Ant Technology

Framework and UI Components

User Guide

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蚂蚁集团
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Document conventions

Style	Description	Example
Danger	A danger notice indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	**Danger:** Resetting will result in the loss of user configuration data.
Warning	A warning notice indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	**Warning:** Restarting will cause business interruption. About 10 minutes are required to restart an instance.
Notice	A caution notice indicates warning information, supplementary instructions, and other content that the user must understand.	**Notice:** If the weight is set to 0, the server no longer receives new requests.
Note	A note indicates supplemental instructions, best practices, tips, and other content.	**Note:** You can use Ctrl + A to select all files.
>	Closing angle brackets are used to indicate a multi-level menu cascade.	Click **Settings**> **Network**> **Set network type**.
Bold	Bold formatting is used for buttons , menus, page names, and other UI elements.	Click **OK**.
`Courier font`	Courier font is used for commands	Run the `cd /d C:/window` command to enter the Windows system folder.
Italic	Italic formatting is used for parameters and variables.	`bae log list --instanceid` *Instance_ID*
[] or [a|b]	This format is used for an optional value, where only one item can be selected.	`ipconfig [-all|-t]`
{} or {a|b}	This format is used for a required value, where only one item can be selected.	`switch {active|stand}`

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1.Framework and UI Components

1.1. H5 Based - Kylin framework

1.1.1. kylin introduction

Kylin is a wireless front-end solution for mPaaS HTML5 containers, with various advantages such as efficient runtime, consistent development experience, rich R&D support, and perfect UI components. It addresses a series of issues in mobile Hybrid development such as front-end packaging, browser compatibility, and API mocking.

Kylin only provides a view-layer framework based on Vue.js 2.0 for efficient DOM updates with minimal JS loading overhead.

As a wireless front-end solution, Kylin assures compatibility only with the `Safari`, `UC Webview`, and Google `Chrome` browsers.

> **Note**
>
> mPaaS has provided updated and more stable Mini program components as the main maintenance and development direction in the future, and stopped the maintenance of Kylin. Compared with the Kylin solution, the Mini program component has higher ease of use and stability, and can adapt to a variety of scenarios. Therefore, it is recommended that new users access the Mini program, and users who have already connected to the Kylin framework are advised to switch to the Mini program component when they encounter new function requirements. For more details, see Mini program.

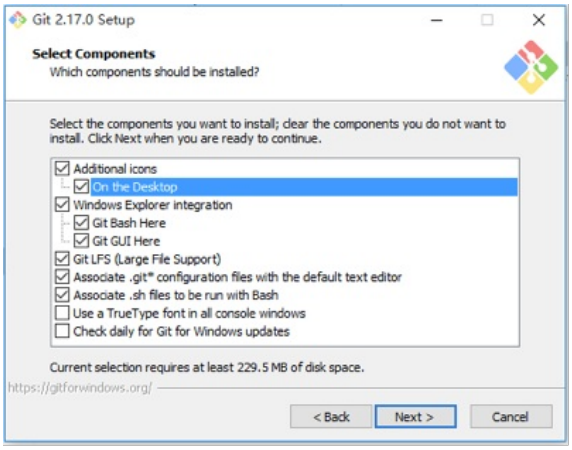
1.1.2. Quick start guide

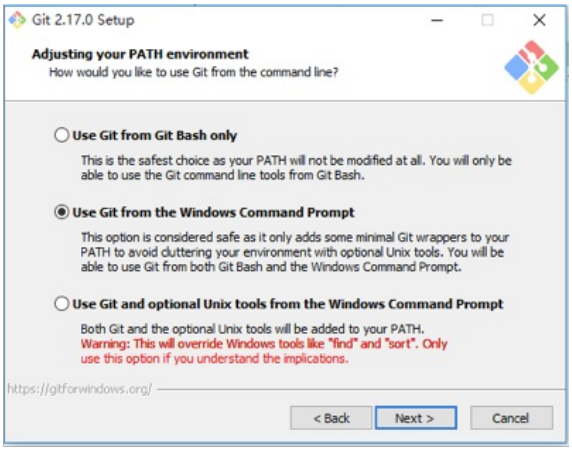
1.1.2.1. Build front-end development workspace

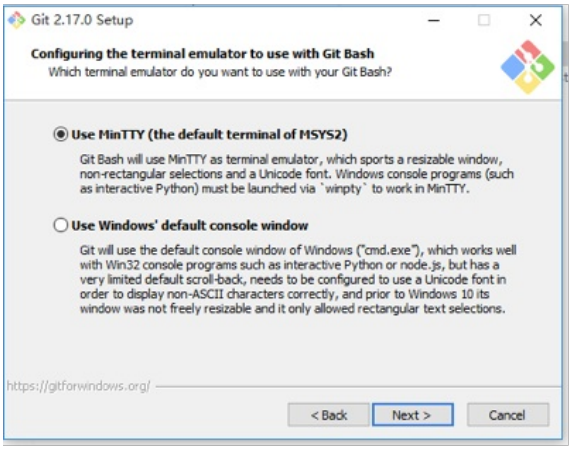
Node.js and cnpm need to be installed for the front-end development workspace. This topic guides you to build environments for different operating systems. If you use Windows operating system, you need to complete user configuration first.

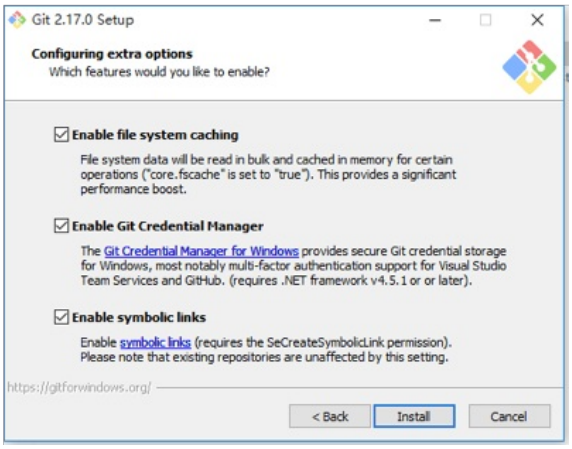
Build front-end development workspace in Windows

1. Complete Windows user configuration. Follow the figure below to install the `MinGW` command prompt. Download the installation file at git-scm.









2. Download and install Node.js v8.
3. Install cnpm.
   i. In **MinGW** or on a **terminal**, run the following command to install `cnpm`:

```
npm install -g cnpm --registry=http://registry.npmmirror.com
```

> **Note**
>
> Do not install `cnpm` in `alias` method that is used for adding the `npm` parameter. For more information about `cnpm`, see NPM mirror.

ii. After cnpm is installed, run the following command to verify the installation.

```
cnpm -v
cnpm@6.1.0 (C:\Users\wb-
wly538545\AppData\Roaming\npm\node_modules\cnpm\lib\parse_argv.js)
npm@6.11.3 (C:\Users\wb-
wly538545\AppData\Roaming\npm\node_modules\cnpm\node_modules\npm\lib\npm.js)
node@8.11.1 (D:\Program Files (x86)\nodejs\node.exe)
npminstall@3.23.0 (C:\Users\wb-
wly538545\AppData\Roaming\npm\node_modules\cnpm\node_modules\npminstall\lib\index.js)

prefix=C:\Users\wb-wly538545\AppData\Roaming\npm
win32 ia32 10.0.17134
registry=https://r.npm.taobao.org
```

Build front-end development workspace in macOS

1. Download and install Node.js v8.
2. Install cnpm.

   i. In **MinGW** or on a **terminal**, run the following command to install `cnpm`:

   ```
   npm install -g cnpm --registry=http://registry.npmmirror.com
   ```

   > **Note**
   > Do not install `cnpm` in `alias` method that is used for adding the `npm` parameter. For more information about `cnpm`, see NPM mirror.

   ii. After cnpm is installed, run the following command to verify the installation.

   ```
   cnpm -v
   cnpm@6.1.0 (C:\Users\wb-
   wly538545\AppData\Roaming\npm\node_modules\cnpm\lib\parse_argv.js)
   npm@6.11.3 (C:\Users\wb-
   wly538545\AppData\Roaming\npm\node_modules\cnpm\node_modules\npm\lib\npm.js)
   node@8.11.1 (D:\Program Files (x86)\nodejs\node.exe)
   npminstall@3.23.0 (C:\Users\wb-
   wly538545\AppData\Roaming\npm\node_modules\cnpm\node_modules\npminstall\lib\index.js)

   prefix=C:\Users\wb-wly538545\AppData\Roaming\npm
   win32 ia32 10.0.17134
   registry=https://r.npm.taobao.org
   ```

1.1.2.2. Develop and Debug

Development commissioning involves the following steps:

1. Install a dependency
2. Development commissioning
3. Build

Click Demo to get a code example and complete the following operations.

Install a dependency

Enter the root directory of the project and use `cnpm` to install the `npm` dependency.

```
# Install the npm dependency.
cnpm install
```

Development commissioning

After installing a workspace, enable the development mode with a command such as the following command:

```
cnpm run dev
```

The preceding command performs the following steps:

- Run `kylin build --dev` to start the following in dev mode:
  - Compression of `css` / `js` without `compress`
  - Automatic change of the `watch` code
  - Hot code updates
- Start a server at `http://localhost:8090/` .

Build

Use the following command to enable the build mode.

```
cnpm run build
```

The preceding command performs the following steps:

- Run the `kylin build` command to compile the source code of the project.
- Export the compilation output to the `./www/` directory for subsequent packaging.

1.1.3. Project structure

1.1.3.1. Introduction to Scaffolding

This topic describes the project initialization structure.

Initialization structure

The project initialization structure is as follows:

```
project
├── mock
│   ├── mock.config.js
│   └── rpc
│       └── test.js
├── package.json
├── www
└── src
    ├── common
    │   ├── components
    │   ├── css
    │   │   └── base.less
    │   ├── img
    │   └── js
    ├── layout
    │   ├── index.html
    │   └── layout.html
    └── pages
        └── index
            ├── components
            ├── index.js
            └── store
```

Subdirectory

- mock
- package.json
- www
- src/common
- src/layout
- src/pages
- Frequently used parameters

mock

This directory provides a data mocking method. When the startup adopts the `cnpm run dev:mock` method, the data APIs that correspond to the `rpc` and `jsapi` directories are automatically loaded.

package.json

The `kylinApp` field in the `package.json` file contains the metadata about project configurations, including `pages`, `output`, `devPort`, `plugins`, and `dirAlias`.

The following code shows a simple example:

```
{
  "kylinApp": {
    "output": "www",
    "pages": {
      "index": {...}
    },
    "devPort": 8090,
    "dirAlias": {
      "common": "./src/common/",
      "pages": "./src/pages/"
    },
    "plugins": [

    ]
  }
}
```

www

The output of `cnpm run build` command are automatically exported to the `www` directory.

src/common

This directory stores the `css`, `js`, and `img` files that are used in the project.

src/layout

This directory corresponds to the pages in the `./src/pages/${pageName}` directory. You can configure the HTML template path used by the corresponding page in the `package.json` file. This directory supports the nujuncks syntax.

src/pages

This directory stores pages. Each page is stored in the corresponding `./src/pages/${pageName}/` directory. The directory for each page contains the `components` and `store` directories and the `index.js` file.

- In the `components` directory, each component is a `Vue` component. For information about coding standards, see Component specifications.
- The `store` directory contains a `Vuex.Store` instance. For more information, see Status injection.
- The `index.js` file is the main entry of the current **page**. The **page** generates a specific `${pageName}.html` page.

Frequently used parameters

Frequently used parameters refer to all key values other than `pages`, `options`, and `plugins` at the lower level of `kylinApp`. `pages`, `options`, and `plugins` are described separately in the following sections.

Parameter	Type	Default value	Remarks
output	String	dist	The relative directory of output.

Parameter	Type	Default value	Remarks
devPort	Number	8090	The IPv4 port number used for listening in dev mode. Value: 0.0.0.0:devPort.
dirAlias	Record	{}	Equivalent to the **relative path** used in `webpack.resolve.alias`.
pageTemplate	String	-	The public Nunjucks template.

pages

The following code lists the configuration items of the `pages` key-value pair. The `home` in the example indicates that the configurations are valid only for pages whose `pageName` is `home`.

```
{
  "kylinApp": {
    "pages": {
      "home": {
        ... // List fields.
      }
    }
  }
}
```

Field	Type	Default value	Remarks
entry	String	-	The relative path that redirects to the JS packaging entry of the current page.
template	String	-	The relative path that redirects to the HTML packaging path of the current page. If this field is empty, the value of the `kylinApp.pageTemplate` field will be used.

plugins

The `kylinApp.plugins` field is an array that supports loading plug-ins on demand.

```
{
  kylinApp: {
    plugins: [
      "xxxx",
      ["yyyy",{ a: 1 }],
      "zzzz",
      ["6666",{ b: 1 }]
    ]
  }
}
```

You can import plug-ins in two modes: **default configuration** and **extended configuration**. The preceding example imports the following plug-ins:

- @ali/kylin-plugin-xxxx, which is loaded in default configuration mode.
- @ali/kylin-plugin-yyyy, which is loaded by using the `{a:1}` option.
- @ali/kylin-plugin-zzzz, which is loaded in default configuration mode.
- @ali/kylin-plugin-6666, which is loaded by using the `{b:1}` option.

Existing plug-ins

Configurable plug-ins include `mock` and `resource`. For more information, see the following topics:

- mock
- resource

1.1.3.2. Page

Page is a `Webview` logical abstraction layer and also the root node for component mounting.

Code import

```
import { Page } from '@ali/kylin-framework';
```

Page declaration structure

The API contained in a `Page` is declared in Page Interface and provides complete control capabilities of `Vue.js` instances. The following shows a simple `Page` usage. `initOptions` is responsible for processing additional `Vue.js` configuration options.

```
import { Page } from '@ali/kylin-framework';
import IndexComponent from './indexComponent.vue';

class IndexPage extends Page {

  initOptions() {
    return {}
  }

  render(h) {
    return <IndexComponent></IndexComponent>
  }

}

new IndexPage('#app');
```

Page Interface

This topic describes the page API, including namespace.

Namespace

`ES6` import method:

```
import { Page } from '@ali/kylin-framework';
```

API

Currently, `Page` provides the following member methods for derivation:

- initOptions
- render

initOptions

```
function initOptions(): VueOptions
```

Return value

The return result must be a valid `Vue.js` input parameter. Generally, we do not recommend that you introduce complex configuration to the `Page` layer. Involved logic can be maintained in `Component`.

render

The function must be a valid `render` function of `Vue.js`.

```
function render(): VNode
```

Return value

The return result must be a valid `VNode` element. Write according to `JSX` specifications.

1.1.3.3. Component

Component is expanded from a `Vue.js` component and provides parameter input capabilities that are equivalent to the `Vue` component. It provides `Decorator` styles for `class` during code writing.

Code import

```
import { Component, Watch } from '@ali/kylin-framework';
```

Structure of component declarations

A component can contain peer configurations of the `options` of `Vue`, such as data, JSX rendering functions, templates, mounting elements, methods, and life cycles. Component declarations include the following parts, which are separately packaged by using the `@Component` and `@Watch` decorators.

- Declarations of classes, which are packaged by using the `@Component` decorator.
- Decorations of class members, which are packaged without using a decorator.
- Declarations of class member methods, which are packaged usually without using a decorator unless the method needs to `watch` another declared variable

The following example shows you how to develop a simple component. For information about specific declaration parameters, see Component API.

*.vue single file component

```
<!-- Hello.vue -->

<template>
  <div>hello {{name}}
    <Child></Child>
  </div>
</template>

<style>
  /* put style here */
</style>

<component default="Child" src="./child.vue" />

<script>
  import { Component } from '@ali/kylin-framework';

  @Component
  class Hello {
    data = {
      name: 'world'
    }
  }

  export default Hello;
</script>
```

For information about the label-style component dependencies in the `<component>` format, see Component API.

Component API

Similar to Vue, the definition of a component is written in the `.vue` file. The following code shows a simple example:

```
<template>
 <div>
   <AButton @click="onClick">Click</AButton>
 </div>
</template>

<style lang="less" rel="stylesheet/less">
    /* less */
</style>

<dependency component="{ AButton }" src="@alipay/antui-vue" lazy/>

<script type="text/javascript">
 import { Component } from '@ali/kylin-framework';
 @Component
 export default class IndexView {
   props = {}
    data = {}
    get comput() { return this.data.c * 2 }
    onClick() {}
    mounted() {}
 }
</script>
```

The preceding example contains four top-level labels including `<template>`, `<style>`, and `<script>`, which are similar to those in Vue, and `<dependency>`.

The following sections describe the usage of the four labels. The definitions of the `<template>` and `<style>` labels are the same as those in `Vue`.

Script

Class structure

Define a Component. Based on the code structure, use Decorators of the class. Available decorators are `@Component` and `@Watch`, which can be imported as shown in the following code:

```
import { Component, Watch } from '@ali/kylin-framework';

@Component
export default class Hello {

}
```

Method type

The Component is declared as a class, and the class must be decorated with a Decorator. Inside a class, member variables are automatically processed by the `babel` plug-in during the building process. Member functions usually do not require a decorator unless `@Watch` is used. The following table describes the properties that the `@Component` decorator can process.

Member type	Name	Usage
get/set property	*	Used to convert into the `computed` property of `Vue`. You can call this by using `this[varName]`.
beforeCreate	Life cycle	The life cycle method, which is equivalent to that in `Vue`.
created	Life cycle	The life cycle method, which is equivalent to that in `Vue`.
beforeMount	Life cycle	The life cycle method, which is equivalent to that in `Vue`.
mounted	Life cycle	The life cycle method, which is equivalent to that in `Vue`.
beforeUpdate	Life cycle	The life cycle method, which is equivalent to that in `Vue`.
updated	Life cycle	The life cycle method, which is equivalent to that in `Vue`.
beforeDestroy	Life cycle	The life cycle method, which is equivalent to that in `Vue`.
destroyed	Life cycle	The life cycle method, which is equivalent to that in `Vue`.
method	*	A regular member method that is used to convert into the method list `methods` in `Vue`.

getter/setter property

```
@Component
export default class Hello {
  get computName() {
    // to sth
  }
}
```

The preceding `getter` declaration is equivalent to the following Vue configuration:

```
HelloOption = {
  computed: {
    computName: {
      get: computName() {
        // to sth
      }
    }
  }
}
```

Likewise, `setter` is also extracted. If both `getter` and `setter` exist, they are extracted together.

Life cycle functions

```
@Component
export default class Hello {
  created() {}
  mounted() {}
}
```

The preceding life cycle functions `created` and `mounted` are extracted as arrays.

```
TestOption = {
  created: [function created(){}],
  mounted: [function mounted(){}],
}
```

The following life cycle methods are supported: `beforeCreate`, `created`, `beforeMount`, `mounted`, `beforeUpdate`, `updated`, `beforeDestroy`, and `destroyed`.

Watch

This decorator exists because `watch` requires the following elements:

- The variables to listen to
- Listening options
- Trigger function

Usage

The following table describes all the parameters for the `@Watch` decorator.

```
function Watch( key: string [, option: Object = {} ] ): PropertyDecorator
```

Parameter		Type	Usage
key		string	The name of the parameter that is listened to. Valid values: `computed`, `data`, and `props`.
option	deep	boolean	Specifies whether an inner data change is triggered when a complex object is listened. Default value: `false`.
option	immediate	boolean	Specifies whether to immediately trigger a callback by using the current value of the expression. Default value: `false`.

Example

- For a member function that is decorated by `@Watch`, you can configure listening of multiple variables for the member function. In the following sample code, changes to the `a` and `c` parameters are listened. A change to either of the parameters will trigger the member method `OnChangeA`.
- `OnChangeA` is a member method in nature and is extracted to the `methods` block together with other member methods. Therefore, make sure that the name of this member method is unique.
- If there are additional configuration items for Watch, import them by using the `@Watch('a', {deep: false})` method. For more information about configuration items, see Watch configuration items.

```
@Component
class WTest {

  data = {
    a: {
      b: 2
    },
    c: 3
  }

  @Watch('c')
  @Watch('a', {deep: false})
  OnChangeA(newVal, oldVal) {

  }
}
```

Note: The listener for `data.a` is converted. If the `deep: true` option is disabled, the `OnChangeA` method is not triggered when `data.a.b` is changed.

Property types

The build tool automatically applies the `@Component.Property` decorator to member variables. The final merging strategy depends on the identifier name of the decorated `member variable`. The following table describes some members that are built in the framework. Members that are not in the following table are passed through to the `options` object of `VueComponent`.

Member type	Name	Usage
Property	props	The props property of Vue.
Property	data	The data property of Vue. **This property is converted into a function and supports the this method.** Do not use `data(){}`.
Property	*	Other unknown properties, which are copied to the corresponding properties in the `options` object of `Vue`.

props

```
@Component
export default class Hello {

  props = {
    name: {
      type: String,
      default: 'haha'
    },
    num: Number
  }
}
```

The preceding definition of the member variable `props` is converted into the corresponding `props` property in the `options` object.

```
HelloOption = {
  props: {
    name: {
      type: String,
      default: 'haha'
    },
    num: Number
  }
}
```

For information about the complete definition structure, see the API-props topic in the Vue documentation.

data

```
@Component
export default class Hello {
  props = {
    name: {
      type: Number,
      default: 1
    },
  }
  data = {
    hello: this.props.name + 2
  }
}
```

The preceding definition of the member variable `data` is **converted into a data function**. You do not need to manually write a data function.

```
TestOption = {
  props: {
    name: {
      type: Number,
      default: 1
    },
  },
  data: function data() {
    return {
      hello: this.props.name + 2
    }
  }
}
```

dependency

In the preceding example, the definition of `<script>` does not describe how to use component dependencies. We recommend that you use the `<dependency>` label to mark component dependencies in the `.vue` file. In the following example, the `./child.vue` component is referenced.

```
<template>
  <child></child>
</template>

<dependency component="Child" src="./child.vue" />
```

Label properties

default import

The following table describes the properties that are used for introducing the `default` export of `ES6 Module` or the export of the `commonjs Module` object.

Parameter	Type	Default value	Remarks
component	string	Required	The identifier name to be imported to `options.components`.
src	string	Required	The source of the component. The value of this property is the same as the result of the `require (src)` method.

lazy	boolean	false	Specifies whether to enable lazy loading for the component. If lazy loading is enabled, a module of the component is loaded only when `Vue` requires this module. Modules are loaded by using `require`.
style	string	undefined	By default, this property is not used. If you set a string for this property, the system loads the corresponding style file of the component by using the `${src}/${style}` path.

The following code shows an example:

```
<dependency component="name" src="source" lazy />
```

member import

The following table describes the properties that are used for introducing the export of `ES6 module` names.

Parameter	Type	Default value	Remarks
component	string	Required	The multiple naming identifiers to be imported to `options.components`. Enclose the identifiers in braces `{`, `}`. Otherwise, the identifiers are identified as `default` import.
src	string	Required	The source of the component. The value of this property is the same as the result of the `require (src)` method.

lazy	boolean	false	Specifies whether to enable lazy loading for the component. If lazy loading is enabled, a module of the component is loaded only when `Vue` requires this module. Modules are loaded by using `require`.

The following code shows an example:

```
<dependency component="{ List, ListItem, AButton }" src="@alipay/antui-vue" lazy />
```

By default, on-demand `babel-plugin-import` loading is supported for the `@alipay/antui-vue` component library.

template

The template content structure is consistent with that of Vue.

```
<template>
  <div>Hello World</div>
</template>
```

style

```
<style lang="less" rel="stylesheet/less">
    /* less */
</style>
```

You can add the property tag `scoped`, so that the style takes effect only for the current component.

```
<style lang="less" rel="stylesheet/less" scoped>
    /* less */
</style>
```

Status injection

We recommend that you use the following `connect` mechanisms to pass through `$store` data:

1. API declaration
2. Use one of the following methods to pass through data:
   - mapStateToProps
   - mapActionsToMethods
   - mapMethods

If you need to use the properties of `Store` in Kylin components, we recommend that you do not use calculation properties to pass through the properties of the `$store` object. We recommend that you use the following method:

```
@Component
class Hello {
  // Associate the status in the store by using calculation properties.
  get hello() {
    return this.$store.state.hello
  }
}
```

API declaration

```
@Component({
  mapStateToProps: Object|Array,
  mapActionsToMethods: Object|Array,
  mapMethods: Array|Boolean,
  mapEvents: Array
})
class Hello {

}
```

mapStateToProps

This function is used to map specific key values in `state` to those in the `props` property of the current component. This function accepts parameter in the same way as the auxiliary function that is provided by `Veux`.

You can use one of the following methods to implement this feature:

Function-based method

The following code maps the data named `bbb` in `$store.state` to the `props` property of `aaa`.

```
{
  mapStateToProps: {
    aaa: (state, getters) => state.bbb
  }
}
```

String key-value pair-based method

The following code maps the data named `bbb` in `$store.state` to the `props` property of `aaa`.

```
{
  mapStateToProps: {
    aaa: 'bbb'
  }
}
```

String array-based method

The code below performs the following operation:

- Map the data named `aaa` in `$store.state` to the `props` property of `aaa`.
- Map the data named `bbb` in `$store.state` to the `props` property of `bbb`.

```
{
  mapStateToProps: ['aaa', 'bbb']
}
```

mapActionsToMethods

Similar to the input parameters of the `mapActions` function in `Vuex`, this function allows you to inject the `actions` property in the global `$state` object into the `methods` of the current component. You can complete the injection based on the name mapping of objects or based on the names of arrays.

```
@Component({
  mapActionsToMethods: ['a', 'b']
})
class IndexView {
  async doSomeAction() {
    const ret = await this.a(123);
    // Equivalent to a call.
    // const ret = await this.$store.dispatch('a', 123);
  }
}
```

mapMethods

Implement the `connect` mechanism by adding a middle layer component between a parent component and a child component. When the parent component calls a specific `method` in the child component, the parent component connects to the middle layer component instead of the child component. Use the following configurations to implement the required access:

```
@Component({
  mapMethods: true
})
export default class Child {
  a() {}
}
```

```
<template>
  <div>
    this is parent
    <child ref="child"></child>
  </div>
</template>
<script>
  @Component
  export default class Parent {
    b() {
      // Access is enabled here.
      this.$refs.child.a();
    }
  }
</script>
```

1.1.3.4. Command line tool

Initialize

If you need to add a new page after the project's scaffold is initialized, you can simply copy and paste relevant content or use the following commands to add page definitions and component definitions.

- init-page
- init-component

init-page

Command syntax

```
kylin init-page <pageName>
```

Precautions

- `pageName` in the preceding command is a required parameter, and it specifies the English name of the page to be created.
- If the current cwd contains `package.json` with the `kylinApp` field, the new `page` will be automatically added to `kylinApp.pages`.

init-component

Command syntax

```
kylin init-component <componentName>
```

Precautions

- `componentName` in the preceding command is a required parameter, and it specifies the English name of the component to be created.
- If the current cwd contains `package.json` with `kylinApp.pages` specifying more than one page, the system prompts the specific `page/components` directory for the newly created component.

Build

This part describes the command syntax for tool building, and the build prompt for public resource package injection.

Command syntax

```
kylin build # ... args
```

Items

Commonly used parameters

```
kylin build --dev     # dev building and static server
kylin build --server --no-prod  --hot   # dev building, static server, and hot update e
nabling
kylin build --server  # prod building and static server
kylin build --no-prod --watch  # dev building and listening on file changes
```

Command line input parameters

Parameter	Type	Note
dev	Boolean	Similar to the original build tool, it uses the dev conf and enables the server. If this parameter is enabled, the following settings will be forcibly made: `prod=false`, `server=true`, and `hot=true`.
no-prod	Boolean	When `prod` is set to `true`, prod conf is used for compilation. When `prod` is set to `false`, dev conf is used for compilation. `NODE_ENV` is set in the same manner.
server	Boolean	Only the static server is enabled. When this parameter is enabled, the following setting is forcibly made: `watch=true`.
verbose	Boolean	The webpack output details.
watch	Boolean	Whether to monitor file changes.

Parameter	Type	Note
no-compress	Boolean	Whether to disable compression. Compression is enabled by default.
no-common	Boolean	Whether to disable `CommonsChunkPlugin`, which is enabled by default.
hot	Boolean	Whether to enable hot update. Hot update is disabled by default. This parameter is used only when `prod` is set to `false` and `server` is set to `true`.
open [entry]	Boolean, String	This parameter is valid only for `--server`. It is used to open the `entry`-specified `URL`. For `--open` without an `entry` specified, the first URL is processed.
mock	Boolean, String	This parameter is used to enable the `mock` plug-in to read `./mock/mock.config.js`.

`kylinApp` configuration options

Parameter	Type	Description
devPort	Number	Default listening IPv4 port 0.0.0.0:8090.
pageTemplate	String	Page template path.
output	String	Relative output directory.
options	Object	Additional options.

Parameter	Type	Description
dirAlias	Object	Equivalent to `webpack.resolve.alias`, for example, { common:'./src/common/' }.

Build prompt

Public resource package injection

`<script>` / `<link>` labels corresponding to the following `require` / `import` package paths are automatically injected into `HTML`.

Package name	Mapping global object	Mapping path
fastclick	FastClick	as.alipayobjects.com/g/luna-component/luna-fastclick/0.1.0/index.js
vue	Vue	a.alipayobjects.com/g/h5-lib/vue/2.1.6/vue.min.js
es6-promise	Promise	as.alipayobjects.com/g/component/es6-promise/3.2.2/es6-promise.min.js
fetch	fetch	as.alipayobjects.com/g/component/fetch/1.0.0/fetch.min.js
zepto	Zepto	a.alipayobjects.com/amui/zepto/1.1.3/zepto.js

1.1.4. Plugin

1.1.4.1. mock

Kylin-plugin-mock is a data mock plug-in developed for debugging JSAPI errors in the desktop browser (Google Chrome).

Enable the plug-in

Execute the following statement in the scaffold project, which is equivalent to the action of adding `--mock` during command execution:

```
cnpm run dev:mock
```

Use the plug-in

The `./mock/mock.config.js` file of the project contains the following configurations:

```
const config = {};

// The custom mock.
config.call = {
    // The mock rpc API.
    rpc: function (opts, callback) {
        var type = opts.operationType;
        var rpc = require('./rpc/' + type);
        var data = typeof rpc === 'function' ? rpc(opts) : rpc;
        // Prevent the input object from being modified in the service logic.
        data = Object.assign({}, data);
        // Simulate a server/network interface delay. Two logs are recorded. One is for
the request, and the other contains the return result.
        setTimeout(() => {
            callback && callback(data);
        }, 2000);
    },
}

window.lunaMockConfig = config;
```

The preceding configuration maps data for APIs in `./mock/rpc/*.js`.

Examples

After `cnpm run dev:mock` is executed, the system enters the `mock` mode. In this mode, execute `AlipayJSBridge.call('abc')` in the browser to search for the mock API data in `./mock/jsapi/abc.js`.

1.1.4.2. resource

Kylin-plugin-resource is a resource interception mechanism designed for global offline resource packages on the mPaaS platform.

Use the plug-in

The `package.json` file in the scaffold file contains the following configuration:

```
["resource",
   {
    "map": {
      "vue": {
        "external": "Vue",
        "js": "https://gw.alipayobjects.com/as/g/h5-lib/vue/2.5.13/vue.min.js"
      },
      "fastclick": {
        "external": "FastClick",
        "js": "https://as.alipayobjects.com/g/luna-component/luna-
fastclick/0.1.0/index.js"
      }
    }
  }
]
```

The above configuration indicates that some actions will be implemented when the following dependency statements appear:

```
import xxx from 'vue';
var xxx = require('vue');
```

When the `vue` dependency is used, the following actions are implemented:

1. Inject the `<script src="https://gw.alipayobjects.com/as/g/h5-lib/vue/2.5.13/vue.min.js"></script>` script resource into the generated `HTML` template.
2. Redirect the preceding `vue` dependency to the value of `window.Vue`.

1.1.4.3. Expansion capability

The Kylin framework supports extending Webpack, Babel, and Express configurations.

Procedure

Extend the Webpack, Babel, and Express configuration as follows:

1. Create `plugin.js` in the root directory of the project.
2. Add the following configuration item to `kylinApp.plugins` in `package.json`:

```
// In package.json
{
 "kylinApp": {
     "plugins": [
           "module:./plugin.js"
     ]
 }
}
```

3. In `plugin.js`, write the following code. In the `modifyWebpackConfig` and `modifyBabelConfig` functions, modify the original `webpack` and `babel` configuration.

```
// In plugin.js
exports.pluginName = '@ali/kylin-plugin-custom';
exports.default = function () {
    return {
        webpack: function modifyWebpackConfig(webpackConfig) {
            console.log('webpackConfig', webpackConfig);
            return webpackConfig;
        },
        babel: function modifyBabelConfig(babelConfig) {
              console.log('babelConfig', babelConfig);
            return babelConfig;
        },
        express: function modifyExpress(expressInstance) {
            expressInstance.use(/* some middleware */);
        }
    }
}
```

Examples

Access the httpProxy plug-in

> **Note**
> The kylin-build package version should be 0.1.49 or higher.

1. Run the following command to install `http-proxy-middleware`.

```
cnpm install --save-dev http-proxy-middleware
```

2. Modify the `express` of the **httpProxy** plug-in.

```
// In plugin.js
var proxy = require('http-proxy-middleware');
exports.pluginName = '@ali/kylin-plugin-custom';
exports.default = function () {
 return {
     express: function modifyExpress(expressInstance) {
         expressInstance.use(
               proxy('/api', {target: 'http://www.baidu.com'})
             // For more configuration information, see the http-proxy-middleware
module documentation.
         );
     }
 }
}
```

Access the px2rem plug-in

1. Run the following command to install `postcss-px2rem`.

```
cnpm install --save-dev postcss-px2rem
```

2. Modify `Webpack` of the **px2rem** plug-in.

```
// In plugin.js
var px2rem = require('postcss-px2rem');
exports.pluginName = '@ali/kylin-plugin-custom';
exports.default = function () {
 return {
     webpack: function modifyWebpackConfig(webpackConfig) {
         webpackConfig.vue.postcss.push(
             px2rem({
                   // Settings of this parameter and **font-size** in the template htm
l need to be modified according to the UI interaction text of the project.
                   remUnit: 100
             })
         );
         return webpackConfig;
     }
 }
}
```

1.2. H5 based - UI library

1.2.1. Introduction to UI component library

AntUI is a front-end component library built based on the Vue.js framework and in compliance with visual interaction specifications of Ant Financial Alipay app. AntUI originates from AntUI wireless HTML5 style library, with interaction logic improved and configuration items abstracted.

AntUI comprises the following components:

- @alipay/antui: Style library
- @alipay/antui-vue: Component library based on the style library

Related topics

AntUI wireless HTML5 style library

1.2.2. User guide

In the Kylin project, `package.json` contains the `@alipay/antui-vue` dependencies. You can use either of the following methods to use an Ant UI front-end component.

- Use this component in the Kylin project. Import it as a `dependency`, because the Kylin project's scaffold includes dependencies of this component. For more information, see Kylin.
- Use this component in other projects. Import it through ESModule. For more information, see ESModule.

In addition, the API description is provided for each component because the `prop`, `slot`, `method`, and `event` APIs are provided for a standard Kylin component. For example, to use AButton, you can define the button size by using `size` in `props` and the button pattern by using `icon` in `slots`, and obtain tapping events based on `tap` in `events`. For specific information, see the API description for each component.

Kylin

The `.vue` component folder of the Kylin project supports the special syntax `<dependency>`. Use the following method to register component dependencies.

```
<dependency component="{ Notice }" src="@alipay/antui-vue" ></dependency>
```

The preceding syntax indicates that the `Notice` component can be used in `template` of the current `.vue` file.

ESModule

In other project structures, ensure the following:

loader

The `.vue` file can be loaded. For example, the file can be loaded by using vue-loader in `webpack`.

js

The loaded `.vue` file is used as a normal component.

```
import { Notice } from '@alipay/antui-vue';

Vue.component(Notice.name, Notice);
```

1.2.3. Basic components

1.2.3.1. AButton

The AButton topic describes different methods of using this component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- API description provides API information for props, slots, and events.

To view the visual effects and code sample of the component, see Demo.

Kylin

```
<dependency component="{ AButton }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { AButton } from '@alipay/antui-vue';
```

API description

props

Property	Description	Type	Default value
type	The type of the button. Valid values: `blue`, `white`, `warn`, `bottom`, and `page-result` (only for `PageResult`).	String	`blue`
size	The size of the button. Valid values: `default` and `tiny`. When it is set to `tiny`, `type` must be `white` and `blue` (unavailable for `[type=page-result]`).	String	`default`
disabled	Disable a button (unavailable for `[type=page-result]`).	Boolean	false
loading	Set a button icon to loading, applicable only when `size` = `default` (unavailable for `[type=page-result]`).	Boolean	false
success	Set a button icon to success, applicable only when `size` = `default` (unavailable for `[type=page-result]`).	Boolean	false
nativeType	`type` attribute in DOM	String	`button`
href	When it is not empty, use the `a` tag for rendering; otherwise, use the `button` tag for rendering by default.	String	-
inactiveLoading	When it is set to `true` and `loading` is set to `true`, trigger no `tap` event and retain the style of `button`. When it is set to `false`, retain the original action of `loading`.	Boolean	`false`

slots

Name	Description	Scope
-	The default slot for filling in the button text.	-

Name	Description	Scope
icon	The custom node for filling the icon. The default value is filled in when `loading` / `success` is set.	-

events

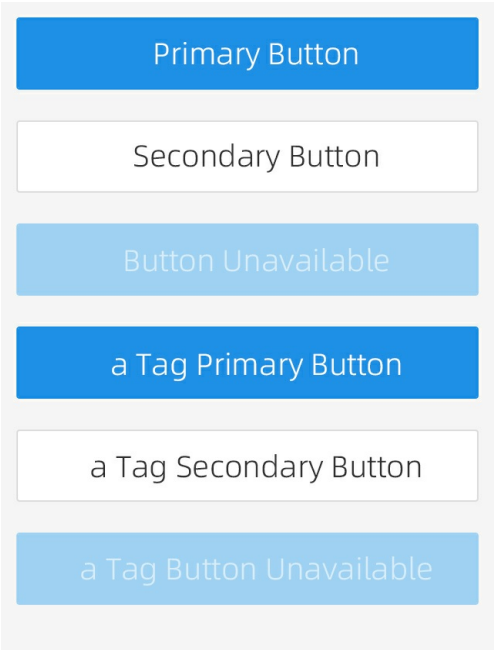
Name	Description	Function
tap	The operation when you press a mouse button.	Function(event: Event): void

Demo

- Button
- Auxiliary button
- Load
- Warning

Button

Sample image



Sample code

```
<template>

  <div style="padding: 10px;">
    <AButton >Primary Button</AButton>
    <AButton type="white">Secondary Button</AButton>
    <AButton disabled>Button Unavailable</AButton>

    <AButton href="#">a Tag Primary Button</AButton>
    <AButton href="#" type="white">a Tag Secondary Button</AButton>
    <AButton href="#" disabled>a Tag Button Unavailable</AButton>
  </div>

</template>

<style scoped>
.am-button {
  margin-bottom: 20px;
}
</style>
```

Auxiliary button

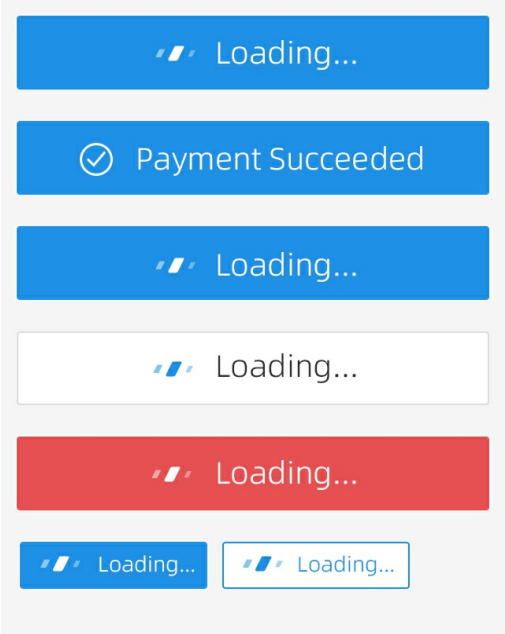
Sample image

Sample code

```
<template>

  <div style="padding: 10px;">

    <AButton size="tiny" type="white">Auxiliary Button</AButton>
    <AButton size="tiny" type="white" disabled>Auxiliary Button</AButton>

    <AButton href="#" size="tiny" type="white">Auxiliary Button</AButton>
    <AButton href="#" size="tiny" type="white" disabled>Auxiliary Button</AButton>

    <AButton size="tiny">Auxiliary Button</AButton>
    <AButton size="tiny" disabled>Auxiliary Button</AButton>

    <AButton href="#" size="tiny">Auxiliary Button</AButton>
    <AButton href="#" size="tiny" disabled>Auxiliary Button</AButton>

  </div>

</template>

<style scoped>
.am-button {
  margin-bottom: 20px;
}
</style>
```

Load

Sample image

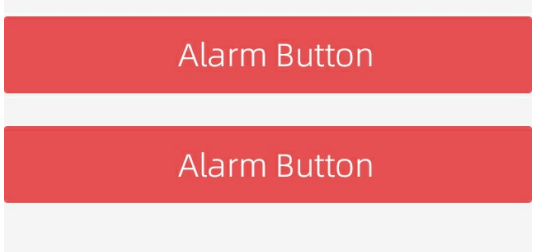


Sample code

```
<template>

  <div style="padding: 10px;">
    <AButton loading>Loading...</AButton>
    <AButton success>Payment Succeeded...</AButton>

    <AButton loading type="blue">Loading...</AButton>
    <AButton loading type="white">Loading...</AButton>
    <AButton loading type="warn">Loading...</AButton>
    <AButton loading type="bottom">Loading...</AButton>
    <AButton loading type="blue" size="tiny">Loading...</AButton>
    <AButton loading type="white" size="tiny">Loading...</AButton>
  </div>

</template>

<style scoped>
.am-button {
  margin-bottom: 20px;
}
</style>
```

Warning

Sample image



Sample code

```
<template>

  <div style="padding: 10px 0;">
    <AButton type="warn">Alarm Button</AButton>
    <AButton type="warn" disbaled>Alarm Button</AButton>
  </div>

</template>

<style scoped>
.am-button {
  margin-bottom: 20px;
}
</style>
```

1.2.3.2. Flexbox

This topic describes different methods of using the Flexbox component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- API description provides API information for props and slots.

To view the visual effects and code sample of the component, see Demo.

Kylin

```
<dependency component="{ Flexbox, FlexboxItem }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { Flexbox, FlexboxItem } from '@alipay/antui-vue';
```

API description

Flexbox

props

Property	Description	Type	Default value
direction	The children's arrangement method. Valid values: `row`, `row-reverse`, `column`, and `column-reverse.	String	`'row'`
wrap	The children's line-wrap method. Valid values: `nowrap`, `wrap`, and `wrap-reverse`.	String	`'nowrap'`
justify	The children's alignment on the main axis. Valid values: `start`, `end`, `center`, `between`, and `around`.	String	`'start'`

Property	Description	Type	Default value
align	The children's alignment on cross axes. Valid values: `start`, `center`, `end`, `baseline`, and `stretch`.	String	`'center'`
alignContent	The alignment on multiple axes. Valid values: `start`, `end`, `center`, `between`, `around`, and `stretch`.	String	`'stretch'`

slots

Name	Description	Scope
-	Default slot used to populate the content of the layout.	-

FlexboxItem

props

FlexboxItem additionally provides the `flex: 1` style by default, ensuring the same width for all items. A child of Flexbox may not necessarily be a FlexboxItem.

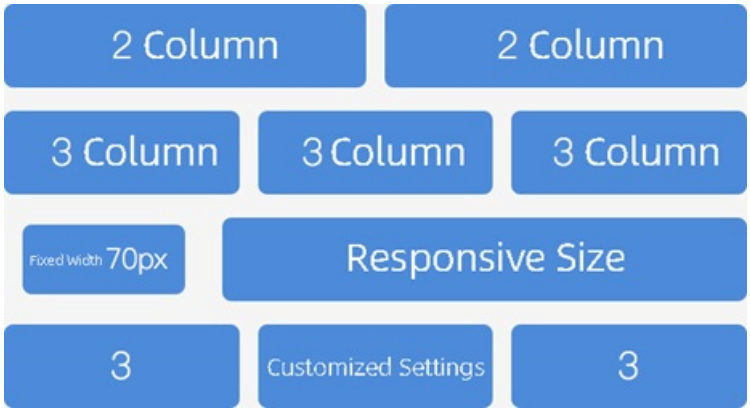
slots

Name	Description	Scope
-	Default slot used to populate the content of the element.	-

Demo

Basic style

Sample image


2 Column
2 Column
3 Column
3 Column
3 Column
Fixed Width 70px
Responsive Size
3
Customized Settings
3

Sample code

```
<template>
  <div>
    <Flexbox>
      <FlexboxItem>2 Column</FlexboxItem>
      <FlexboxItem>2 Column</FlexboxItem>
    </Flexbox>
    <Flexbox>
      <FlexboxItem>3 Column</FlexboxItem>
      <FlexboxItem>3 Column</FlexboxItem>
      <FlexboxItem>3 Column</FlexboxItem>
    </Flexbox>
    <Flexbox>
      <div class="placeholder">Fixed Width 70px</div>
      <FlexboxItem>Responsive Size</FlexboxItem>
    </Flexbox>
    <Flexbox>
      <FlexboxItem>3</FlexboxItem>
      <FlexboxItem class="am-ft-ellipsis">Customized Settings Customized Settings Custo
mized Settings Customized Settings</FlexboxItem>
      <FlexboxItem>3</FlexboxItem>
    </Flexbox>
  </div>
</template>

<style lang="less" rel="stylesheet/less" scoped>
  .am-flexbox {
    margin: 10px 0;
  }

  .demo-item {
    padding: 6px 0;
    background: #4A89DC;
    border-radius: 4px;
    text-align: center;
    color: #fff;
  }

  .am-flexbox-item {
    .demo-item;
  }

  .placeholder {
    .demo-item;
    width: 70px;
    font-size: 12px;
    margin-left: 8px;
    margin-right: 8px;
  }

</style>
```

Arrangement direction

Sample image

Sample code

```
<template>
  <div>
    <Flexbox>
      <div class="placeholder">1</div>
      <div class="placeholder">2</div>
      <div class="placeholder">3</div>
    </Flexbox>

    <Flexbox direction="row-reverse">
      <div class="placeholder">1</div>
      <div class="placeholder">2</div>
      <div class="placeholder">3</div>
    </Flexbox>
  </div>
</template>

<style lang="less" rel="stylesheet/less" scoped>
  .am-flexbox {
    margin: 10px 0;
  }

  .demo-item {
    padding: 6px 0;
    background: #4A89DC;
    border-radius: 4px;
    text-align: center;
    color: #fff;
  }

  .am-flexbox-item {
    .demo-item;
  }

  .placeholder {
    .demo-item;
    width: 70px;
    font-size: 12px;
    margin-left: 8px;
    margin-right: 8px;
  }

</style>
```

Element wrap

Sample image

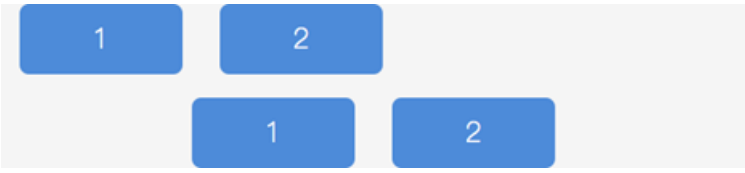
Sample code

```
<template>
  <div>
    <Flexbox>
      <div class="placeholder">1</div>
      <div class="placeholder">2</div>
      <div class="placeholder">3</div>
      <div class="placeholder">4</div>
      <div class="placeholder">5</div>
      <div class="placeholder">6</div>
      <div class="placeholder">7</div>
      <div class="placeholder">8</div>
      <div class="placeholder">9</div>
    </Flexbox>

    <Flexbox wrap="wrap">
      <div class="placeholder">1</div>
      <div class="placeholder">2</div>
      <div class="placeholder">3</div>
      <div class="placeholder">4</div>
      <div class="placeholder">5</div>
      <div class="placeholder">6</div>
      <div class="placeholder">7</div>
      <div class="placeholder">8</div>
      <div class="placeholder">9</div>
    </Flexbox>

    <Flexbox wrap="wrap-reverse">
```

```
    <Flexbox wrap="wrap-reverse">
      <div class="placeholder">1</div>
      <div class="placeholder">2</div>
      <div class="placeholder">3</div>
      <div class="placeholder">4</div>
      <div class="placeholder">5</div>
      <div class="placeholder">6</div>
      <div class="placeholder">7</div>
      <div class="placeholder">8</div>
      <div class="placeholder">9</div>
    </Flexbox>
  </div>
</template>

<style lang="less" rel="stylesheet/less" scoped>
  .am-flexbox {
    margin: 10px 0;
  }

  .demo-item {
    padding: 6px 0;
    background: #4A89DC;
    border-radius: 4px;
    text-align: center;
    color: #fff;
  }

  .am-flexbox-item {
    .demo-item;
  }

  .placeholder {
    .demo-item;
    width: 70px;
    font-size: 12px;
    margin: 8px;
  }

</style>
```

Alignment

Sample image

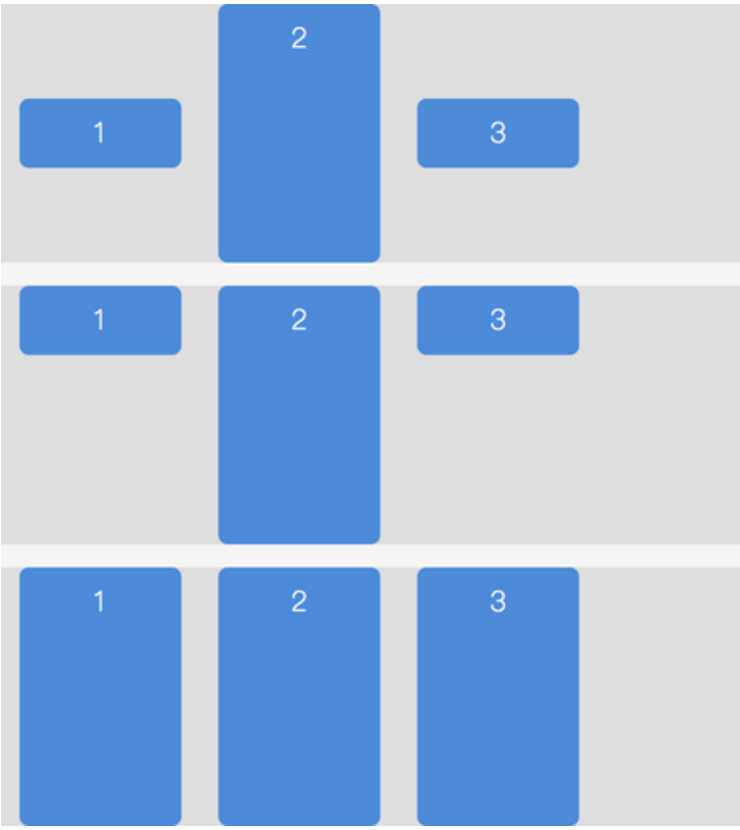


Sample code

```
<template>
  <div>
    <Flexbox>
      <div class="placeholder">1</div>
      <div class="placeholder">2</div>
    </Flexbox>

    <Flexbox justify="center">
      <div class="placeholder">1</div>
      <div class="placeholder">2</div>
    </Flexbox>
  </div>
</template>

<style lang="less" rel="stylesheet/less" scoped>
  .am-flexbox {
    margin: 10px 0;
  }

  .demo-item {
    padding: 6px 0;
    background: #4A89DC;
    border-radius: 4px;
    text-align: center;
    color: #fff;
  }

  .am-flexbox-item {
    .demo-item;
  }

  .placeholder {
    .demo-item;
    width: 70px;
    font-size: 12px;
    margin-left: 8px;
    margin-right: 8px;
  }

</style>
```

Cross-axis alignment

Sample image



Sample code

```
<template>
  <div>
    <Flexbox>
      <div class="placeholder">1</div>
      <div class="placeholder high">2</div>
      <div class="placeholder">3</div>
    </Flexbox>

    <Flexbox align="start">
      <div class="placeholder">1</div>
      <div class="placeholder high">2</div>
      <div class="placeholder">3</div>
    </Flexbox>

    <Flexbox align="stretch">
      <div class="placeholder">1</div>
      <div class="placeholder high">2</div>
      <div class="placeholder">3</div>
    </Flexbox>
  </div>
</template>

<style lang="less" rel="stylesheet/less" scoped>
  .am-flexbox {
    margin: 10px 0;
    background-color: #dedede;
  }

  .demo-item {
    padding: 6px 0;
    background: #4A89DC;
    border-radius: 4px;
    text-align: center;
    color: #fff;
  }

  .am-flexbox-item {
    .demo-item;
  }

  .placeholder {
    .demo-item;
    width: 70px;
    font-size: 12px;
    margin-left: 8px;
    margin-right: 8px;
  }

  .high {
    height: 100px;
  }

</style>
```

Multi-axis alignment

Sample image

Sample code

```
<template>
  <div>
    <Flexbox wrap="wrap">
      <div class="placeholder">1</div>
      <div class="placeholder">2</div>
      <div class="placeholder">3</div>
      <div class="placeholder">4</div>
      <div class="placeholder">5</div>
      <div class="placeholder">6</div>
      <div class="placeholder">7</div>
      <div class="placeholder">8</div>
      <div class="placeholder">9</div>
    </Flexbox>

    <Flexbox wrap="wrap" align-content="start">
      <div class="placeholder">1</div>
      <div class="placeholder">2</div>
      <div class="placeholder">3</div>
      <div class="placeholder">4</div>
      <div class="placeholder">5</div>
```

```
      <div class="placeholder">6</div>
      <div class="placeholder">7</div>
      <div class="placeholder">8</div>
      <div class="placeholder">9</div>
    </Flexbox>
  </div>
</template>

<style lang="less" rel="stylesheet/less" scoped>
  .am-flexbox {
    margin: 10px 0;
    height: 200px;
    background-color: #dedede;
  }

  .demo-item {
    padding: 6px 0;
    background: #4A89DC;
    border-radius: 4px;
    text-align: center;
    color: #fff;
  }

  .am-flexbox-item {
    .demo-item;
  }

  .placeholder {
    .demo-item;
    width: 70px;
    font-size: 12px;
    margin: 8px;
  }

</style>
```

1.2.4. Tab components

1.2.4.1. Tab

This topic describes different methods of using Tab component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- API description provides API information for props, slots, and events.

To view the visual effects and code sample of the component, see Demo.

Kylin

```
<dependency component="{ Tab, TabItem }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { Tab, TabItem } from '@alipay/antui-vue';
```

API description

- Tab
- TabItem

Tab

props

Property	Type	Default value	Description
scroll	Boolean	false	Whether to support scrolling.
value	Number, String	null	id of the selected `tab-item`. v-model is supported.
initial-value	Number, String	null	id of the initially selected `tab-item`. Non-v-model scenarios are supported.
resistant	Number	0.2	Speed ratio (pixels per second) when sliding is out of the screen.
reverseTime	Number	0.15	Bounce time when sliding is out of the screen, in seconds.
slideTime	Number	0.3	Inertia time after sliding, in seconds.
slideRate	Number	0.1	Inertia distance ratio after sliding (distance = slideRate × speed).

slots

Name	Description	Scope
-	Used for populating TabItem.	-

events

Name	Description	Function
input	Triggered when the selected item is changed.	Function (value: [string, number]): void

TabItem

props

Property	Description	Type
id	ID used to identify an item.	String, Number

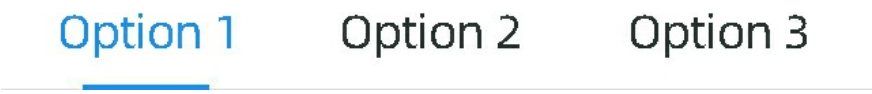
slots

Name	Description	Scope
-	Placeholder for populated content.	-

Demo

Tab

Sample image



Sample code

```
<template>
  <Tab v-model="selected">
    <TabItem v-for="i in 3" v-bind:key="i" :id="i">Option {{ i }}</TabItem>
  </Tab>
</template>

<script type="text/javascript">
  export default {
    data() {
      return {
        selected: 1,
      };
    },
  };
</script>
```

1.2.4.2. TabPanel

This topic describes different methods of using the TabPanel component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- API description provides API information for props, slots, and events.

To view the visual effects and code sample of the component, see Demo.

Kylin

```
<dependency component="{ TabPanel, TabPanelItem }" src="@alipay/antui-vue" ></dependenc
y>
```

ESModule

```
import { TabPanel, TabPanelItem } from '@alipay/antui-vue';
```

API description

- TabPanel
- TabPanelItem

TabPanel

props

Property	Description	Type	Default value
scroll	Whether to support scrolling.	Boolean	true
labels	Labels displayed on the top.	Array	[]
value	Index of the selected tab item, used to support `v-model` binding.	Number	0
initial-value	Index of the initially selected tab item, used to support higher-performance scenarios that do not require `v-model` binding.	Number	0
resistant	Speed ratio (pixels per second) when sliding is out of the screen.	Number	0.2
reverseTime	Bounce time when sliding is out of the screen, in seconds.	Number	0.15

Property	Description	Type	Default value
reverseTimingFunction	Bounce easing time when sliding is out of the screen.	String	-
slideTime	Inertia time after sliding, in seconds.	Number	0.3
slideTimingFunction	Easing function after sliding.	String	“cubic-bezier(.86,0,.07,1)”
slideRate	Inertia distance ratio after sliding (distance = slideRate × speed).	Number	0.1

slots

Name	Description	Scope
-	Used for populating TabPanelItem.	-

events

Name	Description	Function
input	Triggered when an item is selected. `index` indicates the index of the selected item. (It is triggered when the current item is selected again. This issue has been resolved since version `0.4.8-open02`.)	Function (index: number): void

TabPanelItem

slots

Name	Description	Scope
-	Placeholder for populated content.	-

Demo

Tab-panel

Sample image

Sample code

```
<template>
  <TabPanel
    :labels="['Tag1', 'Tag2', 'Tag3', 'Tag4', 'Tag5', 'Tag6', 'Tag7']"
    v-model="selected"
  >
    <TabPanelItem
      v-for="i in 7"
      style="text-align: center; height: 100px; background: white"
    >
      Content{{ i }}
    </TabPanelItem>
  </TabPanel>
</template>

<script>
  export default {
    data() {
      return {
        selected: 0,
      };
    },
  };
</script>
```

1.2.5. Pop-up component

1.2.5.1. ActionSheet

This topic describes different methods of using the ActionSheet component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- Use Service imperative call. Service documentation provides details about static methods and show options.
- API description provides API information for props, slots, and events.

To view the visual effects and code sample of the component, see Demo.

Kylin

```
<dependency component="{ ActionSheet }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { ActionSheet } from '@alipay/antui-vue';
```

Service imperative call

You can directly use `ActionSheet.show('Display content');` to call a command, instead of writing the command in a template. The `DOM` will be automatically inserted into `document.body`.

```
ActionSheet.show({
  title: 'Title',
  items: ['123','321'],
  cancelButtonText: 'Cancel'
}, function (index) {

});
```

Service documentation

static methods

`ActionSheet` provides the following static method.

Name	Description	Function
show	Creates and displays an `ActionSheet` instance with the parameters in the table below.	Function(option: Object | string, callback: Function): vm

show options

The following parameters are accepted for creating an instance.

Property	Description	Type	Default value
title	Description text displayed above the panel.	String	-
items	Text array of options.	Array	-
cancelButtonText	Text of the Cancel button.	String	‘Cancel’
destructiveBtnIndex	Index value of a special operation.	Number	-
transitionDuration	Gradient duration.	String	‘0.3s’

Property	Description	Type	Default value
zIndex	Specifies the `zIndex` value of the elastic layer.	Number	9999

API description

props

Property	Description	Type	Default value
show	Whether to display the panel.	Boolean	false
title	Description text displayed above the panel.	String	-
items	Text array of options.	Array	-
cancelButtonText	Text of the Cancel button.	String	'Cancel'
destructiveBtnIndex	Index value of a special operation.	Number	-
transitionDuration	Gradient duration.	String	'0.3s'

events

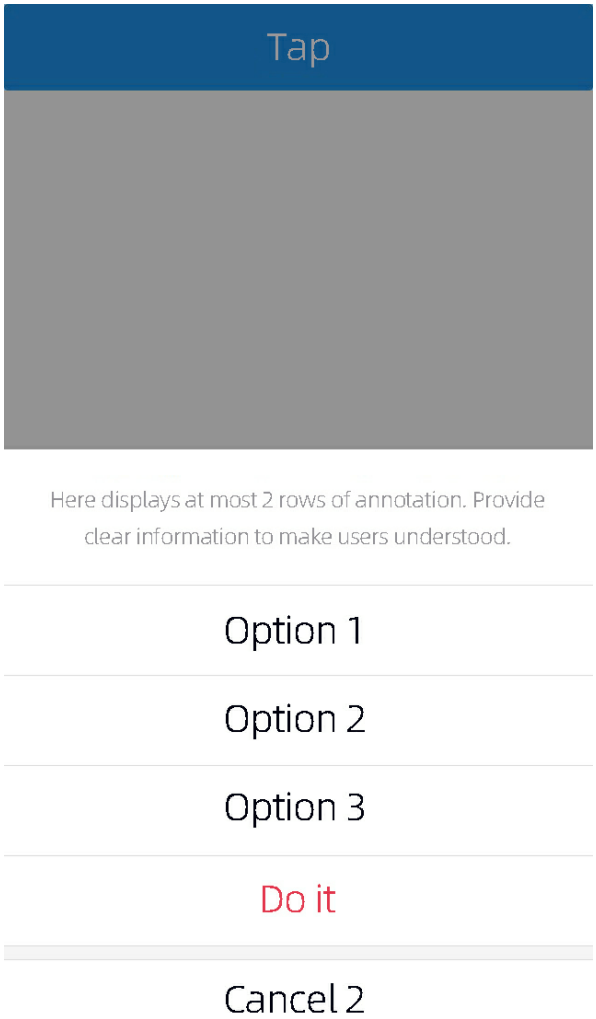
Name	Description	Function
tap	Triggered when an option is tapped. The value is -1 the mask or Cancel button is tapped.	Function(index: number): void

slots

Name	Description	Scope
label	Used for `DOM` extension of `props.items`	`{item: String}`

Demo

Sample image



Sample code

```
<template>
  <div>
    <AButton @click="show = true">Tap</AButton>
    <ActionSheet
      :show="show"
      title="Here displays at most 2 rows of annotation. Provide clear information to m
ake users understood."
      :items="['Option 1', 'Option 2', 'Option 3', 'Do it']"
      cancelButtonText="Cancel 2"
      :destructiveBtnIndex="3"
      transitionDuration="0.3s"
      @click="onClick"
    />
  </div>
</template>

<script>
  export default {
    data() {
      return {
        show: false,
      };
    },
    methods: {
      onClick(index) {
        if (index === -1) {
          this.show = false;
        }
      },
    },
  };
</script>
```

1.2.5.2. ADialog

This topic describes different methods of using the ADialog component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- API description provides API information for props, slots, and events.

To view the visual effects and code sample of the component, see Demo.

Kylin

```
<dependency component="{ ADialog }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { ADialog } from '@alipay/antui-vue';
```

API description

props

Property	Description	Type	Default value
animation	Whether to enable `transition`.	Boolean	true
type	The type of a dialog box. Valid values: `text` and `image`.	String	'text'
value	Whether to show or hide a dialog box. `v-model` is supported`.	Boolean	false
closable	Whether to display the x button.	Boolean	false
title	The title of a dialog box.	String	-
content	The content of a dialog box.	String	-
buttons	Pop-up button group that requires the array element to be `{ [key]:string, [text]:string, [disabled]: boolean }`.	Array<{ key:string, text:string, disabled:boolean }>	[]
selection	Tab dialog box used for setting the vertical distribution of buttons.	Boolean	-
preventMove	Whether to block the touchmove event of document when the pop-up/mask is displayed.	Boolean	true

slots

Name	Description	Scope
image	The area that is used to fill in images.	-
-	Default placeholder as the pop-up content. Custom `DOM` is supported if required.	-
button	Area for the button group.	`buttons`

events

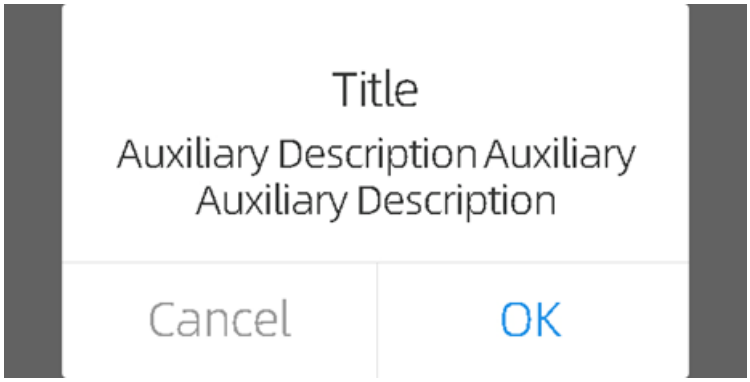
Name	Description	Function
buttonClick	Triggered when a button is tapped.	Function(event: event, buttonKey: string): void
maskClick	Triggered when a mask is tapped.	Function(event: event): void
input	Triggered when `value` is changed.	Function(value: boolean): void
show	Triggered when `value` is changed to `true`.	Function(): void
hide	Triggered when `value` is changed to `false`.	Function(): void

Demo

- Title
- Untitled text
- Title + image + content
- Single-action button: title + image + content
- Single-action button: title + content
- Unclickable button: title + content
- Tab
- Sending success

Title

Sample image

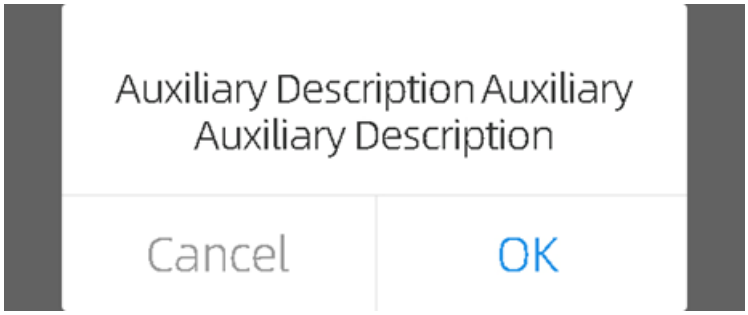


Sample code

```
<template>
  <ADialog
    title="Title"
    :value="true"
    content="Auxiliary Description Auxiliary Auxiliary Description"
    :buttons="buttons"
    @buttonClick="buttonClick"
  ></ADialog>
</template>

<script type="text/javascript">
  import Toast from '../../../lib/toast';

  export default {
    data() {
      return {
        buttons: [{
          key: 'cancel',
          text: 'Cancel',
        }, {
          key: 'ok',
          text: 'OK',
        }],
      };
    },
    methods: {
      buttonClick(evt, key) {
        Toast.show(`Clicked${key}`);
      },
    },
  };
</script>
```

Untitled text

Sample image

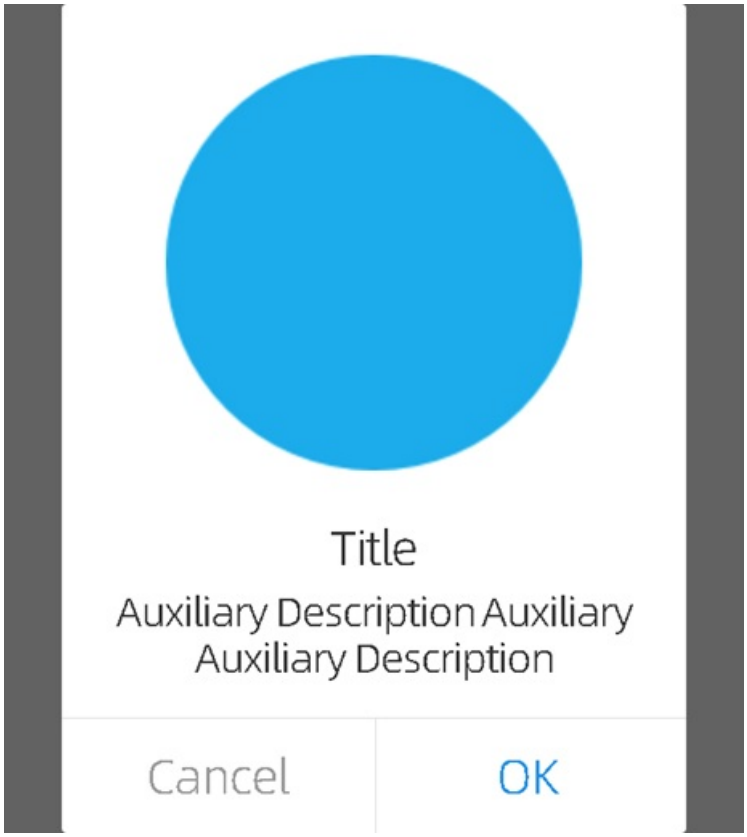


Sample code

```
<template>
  <ADialog
    :value="true"
    content="Auxiliary Description Auxiliary Auxiliary Description"
    :buttons="buttons"
    @buttonClick="buttonClick"
  ></ADialog>
</template>

<script type="text/javascript">
  import Toast from '../../../lib/toast';

  export default {
    data() {
      return {
        buttons: [{
          key: 'cancel',
          text: 'Cancel',
        }, {
          key: 'ok',
          text: 'OK',
        }],
      };
    },
    methods: {
      buttonClick(evt, key) {
        Toast.show(`Clicked${key}`);
      },
    },
  };
</script>
```

Title + image + content

Sample image

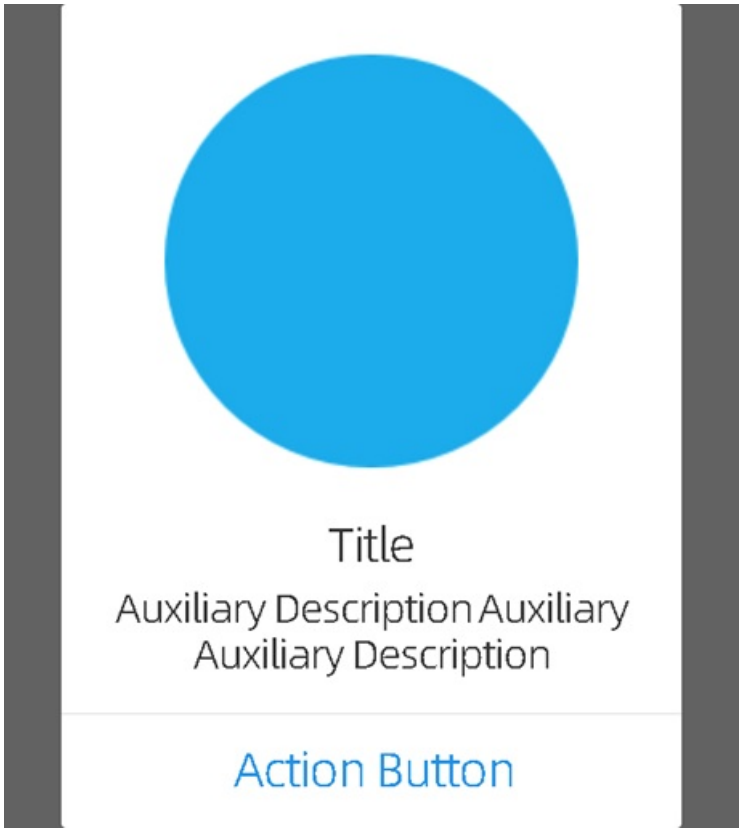

Title
Auxiliary Description Auxiliary
Auxiliary Description
Cancel
OK

Sample code

```
<template>
  <ADialog
    title="Title"
    type="image"
    :value="true"
    content="Auxiliary Description Auxiliary Auxiliary Description"
    :buttons="buttons"
    @buttonClick="buttonClick"
  >
    <img slot="image" src="https://os.alipayobjects.com/rmsportal/QnFHZkFYDZUJqBD.png"
alt="image description" />
  </ADialog>
</template>

<script type="text/javascript">
  import Toast from '../../../lib/toast';

  export default {
    data() {
      return {
        buttons: [{
          key: 'cancel',
          text: 'Cancel',
        }, {
          key: 'ok',
          text: 'OK',
        }],
      };
    },
    methods: {
      buttonClick(evt, key) {
        Toast.show(`Clicked${key}`);
      },
    },
  };
</script>
```

Single-action button: title + image + content

Sample image

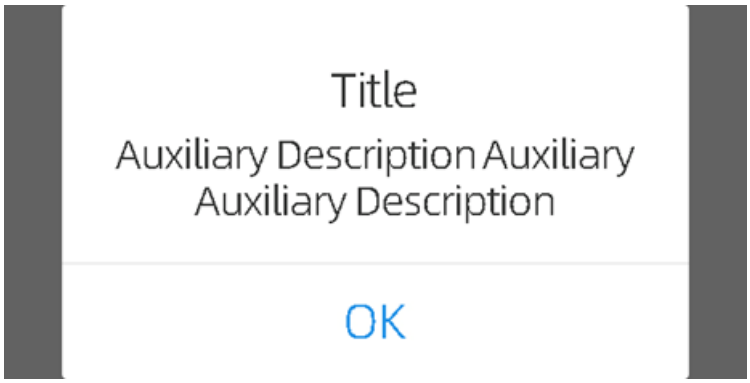

Title
Auxiliary Description Auxiliary
Auxiliary Description
Action Button

Sample code

```
<template>
  <ADialog
    title="Title"
    type="image"
    :value="true"
    content="Auxiliary Description Auxiliary Auxiliary Description"
    :buttons="buttons"
    @buttonClick="buttonClick"
  >
    <img slot="image" src="https://os.alipayobjects.com/rmsportal/QnFHZkFYDZUJqBD.png"
alt="image description" />
  </ADialog>
</template>

<script type="text/javascript">
  import Toast from '../../../lib/toast';

  export default {
    data() {
      return {
        buttons: [{
          key: 'action',
          text: 'Action Button',
        }],
      };
    },
    methods: {
      buttonClick(evt, key) {
        Toast.show(`Clicked${key}`);
      },
    },
  };
</script>
```

Single-action button: title + content

Sample image

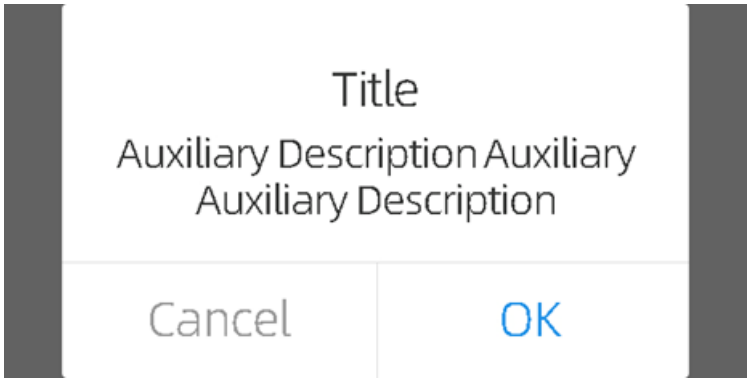


Sample code

```
<template>
  <ADialog
    title="Title"
    :value="true"
    content="Auxiliary Description Auxiliary Auxiliary Description"
    :buttons="buttons"
    @buttonClick="buttonClick"
  ></ADialog>
</template>

<script type="text/javascript">
  import Toast from '../../../lib/toast';

  export default {
    data() {
      return {
        buttons: [{
          key: 'ok',
          text: 'OK',
        }],
      };
    },
    methods: {
      buttonClick(evt, key) {
        Toast.show(`Clicked${key}`);
      },
    },
  };
</script>
```

Unclickable button: title + content

Sample image

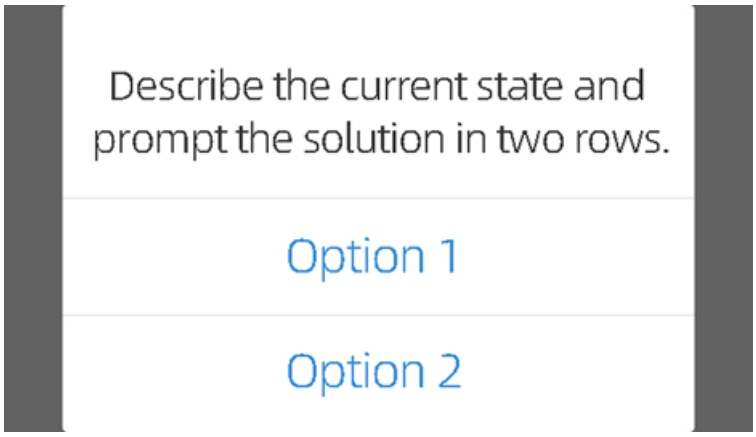


Sample code

```
<template>
  <ADialog
    title="Title"
    :value="true"
    content="Auxiliary Description Auxiliary Auxiliary Description"
    :buttons="buttons"
    @buttonClick="buttonClick"
  ></ADialog>
</template>

<script type="text/javascript">
  import Toast from '../../../lib/toast';

  export default {
    data() {
      return {
        buttons: [{
          key: 'cancel',
          text: 'Cancel',
        }, {
          key: 'ok',
          text: 'OK',
          disabled: true,
        }],
      };
    },
    methods: {
      buttonClick(evt, key) {
        Toast.show(`Clicked${key}`);
      },
    },
  };
</script>
```

Tab

Sample image

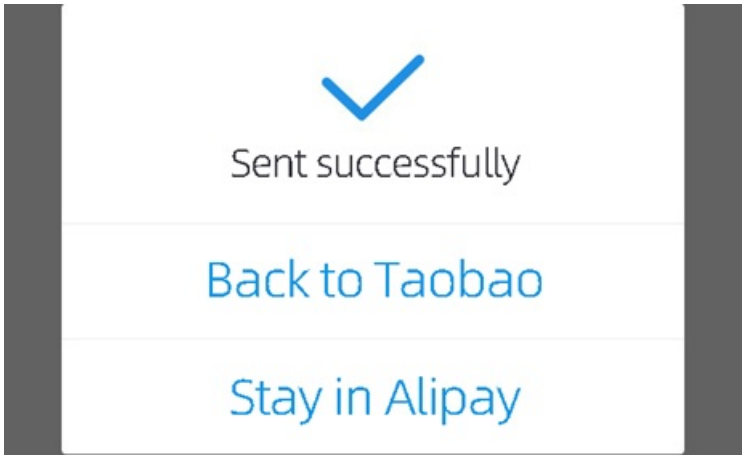


Sample code

```
<template>
  <ADialog
    :value="true"
    content="Describe the current state and prompt the solution in two rows."
    :selection="true"
    :buttons="buttons"
    @buttonClick="buttonClick"
  ></ADialog>
</template>

<script type="text/javascript">
  import Toast from '../../../lib/toast';

  export default {
    data() {
      return {
        buttons: [{
          key: 'action1',
          text: 'Option1',
        }, {
          key: 'action2',
          text: 'Option1',
        }],
      };
    },
    methods: {
      buttonClick(evt, key) {
        Toast.show(`Clicked${key}`);
      },
    },
  };
</script>
```

Sending success

Sample image



Sample code

```
<template>
  <ADialog
    :value="true"
    :selection="true"
    :buttons="buttons"
    @buttonClick="buttonClick"
  >
    <div class="am-dialog-send-img">
      <img src="https://zos.alipayobjects.com/rmsportal/hkzwYezdQOqZfseGofgP.png" width
="45px" height="29px">
    </div>
    <p class="am-dialog-brief">Sent successfully</p>
  </ADialog>
</template>

<script type="text/javascript">
  import Toast from '../../../lib/toast';

  export default {
    data() {
      return {
        buttons: [{
          key: 'taobao',
          text: 'Back to Taobao',
        }, {
          key: 'alipay',
          text: 'Stay in Alipay',
        }],
      };
    },
    methods: {
      buttonClick(evt, key) {
        Toast.show(`Clicked${key}`);
      },
    },
  };
</script>
```

1.2.5.3. Filter

This topic describes different methods of using the Filter component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- API description provides API information for props, slots, and events.

To view the visual effects and code sample of the component, see Demo.

Kylin

```
<dependency component="{ AFilter, FilterList, FilterItem }" src="@alipay/antui-vue" ></
dependency>
```

ESModule

```
import { AFilter, FilterList, FilterItem } from '@alipay/antui-vue';
```

API description

AFilter

The `type` is `dialog` (default).

props

Property	Description	Type	Default value
value	Whether to display the content.	Boolean	false
animation	Whether startup animation is enabled.	Boolean	true

slots

Name	Description	Scope
-	Default slot used to populate the content of the layout.	-

events

Name	Description	Function
input	Triggered when you tap the shadow part. The value is `false`.	Function(value: boolean): void

The `type` is `page`.

props

Property	Description	Type	Default value
value	Whether to display the content.	Boolean	false
animation	Whether startup animation is enabled.	Boolean	true

slots

Name	Description	Scope
-	Default slot used to populate the content of the layout.	-
footer	Used to change a bottom button.	-

events

Name	Description	Function
reset	Triggered when you tap the Reset button.	Function(): void
confirm	Triggered when you tap the Confirm button.	Function(): void

FilterList

props

Property	Description	Type	Default value
recommend	Recommended option.	Boolean	false
title	Option group title.	String	“”

slots

Name	Description	Scope
-	Default slot used to populate the content of the element.	-

FilterItem

Property	Description	Type	Default value
selected	Whether an option is selected. When the value of this property is null, the values of **option** and **value** are used.	Boolean, null	null

Property	Description	Type	Default value
option	Identifier of this option.	String, Number	-
value	Identifier of the currently selected option. If the value is the same as that of **option**, the option is selected. If **selected** is not `null`, the value of **selected** is used preferentially.	String, Number	-
disabled	Whether the option is disabled.	Boolean	false

slots

Name	Description	Scope
-	Default slot used to populate the content of the element.	-

events

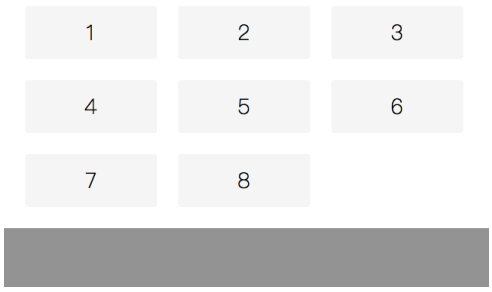
Name	Description	Function
input	Triggered when the option is selected, and not triggered when the option is disabled.	Function(option: [string, number]): void

Demo

- Filter box
- Multi-classification filter
- Full-screen filter

Filter box

Sample image

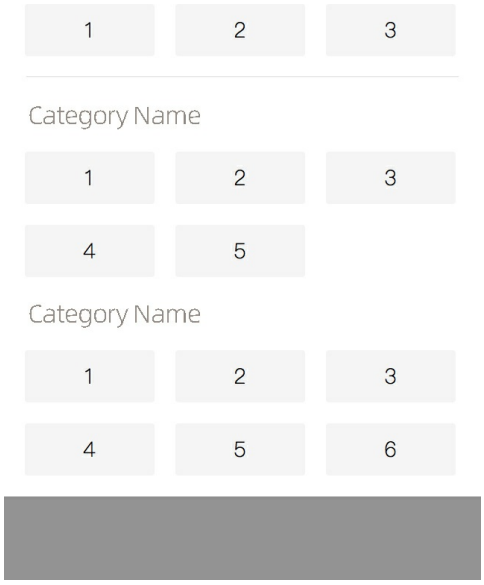


Sample code

```
<template>
  <div style="min-height: 200px;">
    <AFilter type="dialog" v-model="show">
      <FilterList>
        <FilterItem v-for="i in 8" :option="i" v-model="selected">
          {{ i }}
        </FilterItem>
      </FilterList>
    </AFilter>
    <div class="button-wrap">
      <button class="am-button white" @click="show = true">Tap to show the filter box</
button>
    </div>
  </div>
</template>

<style lang="less" scoped>
  .button-wrap {
    padding: 15px;
  }
</style>

<script>
  export default {
    data() {
      return {
        show: true,
        selected: null,
      };
    },
  };

</script>
```

Multi-classification filter

Sample image

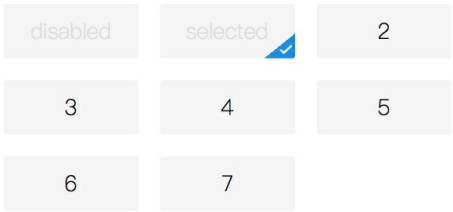


Sample code

```
<template>
  <div style="min-height: 400px;">
    <AFilter v-model="show">
      <FilterList recommend>
        <FilterItem v-for="i in 3" :option="'recommend-' + i" v-model="selected">
          {{ i }}
        </FilterItem>
      </FilterList>
      <FilterList title="Category Name">
        <FilterItem v-for="i in 5" :option="'a-' + i" v-model="selected">
          {{ i }}
        </FilterItem>
      </FilterList>
      <FilterList title="Category Name">
        <FilterItem v-for="i in 6" :option="'b-' + i" v-model="selected">
          {{ i }}
        </FilterItem>
      </FilterList>
    </AFilter>
    <div class="button-wrap">
      <button class="am-button white" @click="show = true">Tap to show the filter box</
button>
    </div>
  </div>
</template>

<style lang="less" scoped>
  .button-wrap {
    padding: 15px;
  }
</style>

<script>
  export default {
    data() {
      return {
        show: false,
        selected: null,
      };
    },
  };

</script>
```

Full-screen filter

Sample image



Sample code

```
<template>
  <div>
    <div class="button-wrap">
      <button class="am-button white" @click="show = true">Tap to show the filter box</
button>
    </div>
    <AFilter type="page" v-model="show">
      <FilterList>
        <FilterItem option="disabled" :selected="!!~selected.indexOf('disabled')"
@input="onSelect" disabled>
          disabled
        </FilterItem>
        <FilterItem option="selected" :selected="!!~selected.indexOf('selected')"
@input="onSelect" disabled selected>
          selected
        </FilterItem>
        <FilterItem v-for="i in 6" :option="i" :selected="!!~selected.indexOf(i)"
@input="onSelect">
          {{ i + 1 }}
        </FilterItem>
      </FilterList>
    </AFilter>
  </div>
</template>

<style lang="less" scoped>
  .button-wrap {
    padding: 15px;
  }
</style>


<script>
  export default {
    data() {
      return {
        selected: [],
        show: true
      };
    },
    methods: {
      onSelect(v) {
        if (~this.selected.indexOf(v)) {
          this.selected = this.selected.filter(i => i !== v);
        } else {
          this.selected.push(v);
        }
      },
    },
  };

</script>
```

1.2.5.4. Toast

This topic describes different methods of using the Toast component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- Use Service imperative call. Service documentation provides details about static methods and show options.
- API description provides API information for props, slots, events, and methods.

To view the visual effects and code sample of the component, see Demo.

Kylin

```
<dependency component="{ Toast }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { Toast } from '@alipay/antui-vue';
```

Service imperative call

You can directly use `Toast.show ('Display content ');` to call a command, instead of writing the command in a template. The `DOM` will be automatically inserted into `document.body` .

```
Toast.show({
  type: 'text',
  text: 'Displayed message'
});
```

Service documentation

static methods

`Toast` provides the following static methods.

Name	Description	Function
show	Creates and displays a `Toast` instance with the following parameters. You can also directly input a character string as the `text` .	Function(option: Object | string): vm
closeAll	Closes all currently non-closed `Toast` instances.	Function(void): void

show options

The following parameters are accepted for creating an instance.

Property	Description	Type	Default value
type	Toast type. Value options include `text`, `loading`, `warn`, `success`, `network`, and `fail`.	String	'text'
text	Pure character string text.	String	-
duration	Automatically hides and destructs an instance upon timeout.	Number	3000
zIndex	Specifies the `zIndex` value of the elastic layer.	Number	9999

instance methods

The `Toast.show` method returns a `vm` instance and exposes the following method.

Name	Description	Function
hide	Proactively hides and destructs the instance within the `duration`.	Function(void): void

API description

props

Property	Description	Type	Default value
type	Toast type. Value options include `text`, `loading`, `warn`, `success`, `network`, and `fail`.	String	'text'
value	Displayed or hidden state of the Toast. `v-model` is supported for triggering scheduled hiding.	Boolean	false
duration	Upon timeout, `$emit('input',false)` is automatically triggered. If the value 0, `$emit('input',false)` will not be triggered.	Number	3000

Property	Description	Type	Default value
text	Pure character string text. Use `slot` if `DOM` is required`.	String	-
onClose	Triggered when the Toast is hidden.	Function	-
multiline	When the value is true, the default pattern supports multi-line text.	Boolean	false

slots

Name	Description	Scope
-	Default placeholder and content, with custom `DOM` supported`.	-

events

Name	Description	Function
input	Adaptive to `v-model`.	Function(newValue: boolean): void

methods

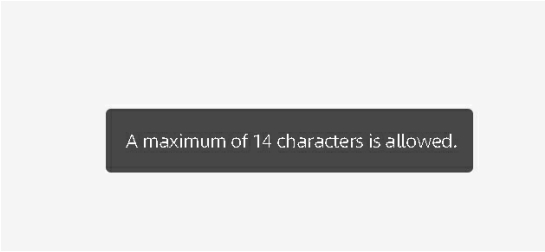
Name	Description	Function
hide	Actively hides the current Toast.	Function(void): void

Demo

- Text
- Loading
- Warning
- Success

Text

Sample image

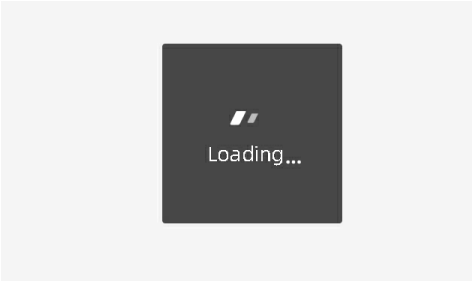


Sample code

```
<template>

  <div style="padding: 10px;">
    <AButton @click="trigger">{{show?'Close':'Show'}}Toast</AButton>
    <Toast v-model="show">A maximum of 14 characters is allowed.</Toast>
  </div>

</template>

<script>
  import { Toast, AButton } from "@alipay/antui-vue";
  export default {
    data() {
      return { show: true };
    },
    methods: {
      trigger() {
        this.show = !this.show;
      },
    },
   components: {
      Toast,
      AButton,
   },
  };
</script>
```

Loading

Sample image



Sample code

```
<template>

  <div style="padding: 10px;">
    <AButton @click="trigger">{{show?'Close':'Show'}}Toast</AButton>
    <Toast type="loading" v-model="show">Loading...</Toast>
  </div>

</template>

<script>
  import { Toast, AButton } from "@alipay/antui-vue";
  export default {
    data() {
      return { show: true };
    },
    methods: {
      trigger() {
        this.show = !this.show;
      },
    },
   components: {
      Toast,
      AButton,
   },
  };
</script>
```

Warning

Sample image

Sample code

```
<template>

  <div style="padding: 10px;">
    <AButton @click="trigger">{{show?'Close':'Show'}}Toast</AButton>
    <Toast type="warn" v-model="show">Warning</Toast>
  </div>

</template>

<script>
  import { Toast, AButton } from "@alipay/antui-vue";
  export default {
    data() {
      return { show: true };
    },
    methods: {
      trigger() {
        this.show = !this.show;
      },
    },
   components: {
      Toast,
      AButton,
   },
  };
</script>
```

Success

Sample image

Sample code

```
<template>

  <div style="padding: 10px;">
    <AButton @click="trigger">{{show?'Close':'Show'}}Toast</AButton>
    <Toast type="success" v-model="show">Successful</Toast>
  </div>

</template>

<script>
  import { Toast, AButton } from "@alipay/antui-vue";
  export default {
    data() {
      return { show: true };
    },
    methods: {
      trigger() {
        this.show = !this.show;
      },
    },
   components: {
      Toast,
      AButton,
   },
  };
</script>
```

1.2.6. Entry component

1.2.6.1. List

This topic describes different methods of using the List component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- API description provides API information for props, slots, and events.

To view the visual effects and code sample of the component, see Demo.

List items are in a complex structure, comprising single-line or multi-line text lists, forms, verification codes, and form elements such as checkbox, radio, and switch. Functions are divided by using `List`, `ListCell`, and `ListItem`.

- `List`: A list packet, equivalent to `am-list`. For details about the supported types, see API description.
- `ListItem`: A one-line list item, which can be used in ordinary list layout. For details about the supported types, see API description.
- `Listcell`: Various blocks in a list item, which can be used in a complex layout through flexible combination. For details about the supported types, see API description.

Kylin

```
<dependency component="{ List, ListItem, ListCell }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { List, ListItem, ListCell } from '@alipay/antui-vue';
```

API description

List

props

Property	Description	Type	Default value
type	The type of the list. Valid values: `"form"`, `"twoline"`, `"twoline-text"`, `"twoline-side"`, `"moreline"`, `"ptext"`, `"users"`, `"users-sm"`, `"users-lg"`, `"bank"`, `"info"`, and `"delete"`.	String	-

slots

Name	Description	Scope
header	Used to fill the list header. `ListCell` is recommended,	-
footer	Used to fill the list footer. `ListCell` is recommended.	-

ListCell

props

Property	Description	Type	Default value
type	The type of a list element. Valid values: `"content"`, `"brief"`, `"extra"`, `"arrow"`, `"thumb"`, `"title"`, `"brief"`, `"sti"`, `"header"`, `"footer"`, and `"header-sp"`.	String	“content”

Property	Description	Type	Default value
noFlex	Whether to remove the flex for the current cell.	Boolean	false
noEllips	Whether the single-line style is not required for the content in a cell.	Boolean	false
alignTop	Whether the content in a cell is aligned to the top.	Boolean	false
twoColumn	Display the content in a cell in two columns.	Boolean	false
title	Inject the `ListCell [type = title]` node to enter the text.	String	-
brief	Inject the `ListCell[type=brief]` node to enter the text.	String	-
titleEllips	Whether to enable `am-ft-ellipsis` for the `title` injection node.	Boolean	false
briefEllips	Whether to enable `am-ft-ellipsis` for the `brief` injection node.	Boolean	false

slots

Name	Description	Scope
-	Used for filling in the child node.	-

events

Name	Description	Function
click	Triggered upon a tap operation.	Function(event: event): void

ListItem

props

Property	Description	Type	Default value
type	The type of list lines. Valid values: `""` , `"twoline"` , `"moreline"` , `"check"` , `"radio"` , `"more"` , `"part"` , `"delete"`	String	“”
arrow	Whether to display the right arrow. It is enabled by default if the `href` attribute is configured (`href` is unavailable when arrow=true).	Boolean	false
href	Whether to enable page redirection upon tapping. If it is set, the `A` label is added to `DOM` , otherwise the `DIV` label is added.	String	-
content	This short term can be used by default when only `ListCell[type=content]` is filled in a placeholder.	String	-
extra	Placeholder text on the right side	String	-
reddot	Display red dots in the extra part on the right side.	Boolean	-
deletable	Whether to display the Delete button on the left side of a list.	Boolean	-
contentNoFlex	Automatically add the `ListCell[noFlex]` attribute for `content` .	Boolean	false
extraNoFlex	Automatically add the `ListCell[noFlex]` attribute for `extra` .	Boolean	false
contentNoEllips	Automatically add the `ListCell[noEllips]` attribute for `content` .	Boolean	false

Property	Description	Type	Default value
extraNoEllips	Automatically add the `ListCell[noEllips]` attribute for `extra`.	Boolean	false
cancelText	Display the `Cancel` text when [type=delete].	String	“Cancel”
deleteText	Display the `Delete` text when [type=delete].	String	“Delete”
indentLine	The indentation of an underscore. Valid values: “”, “thumb”, “twoline”.	String	“”

slots

Name	Description	Scope
thumb	The placeholder for the thumbnail on the left side.	-
-	Default placeholder. To quickly fill the `ListCell[type=content]` node, you can directly use the `content` attribute.	-
extra	If string text is not enough for the placeholder on the right side, you can use the `DOM` node instead.	-

events

Name	Description	Function
click	Triggered upon a tap operation.	Function(event: event): void
cancel	Tap it to cancel when [type=delete].	Function(): void
delete	Tap it to delete when [type=delete].	Function(): void

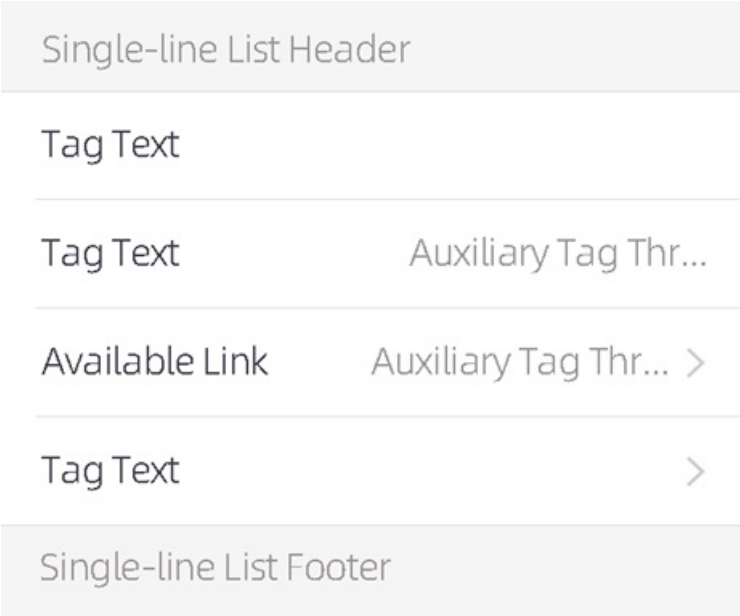
Demo

- List header and footer

- Single-line text list
- Extra-long cell
- Two-line plain text
- Image-text information
- Information list
- Left-right lines

List header and footer

Sample image

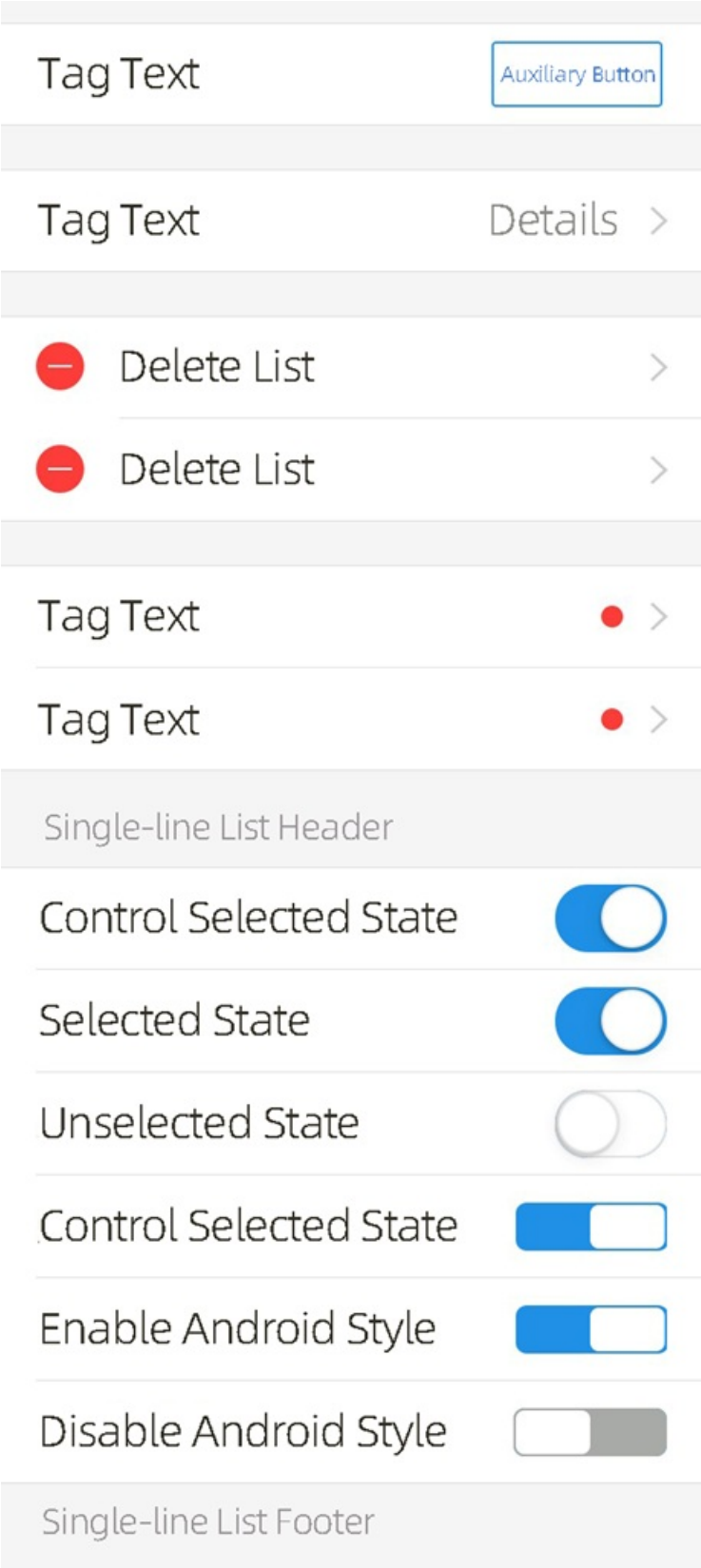


Sample code

```
<template>
  <List>
    <ListCell type="header" slot="header">Single-line list header</ListCell>
    <ListItem content="Tag"></ListItem>
    <ListItem content="Tag" extra="Auxiliary Tag three four five six seven eight nine t
en"></ListItem>
    <ListItem content="Available link" extra="Auxiliary Tag three four five six seven e
ight nine ten" href="#" arrow></ListItem>
    <ListItem content="Tag" arrow></ListItem>
    <ListCell type="footer" slot="footer">Single-line list footer</ListCell>
  </List>

</template>
```

Single-line text list

Sample image



Sample code

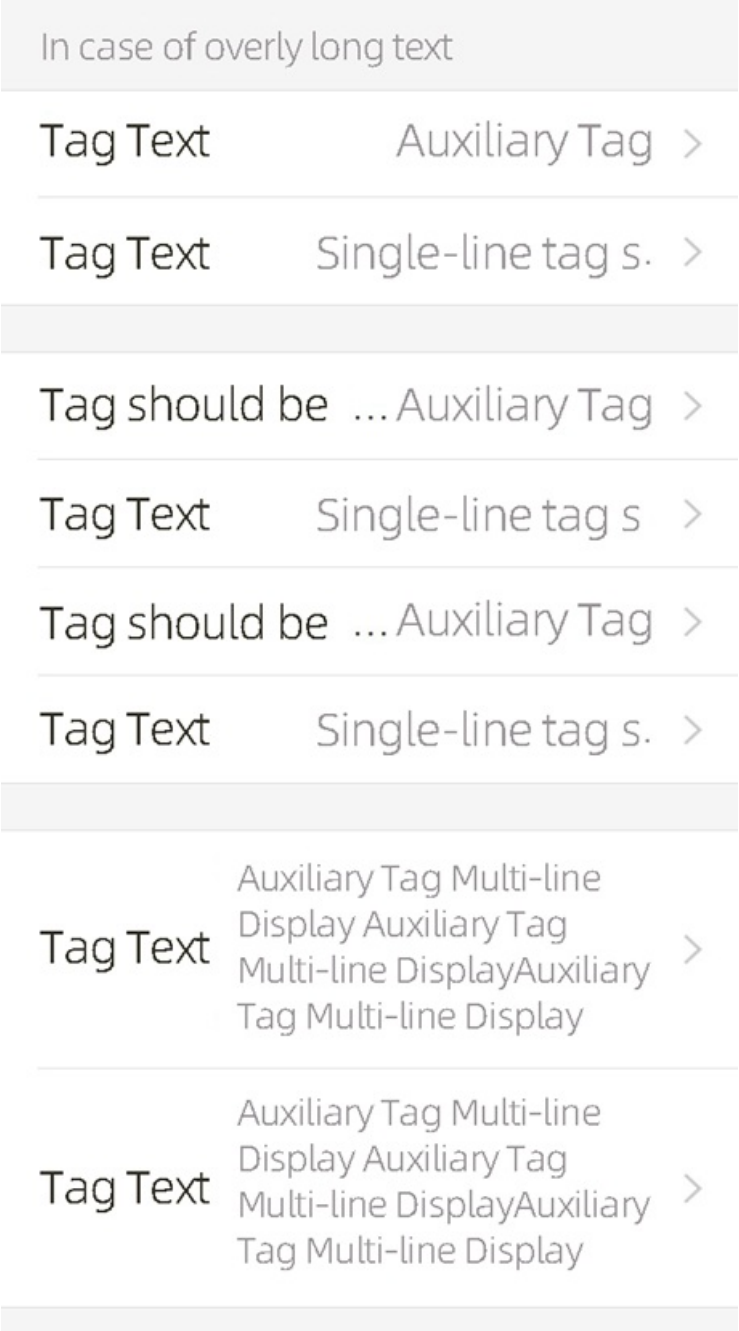
```
<template>

  <div>
```

```
    <List>
      <ListItem content="Tag">
        <AButton slot="extra" size="tiny" type="white">Auxiliary button</AButton>
      </ListItem>
    </List>

    <List>
      <ListItem content="Tag" extra="Details" arrow></ListItem>
    </List>

    <List>
      <ListItem deletable content="Delete list" arrow></ListItem>
      <ListItem deletable content="Delete list" arrow></ListItem>
    </List>

    <List>
      <ListItem content="Tag" reddot arrow></ListItem>
      <ListItem content="Tag" reddot arrow></ListItem>
    </List>

    <List>
      <ListCell type="header" slot="header">Single-line list header</ListCell>
      <ListItem content="Control selected state">
        <ASwitch slot="extra" v-model="ctrl"></ASwitch>
      </ListItem>
      <ListItem content="Selected state">
        <ASwitch slot="extra" :value="true"></ASwitch>
      </ListItem>
      <ListItem content="Unselected state">
        <ASwitch slot="extra" :value="false"></ASwitch>
      </ListItem>
      <ListItem content="Control selected tate">
        <ASwitch platform="android" slot="extra" v-model="ctrl"></ASwitch>
      </ListItem>
      <ListItem content="Enable Android Style
">
        <ASwitch platform="android" slot="extra" :value="true"></ASwitch>
      </ListItem>
      <ListItem content="Disable Android Style">
        <ASwitch platform="android" slot="extra" :value="false"></ASwitch>
      </ListItem>
      <ListCell type="footer" slot="footer">Single-line list footer</ListCell>
    </List>

  </div>

</template>

<script>
  export default {
    data() {
      return {
        ctrl: true
      };
```

```
    }
  };
</script>
```

Extra-long cell

Sample image

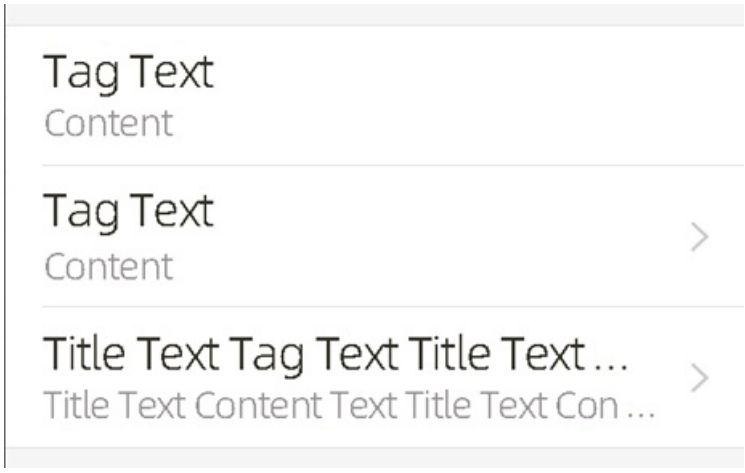


Sample code

```
<template>

  <div>

    <List>
      <ListCell type="header" slot="header">In case of overly long text</ListCell>
      <ListItem content="Tag" extra="Auxiliary Tag" arrow></ListItem>
      <ListItem content="Tag" extra="Auxiliary tag single-line ellipsis display" arrow>
</ListItem>
    </List>

    <List>
      <ListItem content="The content of tag texts is displayed on the right"
extra="Auxiliary Tag" extra-no-flex arrow></ListItem>
      <ListItem content="Tag" content-no-flex extra="The content of auxiliary tags is d
isplayed on the left" arrow></ListItem>

      <ListItem content="The content of tag texts is displayed on the right" arrow>
        <ListCell slot="extra" type="extra" no-flex>Auxiliary Tag</ListCell>
      </ListItem>
      <ListItem extra="The content of auxiliary tags is displayed on the left" arrow>
        <ListCell type="content" no-flex>Tag</ListCell>
      </ListItem>
    </List>

    <List>
      <ListItem
        content="Tag" content-no-flex
        extra="Auxiliary Tag Multi-line DisplayMulti-line DisplayMulti-line
DisplayMulti-line DisplayMulti-line DisplayMulti-line DisplayMulti-line DisplayMulti-li
ne DisplayMulti-line Display" extra-no-ellips
        arrow
      ></ListItem>

      <ListItem arrow>
        <ListCell type="content" no-flex>Tag</ListCell>
        <ListCell slot="extra" type="extra" no-ellips>Auxiliary Tag Multi-line
DisplayMulti-line DisplayMulti-line DisplayMulti-line DisplayMulti-line DisplayMulti-li
ne DisplayMulti-line DisplayMulti-line DisplayMulti-line Display</ListCell>
      </ListItem>

    </List>

  </div>

</template>
```

Two-line plain text

Sample image



Sample code

```
<template>

  <List type="twoline-text">
    <ListItem >
      <ListCell type="content" title="Tag" brief="Content" ></ListCell>
    </ListItem>
    <ListItem arrow>
      <ListCell type="content" title="Tag" brief="Content" ></ListCell>
    </ListItem>
    <ListItem arrow>
      <ListCell
        type="content"
        title="Title Tag Title Tag Title" title-ellips
        brief="Title Content Title Content Title" brief-ellips
      ></ListCell>
    </ListItem>
  </List>

</template>
```

Image-text information

Sample image

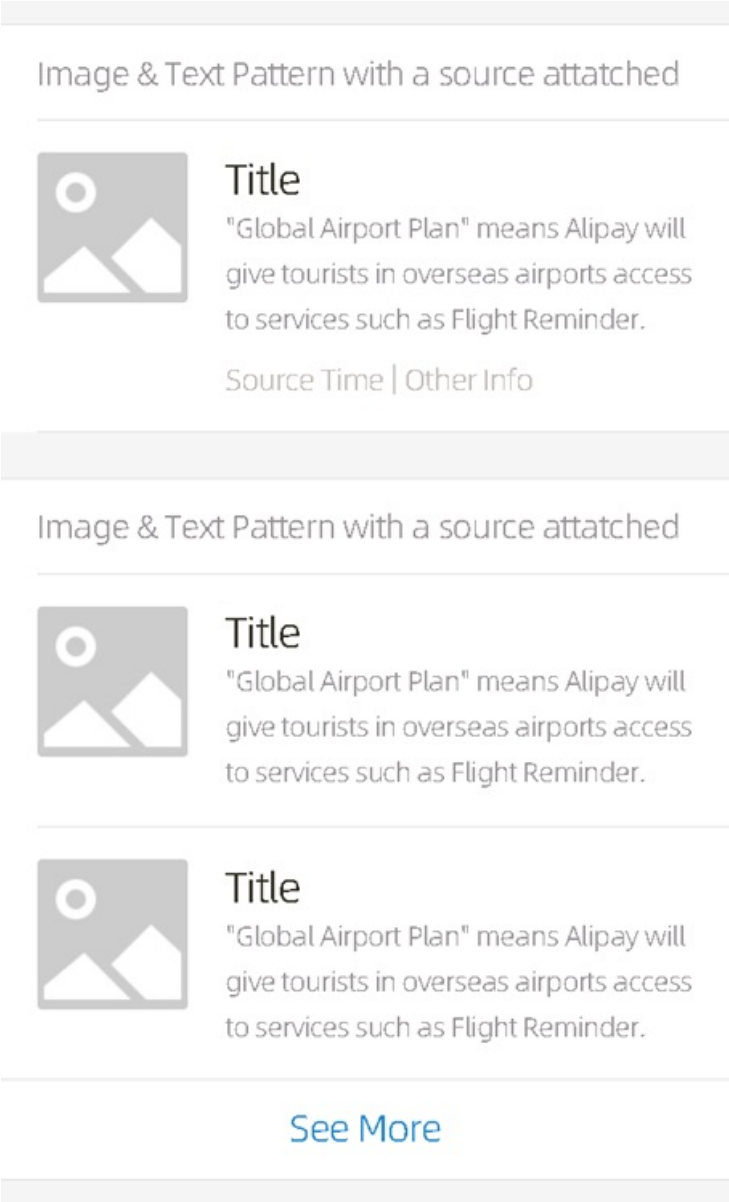


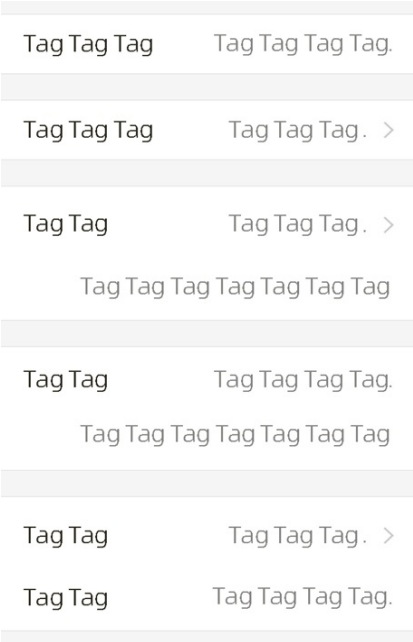
Image & Text Pattern with a source attatched
Title
"Global Airport Plan" means Alipay will give tourists in overseas airports access to services such as Flight Reminder.
Source Time | Other Info
Image & Text Pattern with a source attatched
Title
"Global Airport Plan" means Alipay will give tourists in overseas airports access to services such as Flight Reminder.
Title
"Global Airport Plan" means Alipay will give tourists in overseas airports access to services such as Flight Reminder.
See More

Sample code

```
<template>
  <div>
    <List type="ptext">
      <ListCell type="header-sp" slot="header">Image & Text Pattern with a source attat
ched</ListCell>
      <ListItem content="Tag" >
        <ListCell type="thumb" slot="thumb"
src="https://os.alipayobjects.com/rmsportal/OhSzVdRBnfwiuCK.png"/>
        <ListCell
          title="Title"
          brief="""Global Airport Plan" means Alipay will give tourists in overseas
airports access to services such as Flight Reminder."
        >
          <ListCell type="sti" slot="after">
            <span>Source Time | Other Info</span>
          </ListCell>
        </ListCell>
      </ListItem>
    </List>

    <List type="ptext">
      <ListCell type="header-sp" slot="header">Image & Text Pattern with a source attat
ched</ListCell>
      <ListItem content="Tag" >
        <ListCell type="thumb" slot="thumb"
src="https://os.alipayobjects.com/rmsportal/OhSzVdRBnfwiuCK.png"/>
        <ListCell
          title="Title"
          brief="""Global Airport Plan" means Alipay will give tourists in overseas
airports access to services such as Flight Reminder."
        />
      </ListItem>
      <ListItem content="Tag" >
        <ListCell type="thumb" slot="thumb"
src="https://os.alipayobjects.com/rmsportal/OhSzVdRBnfwiuCK.png"/>
        <ListCell
          title="Title"
          brief="""Global Airport Plan" means Alipay will give tourists in overseas
airports access to services such as Flight Reminder."
        />
      </ListItem>
      <ListItem type="more" slot="footer">See More</ListCell>
    </List>
  </div>

</template>
```

Information list

Sample image

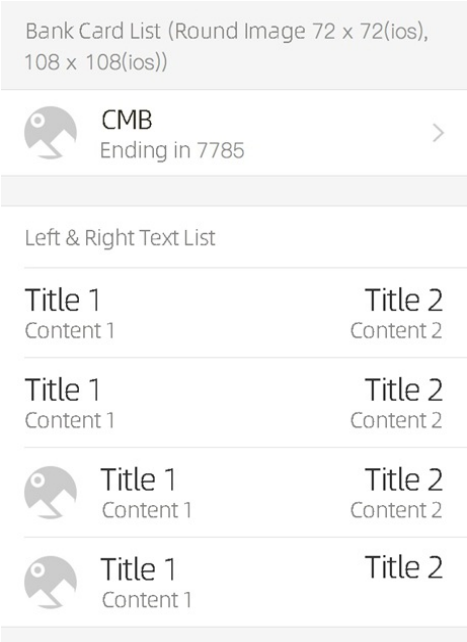

Tag Tag Tag
Tag Tag Tag Tag.
Tag Tag Tag
Tag Tag Tag.
Tag Tag
Tag Tag Tag.
Tag Tag Tag Tag Tag Tag Tag
Tag Tag
Tag Tag Tag Tag.
Tag Tag Tag Tag Tag Tag Tag
Tag Tag
Tag Tag Tag.
Tag Tag
Tag Tag Tag Tag.

Sample code

```
<template>
  <div>

    <List type="info" >
      <ListItem type="oneline" content="TagTag" extra="Tag Tag Tag Tag" />
    </List>

    <List type="info" >
      <ListItem type="oneline" content="TagTag" extra="Tag Tag Tag Tag" arrow/>
    </List>

    <List type="info">
      <ListItem type="more">
        <ListItem type="part" content="Tag" extra="Tag Tag Tag Tag" arrow/>
        <ListItem type="part" :content="false" extra="Tag Tag Tag Tag"/>
      </ListItem>
    </List>

    <List type="info">
      <ListItem>
        <ListItem type="part" content="Tag" extra="Tag Tag Tag Tag" />
        <ListItem type="part" :content="false" extra="Tag Tag Tag Tag"/>
      </ListItem>
    </List>

    <List type="info">
      <ListItem type="more">
        <ListItem type="part" content="Tag" extra="Tag Tag Tag Tag" arrow/>
        <ListItem type="part" content="Tag" extra="Tag Tag Tag Tag"/>
      </ListItem>
    </List>
  </div>

</template>
```

Left-right lines

Sample image


Bank Card List (Round Image 72 x 72(ios), 108 x 108(ios))
CMB
Ending in 7785
Left & Right Text List
Title 1
Content 1
Title 2
Content 2
Title 1
Content 1
Title 2
Content 2
Title 1
Content 1
Title 2
Content 2
Title 1
Content 1
Title 2

Sample code

```
<template>
  <div>

    <List type="bank" >
      <ListCell type="header" slot="header">Bank Card List(Round Image 72 x 72(ios), 10
8 x 108(ios))</ListCell>
      <ListItem arrow>
        <ListCell type="thumb"
src="https://os.alipayobjects.com/rmsportal/OhSzVdRBnfwiuCK.png" slot="thumb"/>
        <ListCell title="CMB" brief="Ending in 7785"/>
      </ListItem>
    </List>

    <List type="twoline-side" >
      <ListCell type="header-sp" slot="header">Left & Right text list</ListCell>
      <ListItem >
        <ListCell title="Title 1" brief="Content 1" />
        <ListCell type="extra" title="Title 2" brief="Content 2" slot="extra"/>
      </ListItem>
      <ListItem >
        <ListCell title="Title 1" brief="Content 1" />
        <ListCell type="extra" title="Title 2" brief="Content 2" slot="extra"/>
      </ListItem>

      <ListItem >
        <ListCell type="thumb"
src="https://os.alipayobjects.com/rmsportal/OhSzVdRBnfwiuCK.png" />
        <ListCell title="Title 1" brief="Content 1" />
        <ListCell type="extra" title="Title 2" brief="Content 2" slot="extra"/>
      </ListItem>
      <ListItem >
        <ListCell type="thumb"
src="https://os.alipayobjects.com/rmsportal/OhSzVdRBnfwiuCK.png" />
        <ListCell title="Title 1" brief="Content 1" />
        <ListCell type="extra" title="Title 2" slot="extra"/>
      </ListItem>

    </List>

  </div>

</template>
```

1.2.7. Input component

1.2.7.1. Checkbox

This topic describes different methods of using the Checkbox component and the API descriptions:

- Use this component in the Kylin project.

- Use this component in other projects. Import it through ESModule.
- API description provides API information for props, slots, and events.

Kylin

```
<dependency component="{ ListItemCheckbox }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { ListItemCheckbox } from '@alipay/antui-vue';
```

API description

props

Property	Description	Type	Default value
type	The type of a checkbox. Valid values: `checkbox`, `radio`, and `agreement`.	String	`checkbox`
value	Return the selected `tag` field for the `radio` box, and return `true/false` for `checkbox/agreement`.	String, Boolean	-
tag	Provide different options for the `radio` box under the same `name`.	String	-
label	The label of a checkbox. To customize `DOM`, you can use `slot[name=label]`.	String	-
id	The `id` attribute of the input.	String	-
Name	The `name` attribute of the input.	String	-

Property	Description	Type	Default value
disabled	Whether to disable a checkbox.	Boolean	`false`
brief	Used for an auxiliary label, which is unavailable for the `agreement` type.	String	-
thumb	Display the URL of an image, which is unavailable for the `agreement` type.	String	-
thumbAlt	The `alt` attribute of an image, which is unavailable for the `agreement` type.	String	-

slots

Name	Description	Scope
label	Used to extend `props.label` from a string to a `DOM` node. To customize `label`, you need to fill the `label[for]` field with `props.id`.	`{id:String}`

events

Name	Description	Function
input	Adapt to `v-model`. If the type is `radio`, return the string of the selected `tag`, otherwise return a Boolean value indicating whether the tag is selected.	Function(value: [string(radio), boolean(other types)]): void

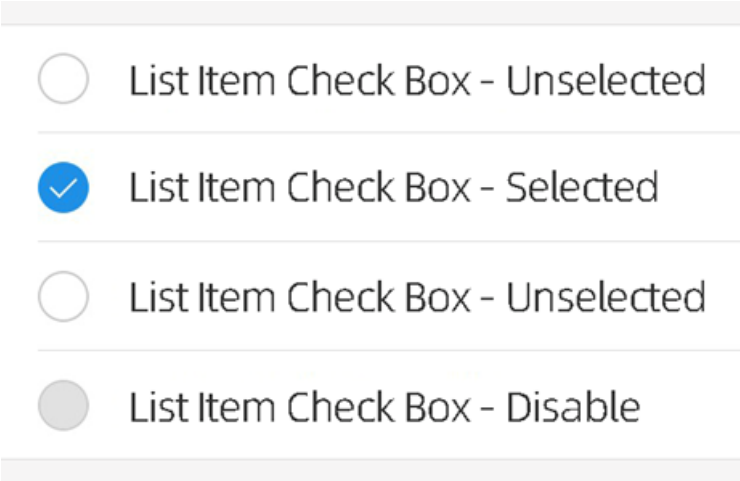
Demo

- Checkbox
- Radio button
- Agreement checkbox

Checkbox

Checkbox without image

Sample image

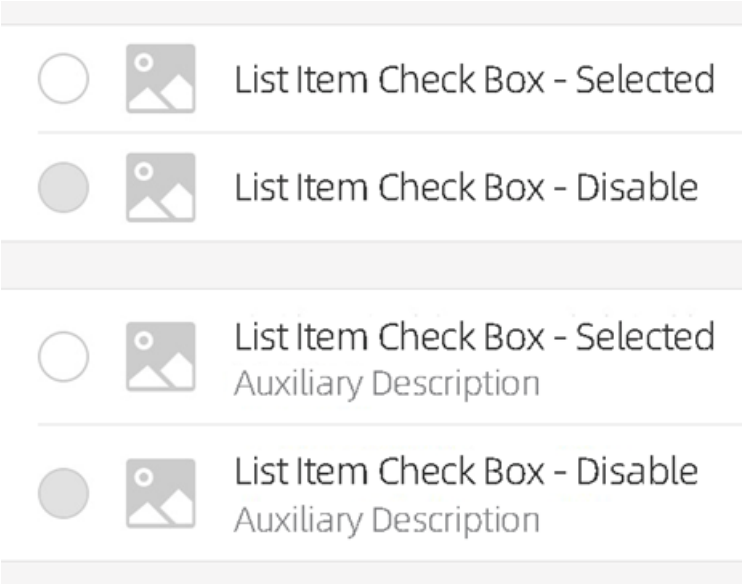


Sample code

```
<template>
  <List>
    <ListItemCheckbox
      id="test1"
      label="List Item Check Box--Unselected"
      v-model="c1"
    />
    <ListItemCheckbox
      id="test2"
      label="List Item Check Box--Selected"
      v-model="c2"
    />
    <ListItemCheckbox
      id="test3"
      label="List Item Check Box--Unselected"
      v-model="c3"
    />
    <ListItemCheckbox id="test4" label="List Item Check Box--Disable" disabled />
  </List>
</template>

<script>
  export default {
    data() {
      return {
        c1: false,
        c2: true,
        c3: false,
      };
    },
  };
</script>
```

Checkbox with image

Sample image

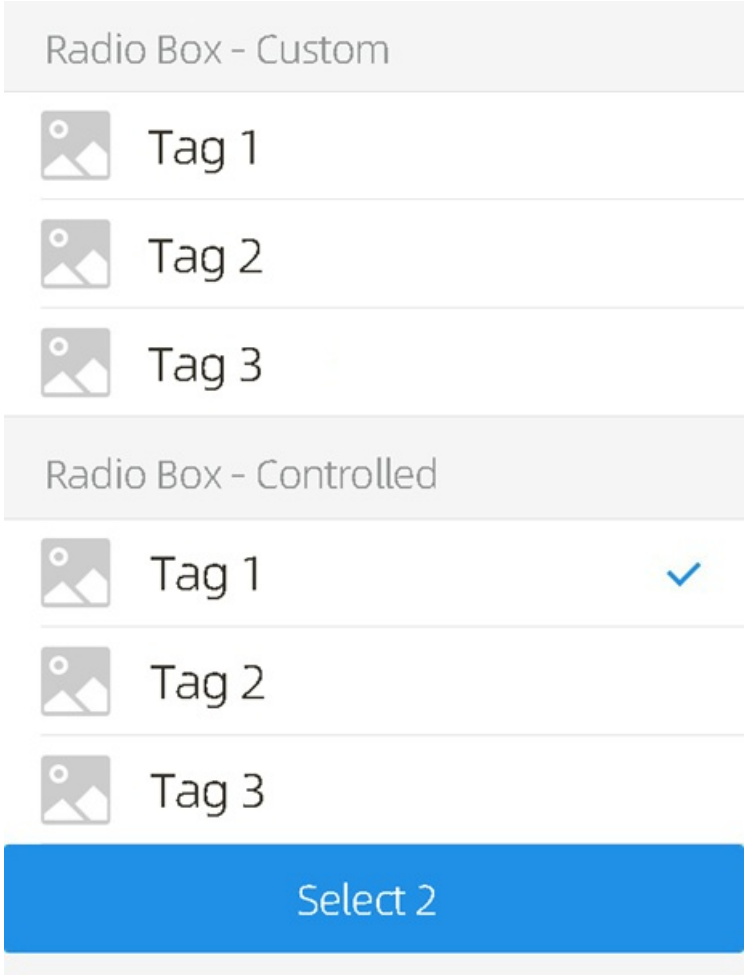

List Item Check Box - Selected
List Item Check Box - Disable
List Item Check Box - Selected
Auxiliary Description
List Item Check Box - Disable
Auxiliary Description

Sample code

```
<template>
  <div>
    <List>
      <ListItemCheckbox
        id="test1"
        label="List Item Check Box--Selected"
        thumb="https://os.alipayobjects.com/rmsportal/OhSzVdRBnfwiuCK.png"
        thumbAlt="Picture description"
      />
      <ListItemCheckbox
        id="test2"
        label="List Item Check Box--Disable"
        thumb="https://os.alipayobjects.com/rmsportal/OhSzVdRBnfwiuCK.png"
        thumbAlt="Picture description"
        disabled
      />
    </List>
    <List class="towline">
      <ListItemCheckbox
        id="test3"
        label="List Item Check Box--Selected"
        brief="Auxiliary description"
        thumb="https://os.alipayobjects.com/rmsportal/OhSzVdRBnfwiuCK.png"
        thumbAlt="Picture description"
      />
      <ListItemCheckbox
        id="test4"
        label="List Item Check Box--Disable"
        brief="Auxiliary description"
        thumb="https://os.alipayobjects.com/rmsportal/OhSzVdRBnfwiuCK.png"
        thumbAlt="Picture description"
        disabled
      />
    </List>
  </div>
</template>
```

Radio button

Sample image


Radio Box - Custom
Tag 1
Tag 2
Tag 3
Radio Box - Controlled
Tag 1
Tag 2
Tag 3
Select 2

Sample code

```
<template>
  <div>
    <List>
      <ListCell type="header" slot="header">Radio Box-Custom</ListCell>
      <ListItemCheckbox
        :id="'test'+i"
        type="radio"
        thumb="https://os.alipayobjects.com/rmsportal/OhSzVdRBnfwiuCK.png"
        v-for="i in 3"
        :label="'lable'+i"
        :tag="i + ''"
        name="demo"
        @input="onChange"
      />
    </List>
    <List>
      <ListCell type="header" slot="header">Radio Box-Controlled</ListCell>
      <ListItemCheckbox
        :id="'test'+i"
        type="radio"
        thumb="https://os.alipayobjects.com/rmsportal/OhSzVdRBnfwiuCK.png"
        v-for="i in 3"
        :label="'lable'+i"
        :tag="i + ''"
        name="demo2"
        v-model="checked"
      />
      <AButton @click="checked = '2'">
        choice 2
      </AButton>
    </List>
  </div>
</template>

<script>
  export default {
    data() {
      return {
        checked: '1',
      };
    },
    methods: {
      onChange(v) {
        console.log(v);
      },
    },
  };
</script>
```

Agreement checkbox

Sample image

Sample code

```
<template>
  <List>
    <ListItemCheckbox
      type="agreement"
      id="agree"
      label
      v-model="checked"
    >
      <template slot="label">
        <label class="am-ft-md" for="agree">Agree</label>
        <a href="#">《Credit Payment Service Agreement》</a>
      </template>
    </ListItemCheckbox>
    <ListItemCheckbox
      id="test2"
      type="agreement"
      label="List Item Check Box--Disable"
      disabled
    />
  </List>
</template>

<script>
  export default {
    data() {
      return {
        checked: false,
      };
    },
  };
</script>
```

1.2.7.2. Input

This topic describes different methods of using the Input component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- API description provides API information for props, slots, and events.

> **Note**
> This component is generally used with `List [type = 'form']` .

Kylin

```
<dependency component="{ ListItemInput }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { ListItemInput } from '@alipay/antui-vue';
```

API description

props

Property	Description	Type	Default value
value	The value of an input box, which can be bound to `v-model`.	String	-
label	The label on the left side of an input box, which is not displayed when the value is empty.	String	-
labelWidth	The `width` of the label on the left side of an input box, which can be set to a number (similar to `em`) or string (in a custom unit).	String, Number	auto
placeholder	The placeholder text of an input box.	String	-
inputType	The type of the input box. Used for the browser to identify the keyboard type.	String	text
clear	The clear button of an input box. Displayed only when the input box is not empty and `clear` is set to `true` instead of `disabled`.	Boolean	false
labelId	The `id` of the label on the left side of an input box. Used for accessibility,	String	-
inputId	The `id` of the label of an input box. Used for accessibility.	String	-
disabled	Whether to disable an input box.	Boolean	false
error	Indicate that the current input value of an input box is improper.	Boolean	false

Property	Description	Type	Default value
button	The button text on the right side, which is not displayed when the value is empty.	String	-
buttonDisabled	Whether to disable the button on the right side.	Boolean	false

slots

Name	Description	Scope
-	Enable you to extend `props.label` from a string to a `DOM` node.	-

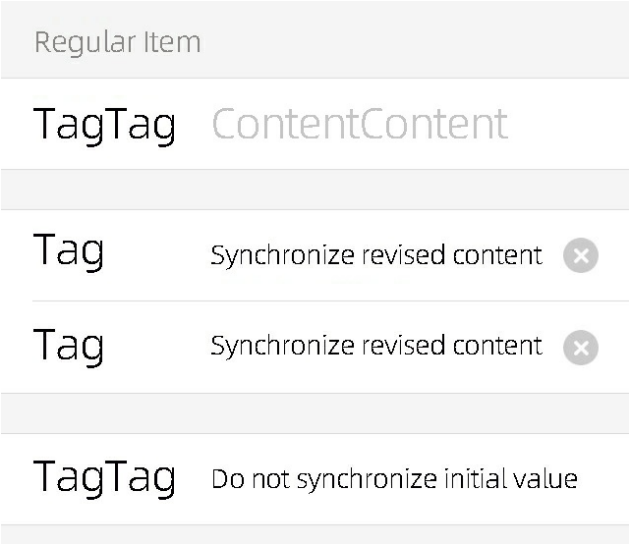
events

Name	Description	Function	Note
input	Trigger an `input` event when `value` changes or `value` is cleared. Support `v-model`.	Function(value: boolean): void	
click	Triggered upon a tap operation.	Function(event: event): void	
errorClick	Triggered when the red circle on the right side is tapped and `error` is configured.	Function(void): void	
buttonClick	Triggered when the button on the right side is tapped and `button` is configured and enabled.	Function(void): void	Since `0.4.8-open02`

Demo

General

Sample image

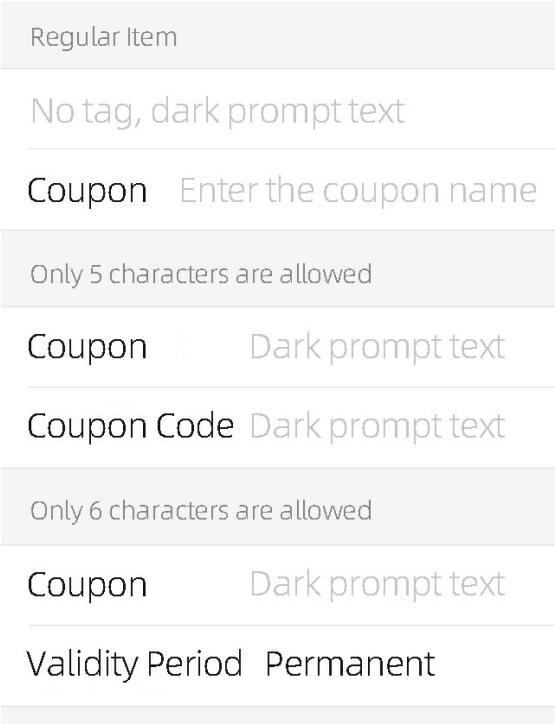


Sample code

```
<template>

  <div>

    <List type="form">
      <ListCell type="header" slot="header">Regular Item</ListCell>
      <ListItemInput label="Tag" placeholder="Content" clear></ListItemInput>
    </List>

    <List type="form">
      <ListItemInput label="Tag"placeholder="Content" v-model="syncText" clear>
</ListItemInput>
      <ListItemInput label="Tag"placeholder="Content" v-model="syncText" clear>
</ListItemInput>
    </List>

    <List type="form">
      <ListItemInput label="Tag" placeholder="Content" value="Do not synchronize initia
l value" ></ListItemInput>
    </List>

  </div>

</template>

<script type="text/javascript">
  export default {
    data() {
      return {
        syncText: 'Synchronize revised content',
      };
    },
  };
</script>
```

Label

Sample image

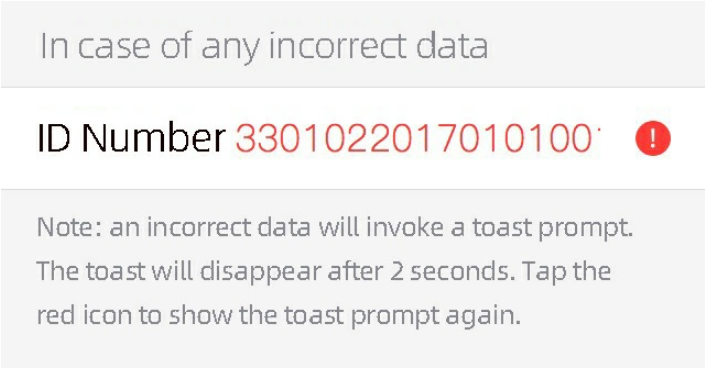


Sample code

```
<template>

  <div>

    <List type="form">
      <ListCell type="header" slot="header">Regular List</ListCell>
      <ListItemInput label="" placeholder="No tag,dark prompt text" clear>
</ListItemInput>
      <ListItemInput label="Coupon name" placeholder="Enter the coupon name" clear></Li
stItemInput>
    </List>

    <List type="form">
      <ListCell type="header" slot="header">Only 5 characters are allowed</ListCell>
      <ListItemInput label="Coupon" label-width="5em" placeholder="dark prompt dark pro
mpt" clear></ListItemInput>
      <ListItemInput label="Coupon Code" label-width="5em" placeholder="dark prompt dar
k prompt" clear></ListItemInput>
    </List>

    <List type="form">
      <ListCell type="header" slot="header">Only 6 characters are allowed</ListCell>
      <ListItemInput label="Coupon" :label-width="6" placeholder="dark prompt dark prom
pt" clear></ListItemInput>
      <ListItemInput label="Coupon Validity Period" :label-width="6" value="Permanent v
alidity" ></ListItemInput>
    </List>

  </div>

</template>

<script type="text/javascript">
  export default {
    data() {
      return {
        syncText: 'Synchronize modified content',
      };
    },
  };
</script>
```

Input error

Sample image



Sample code

```
<template>

  <div>

    <List type="form">
      <ListCell type="header" slot="header">In case of any incorrect data</ListCell>
      <ListItemInput label="ID Number" value="33010220170101001XX" error @error-
click="onClick"></ListItemInput>
      <ListCell type="footer" slot="footer">Note: an incorrect data will invoke a toast
prompt. The toast will disappear after 2 seconds. Tap the red icon to show the toast pr
ompt again.</ListCell>
    </List>

  </div>

</template>

<script>
  import Toast from '../../../lib/toast';

  export default {
    methods: {
      onClick() {
        Toast.show('fill in error');
      },
    },
  };
</script>
```

1.2.8. Loading component

1.2.8.1. Loading

This topic describes different methods of using the Loading component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.

- API description provides API information for props and slots.

Kylin

```
<dependency component="{ Loading, LoadingIndicator }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { Loading, LoadingIndicator } from '@alipay/antui-vue';
```

API description

Loading

Packaged loading, including full page loading and footer loading.

props

Property	Description	Type	Default value
type	The loading type. Valid values: `""` , `"page"` , `"refresh"` , and `"nomore"` .	String	`""`

slots

Name	Description	Scope
-	Default placeholder and content, with custom `DOM` supported.	-

LoadingIndicator

Independent three-square animation for loading.

props

Property	Description	Type	Default value
white	Whether to display white squares (blue squares are displayed by default).	Boolean	false
tiny	Whether to display the squares in minimum size.	Boolean	false

Demo

- Loading animation only

- Loading at the center of a page
- Loading at the top of a page
- Loading at the bottom of a page
- No more

Loading animation only

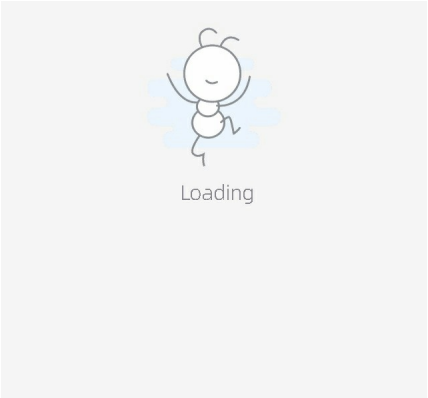
Sample image

Sample code

```
<template>

  <div style="text-align: center; background: #999;">
    <LoadingIndicator />
    <br/>
    <LoadingIndicator white />
    <br/>
    <LoadingIndicator tiny />
    <br/>
    <LoadingIndicator tiny white />
  </div>

</template>
```

Loading at the center of a page

Sample image

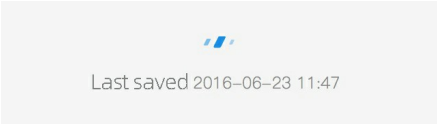


Sample code

```
<template>
  <div style="min-height: 300px;">
    <Loading type="page">Loading</Loading>
  </div>
</template>
```

Loading at the top of a page

Sample image

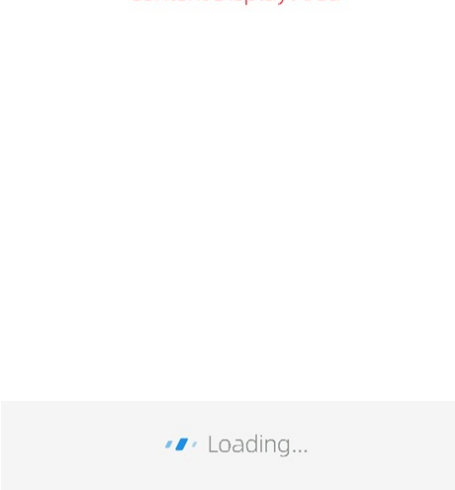


Sample code

```
<template>

  <Loading type="refresh">Last saved 2016-06-23 11:47</Loading>

</template>
```

Loading at the bottom of a page

Sample image



Sample code

```
<template>

  <div>
    <div style="color:#F4333C;background-color: #fff; text-align: center; height:
300px;">Content Display Area</div>
    <Loading >Loading...</Loading>
  </div>

</template>
```

No more

Sample image

Content Display Area

There is no more

Sample code

```
<template>

  <div>
    <div style="color:#F4333C;background-color: #fff; text-align: center; height:
300px;">Content Display Area</div>
    <Loading type="nomore">There is no more</Loading>
  </div>

</template>
```

1.2.9. Result page component

1.2.9.1. Message

The Message topic describes different methods of using this component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- API description provides API information for props, slots, and events.

Kylin

```
<dependency component="{ Message }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { Message } from '@alipay/antui-vue';
```

API description

props

Property	Description	Type	Default value
type	Button type. Value options include `result`, `multi`, `week`, and `''` (empty string).	String	`''`
icon	Icon type. Value options include `success`, `pay`, `fail`, `error`, `warn`, `info`, `wait`, and `question`. You can also input a `class` to define the icon.	String	`success`
main	Main content of the pure text prompt. The DOM of the placeholder is not displayed when the main content is specified as `false`.	String, Boolean	-
sub	Sub content of the pure text prompt. The DOM of the placeholder is not displayed when the main content is specified as `false`.	String, Boolean	-

slots

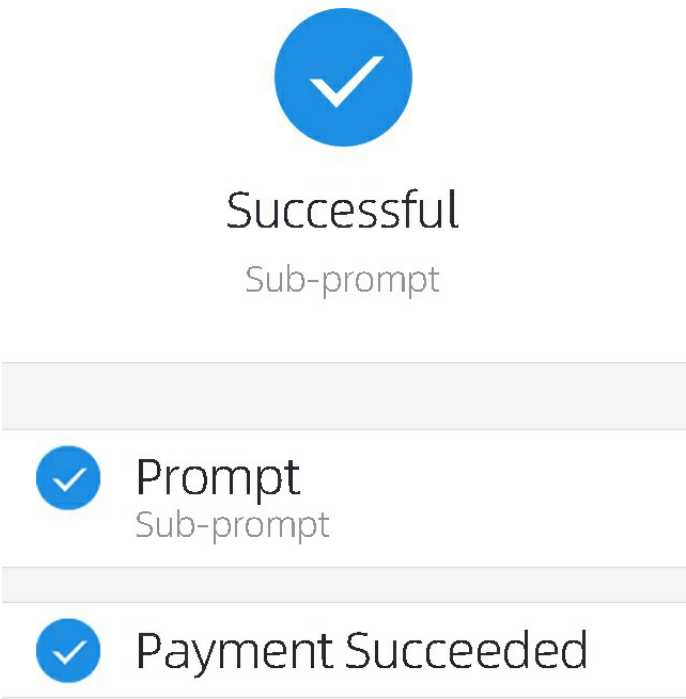
Name	Description	Scope
main	Used in the scenario where the DOM needs to be populated into `props.main`.	-
sub	Used in the scenario where the DOM needs to be populated into `props.sub`.	-
-	Used to populate content under sub.	-

events:None

Demo

Success state

Sample image

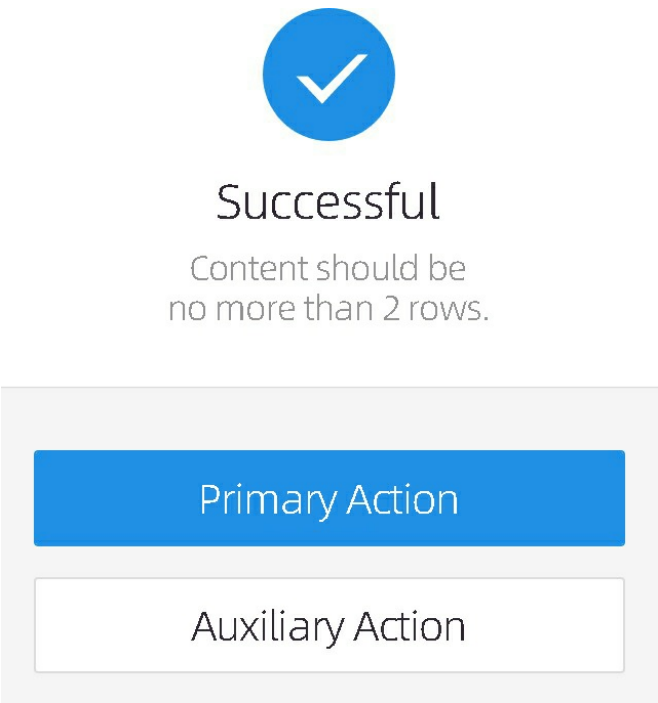


Sample code

```
<template>

  <div>
    <Message type="result" icon="success" main="Success" sub="Sub-prompt"></Message>
    <Message type="multi" icon="success" main="Prompt" sub="Sub-prompt"></Message>
    <Message type="" icon="success" main="Payment Succeeded" :sub="false" ></Message>
  </div>

</template>
```

Success result page

Sample image



Sample code

```
<template>

  <div>
    <Message type="result" icon="successful" main="Success" >
      <template slot="sub">
        Content should be<br />no more than 2 rows.
      </template>
    </Message>
    <div class="am-button-wrap">
      <AButton type="blue">Primary Action</AButton>
      <AButton type="white">Auxiliary Action</AButton>
    </div>
  </div>

</template>
```

1.2.9.2. PageResult

The PageResult topic describes different methods of using this component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- API description provides API information for props, slots, and events.

Kylin

```
<dependency component="{ PageResult, AButton }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { PageResult, AButton } from '@alipay/antui-vue';
```

Service imperative call

You can directly use `PageResult.show ('system busy');` to call a command, instead of writing the command in a template. The `DOM` will be automatically inserted into `document.body` .

```
PageResult.show({
  type: 'text',
  text: 'Displayed message'
});
```

Service documentation

static methods

`PageResult` provides the following static methods.

Name	Description	Function
show	Creates and displays a `PageResult` instance with the following parameters. If the instance is called multiple times, the previous instance will be destructed. You can also directly input a character string as the `content` .	Function(option: Object | string): vm

show options

The following parameters are accepted for creating an instance.

Property	Description	Type	Default value
type	PageResult type. Value options include `error` , `empty` , `nofound` , `network` , and `busy` .	String	`busy`
content	Pure character string text.	String	`The system is busy, please try again later` .
title	Title text.	String	''

Property	Description	Type	Default value
btns	Array of displayed buttons.	`Array<{ text: string, click: Function }>`	[{text: 'Reload',click: () => window.location.reload()}]
zIndex	Specifies the `zIndex` value of the elastic layer.	Number	9000

API description

props

Property	Description	Type	Default value
type	Icon type. Value options include `error`, `empty`, `nofound`, `network`, and `busy`.	String	-
title	The custom business text contains no more than 14 characters.	String	-
brief	The custom business text contains no more than two lines. Auxiliary text is optional.	String	-

slots

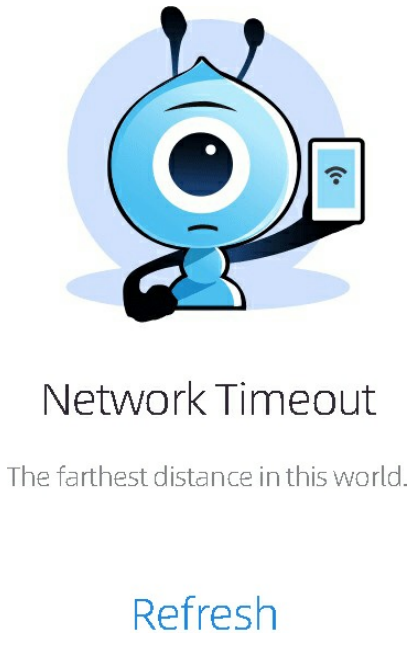
Name	Description	Scope
-	Default slot used to place one or more buttons.	-
title	Used to define the `DOM`.	-
brief	Used to define the `DOM`.	-

events:None

Demo

Network timeout

Sample image



Sample code

```
<template>

  <PageResult type="network"
    title="Network Timeout"
    brief="The farthest distance in this world."
  >
    <AButton type="page-result" >Refresh</AButton>
  </PageResult>

</template>
```

System error

Sample image

Troubleshooting in Progress

We are sorry for the inconvenience

Refresh

Sample code

```
<template>

  <PageResult type="error"
    title="Troubleshooting in Progress"
    brief="We are sorry for the inconvenience."
  >
    <AButton type="page-result" >Refresh</AButton>
  </PageResult>

</template>
```

Empty

Sample image

Title content

Auxiliary content

Action options

Sample code

```
<template>

  <PageResult type="empty"
    title="A maximum of 14 characters is allowed."
    brief="Auxiliary content"
  >
    <AButton type="page-result" >Action options</AButton>
  </PageResult>

</template>
```

Busy

Sample image

System Timeout

System tiemout content

Refresh

Sample code

```
<template>

  <PageResult type="busy"
    title="System Busy"
    brief="System tiemout content"
  >
    <AButton type="page-result" >Refresh</AButton>
  </PageResult>

</template>
```

1.2.10. Notification component

1.2.10.1. Inform

This topic describes different methods of using the Inform component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- API description provides API information for props, slots, and events.

Kylin

```
<dependency component="{ Inform }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { Inform } from '@alipay/antui-vue';
```

API description

props

Property	Description	Type	Default value
operation	Available actions for notifications. Valid values: `Go` and `Button`.	String	`null`
buttonText	The button text that is displayed when `operation` is set to `button`.	String	`'Got it'`
href	Redirection upon tapping. Valid when `operation` is set to `go`.	String	`null`

slots

Name	Description	Scope
-	Notification content	-

Name	Description	Scope
button	When `operation` is set to `button`, the content of `buttonText` can be customized as `DOM`.	-

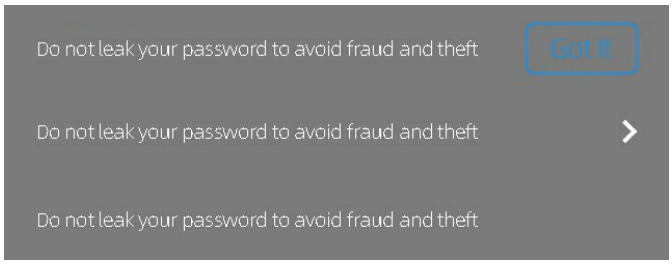
events

Name	Description	Function
buttonClick	Triggered when a button is tapped.	Function(): void

Demo

The following shows a sample for a basic style Inform notice.

Sample image



Sample code

```
<template>
  <div>
    <Inform
      :style="{visibility: visible ? 'visible' : 'hidden'}"
      operation="button"
      buttonText="Got It"
      @buttonClick="visible = false"
    >
      Do not leak your password to avoid fraud and theft
    </Inform>
    <Inform
      operation="go"
      href="https://alipay.com/"
    >
      Do not leak your password to avoid fraud and theft
    </Inform>
    <Inform>
      Do not leak your password to avoid fraud and theft
    </Inform>
  </div>
</template>

<script>
  export default {
    data() {
      return {
        visible: true,
      };
    },
  };
</script>
```

1.2.10.2. Notice

The Notice topic describes different methods of using this component and the API descriptions:

- Use this component in the Kylin project.
- Use this component in other projects. Import it through ESModule.
- API description provides API information for props, slots, and events.

Kylin

```
<dependency component="{ Notice }" src="@alipay/antui-vue" ></dependency>
```

ESModule

```
import { Notice } from '@alipay/antui-vue';
```

API description

props

Property	Description	Type	Default value
operation	Available operations for announcements. Valid values: `Go` and `Close`.	String	null
href	Redirection upon tapping. Valid when `operation` is set to `go`.	String	null

slots

Name	Description	Scope
-	Announcement content	-

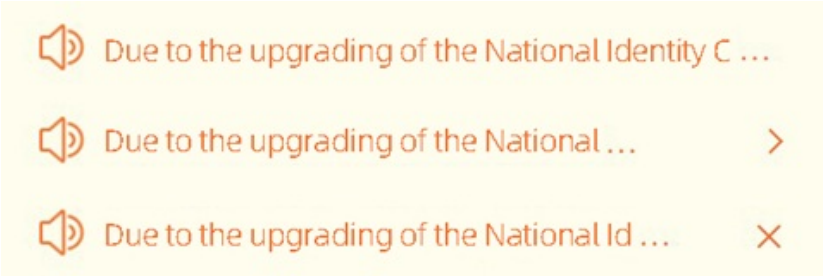
events

Name	Description	Function
close	Triggered upon tapping the close button when `operation` is set to `close`.	Function(): void

Demo

The following shows a sample for a basic style notice.

Sample image



Sample code

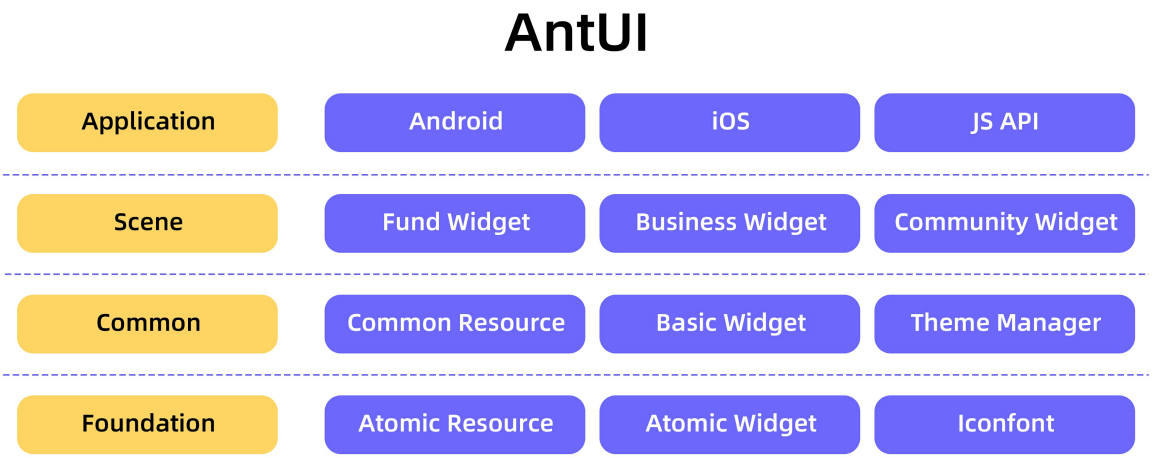
```
<template>
<div>
  <Notice>
    Due to the upgrading of the National Identity Card System, when adding a bank card.
.....
  </Notice>
  <Notice operation="go" href="https://www.alipay.com/">
    Due to the upgrading of the National Identity Card System, when adding a bank card.
......
  </Notice>
  <Notice operation="close" @close="show = false" v-if="show">
    Due to the upgrading of the National Identity Card System, when adding a bank card.
......
  </Notice>
</div>

</template>

<script>
export default {
  data() {
    return {
      show: true,
    };
  },
};
</script>
```

1.3. Introduction to Native framework

The mPaaS unified component library (AntUI) converts abstract visual specifications concepts into control entities based on standardized visual specifications. Developers can unify visual specifications on clients upon control access by using the unified component library.

Unified component library architecture

The overall architecture of AntUI is similar to block building. The AntUI unified control system is built from bottom to top:



The following table describes the layers of the architecture from bottom to top.

Architecture layer	Description
Foundation	The Foundation layer represents modular visual specifications. It is the foundation for building the AntUI system and consists of atomic resources, atomic widgets, and Iconfont. The Foundation layer is built of the minimum units of visual specifications.
Common	The Common layer is the core unification module of AntUI and the most frequently used unification widget module on the business side. This layer consists of common resources, basic widgets, and the Theme Manager. The Common layer is built based on the combination and visualization of the Foundation layer. This layer can be used in all common scenarios on the client.
Scene	This layer builds a set of scene-oriented widgets, such as the fund widget, business widget, and community widget. Due to the fact that mPaaS is a super app, its volume determines that a large amount of business needs personalized processing. Therefore, AntUI sets up the Scene layer, which builds personalized and scene-oriented widgets for processing business based on the Foundation layer.
Application	The Application layer provides capabilities such as differentiated processing and HTML5 container support. This layer solves the conflict between unification and platform personalization. Atomic resources, combinations, and scenes are the basis of AntUI construction. However, in actual application scenarios, the requirements of Android, iOS, and HTML5 need to be taken into account at the same time. Therefore, the unified component library builds some personalized and differentiated APIs of the platform, that is, the application layers.

Foundation layer

It represents modular visual specifications. It is the foundation for building the AntUI system and mainly contains the atomic resources, atomic controls, and Iconfont icon.

- **Atomic resources** define the resources that are used by widgets such as color, size, and spacing in an atomized manner to ensure uniqueness. For example, colors include red, yellow, and blue and font sizes include 1, 2, and 3.
- **Atomic widgets** package the built-in widgets of the platform framework to build a basic atomic widget library.
- **Iconfont** collects icons for common scenes and builds the Iconfont format to provide an available widget icon library.

Common layer

The common layer is the core unification module of the AntUI, that is, the unification control module most commonly used by the client. It contains the common resources, basic controls, and style manager.

- **Common resources** are used for secondary definition of atomic resources based on application scenarios, such as title color, content color, and link color.
- **Basic widgets** perform one-to-one visual presentation on the widgets that are defined in the visual draft to ensure consistent naming and implementation on Android and iOS. This facilitates the development and usage on clients.
- The **Theme Manager** defines styles in an abstract manner and manages them in a centralized manner. A specific widget can switch between multiple sets of skins. Style abstraction is implemented in an incremental definition manner. Therefore, you only need to focus on styles of some elements required by business.

Scene layer

This layer builds a set of scene-based controls, for example, fund control, business control, and social control.

Application layer

The Application layer provides capabilities such as differentiated processing and HTML5 container support. This layer solves the conflict between unification and platform personalization.

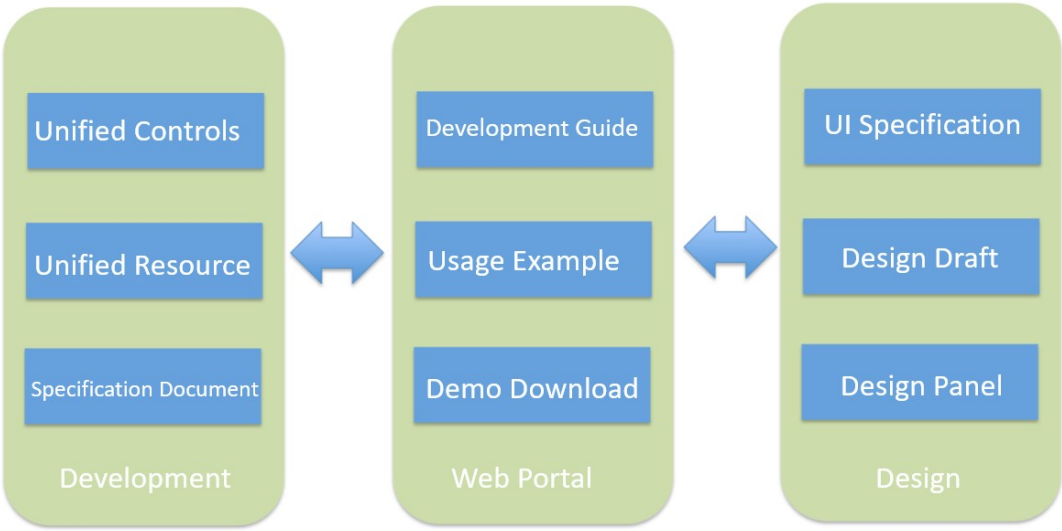
Android and iOS platforms differ in visual specifications. Taking actionsheet as an example, AntUI performs different processing by platform:

- For the iOS platform, keep the bottom flyout.
- For the Android platform, keep the middle list pop-up window.

There are many different scenes for H5, such as pop-up windows and title bars. To keep platform features in the visual experience with HTML5, AntUI defines a unified JSAPI for HTML5 containers. This facilitates the evoking of platform widgets for differentiated processing of HTML5 pages on Android and iOS.

Linkage

To reduce the communication cost between designers and developers and avoid repeated control development and visual design, the unified component library (AntUI) aggregates the development and visual work.



Designers formulate specifications and developers interpret specifications into controls. Complete development guidelines facilitate development implementation and form a one-stop control system.

- Unified naming helps designers and developers achieve unified cognition. For more information, see the Component specifications and principles section.
- Designers can recognize existing controls through the design panel and build a basic structure of a page through simple drag-and-drop operations.
- Developers can intuitively view visual effects of a control by referring to the portal aggregation development documents and visual specifications and downloading the demo.

Component specifications and principles

- **Naming conventions**

  The same type of widgets must be named the same on Android and iOS. A widget name must be prefixed with AU. The custom properties of widgets must be named in camel case.

  > **Note**
  >
  > Some widgets may need to be implemented in one platform but not in the other platform due to platform differences.

- **Matching between basic widgets and visual/interaction specifications**
  - Controls not specified in the specifications cannot be delivered in standard controls.
  - Controls that are not specified in the specifications but are already used in multiple places should be delivered in the candidate control set.
  - Single specifications, such as the title bar specifications, are not forcibly required to be implemented as a single control.
- **Ease of use**
  - Different from commonui, the unified control library does not simply encapsulate system controls (such as APImageView and APTextView). When you need to use system controls, it is recommended that you use native controls.
  - The control name must be accurate and clear.

- Similar functions should be consistent in different controls.
- User habits should be respected.

- **Extensibility**
  - Do not use hard coding to implement widget features, such as the dynamic modification of the number of labels.
  - Some widgets are required to support external modification of their layouts, such as dialog boxes and navigation bars.
- **Novelty**

  You can try the latest platform features. For example, you can use RecycleView for Android.

1.4. Native based - Android component library

1.4.1. Quick start

AntUI supports three types of access: **native AAR** and **component-based mode (Portal & Bundle)**.

Prerequisite

- If you want to connect the component to the mPaaS based on the native AAR mode, you need to first complete the prerequisites and the subsequent steps. For more information, see Add mPaaS to your project.
- If you want to connect the component to the mPaaS based on components, you need to first complete the Component-based access procedure.

Add the SDK

Native AAR mode

You can use the **component management** feature to install the **AntUI** component in your project. For more information, see ARR component management.

Component-based mode

In your Portal and Bundle projects, use the **component management** feature to install the **AntUI** component.

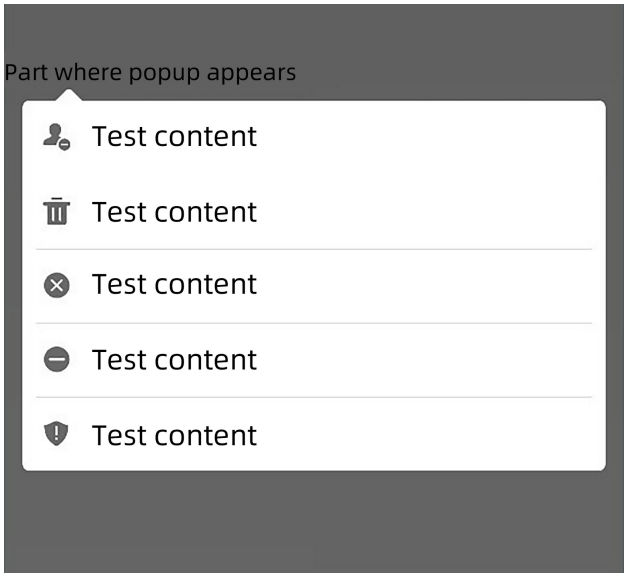
For more information, see Manage component dependencies.

1.4.2. Dialog component

1.4.2.1. Card menu

AUCardMenu is used to display a selection menu when the user taps the card on the homepage of the mPaaS client. It’s essentially a dialog, and similar to a pop up window.

Sample image



Dependency

See Quick start.

API description

```
/**
* show dialog with default width
* @param view
* @param popItems
*/
public void showDrop(View view, ArrayList<MessagePopItem> popItems)

/**
* show dialog with given width
* @param view
* @param popItems
* @param width
*/
public void showDrop(View view, ArrayList<MessagePopItem> popItems, int width) {
int defaultMarginRight =
mContext.getResources().getDimensionPixelSize(R.dimen.AU_SPACE5)/2;
showDrop(view, popItems, width, defaultMarginRight);
}

/**
* show dialog with given width & marginRight
* @param view
* @param popItems
* @param width
*/
public void showDrop(View view, ArrayList<MessagePopItem> popItems, int width, int marg
inRight)

/**
* show dialog with given ViewLoc
* @param location
* @param popItems
*/
public void showDropWithLocation(ViewLoc location, ArrayList<MessagePopItem> popItems)

If an image is in the hyperlink form, you need to download it.
public void setOnLoadImageListener(OnLoadImageListener onLoadImageListener)

public interface OnLoadImageListener {

/**
* show dialog with given width & marginRight
* @param url URL of the image.
* @param imageView Target view of the image.
* @param defaultDrawable The default image.
*/
public void loadImage(String url, AUImageView imageView ,Drawable defaultDrawable);
}
```

Custom properties

No customized property is available. The XML layout is not supported.

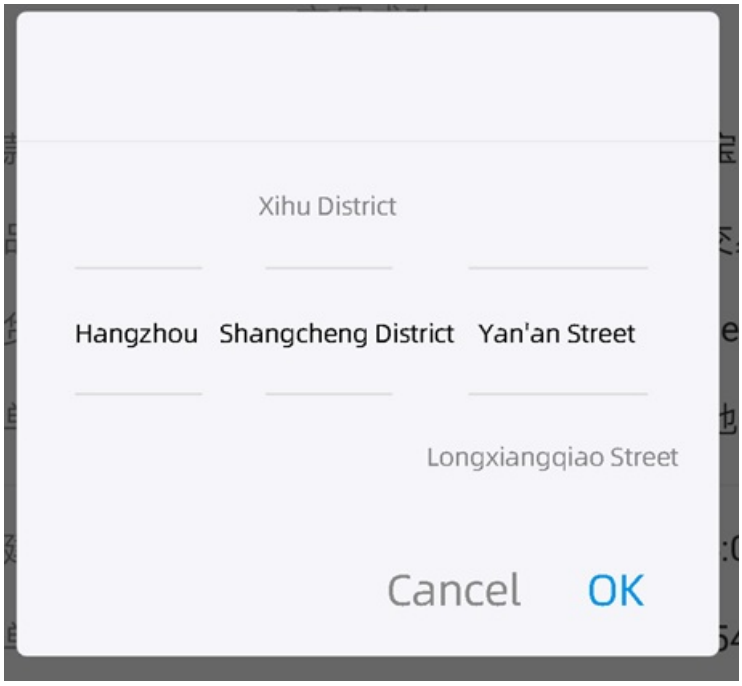
Sample code

```
ArrayList<MessagePopItem> menuList = new ArrayList<MessagePopItem>();

    MessagePopItem item1 = new MessagePopItem();
    IconInfo info = new IconInfo();
    info.type = IconInfo.TYPE_DRAWABLE;
    info.drawable = getResources().getDrawable(R.drawable.menu_del_reject);
    item1.icon = info;
    item1.title = "Test content";
    menuList.add(item1);


    MessagePopItem item2 = new MessagePopItem();
    IconInfo info2 = new IconInfo();
    info2.type = IconInfo.TYPE_DRAWABLE;
    info2.drawable = getResources().getDrawable(R.drawable.menu_delete);
    item2.icon = info2;
    item2.title = "Test content";
    menuList.add(item2);

    MessagePopItem item3 = new MessagePopItem();
    IconInfo info3 = new IconInfo();
    info3.type = IconInfo.TYPE_DRAWABLE;
    info3.drawable = getResources().getDrawable(R.drawable.menu_ignore);
    item3.icon = info3;
    item3.title = "Test content";
    menuList.add(item3);

    MessagePopItem item4 = new MessagePopItem();
    IconInfo info4 = new IconInfo();
    info4.type = IconInfo.TYPE_DRAWABLE;
    info4.drawable = getResources().getDrawable(R.drawable.menu_reject);
    item4.icon = info4;
    item4.title = "Test content";
    menuList.add(item4);

    MessagePopItem item5 = new MessagePopItem();
    IconInfo info5 = new IconInfo();
    info5.type = IconInfo.TYPE_DRAWABLE;
    info5.drawable = getResources().getDrawable(R.drawable.menu_report);
    item5.icon = info5;
    item5.title = "Test content";
    menuList.add(item5);

    final AUCardMenu popMenu = new AUCardMenu(CardMenuActivity.this);
    int id = v.getId();
    if(id == R.id.showCardMenu1) {
        popMenu.showDrop(textView1,menuList);
    }else if(id == R.id.showCardMenu2) {
        popMenu.showDrop(textView2,menuList);
    }
```

1.4.2.2. Cascade picker

AUCascadePicker provides a multi-level cascade selector that supports selection at a maximum of three levels.

Sample image



API description

```
/**
 * Set the selected list.
 */
public void setDateData(List<PickerDataModel> strList)


 /**
 * Start the selected items.
 * @param model
 */
public void setSelectedItem(PickerDataModel model)

/**
 *Set listeners for the selected items.
 * @param model
 */
public void setOnLinkagePickerListener(OnLinkagePickerListener listener)
```

JSAPI description

API

antUIGetCascadePicker

API usage

```
AlipayJSBridge.call('antUIGetCascadePicker',
{
    title: 'nihao',// The cascade option title.
    selectedList:[{"name":"Hangzhou",subList:[{"name":"Shangcheng District"}]}],
    list: [
        {
            name: "Hangzhou",// The entry name.
            subList: [
                {
                    name: "Xihu District",
                    subList: [
                        {
                            name: "Gucui Street"
                        },
                        {
                            name: "Wenxin Street"
                        }
                    ]
                },
                {
                    name: "Shangcheng District",
                    subList: [
                        {
                            name: "Yan'an Street"
                        },
                        {
                            name: "Longxiangqiao Street"
                        }
                    ]
                }
            ]// The cascade sub-data list.
        }
    ]// The cascade data list.
},
function(result){
    console.log(result);
});
```

Input parameters

Name	Type	Description	Required	Default value	Version
title	String	The cascade control title.	No	-	10.1.2

Name	Type	Description	Required	Default value	Version
selectedList	JSON	Selected state, specifying the selected sub-item and in a format the same as that of the input parameter ([{“name”:”Hangzhou City”,subList:[{“name”:”Shangcheng District”}]}])	No	-	10.1.2
List	JSON	The selector data list.	Yes	-	10.1.2
name (a name in a list)	String	The entry name.	Yes	-	10.1.2
subList (a sublist in a list)	JSON	The sub-entry list.	No	-	10.1.2
fn	function	The callback function after selection is complete.	No	-	10.1.2

Output parameters

Name	Type	Description	Version
success	bool	Whether selection is complete. If selection is canceled, false is returned.	10.1.2

Name	Type	Description	Version
result	JSON	The selection result, for example, `[{"name":"Hangzhou City",subList:[{"name":"Shangcheng District"}]}]` .	10.1.2

Sample code

```
AUCascadePicker datePicker = new AUCascadePicker(PickerActivity.this);
                datePicker.setDateData(datas);
                datePicker.setOnLinkagePickerListener(new
AUCascadePicker.OnLinkagePickerListener() {
                    @Override
                    public void onLinkagePicked(PickerDataModel msg) {
                        PickerDataModel model = msg;
                        AuiLogger.info("onLinkagePicked", "onLinkagePicked:"+msg.name+ m
odel);
                        StringBuilder sb = new StringBuilder();
                        while (msg != null){
                            sb.append(msg.name+" ");
                            if(msg.subList != null && msg.subList.size() > 0) {
                                msg = msg.subList.get(0);
                            }else {
                                msg = null;
                            }
                        }
                        box3.getInputEdit().setText(sb);
                    }
                });
                datePicker.show();
```

1.4.2.3. Date picker

AUDatePicker is a date selection control and is essentially a pop-up window.

Dependency

See Quick start.

API description

```
  /**
     * Instantiates a new Date picker.
     *
     * @param activity the activity
     * @param mode     the mode
```

```
     * @see #YEAR_MONTH_DAY #YEAR_MONTH_DAY#YEAR_MONTH_DAY
     * @see #YEAR_MONTH #YEAR_MONTH#YEAR_MONTH
     * @see #MONTH_DAY #MONTH_DAY#MONTH_DAY
     */
    public AUDatePicker(Activity activity, @Mode int mode)

    /**
     * Set the date range.
     *
     * @param startYear the start year
     * @param endYear   the end year
     */
    public void setRange(int startYear, int endYear)

..//**
     * Select the specified year, month, and date.
     *
     * @param year  the year
     * @param month the month
     * @param day   the day
     */
    public void setSelectedItem(int year, int month, int day)

  /**
     * Select the specified date.
     *
     * @param yearOrMonth the year or month
     * @param monthOrDay  the month or day
     */
    public void setSelectedItem(int yearOrMonth, int monthOrDay)

  /**
     * Set the date selection listener.
     *
     * @param listener the listener
     */
    public void setOnDatePickListener(OnDatePickListener listener) {
        this.onDatePickListener = listener;
    }

    /**
     * The interface on year month day pick listener.
     */
    public interface OnYearMonthDayPickListener extends OnDatePickListener {

      /**
         * On date picked.
         *
         * @param year  the year
         * @param month the month
         * @param day   the day
         */
        void onDatePicked(String year, String month, String day);
```

```
    }

    /**
     * The interface On year month pick listener.
     */
    public interface OnYearMonthPickListener extends OnDatePickListener {

      /**
         * On date picked.
         *
         * @param year  the year
         * @param month the month
         */
        void onDatePicked(String year, String month);

    }

  /**
     * The interface On month day pick listener.
     */
    public interface OnMonthDayPickListener extends OnDatePickListener {

      /**
         * On date picked.
         *
         * @param month the month
         * @param day   the day
         */
        void onDatePicked(String month, String day);

    }
```

Custom properties

No customized property is available. The XML layout file is not supported.

Sample code

```
AUDatePicker datePicker = new
AUDatePicker(DatePickActivity.this,AUDatePicker.YEAR_MONTH_DAY);
                datePicker.setRange(1949,2050);
                datePicker.setOnDatePickListener(new
AUDatePicker.OnYearMonthDayPickListener() {
                    @Override
                    public void onDatePicked(String year, String month, String day) {
                        Toast.makeText(DatePickActivity.this,year + "-" + month + "-" +
day,Toast.LENGTH_LONG).show();
                    }
                });
                datePicker.show();
```

Application of AUDatePicker on a build-in page:

```
AUDatePicker picker = new AUDatePicker(this);
        picker.show();
        picker.dismiss();
        View view = picker.getOutterView();
        LinearLayout layout = (LinearLayout) findViewById(R.id.layout);
        layout.removeAllViews();
        if(view != null) {
            ((ViewGroup) view.getParent()).removeAllViews();
            layout.addView(view);
        }
```

For more information, please search for group number 41708565 with DingTalk to join DingTalk group to contact mPaaS after-sales support.

1.4.2.4. Float menu

AUFloatMenu provides a menu that contains icons and option lists.

Dependency

See Quick start.

API description

```
    /**
     * The constructor.
     *
     * @param context Activity context including the antui-build dependency.
     */
    public AUFloatMenu(Context context)
        /**
     * Align with the right by default.
     * @param view Display-based view.
     * @param popItems The list display model.
     */
    @Override
    public void showDrop(View view, ArrayList<MessagePopItem> popItems);

    /**
     * Align with the left.
     * @param view Display-based view.
     * @param popItems The list display model.
     */
    public void showAsDropDownLeft(View view, ArrayList<MessagePopItem> popItems);

    /**
     * Display in the center of the screen.
     * @param parent Display-based view.
     * @param title The title of the display list.
     * @param popItems The list display model.
     */
    public void showAsDropDownTitleCenter(View parent, String title,
ArrayList<MessagePopItem> popItems);

    /**
     * Add the entry tapping event of the display list.
     * @param listener
     */
    public void setOnClickListener(AdapterView.OnItemClickListener listener)
```

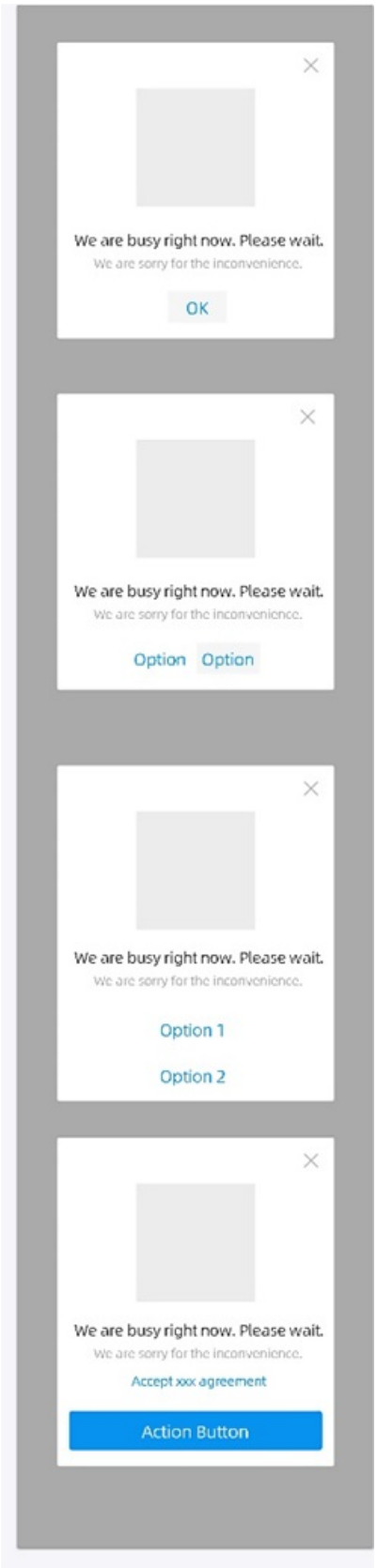
Sample code

```
ArrayList<MessagePopItem> menuList = new ArrayList<MessagePopItem>();

    MessagePopItem item1 = new MessagePopItem();
    IconInfo info = new IconInfo();
    info.icon = getResources().getString(R.string.iconfont_add_user);
    item1.icon = info;
    item1.title = "Add contacts";
    menuList.add(item1);


    MessagePopItem item2 = new MessagePopItem();
    IconInfo info2 = new IconInfo();
    info2.icon = getResources().getString(R.string.iconfont_group_chat);
    item2.icon = info2;
    item2.title = "Group chat";
    menuList.add(item2);

    MessagePopItem item3 = new MessagePopItem();
    IconInfo info3 = new IconInfo();
    info3.icon = getResources().getString(R.string.iconfont_scan);
    item3.icon = info3;
    item3.title = "Scan";
    menuList.add(item3);

    MessagePopItem item4 = new MessagePopItem();
    IconInfo info4 = new IconInfo();
    info4.icon = getResources().getString(R.string.iconfont_collect_money);
    item4.icon = info4;
    item4.title = "Payment";
    menuList.add(item4);

    MessagePopItem item5 = new MessagePopItem();
    IconInfo info5 = new IconInfo();
    info5.icon = getResources().getString(R.string.iconfont_help);
    item5.icon = info5;
    item5.title = "Help";
    menuList.add(item5);

    final AUFloatMenu floatMenu = new AUFloatMenu(ScrollTitleBarActivity.this);
    floatMenu.showDrop(v, menuList);
    floatMenu.setOnClickListener(new AdapterView.OnItemClickListener() {
        @Override
        public void onItemClick(AdapterView<?> parent, View view, int position, long id
) {
            Toast.makeText(ScrollTitleBarActivity.this, String.valueOf(position),
Toast.LENGTH_SHORT).show();
            floatMenu.hideDrop();
        }
    });
```

1.4.2.5. Image dialog

AUImageDialog (formerly SalesPromotionLimitDialog) provides a dialog box containing a title, three-level text, one confirm button or two buttons (left and right) at the bottom, and an ImageView in the middle. This component can be used to display message in throttling scenarios.

Sample image



Dependency

See Quick start.

API description

```
public interface OnItemClickListener {
    void onItemClick(int index);
}

/**
 * Obtain an AUImageDialog instance.
 *
 * @param context The context object.
 * @return Return an AUImageDialog instance.
 */
public static AUImageDialog getInstance(Context context)

/**
 * Disable the listener.
 *
 * @param mCloseBtnClickListener
 */
public void setCloseBtnClickListener(View.OnClickListener mCloseBtnClickListener)


/**
 * Set the first-level title text.
 */
public void setTitle(CharSequence title)

/**
 * Set the font size (in sp) of the first-level title.
 *
 * @param size
 */
public void setTitleTextSize(float size)

/**
 * Set the visibility of the first-level title.
 *
 * @param visibility
 */
public void setTitleTextVisibility(int visibility)
}

/**
 * Set the visibility of the second-level title.
 *
 * @param visibility
 */
public void setSubTitleTextVisibility(int visibility)

/**
 * Set the color of the first-level title.
 *
 * @param color
 */
```

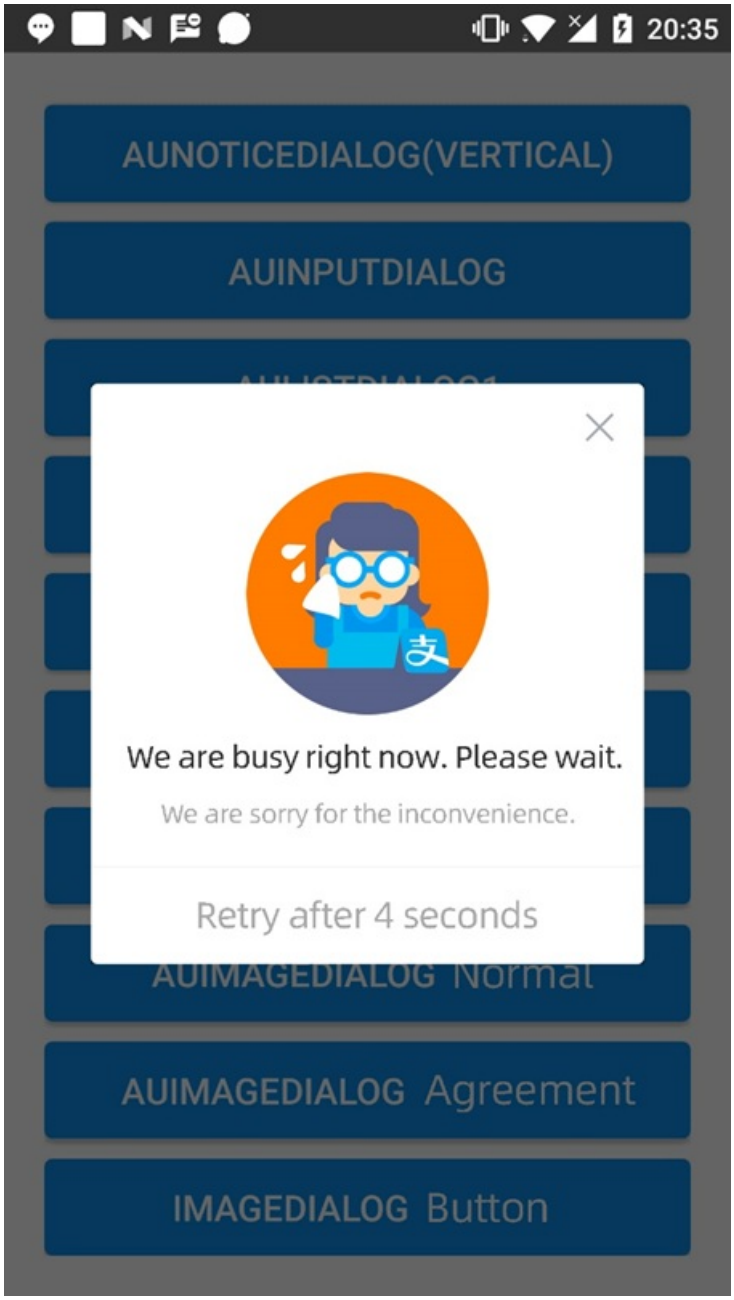
```
public void setTitleTextColor(int color)

/**
 * Set the second-level title text.
 *
 * @param title
 */
public void setSubTitle(CharSequence title)

/**
 * Set the font size (in sp) of the second-level title.
 *
 * @param size
 */
public void setSubTitleTextSize(float size)

/**
 * Set the color of the second-level title.
 *
 * @param color
 */
public void setSubTitleTextColor(int color)

/**
 * Set the third-level title text.
 *
 * @param text
 */
public void setThirdTitleText(String text)

/**
 * Set the color of the third-level title.
 *
 * @param color
 */
public void setThirdTitleTextColor(int color)

/**
 * Set the background of ImageView.
 *
 * @param drawable
 */
public void setLogoBackground(Drawable drawable)

/**
 * Set the background of ImageView.
 *
 * @param resid
 */
public void setLogoBackgroundResource(int resid)

/**
 * Set the background color of ImageView.
 *
```

```
 * @param color
 */
public void setLogoBackgroundColor(int color)

/**
 * Set the background transparency of the dialog box.
 *
 * @param alpha
 */
public void setBackgroundTransparency(float alpha)

/**
 * Indicates whether to return animation.
 */
public boolean isUsdAnim()

/**
 * Indicates whether to display animation when a dialog box is displayed or disappears.
This parameter is set to true by default.
 *
 * @param usdAnim
 */
public void setUsdAnim(boolean usdAnim)

/**
 * Set the visibility of the Close button.
 *
 * @param visibility
 */
public void setCloseButtonVisibility(int visibility)

/**
 * Set the text of the Confirm button.
 *
 * @param text
 */
public void setConfirmBtnText(String text)


/**
 * Return the Confirm button.
 */
public Button getConfirmBtn()

/**
 * Set the Confirm button tapping listener.
 *
 * @param clickListener
 */
public void setOnConfirmBtnClickListener(View.OnClickListener clickListener)


/**
 * Display a dialog box without animation.
 */
```

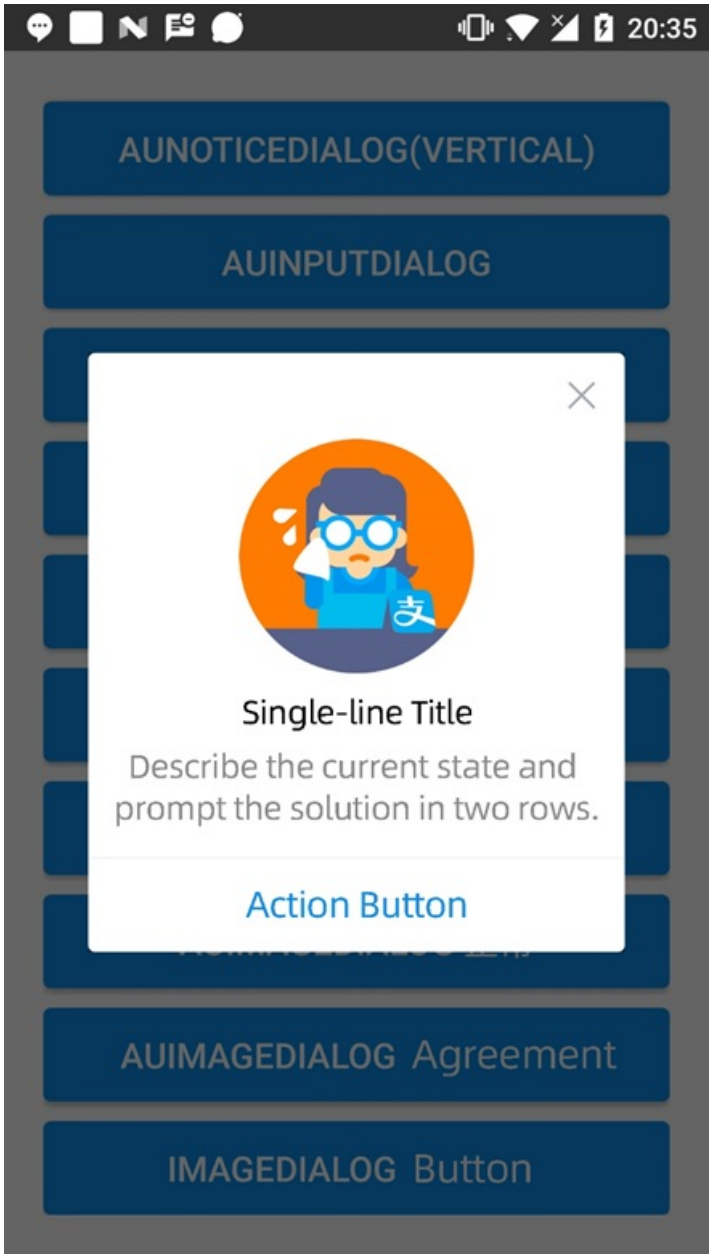
```
 */
public void showWithoutAnim()

/**
 * Set the countdown.
 * @param seconds Countdown seconds.
 * @param tickColor
 * @param action
 * @param clickListener
 * @param timerListener
 */
public void showWithTimer(int seconds, String tickColor, String action,
View.OnClickListener clickListener, TimerListener timerListener)

public void showWithTimer(int seconds, View.OnClickListener clickListener,
TimerListener timerListener)

/**
 * Obtain the default countdown color.
 * @return
 */
public String getDefaultTimeColorStr()

/**
 * Dismiss a dialog box without animation.
 */
public void dismissWithoutAnim()

@Override
public void dismiss()


public boolean isCanceledOnTouch() {
    return canceledOnTouch;
}

/**
 * Indicates whether a dialog box is automatically canceled when a user taps the middle
image.
 *
 * @param canceledOnTouch
 */
public void setCanceledOnTouch(boolean canceledOnTouch)


/**
 * Set the list button.
 * @param buttonListInfo
 * @param listener
 */
public void setButtonListInfo(List<String> buttonListInfo, OnItemClickListener listener
)

public ImageView getLogoImageView() {
    return bgImageView;
```

```
}

public TextView getTitleTextView() {
    return titleTextView_1;
}

public TextView getSubTitleTextView() {
    return titleTextView_2;
}

public TextView getThirdTitleTextView() {
    return titleTextView_3;
}

public ImageView getBottomLine() {
    return bottomLine;
}
```

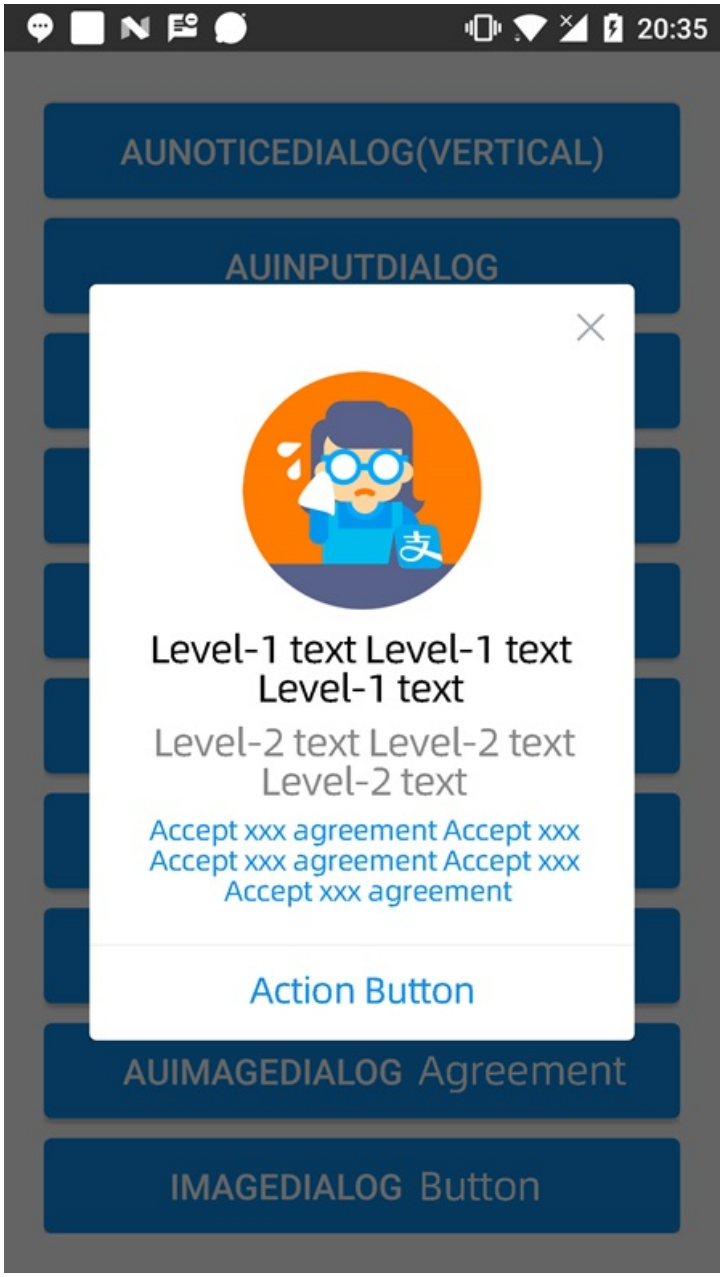
Sample code



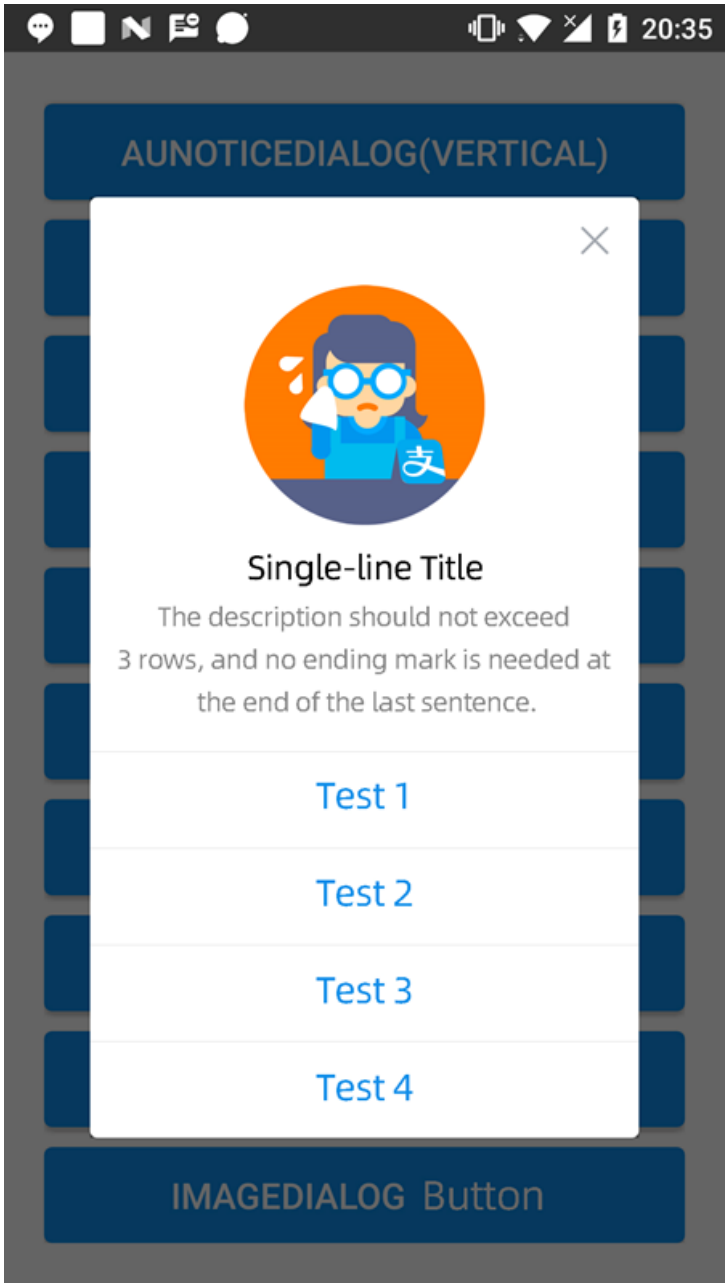

```
AUImageDialog dialog = AUImageDialog.getInstance(this);
dialog.showWithTimer(5, null, null);
```




```
AUImageDialog dialog = AUImageDialog.getInstance(this);
dialog.setCanceledOnTouch(true);
dialog.setTitle("Single-line Title");
dialog.setSubTitle("Describe the current state and prompt the solution in two rows.");
dialog.setConfirmBtnText("Action Button");
dialog.showWithoutAnim();
```




```
AUImageDialog dialog = AUImageDialog.getInstance(this);
dialog.setCanceledOnTouch(true);
dialog.setTitle("Level-1 textLevel-2 textLevel-2 textLevel-2 textLevel-2 text");
dialog.setSubTitle("Level-2 textLevel-2 textLevel-2 textLevel-2 textLevel-2 textLevel-2
text");
dialog.setThirdTitleText("Accept xxx agreementAccept xxx agreementAccept xxx agreementA
ccept xxx agreementAccept xxx agreementAccept xxx agreementAccept xxx agreement");
dialog.setConfirmBtnText("Action Button");
dialog.showWithoutAnim();
```

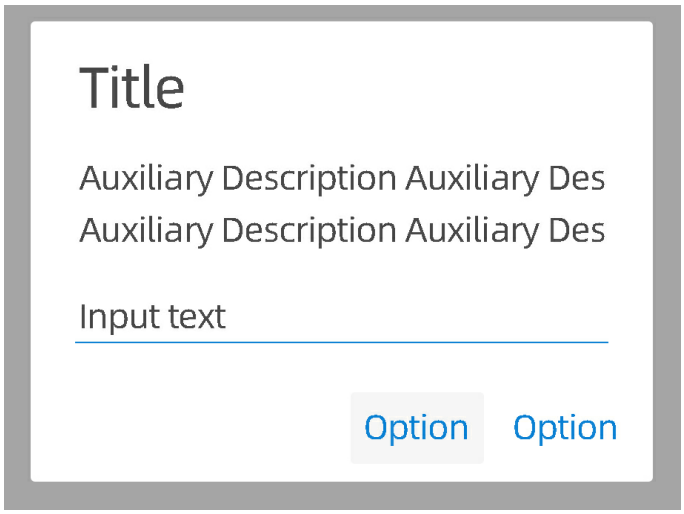



```
AUImageDialog dialog = AUImageDialog.getInstance(this);
dialog.setTitle("Single-line Title");
dialog.setSubTitle("The description should not exceed 3 rows, and no ending mark is nee
ded at the end of the last sentence.");
dialog.setButtonListInfo(getData(), new AUImageDialog.OnItemClickListener() {
    @Override
    public void onItemClick(int index) {

    }
});
dialog.showWithoutAnim();
```

1.4.2.6. Input dialog

AUInputDialog (formerly APInputDialog) provides a dialog box containing a title, body, Confirm and Cancel buttons, and an input box.

Sample image



Dependency

See Quick start.

API description

```
    /**
     * Construct AUInputDialog based on Input parameters.
     *
     * @param context The context object.
     * @param title The title.
     * @param msg The message.
     * @param positiveString Confirm button text.
     * @param negativeString Cancel button text.
     * @param isAutoCancel Indicates whether to automatically cancel actions in the are
a outside the pop-up window.
     */
    public AUInputDialog(Context context, String title, String msg, String positiveStri
ng,
            String negativeString, boolean isAutoCancel)

    /**
     * Obtain the Cancel button.
     */
    public Button getCancelBtn();

    /**
     * Obtain the Confirm button.
     */
    public Button getEnsureBtn();

    /**
     * Obtain title TextView.
     */
    public TextView getTitle();
```

```
    /**
     * Obtain message TextView.
     */
    public TextView getMsg();

    /**
     * Obtain LinearLayout of the bottom button.
     */
    public LinearLayout getBottomLayout();

    /**
     * Obtain RelativeLayout at the outermost layer of the pop-up window.
     */
    public RelativeLayout getDialogBg();

    /**
     * Set the Confirm button listener.
     */
    public void setPositiveListener(OnClickPositiveListener listener);

    /**
     * Set the Cancel button listener.
     */
    public void setNegativeListener(OnClickNegativeListener listener);

    /**
     * Obtain EditText of the input box.
     */
    public AUEditText getInputContent() {
        return inputContent;
    }

    /**
     * Starts and display the dialog.
     */
    public void show();
```

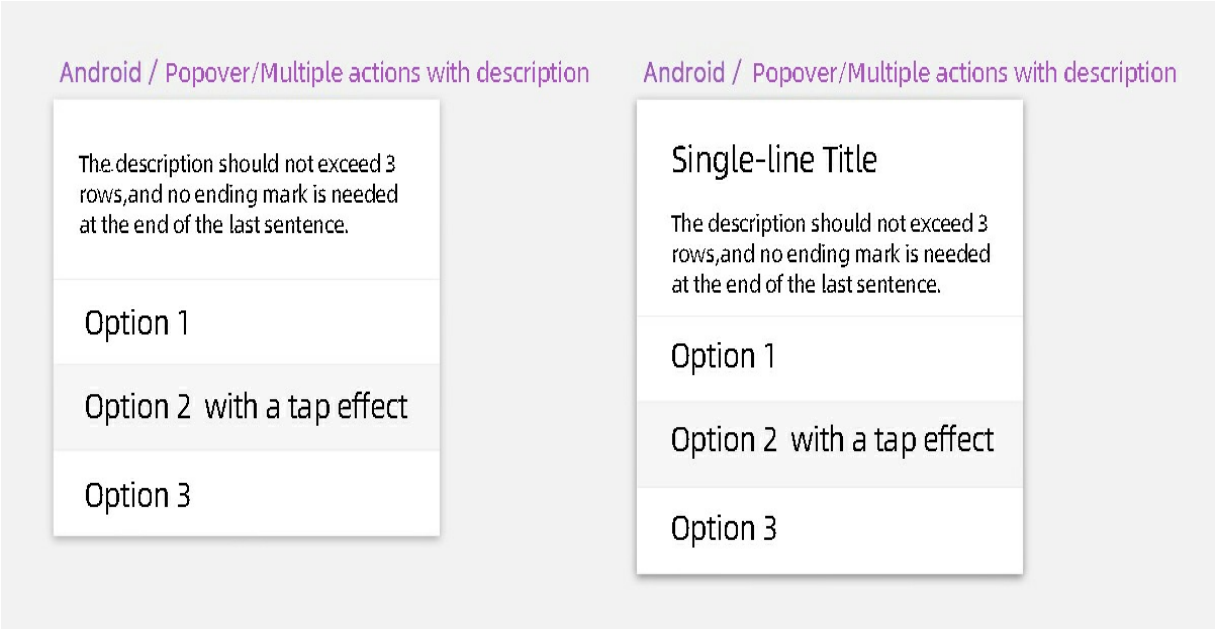
Sample code

```
    AUInputDialog dialog = new AUInputDialog(this, "Title", "Auxiliary Description",
                "OK", "Cancel", true);
        dialog.show();
```

1.4.2.7. List dialog

AUListDialog (formerly APListPopDialog) provides a list dialog box containing a title, an option list, a Confirm button, and a Cancel button. Each option is a PopMenuItem with icon, option name, and selected state.

Sample image



Dependency

See Quick start.

API description

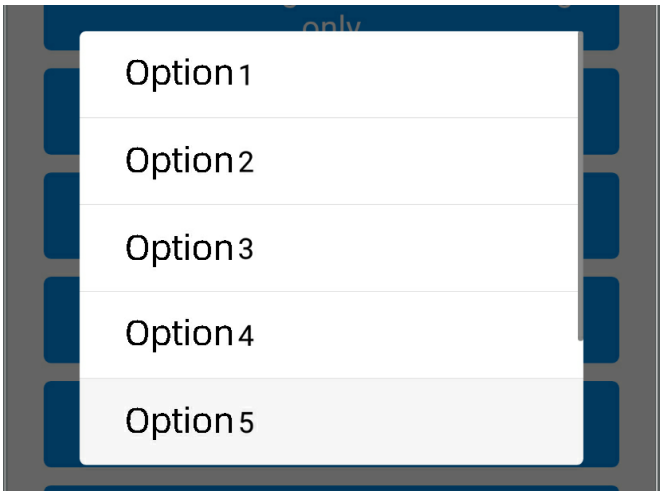
```
public interface OnItemClickListener {
    void onItemClick(int index);
}

/**
 * Create AUListDialog based on the input list, in which the item contains only text bu
t no image.
 *
 * @param context The context object.
 * @param list The string list with only ItemName instead of any image.
 */
public AUListDialog(Context context, ArrayList<String> list)

/**
 * Create AUListDialog based on the input list.
 *
 * @param list The PopMenuItem list.
 * @param context The context object.
 */
public AUListDialog(ArrayList<PopMenuItem> list, Context context)

/**
 * Create AUListDialog based on the input list.
 *
 * @param title The title.
 * @param list PopMenuItem The object list. Icons are allowed.
 * @param context The context object.
 */
public AUListDialog(String title, ArrayList<PopMenuItem> list, Context context)
```

```
/**
 * Create AUListDialog based on the input list.
 *
 * @param title The title.
 * @param message The message main body.
 * @param list PopMenuItem The object list. Icons are allowed.
 * @param context The context object.
 */
public AUListDialog(String title, String message, ArrayList<PopMenuItem> list, Context
context)

/**
 * Create AUListDialog based on the input list.
 *
 * @param title The title.
 * @param list The PopMenuItem list.
 * @param showSelectionState Whether to display the icon in the selected state.
 * @param positiveString Confirm button text.
 * @param positiveListener The Confirm button listener.
 * @param negativeString Cancel button text.
 * @param negativeListener The Cancel button listener.
 * @param context The context object.
 */
public AUListDialog(String title, ArrayList<PopMenuItem> list, boolean
showSelectionState,
        String positiveString, View.OnClickListener positiveListener,
        String negativeString, View.OnClickListener negativeListener, Context context)

/**
 * Create AUListDialog based on the input list.
 *
 * @param title The title.
 * @param message The message main body.
 * @param list The PopMenuItem list.
 * @param showSelectionState Whether to display the icon in the selected state.
 * @param positiveString Confirm button text.
 * @param positiveListener The Confirm button listener.
 * @param negativeString Cancel button text.
 * @param negativeListener The Cancel button listener.
 * @param context The context object.
 */
public AUListDialog(String title, String message, ArrayList<PopMenuItem> list, boolean
showSelectionState,
        String positiveString, View.OnClickListener positiveListener,
        String negativeString, View.OnClickListener negativeListener, Context context)

/**
 * Set the list option tapping event listener.
 */
public void setOnItemClickListener(OnItemClickListener listener) {
    this.listener = listener;
}
```

```
/**
 * Dynamic data refreshing API.
 *
 * @param list
 */
public void updateData(ArrayList<PopMenuItem> list)
```

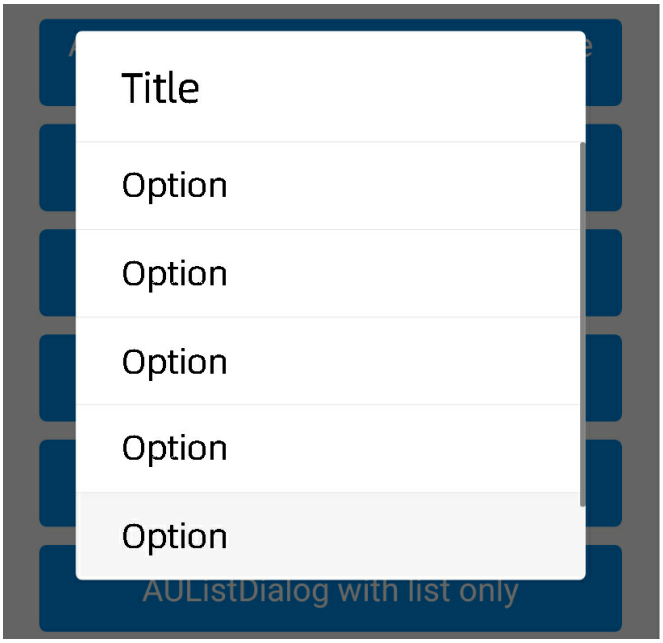
Sample code

- List dialog with options only



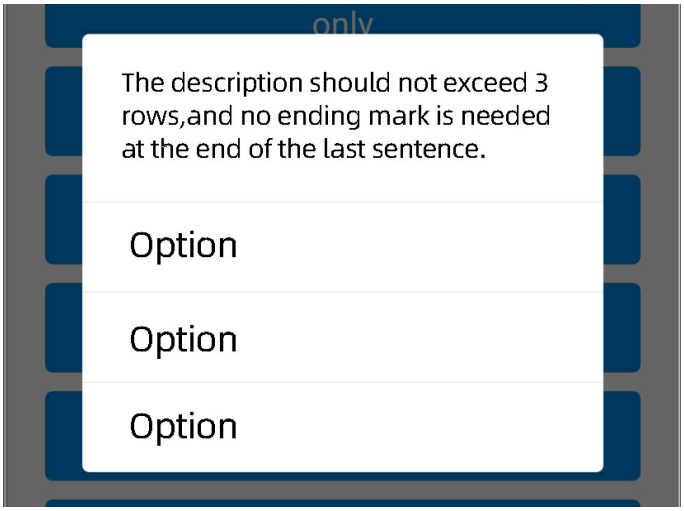

```
new AUListDialog(this, getData(7)).show();

 private ArrayList<String> getData(int size){
     ArrayList<String> data = new ArrayList<String>();
     for (int i= 1 ; i<= size; i++){
         data.add("Option"+ String.valueOf(i));
     }
     return data;
 }
```

- List dialog with a title



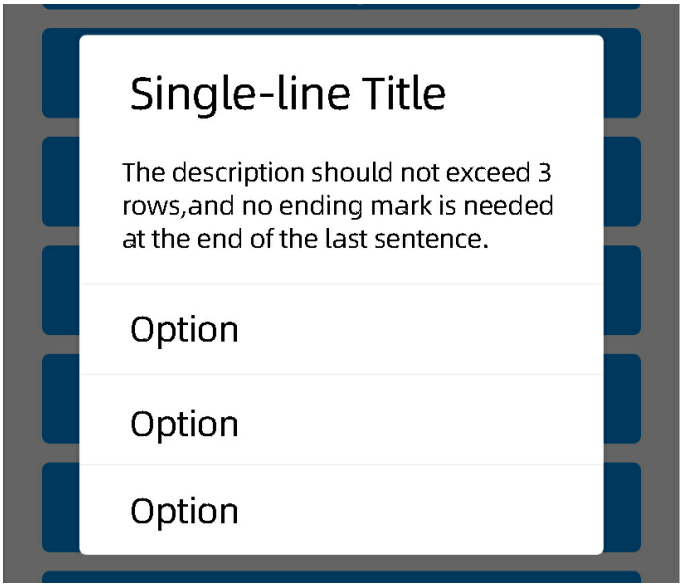

```
ArrayList<PopMenuItem> items = new ArrayList<PopMenuItem>();
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
new AUListDialog("Title", items, this).show();
```

- List dialog with description text



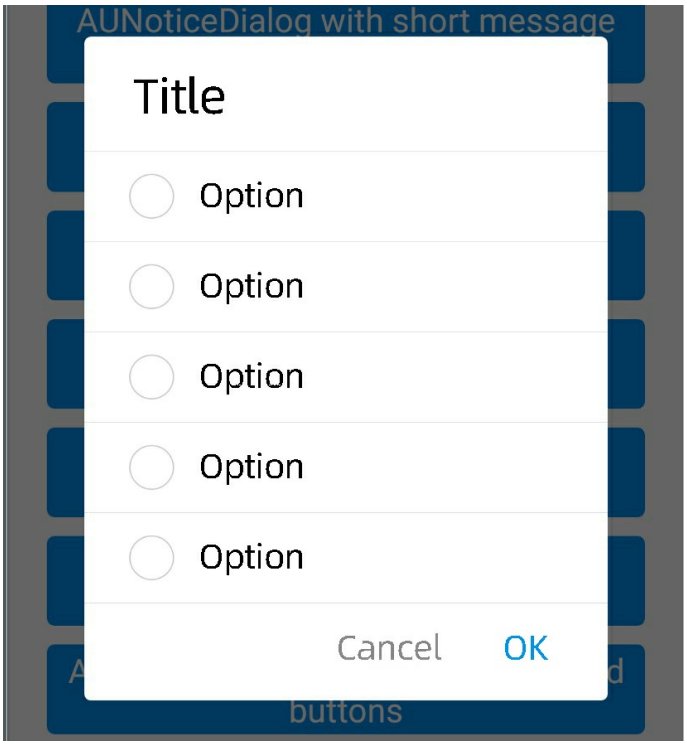

```
ArrayList<PopMenuItem> items = new ArrayList<PopMenuItem>();
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
new AUListDialog("", "The description should not exceed 3 rows, and no ending mark
is needed at the end of the last sentence.", items, this).show();
```

- List dialog with a title and description text




```
  ArrayList<PopMenuItem> items = new ArrayList<PopMenuItem>();
  items.add(new PopMenuItem("Option", null));
  items.add(new PopMenuItem("Option", null));
  items.add(new PopMenuItem("Option", null));
  new AUListDialog("Single-line Title", "The description should not exceed 3 rows, an
d no ending mark is needed at the end of the last sentence.", items, this).show();
```

- List dialog with checkboxes

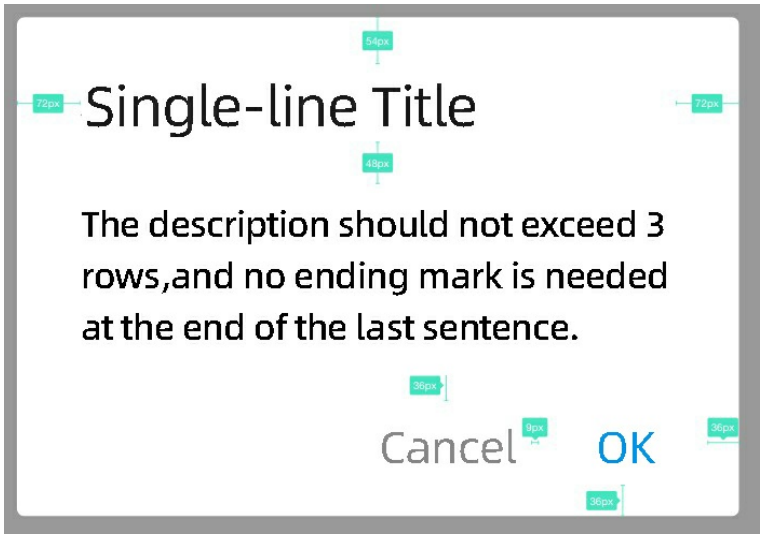


```
ArrayList<PopMenuItem> items = new ArrayList<PopMenuItem>();
PopMenuItem item = new PopMenuItem("Option", null);
item.setType(AUCheckIcon.STATE_UNCHECKED);
items.add(item);
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
items.add(new PopMenuItem("Option", null));
new AUListDialog("Title", items, true, "OK", null, "Cancel", null, this).show();
```

1.4.2.8. Notice dialog

AUNoticeDialog (formerly APNoticePopDialog) provides a dialog box containing a title, body, a Confirm button, and a Cancel button. It can be used to display common notices.

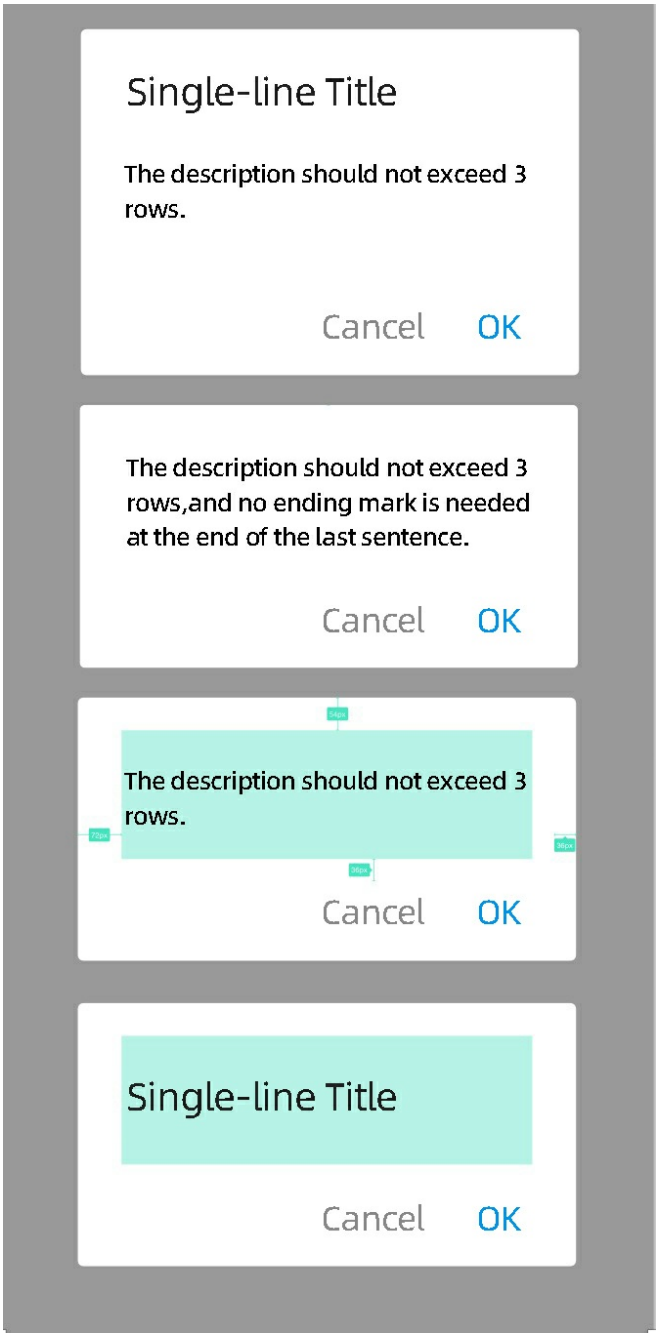
Sample image




```
AUNoticeDialog dialog = new AUNoticeDialog(this, "Single-line Title",
    "The description should not exceed 3 rows,and no ending mark is needed at the end o
f the last sentence.",
    "OK", "Cancel", true);
dialog.show();
```

Basic rules

- A pop-up window has a minimum height.
- When the window contains only a title or description, it is vertically centered and displayed at the minimum height.



- The text of the **Confirm** and **Cancel** buttons should contain a maximum of four words. Otherwise, the text may not be fully displayed on a phone with a small screen (such as VIVO Y23L).

Dependency

See Quick start.

API

```
public AUNoticeDialog(Context context, CharSequence title, CharSequence msg,
        String positiveString, String negativeString);

public AUNoticeDialog(Context context, CharSequence title, CharSequence msg,
        String positiveString, String negativeString, boolean isAutoCancel) ;
```

```
/**
 * Create AUNoticeDialog based on the Input parameters.
 *
 * @param context The context object.
 * @param title The title.
 * @param msg The message.
 * @param positiveString Confirm button text.
 * @param negativeString Cancel button text.
 * @param isAutoCancel Indicates whether to automatically cancel actions in the area ou
tside the pop-up window.
 */
public AUNoticeDialog(Context context, CharSequence title, CharSequence msg, String pos
itiveString, String negativeString, boolean isAutoCancel);

/**
 * Set the color of the Confirm button text.
 *
 * @ Param c The color value.
 */
public void setPositiveTextColor(ColorStateList c);

/**
 * Set the color of the Cancel button text.
 *
 * @ Param c The color value.
 */
public void setNegativeTextColor(ColorStateList c);

/**
 * Obtain the Cancel button.
 */
public Button getCancelBtn();

/**
 * Obtain the Confirm button.
 */
public Button getEnsureBtn();

/**
 * Obtain title TextView.
 */
public TextView getTitle();

/**
 * Obtain message TextView.
 */
public TextView getMsg();

/**
 * Set the Confirm button tapping listener.
 *
 * @param listener
 */
public void setPositiveListener(OnClickPositiveListener listener);
```

```
/**
 * Set the Cancel button tapping listener.
 *
 * @param listener
 */
public void setNegativeListener(OnClickNegativeListener listener);

/**
 * Obtain RelativeLayout at the outermost layer of the pop-up window.
 */
public RelativeLayout getDialogBg();

/**
 * Start the dialog and display it on screen.
 */
public void show();
```

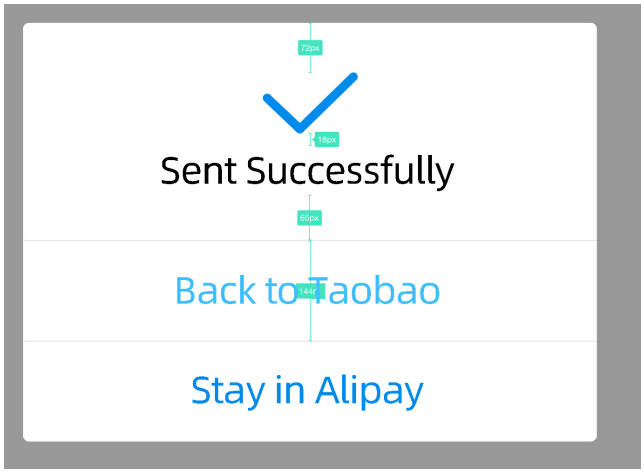
Sample code

```
//Without a title.
AUNoticeDialog dialog = new AUNoticeDialog(this, "",
            "The description should be within three lines, and punctuation should not b
e at the rightmost side of a single line.",
            "Confirm", "Cancel", true);
dialog.show();

//Without description.
AUNoticeDialog dialog = new AUNoticeDialog(this, "Single-line title",
            "",
            "Confirm", null, true);
dialog.show();
```

1.4.2.9. Operation result dialog

AUOperationResultDialog provides a pop-up window containing a title and an option list. It is mainly used for displaying social sharing and payment results.

Sample image



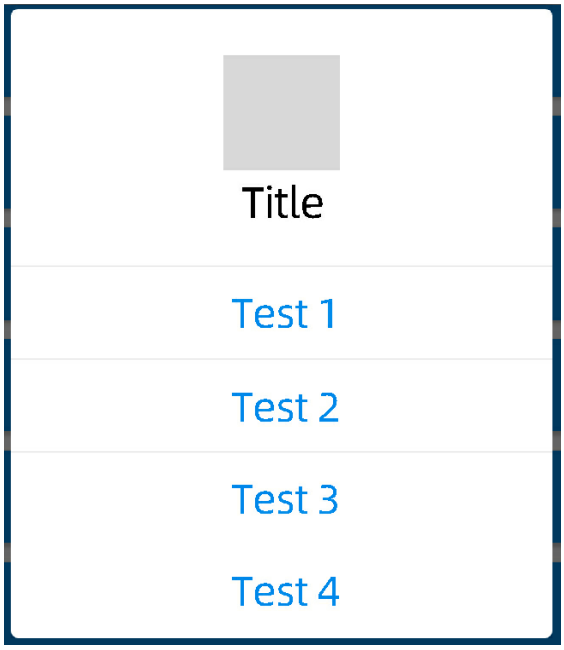
Dependency

See Quick start.

API description

```
/**
* Create AUListDialog based on the input list.
*
* @param title      The title.
* @param list       The PopMenuItem object list. Icons are allowed.
* @param context    The context object.
*/
public AUOperationResultDialog(Context context, String title, List<String> list)

/**
* Set the list option tapping event listener.
*/
public void setOnItemClickListener(OnItemClickListener listener)

/**
* Dynamic data refreshing API.
*
* @param list
*/
public void updateData(ArrayList<PopMenuItem> list)

/**
* Obtain imageView.
* @return
*/
public ImageView getIconView()

/**
* Set the visibility of the separation line.
* @param visibility
*/
public void setDivierViewVisibility(int visibility)
```

Sample code




```
public void clickAUOperationResultDialog(View view) {
        AUOperationResultDialog dialog = new
AUOperationResultDialog(this,"Title",getData());

dialog.getIconView().setImageDrawable(getResources().getDrawable(R.drawable.image));
        dialog.show();
}
```

1.4.2.10. Pop up menu

AUPopMenu provides a pop-up menu displayed when the user taps an option card on the navigation bar, which is essentially a pop-up window.

Different from AUFloatMenu, AUPopMenu has no bottom layer mask but has menu outlines, and all menu texts are centered.

Basic features

- Whether the menu pops upwards or downwards is controlled by the service system.
- The string list passed by the service system shall use the default style, or pass adapter directly.

Dependency

See Quick start.

API description

```
/**
* The data structure. Use the default style.
* @param context
* @param itemArrayList
*/
public AUPopMenu(Context context, ArrayList<MessagePopItem> itemArrayList)

/**
* The adapter structure. Use the custom style.
* @param context
* @param listAdapter
*/
public AUPopMenu(Context context, BaseAdapter listAdapter)

/**
* tip toast down
* @param anchorView
*/
public void showTipView(View anchorView)

/**
* tip toast with direction
* @param anchorView
* @param isDown
*/
public void showTipView(View anchorView, boolean isDown)

/**
* Make the window disappear.
*/
public void dismiss()


/**
* Set the option tapping listener.
* @param listener
*/
public void setOnItemClickListener(AdapterView.OnItemClickListener listener)
```

Custom properties

No customized property is available. The XML layout is not supported.

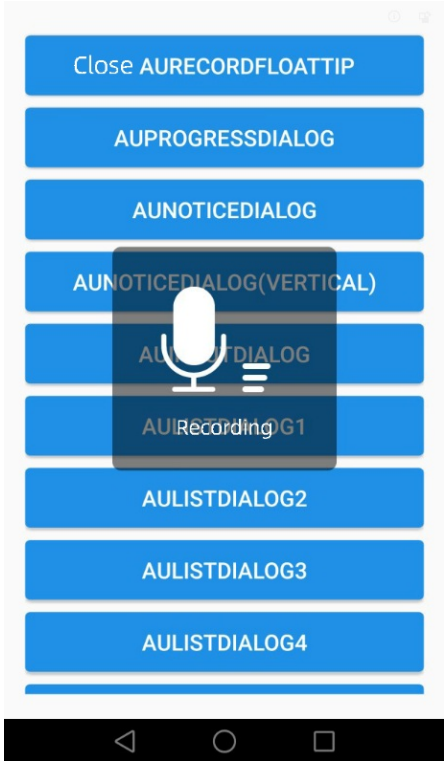
Sample code

```
final AUPopMenu popMenu = new AUPopMenu(ScrollTitleBarActivity.this, getItemList());
popMenu.showTipView(view);
popMenu.setOnItemClickListener(new AdapterView.OnItemClickListener() {
    @Override
    public void onItemClick(AdapterView<?> parent, View view, int position, long id) {

    }
});
```

1.4.2.11. Recording float tip

AURecordFloatTip is used to display a floating layer indicating that audio is being recorded. It provides users with more intuitive experience during recording.

Sample image



Dependency

See Quick start.

Structure

```
public AURecordFloatTip(Activity activity) ;

    public AURecordFloatTip(Activity activity, String tip);
```

API description

```
    /**
     * Display the floating layer.
     */
    public void show();

    /**
     * Make the floating layer disappear.
     */
    public void dismiss();

    /**
     * Obtain floating layer text view.
     *
     * @return
     */
    public AUTextView getTipTextView();

    /**
     * Obtain floating layer icon view.
     *
     * @return
     */
    public AUImageView getIconView();
```

Sample code

```
    if (!isSHowAURecordFloatTip) {
        ((AUButton) view).setText("Close AURecordFloatTip");
        if (mAURecordFloatTip == null) {
            mAURecordFloatTip = new AURecordFloatTip(this, "Recording");
        }
        mAURecordFloatTip.show();
        isSHowAURecordFloatTip = true;
    } else {
        ((AUButton) view).setText("Show AURecordFloatTip");
        if (mAURecordFloatTip != null) {
            mAURecordFloatTip.dismiss();
        }
        isSHowAURecordFloatTip = false;
    }
```

1.4.2.12. Toast

AUToast is the page pop-up indicator, and the AUProgressDialog is a progress indicator.

When the Toast methods of BaseFragmentActivity and BaseActivity are used, the mPaaS framework modifies the pop-ups in a unified manner.

For activity developed based on BaseFragmentActivity and BaseActivity, the system uses AUToast by default.

Dependency

See Quick start.

API description

```
    /**
     * Instantiate Toast.
     *
     * @param context       The context. Use activities on the current page.
     * @param drawableId    Image resources.
     * @param tipSrcId      The text prompt ID.
     * @param duration      Display duration Toast.Long/Toast.Short.
     * @return Toast
     */
    public static Toast makeToast(Context context, int drawableId, int tipSrcId, int du
ration) {
        CharSequence tipSrc = context.getResources().getText(tipSrcId);
        return makeToast(context, drawableId, tipSrc, duration);
    }

    /**
     * Create Toast.
     *
     * @param context   The context. Use activities on the current page.
     * @param tipSrcId  The prompt information.
     * @param duration  The duration.
     * @return toast
     */
    public static Toast makeToast(Context context, int tipSrcId, int duration) {
        CharSequence tipSrc = context.getResources().getText(tipSrcId);
        return makeToast(context, 0, tipSrc, duration);
    }

    /**
     * Make a toast that just contains a image view and a text view.
     *
     * @param context       The context. Use activities on the current page.
     * @param drawableId    The image resourceid.
     * @param tipSrc        The text to show.  Can be formatted text.
     * @param duration      How long to display the message.  Either  or
     * @return
     */
    public static Toast makeToast(Context context, int drawableId, CharSequence tipSrc,
int duration)
```

Code sample

```
    // Success.
        AUToast.makeToast(ToastActivity.this,
com.alipay.mobile.antui.R.drawable.toast_ok, "Success prompt",
Toast.LENGTH_SHORT).show();


    // Failure.
        AUToast.makeToast(ToastActivity.this,
com.alipay.mobile.antui.R.drawable.toast_false, "Failure prompt",
Toast.LENGTH_SHORT).show();
    }

    // Warning.
        AUToast.makeToast(ToastActivity.this,
com.alipay.mobile.antui.R.drawable.toast_warn, "Warning prompt",
Toast.LENGTH_SHORT).show();
    }

    // Text.
        AUToast.showToastWithSuper(ToastActivity.this, 0, "The text contains up to 14 w
ords", Toast.LENGTH_SHORT);

    // Loading.
    AUProgressDialog dialog = new AUProgressDialog(this);
    dialog.setMessage("Loading");
    dialog.show();

}
```

1.4.3. Input components

1.4.3.1. Amount input box

The AUAmountInputBox component provides an input box for the capital chain, and the number in the input box is in a special digit font. The input box includes two parts: edit box (AUAmountEditText) and notes (AUAmountFootView). AUAmountFootView has two styles, editable input box and text display, which can be used as needed.

In addition, the component provides AUAmountLabelText for special digit font display.

Dependency

See Quick start.

API description

AUAmountInputBox

```
/**
     * Get the edit box.
     * @return
     */
    public AUEditText getEditText()

    /**
     * Get the edit box.
     * @return
     */
    public AUAmountEditText getEditLayout()

    /**
     * Get footView of the capital chain.
     * @return
     */
    public AUAmountFootView getFootView()

    /**
     * Get the title bar of the output box.
     * @return
     */
    public AUTextView getTitleView()

    /**
     * Set properties of HeadView.
     * @param style EDIT_STYLE and TEXT_STYLE.
     */
    public void setFootStyle(int style)

    /**
     * Set the FootView edit box prompt.
     * @param hint
     */
    public void setFootHint(String hint)


    /**
     * Set the FootView text.
     * @param text
     */
    public void setFootText(String text)
```

AUAmountEditText

```
/**
     * Get EditText.
     * @return
     */
    public AUEditText getEditText()


    /**
     * Get input box information.
     * @return
     */
    public Editable getEditTextEditable()

    /**
     * Set to show or hide the separation line.
     * @param visible
     */
    public void setDividerVisible(boolean visible)

    /**
     * Set the prompt.
     * @param hint
     */
    public void setHint(String hint)

    /**
     * Specify whether to display the Delete button.
     * @param isShow
     */
    public void isShowClearIcon(boolean isShow)

    /**
     * Add focus listening.
     * @param listener
     */
    public void addOnFocusChangeListeners(OnFocusChangeListener listener)

    /**
     * Bind the external AUNumberKeyboardView ScrollView.
     * @param keyboardView
     * @param scrollView
     */
    public void setKeyBoardView(AUNumberKeyboardView keyboardView, ScrollView
scrollView)

    /**
     * Bind the external AUNumberKeyboardView.
     * @param keyboardView
     */
    public void setKeyBoardView(AUNumberKeyboardView keyboardView)
```

Custom properties

Property	Description	Type
footStyle	Type of header view.	editStyle, textStyle
amountTitleText	Edit box title.	String, Reference
amountHintText	Prompt for edit box.	String, Reference

Code sample

General code sample

```
<com.alipay.mobile.antui.amount.AUAmountEditText
    android:id="@+id/edit_text"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:amountHintText="Available balance 500.00" />

<com.alipay.mobile.antui.amount.AUAmountLabelText
    android:id="@+id/label_text"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center_horizontal" />

<com.alipay.mobile.antui.amount.AUAmountInputBox
      android:id="@+id/amount_input_1"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_marginTop="10dp"
      app:amountTitleText="Transfer amount" />

<com.alipay.mobile.antui.amount.AUAmountInputBox
      android:id="@+id/amount_input_2"
      android:layout_width="match_parent"
      android:layout_height="wrap_content"
      android:layout_marginTop="10dp"
      app:amountTitleText="Transfer amount"
      app:amountHintText="Available balance 500.00"
      app:footStyle="textStyle" />

AUAmountInputBox inputBox1 = (AUAmountInputBox)findViewById(R.id.amount_input_1);
inputBox1.setFootHint("Add remark");

AUAmountInputBox inputBox2 = (AUAmountInputBox)findViewById(R.id.amount_input_2);
inputBox2.setFootText("Input not allowed");
```

Code sample defining a numeric keypad

```
<?xml version="1.0" encoding="utf-8"?>
<com.alipay.mobile.antui.basic.AULinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res/com.alipay.mobile.antui"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical">

    <com.alipay.mobile.antui.basic.AUScrollView
        android:id="@+id/scroll"
        android:layout_weight="1"
        android:layout_width="match_parent"
        android:layout_height="match_parent">

        <com.alipay.mobile.antui.basic.AULinearLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:orientation="vertical">

            <com.alipay.mobile.antui.amount.AUAmountInputBox
                android:id="@+id/amount_input_1"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_marginTop="10dp"
                app:amountTitleText="Transfer amount" />
        </com.alipay.mobile.antui.basic.AULinearLayout>
    </com.alipay.mobile.antui.basic.AUScrollView>

    <com.alipay.mobile.antui.keyboard.AUNumberKeyboardView
        android:id="@+id/keyboard"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:visibility="gone"/>
</com.alipay.mobile.antui.basic.AULinearLayout>
```

```
// Initialize
keyboardView = (AUNumberKeyboardView) findViewById(R.id.keyboard);
inputBox1 = (AUAmountInputBox)findViewById(R.id.amount_input_1);
ScrollView scrollView = (ScrollView) findViewById(R.id.scroll);

// Bind the keyboard.
inputBox1.getEditLayout().setKeyBoardView(keyboardView, scrollView);
```

1.4.3.2. Input box

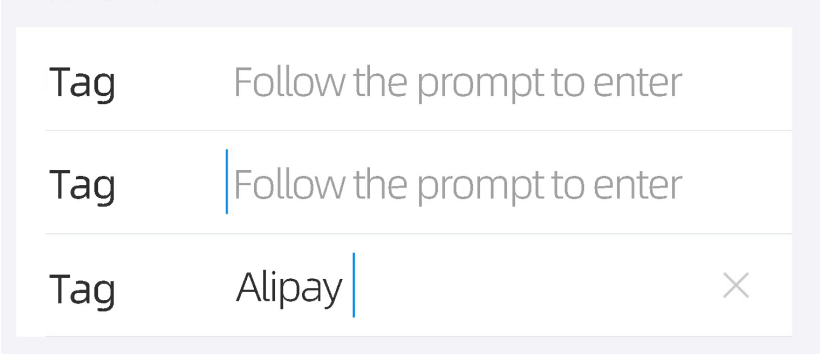
This topic describes the AUInputBox, AUImageInputBox, and AUTextCodeInputBox input box components provided by mPaaS. The AUImageInputBox and AUTextCodeInputBox components inherit the AUInputBox component.

AUInputBox

The AUInputBox component contains the following:

- An AUEditText text input box
- A tag name displayed on the left of the input box
- A Delete button that is displayed when an input box gets focus and the content is not empty

Sample image



Dependency

See Quick start.

API description

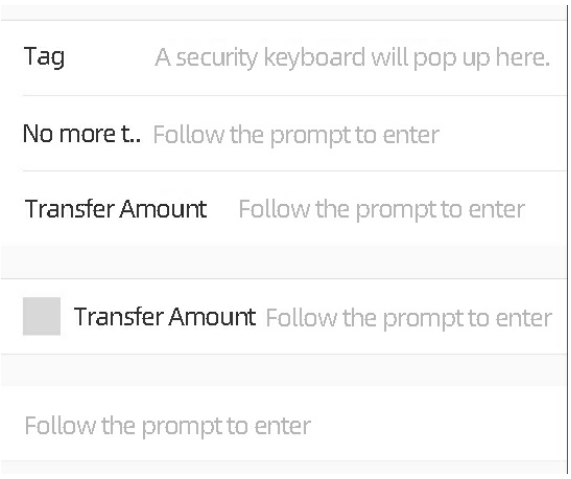
```
/**
 * Get the string after UBB encoding.
 */
public String getUbbStr()

/***
 * Set the emoji font size, in pixels(px).
 */
public void setEmojiSize(int emojiSize)
/***
 * Specify whether support to emoji.
 */
public void setSupportEmoji(boolean isSupport) {
    this.supportEmoji = isSupport;
}

/**
 * Set a Formatter to format the input.
 * After the setting is completed, the text that has been entered does not take effect
immediately. The effects will show upon subsequent text input.
 */
public void setTextFormatter(AUFormatter formatter)

/**
 * Specify whether the input text is bold.
 *
 * @param isBold    The value true indicates that the text is bold and the value false
indicates that the text is normal.
 */
public void setApprerance(boolean isBold)

/**
```

```
/**
 * Set a special listener to be called when an action is performed on the
 * text view. This will be called when the enter key is pressed, or when an
 * action supplied to the IME is selected by the user. Setting this means
 * that the normal hard key event will not insert a newline into the text
 * view, even if it is multi-line; holding down the ALT modifier will,
 * however, allow the user to insert a newline character.
 */
public void setOnEditorActionListener(OnEditorActionListener l)

/**
 * Adds a TextWatcher to the list of those whose methods are called whenever
 * this TextView's text changes.
 */
public void addTextChangedListener(TextWatcher watcher)


/**
 * The Delete button will be displayed after entering text in the input box, and settin
g the object received by click event of the delete button here.
 */
public void setCleanButtonListener(View.OnClickListener listener)

/**
 * Set the text content of the input box.
 */
public void setText(CharSequence inputContent)

/**
 * Get the text content. If the text is formatted, the calling party needs to process t
he text to meet the required format.
 */
public String getInputedText()

/**
 * The EditText control for getting the input box.
 */
public AUEditText getInputEdit()

/**
 * Set the tag text.
 * @param title The input tag text.
 */
public void setInputName(String title)


/**
 * The control for getting the input content name (tag name).
 */
public AUTextView getInputName()

/**
 * The font size of the input content name, in pixels(px).
 */
public void setInputNameTextSize(float textSize)
```

```
public void setInputNumberTextSize(float textSize)

/**
 * Set the font size of the input box, in pixels(px).
 */
public void setInputTextSize(float textSize)

/**
 * The text color for the input content.
 */
public void setInputTextColor(int textColor)

/**
 * Set the input content type.
 */
public void setInputType(int inputType)
/**
 * Set prompt message.
 */
public void setHint(String hintString)

/**
 * Set the left tag icon.
 */
public void setInputImage(Drawable drawable)

/**
 * Get the left tag icon.
 */
public AUImageView getInputImage()

/**
 * Set the color of the prompt message.
 */
public void setHintTextColor(int textColor)

/**
 * Set the maximum input length of the input box.
 *
 * @param maxlength If the value is 0 or smaller, the length is not restricted.
 */
public void setMaxLength(int maxlength)

/**
 * The control for getting the Clear button.
 */
public AUIconView getClearButton()

/**
 * Get the setting of whether to show the Clear button.
 */
public boolean isNeedShowClearButton() {
    return isNeedShowClearButton;
}
```

```
/**
 * Specify whether to show the Clear button. If the parameter is set to false, the Clea
r button will not be showed in any case.
 */
public void setNeedShowClearButton(boolean isNeedShowClearButton)

/**
 * Set the border style of the control, including upper, middle, lower, and independent
.
 * This method is in the AULineGroupItemInterface API.
 * This method is automatically called when the control is used with LineGroupView.
 *
 * @param positionStyle Use the variables defined in AULineGroupItemInterface: TOP, CEN
TER, BOTTOM, NORMAL, LINE, and NONE.
 */
@Override
public void setItemPositionStyle(int positionStyle)

/**
 * Get the input content type.
 */
public int getInputType()
```

Code sample



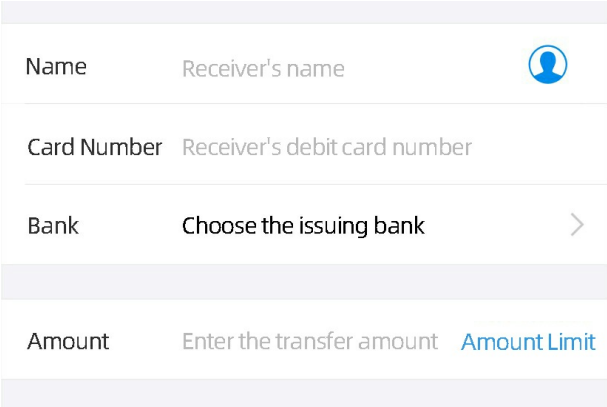
```
<com.alipay.mobile.antui.input.AUInputBox
    android:id="@+id/safeInputBox"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:listItemType="top"
    app:inputName="Tag 1"
    app:inputType="textPassword"
    app:inputHint="This input box pops up a security keyboard"/>

<com.alipay.mobile.antui.input.AUInputBox
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:listItemType="center"
    app:inputName="Tag 2"
    app:inputHint="Input as prompted"/>

<com.alipay.mobile.antui.input.AUInputBox
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:listItemType="bottom"
    app:inputName="Transfer amount"
    app:inputHint="Input as prompted"/>


<com.alipay.mobile.antui.input.AUInputBox
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    app:inputImage="@drawable/image"
    app:inputName="Transfer amount"
    app:inputHint="Input as prompted"/>

<com.alipay.mobile.antui.input.AUInputBox
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    app:inputHint="Input as prompted"/>
```

AUImageInputBox

AUImageInputBox inherits AUInputBox and contains the following:

- A IconView on the right to show icons or Unicode
- A TextView on the right

Sample image



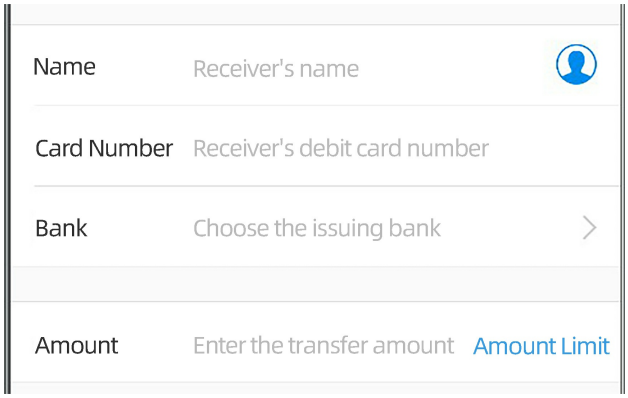
Dependency

See Quick start.

API description

```
/**
 * Set the background of the rightmost functional button.
 * If the background of the Set button is empty, the functional button will not be show
ed, which is consistent with the AUInputBox function.
 */
public void setLastImgDrawable(Drawable drawable)

/**
 * Set the background of the rightmost functional button.
 * @param unicode
 */
public void setLastImgUnicode(String unicode)

/**
 * Specify whether the rightmost icon is visible.
 * @param visible
 */
public void setLastImgBtnVisible(boolean visible)

/**
 * Set listening on the rightmost functional button.
 */
public void setLastImgClickListener(View.OnClickListener l)

/**
 * Set the rightmost text.
 * @param lastText
 */
public void setLastTextView(String lastText)

/**
 * Get the rightmost TextView.
 *
 * @return Get the rightmost TextView.
 */
public AUTextView getLastTextView()

/**
 * Get the rightmost IconView.
 * @return
 */
public AUIconView getLastImgBtn()
```

Code sample

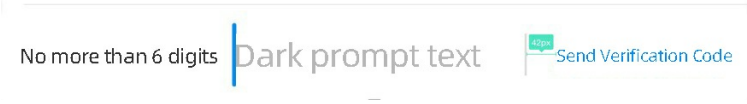



```
<com.alipay.mobile.antui.input.AUImageInputBox
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    app:listItemType="top"
    app:inputName="Name"
    app:inputHint="Payee name"
    app:input_rightIconUnicode="@string/iconfont_phone_contact" />

<com.alipay.mobile.antui.input.AUImageInputBox
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:listItemType="center"
    app:inputName="Card number"
    app:inputHint="Savings card number of the payee"/>

<com.alipay.mobile.antui.input.AUImageInputBox
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:listItemType="bottom"
    app:inputName="Bank"
    app:inputHint="Select bank"
    app:input_rightIconDrawable="@drawable/table_arrow" />


<com.alipay.mobile.antui.input.AUImageInputBox
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    app:inputName="Amount"
    app:inputHint="Enter transfer amount"
    app:input_rightText="Amount limit" />
```

AUTextCodeInputBox

AUTextCodeInputBox inherits AUInputBox and contains a text button used for sending the SMS verification code on the right.

Sample image



Dependency

See Quick start.

API description

```
/**
 * Set the callback for the Send button clicking event.
 * @param callback When a user clicks the Send button, the OnSendCallback.onSend() meth
od will be called back.
 */
public void setOnSendCallback(OnSendCallback callback)

/**
 * Reset the current time to zero.
 */
public void currentSecond2Zero()

/**
 * Set the current time.
 */
public void setCurrentSecond(int current)

/**
 * Get the current time.
 */
public int getCurrentSecond()

/**
 * Get the Send button.
 */
public AUButton getSendCodeButton()

/**
 * The release timer for business calling.
 */
public void releaseTimer()


/**
 * Start countdown for the button.
 */
public void scheduleTimer()

public interface SendButtonEnableChecker {
    public boolean checkIsEnabled();
}

/**
 * This method sets the method used to detect whether SendButton is available.
 * If this method detects that the button is unavailable, the button is dimmed when the
updateSendButtonEnableStatus method is called.
```

```
updateSendButtonEnableStatus method is called.
 * Otherwise, the button is available when the updateSendButtonEnableStatus method is c
alled according to the countdown logic.
 * The button is available only when all checks are available, or it will be dimmed.
 */
public void setSendButtonEnableChecker(SendButtonEnableChecker checker)

/**
 * Update the SendButton availability state based on the internal state of
SendButtonEnableChecker and CheckCodeSendBox.
 * The button is available only when all checks are available, or it will be dimmed.
 */
public void updateSendButtonEnableStatus()

/**
 * Get SendResultCallback.
 */
public SendResultCallback getSendResultCallback()
```

Code sample

- **XML**

```
<com.alipay.mobile.antui.input.AUTextCodeInputBox
    android:id="@+id/au_textcode_input"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"/>
```

- **Java**

```
final AUTextCodeInputBox textCodeInputBox = (AUTextCodeInputBox)
findViewById(R.id.au_textcode_input);
textCodeInputBox.setOnSendCallback(new OnSendCallback() {
    @Override
    public void onSend(final SendResultCallback callback) {
        // The RPC request to the server for a verification code.
        boolean resendSmsRpcSuccess = true;
        if (resendSmsRpcSuccess) {
            // Start countdown when the verification code is successfully sent.
            callback.onSuccess();
            // The verification code is received.
            Toast.makeText(InputActivity.this, "Verification code received: 123456",
Toast.LENGTH_SHORT)
                    .show();
            textCodeInputBox.setText("123456");
            Log.d(TAG, "Input verification code: " +
textCodeInputBox.getInputedText());
        } else {
            // Failed to send the verification code. Enable the Send button again.
            callback.onFail();
        }
    }
});
```

Custom properties

The following table describes custom attribute parameters of the three components.

Property	Description	Type
inputName	The input content name.	String, Reference
inputHint	The prompt content of the input box.	String, Reference
maxLength	The maximum length of the input content.	Integer
inputType	The input content type.	Enum, including textNormal, textNumber, textDecimal, and textPassword
inputImage	The image to the left of the input box.	Reference
listItemType	The background type of an item.	Enum, including top, center, bottom, normal, line, and none

Property	Description	Type
input_rightIconUnicode	The right-side icon.	String, Reference
input_rightIconDrawable	The right-side image.	Reference
input_rightText	The right-side hyperlink text.	String, Reference

1.4.3.3. Numerical keyboard

AUNumberKeyboardView provides numeric keypads in three states.

Use the component

- Use the component independently to show a view, for example, a mini program.
- Bind the component with AUAmountEditText and use them together. The binding tool is AUNumberKeyBoardUtil, which is encapsulated in AUAmountEditText. For more information, see AUAmountInputBox documentation.
- Bind the component with common EditText and use them together. The binding tool is AUNumberKeyBoardUtil, which needs to be called independently.

Dependency

See Quick start.

API description

AUAmountEditText

```
/**
     * Set the keyboard style. The default value is STYLE_POINT.
     * @param style STYLE_POINT, STYLE_X, and STYLE_NONE.
     */
    public void setStyle(int style)

    /**
     * Set button listening.
     * @param listener
     */
    public void setActionClickListener(OnActionClickListener listener)

    /**
     * Show status listening.
     * @param windowStateChangeListener
     */
    public void setWindowStateChangeListener(WindowStateChangeListener
windowStateChangeListener)

    /**
     * Show.
     */
    public void show()

    /**
     * Hide.
     */
    public void hide()

    /**
     * Return the show state.
     * @return
     */
    public boolean isShow()
```

AUNumberKeyBoardUtil

```
/**
     * Pass in EditText and AUNumberKeyboardView.
     * @param context
     * @param editText
     * @param keyboardView
     */
    public AUNumberKeyBoardUtil(Context context, EditText editText,
AUNumberKeyboardView keyboardView)

    /**
     * Set the scroll view.
     * @param view
     */
    public void setScrollView(ScrollView view)

    /**
     * Show the numeric keypad.
     */
    public void showKeyboard()

    /**
     * Hide the numeric keypad.
     */
    public void hideKeyboard()
```

Code sample

AUAmountEditText

```
AUNumberKeyboardView  auNumberKeyboardView = new AUNumberKeyboardView(this, AUNumberKey
boardView.STYLE_POINT, new AUNumberKeyboardView.OnActionClickListener() {
            @Override
            public void onNumClick(View view, CharSequence num) {

            }

            @Override
            public void onDeleteClick(View view) {

            }

            @Override
            public void onConfirmClick(View view) {

            }

            @Override
            public void onCloseClick(View view) {

            }
        });
```

AUNumberKeyBoardUtil

- **XML**

```
<com.alipay.mobile.antui.basic.AULinearLayout
xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical">

    <com.alipay.mobile.antui.basic.AUScrollView
        android:id="@+id/scroll"
        android:layout_weight="1"
        android:layout_width="match_parent"
        android:layout_height="match_parent">

        <com.alipay.mobile.antui.basic.AULinearLayout
            android:layout_width="match_parent"
            android:layout_height="match_parent"
            android:orientation="vertical">

            <EditText
                android:id="@+id/editText"
                android:layout_width="match_parent"
                android:layout_height="wrap_content"
                android:layout_marginTop="10dp" />
        </com.alipay.mobile.antui.basic.AULinearLayout>
    </com.alipay.mobile.antui.basic.AUScrollView>

    <com.alipay.mobile.antui.keyboard.AUNumberKeyboardView
        android:id="@+id/keyboard"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:visibility="gone"/>
</com.alipay.mobile.antui.basic.AULinearLayout>
```

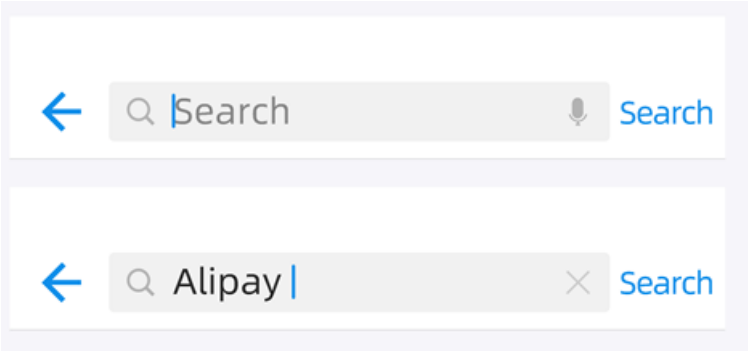
- **Java**

```
keyBoardUtil = new AUNumberKeyBoardUtil(context, editText, keyboardView);
keyBoardUtil.setScrollView(scrollView);
```

1.4.3.4. Search bar

AUSearchBar (previously known as APSocailSearchBar) provides a search title bar containing a Back button, a search box, and a Search button on the right.

Sample image



API description

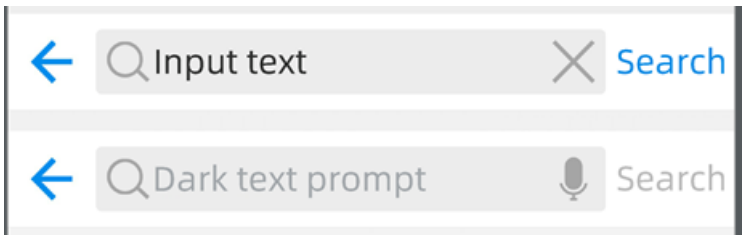
```
/**
     * Set the maximum input length.
     */
    public void setInputMaxLength(int length);

    /**
     * Get the Back button.
     * @return
     */
    public AUIconView getBackButton() ;

    /**
     * Get the Delete button.
     * @return
     */
    public AUIconView getClearButton();

    /**
     * Get the search input box.
     * @return
     */
    public AUEditText getSearchEditView();

    /**
     * Get the Search button.
     * @return
     */
    public AUIconView getSearchButton() ;

    /**
     * Get the search layout.
     * @return
     */
    public AURelativeLayout getSearchRelativeLayout() ;

    /**
     * Get the voice search button.
     * @return
     */
    public AUIconView getVoiceButton();

         /**
     * Add editing event listening.
     */
        public void setEditChangedListener(TextWatcher watcher)
```

Custom properties

Property	Description	Type

isShowSearchBtn	Whether to show the Search button.	Boolean
isShowVoiceSearch	Whether to show the voice search button.	Boolean
searchEditText	The default text in the search box.	String, Reference
searchEditHint	The default prompt content in the search box.	String, Reference
searchButtonText	The text of the Search button.	String, Reference
inputMaxLength	The maximum length of the search box.	Integer, Reference
hintIconUnicode	The Unicode of the icon on the left side of the edit box.	String, Reference
hintIconDrawable	The resource of the icon on the left side of the edit box.	Reference
backIconUnicode	The Unicode of the Back button.	String, Reference
backIconDrawable	The resource of the Back button.	Reference
editHintColor	The color of the prompt content in the edit box.	Color, Reference
editTextColor	The color of the text in the edit box.	Color, Reference
editIconColor	The color of the icon in the edit box.	Color, Reference

Code sample



```
<com.alipay.mobile.antui.basic.AUSearchBar
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dp"
        app:searchEditText="Input text"
        app:isShowSearchBtn="true"
        app:isShowVoiceSearch="true"/>

    <com.alipay.mobile.antui.basic.AUSearchBar
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dp"
        app:searchEditHint="Dark text prompt"
        app:isShowSearchBtn="true"
        app:isShowVoiceSearch="true"/>
```

1.4.3.5. Search input box

AUSearchInputBox (previously known as APSocialTagSearchBar) provides a search title bar containing a search box and a Search button on the right. To use this component, you need to set the height of View.

Dependency

See Quick start.

API description

```
/**
     * Set the maximum input length.
     */
    public void setInputMaxLength();

    /**
     * Get the Delete button.
     * @return
     */
    public AUIconView getClearButton();

    /**
     * Get the search input box.
     * @return
     */
    public AUEditText getSearchEditView();

    /**
     * Get the voice search button.
     * @return
     */
    public AUIconView getVoiceButton();
```

Custom properties

Property	Description	Type
isShowSearchBtn	Whether to show the Search button.	Boolean
isShowVoiceSearch	Whether to show the voice search button.	Boolean
searchEditText	The default text in the search box.	String, Reference
searchEditHint	The default prompt content in the search box.	String, Reference
inputMaxLength	The maximum length of the search box.	Integer, Reference
hintIconUnicode	The Unicode of the icon on the left side of the edit box.	String, Reference
hintIconDrawable	The resource of the icon on the left side of the edit box.	Reference
editHintColor	The color of the prompt content in the edit box.	Color, Reference
editTextColor	The color of the text in the edit box.	Color, Reference
editIconColor	The color of the icon in the edit box.	Color, Reference

Code sample

XML

```
<com.alipay.mobile.antui.basic.AUSearchInputBox
        android:layout_width="match_parent"
        android:layout_height="52dp"
        android:layout_marginTop="10dp"
        app:searchEditHint="Dimmed text prompt" />
```

```
AUSearchInputBox inputBox = new AUSearchInputBox(this);
ViewGroup.LayoutParams layoutParams = new
ViewGroup.LayoutParams(ViewGroup.LayoutParams.MATCH_PARENT,300);
inputBox.setLayoutParams(layoutParams);

layout.addView(inputBox);
```

1.4.4. Item component

1.4.4.1. Auxiliary description component

AUAssistLabelView is a TextView component that displays the auxiliary text.

Dependency

See Quick start.

Code sample

```
<com.alipay.mobile.antui.basic.AUAssistLabelView
android:layout_width="match_parent"
android:layout_height="wrap_content"
android:text="If the function is disabled, the notification will not show the sender an
d summary when you receive a message." />
```

```
<com.alipay.mobile.antui.basic.AUAssistLabelView
android:layout_width="match_parent"
android:layout_height="wrap_content"
app:isHead="true"
android:text="Header" />
```

1.4.4.2. Bank card item component

The AUBankCardItem component is used to provide bank card entries such as the bank name, bank logo, and bank account number.

Dependency

See Quick start.

API description

```
/**
 * Get the bank name view.
 * @return
 */
public AUEmptyGoneTextView getBankName();

/**
 * Get the bank account view.
 * @return
 */
public AUEmptyGoneTextView getBankNumber();

/**
 * Get the bank logo view.
 * @return
 */
public AUCircleImageView getBankImage();

/**
 * Set the bank name and account number simultaneously.
 * @param bankName
 * @param bankNum
 */
public void setBankInfo(String bankName, String bankNum) ;
```

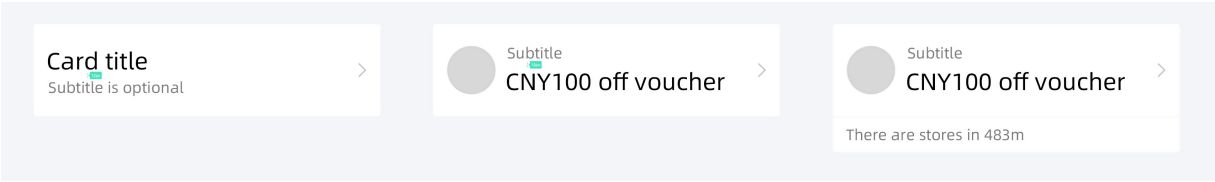
Code sample

```
AUBankCardItem cardItem = new AUBankCardItem(this);
cardItem.setBankInfo("Bank name","Last 4 digits");
cardItem.getBankImage().setImageResource(R.drawable.image);
```

1.4.4.3. Coupons item component

The coupon entry component is used to display the coupon entry including the coupon icon, title, and auxiliary description.

Sample images



Dependency

See Quick start.

Code sample

```
AUCouponsItem couponsItem1 = new AUCouponsItem(this);
couponsItem1.setCouponsInfo("Subtitle","CNY100 off voucher","");
couponsItem1.getCouponsImage().setImageResource(R.drawable.image);

AUCouponsItem couponsItem2 = new AUCouponsItem(this);
couponsItem2.setCouponsInfo("","CNY100 off voucher","Subtitle is optional");

AUCouponsItem couponsItem3 = new AUCouponsItem(this);
couponsItem3.setCouponsInfo("Subtitle","CNY100 off voucher","");
couponsItem3.setCouponsAssitDes("There are stores in 483m");
couponsItem3.getCouponsImage().setImageResource(R.drawable.image);
```

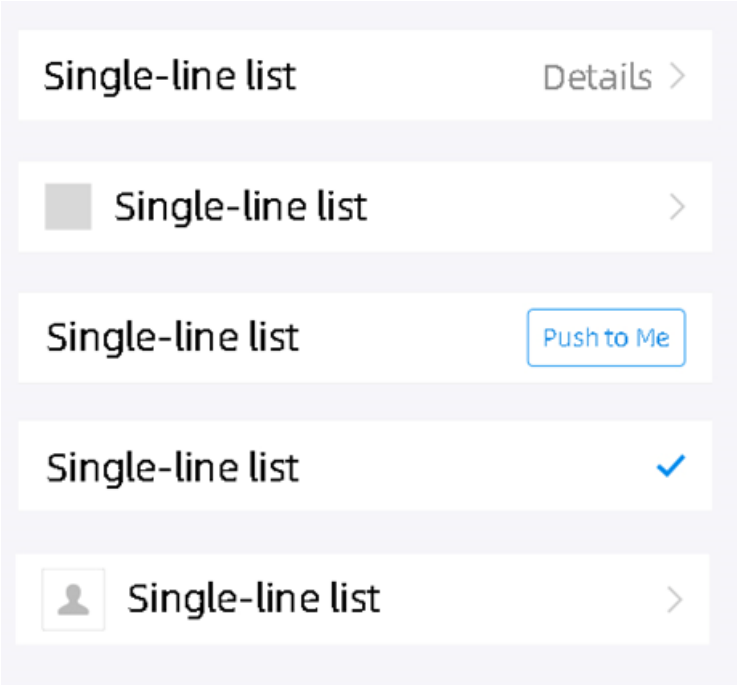
1.4.4.4. List item component

AUListItem is a list item component, including the following controls:

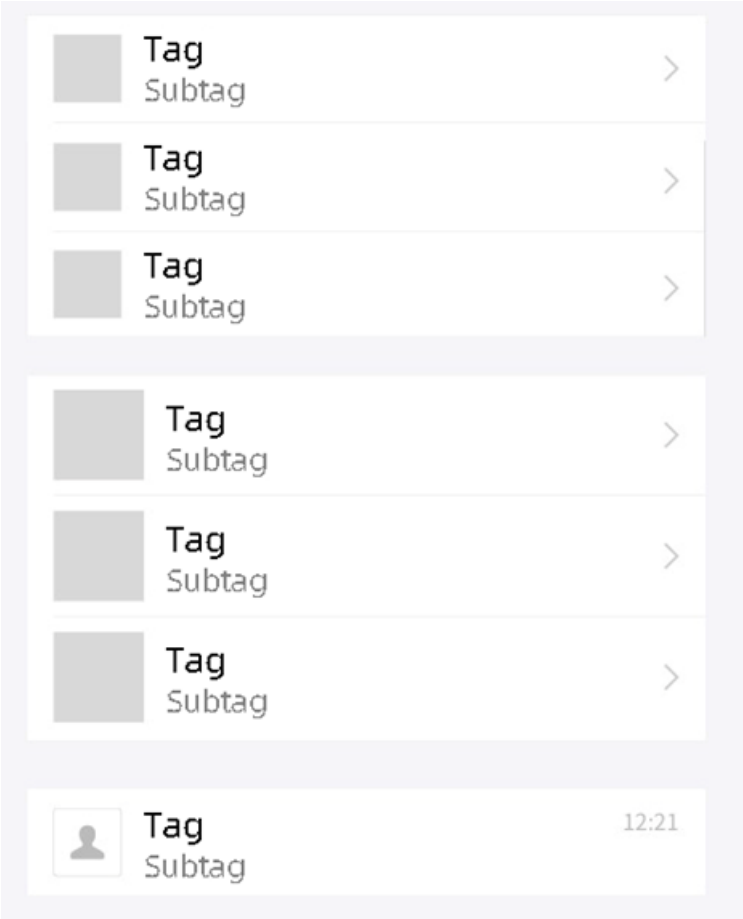
- AUSingleTitleListItem
- AUDoubleTitleListItem
- AUCheckBoxListItem
- AUSwitchListItem
- AUMultiListItem
- AUParallelTitleListItem
- AULineBreakListItem

Sample images

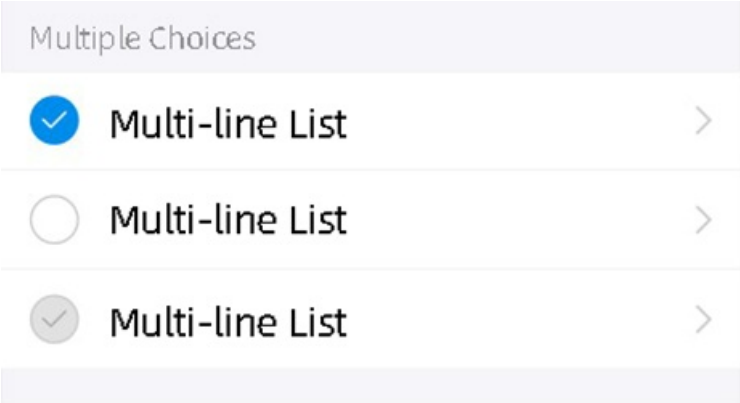
AUSingleTitleListItem



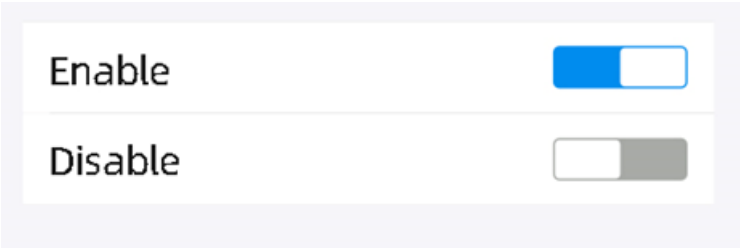
AUDoubleTitleListItem



AUCheckBoxListItem



AUSwitchListItem



Dependency

See Quick start.

API description

Basic APIs

```
/**
* Set the item type, including upper, medium, and lower.
*
* @param positionStyle AULineGroupItemInterface.NORMAL TOP BOTTOM CENTER LINE NONE
*/
public void setItemPositionStyle(int positionStyle)

/**
* Specify whether the arrow on the right is visible.
* @param isVisible
*/
public void setArrowVisibility(boolean isVisible)
```

AUParallelListItem

```
/**
 * Set the text in four positions simultaneously.
 * @param leftText
 * @param leftSubText
 * @param rightText
 * @param rightSubText
 */
public void setParallelText(String leftText, String leftSubText, String rightText, Stri
ng rightSubText)

/**
 * Set the main text on the left.
 * @param leftText
 */
public void setLeftText(String leftText)

/**
 * Set the main text on the right.
 * @param rightText
 */
public void setRightText(String rightText)

/**
 * Set the auxiliary text on the left.
 * @param leftSubText
 */
public void setLeftSubText(String leftSubText)

/**
 * Set the auxiliary text on the right.
 * @param rightSubText
 */
public void setRightSubText(String rightSubText)
```

AULineBreakListItem

```
/**
 * Set the text on the left and right.
 * @param left
 * @param right
 */
public void setText(String left, String right)

/**
 * Get the left TextView.
 * @return
 */
public AUTextView getLeftText()

/**
 * Get the right TextView.
 * @return
 */
public AUTextView getRightText()
```

Public APIs

```
/**
 * Set the size of the icon image.
 */
public void setIconSize(float width, float height)

/**
 * Get the main text on the left.
 * @return
 */
public CharSequence getLeftText()

/**
 * Set the main text on the left.
 * @param text
 */
public void setLeftText(CharSequence text)

/**
 * Set the color of the main text on the left.
 * @param color
 */
public void setLeftTextColor(int color)

/**
 * Get the view of the left-side image.
 * @return
 */
public AURoundImageView getLeftRoundImageView()
public AUImageView getLeftImageView()

/**
```

```
 * Set the left-side image.
 * @param resId
 */
public void setLeftImage(int resId)

/**
 * Set the left-side image.
 * @param drawable
 */
public void setLeftImage(Drawable drawable)

/**
 * Set visibility when setLeftImage is set in the API.
 * If setLeftImage is called after this API is called, the system will reset the visibi
lity.
 *
 * @param vis View.GONE
 */
public void setLeftImageVisibility(int vis)

/**
 * Get text information on the left.
 * @return
 */
public AUTextView getLeftTextView()
}
```

AUSingleTitleListItem

```
/**
 * Set the Select button on the right.
 * @param checked
 */
public void setItemChecked (boolean checked)


/**
 * Set text information on the right.
 * @param text
 */
public void setRightText(CharSequence text)

/**
 * Set the color of the text on the right.
 * @param color
 */
public void setRightTextColor(int color)

/**
 * Set the right-side image.
 */
public void setRightImage(int resId)
public void setRightImage(Bitmap bitmap)
```

```
public void setRightImage(Drawable drawable)

/**
 * Get the view of the text on the right.
 * @return
 */
public AUTextView getRightTextView()

/**
 * Get the view of the right-side image.
 * @return
 */
public AUImageView getRightImageView()

/**
 * Set text information on the right.
 * @param text
 */
public void setRightButtonText(CharSequence text)

/**
 * Get the button.
 * @return
 */
public AUProcessButton getProcessButton()

/**
 * Set the button clicking listener.
 * @param listener
 */
public void setButtonClickListener(OnClickListener listener)

/**
 * Set the style on the right.
 * @param type AUAbsListItem.TEXT_IMAGE AUAbsListItem.BUTTON
 */
public void setRightType(int type)
```

AUCheckBoxListItem

```
/**
 * Get the check icon on the left.
 * @return
 */
public AUCheckIcon getLeftCheckIcon()

/**
 * Set the icon state.
 * @param status AUCheckIcon.STATE_CHECKED|STATE_UNCHECKED|STATE_DISABLED
 */
public void setCheckstatus(int status)

/**
 * Get the check state.
 * @return
 */
public int getIconState()
```

AUSwitchListItem

```
/**
 * Set switch status listening.
 * @param onCheckedChangeListener
 */
public void setOnSwitchListener (CompoundButton.OnCheckedChangeListener
onCheckedChangeListener)

/**
 * Get the switch.
 * @return
 */
public AUSwitch getSwitch()

/**
 * Return the switch status.
 * @return Indicates whether the switch is enabled.
 */
public boolean isSwitchOn()

/**
 * Set the switch status.
 * @param status
 */
public void setSwitchStatus(boolean status)

/**
 * Set the state to enable or disable.
 * @param enabled
 */
public void setSwitchEnabled(boolean enabled)
```

AUDoubleTitleListItem

```
/**
 * Set the auxiliary text on the left.
 * @param text
 */
public void setLeftSubText(CharSequence text)

/**
 * Set the text on the right.
 * @param text
 */
public void setRightText(CharSequence text)

/**
 * Set the font and color of the text on the right.
 * @param color
 */
public void setRightTextColor(int color)

/**
 * Get the view of the text on the right.
 * @return
 */
public AUTextView getRightTextView()

/**
 * Get the view of the auxiliary text on the left.
 * @return
 */
public AUTextView getLeftSubTextView()

/**
 * Set text information on the right.
 * @param text
 */
public void setRightButtonText(CharSequence text)

/**
 * Get the button.
 * @return
 */
public AUProcessButton getProcessButton()

/**
 * Set the button clicking listener.
 * @param listener
 */
public void setButtonClickListener(OnClickListener listener)

/**
 * Set the style on the right.
 * @param type AUAbsListItem.TEXT_IMAGE AUAbsListItem.BUTTON
 */
public void setRightType(int type)
```

AUMultiListItem

```
/**
 * Add an extended view to the left.
 * @param view
 */
public void addLeftAssistantView(View view)

/**
 * Set the auxiliary text on the left.
 * @param text
 */
public void setLeftSubText(CharSequence text)

/**
 * Get the subtitle text.
 * @return
 */
public AUEmptyGoneTextView getLeftSubTextView()
```

Custom properties

Property	Description	Type
listItemType	Sets the position style.	Normal/Top/Bottom/Center/Line/None
listLeftText	The text on the left.	String, Reference
listLeftSubText	The auxiliary text on the left.	String, Reference
listLeftTextSize	The font size of the text on the left.	Dimension
listLeftSubTextSize	The font size of the auxiliary text on the left.	Dimension
listLeftTextColor	The color of the text on the left.	Color, Reference
listLeftSubTextColor	The color of the auxiliary text on the left.	Color, Reference
listLeftImage	The left-side icon.	Reference
listLeftImageWidth	The width of the left-side image.	Dimension, Reference

Property	Description	Type
listLeftImageHeight	The height of the left-side image.	Dimension, Reference
listShowArrow	Whether to show the arrow on the right.	Boolean
listArrowType	Arrow orientation	Arrow_right/Arrow_down/Arrow_up
listRightText	The text on the right.	String, Reference
listRightSubText	The auxiliary text on the right.	String, Reference
listRightType	The style on the right.	Text_image/Button
listRightImage	The right-side image.	String, Reference
listShowCheck	The checking image on the right.	Boolean

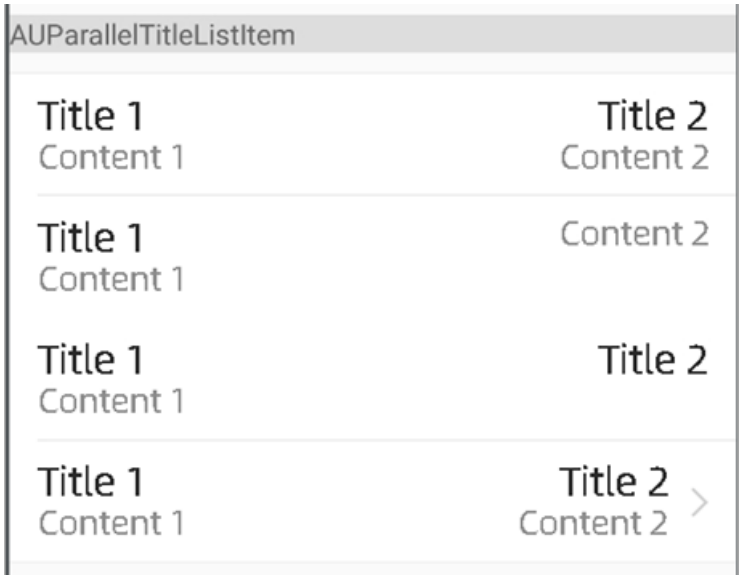
Note:

- Note: The following code sample(XML) shows the properties supported in each control.
- If you need to use the background color changing effect, add the `android:clickable="true"` property.
- The height of the control, the width and height of the left image are custom based on business requirements.

Sample code

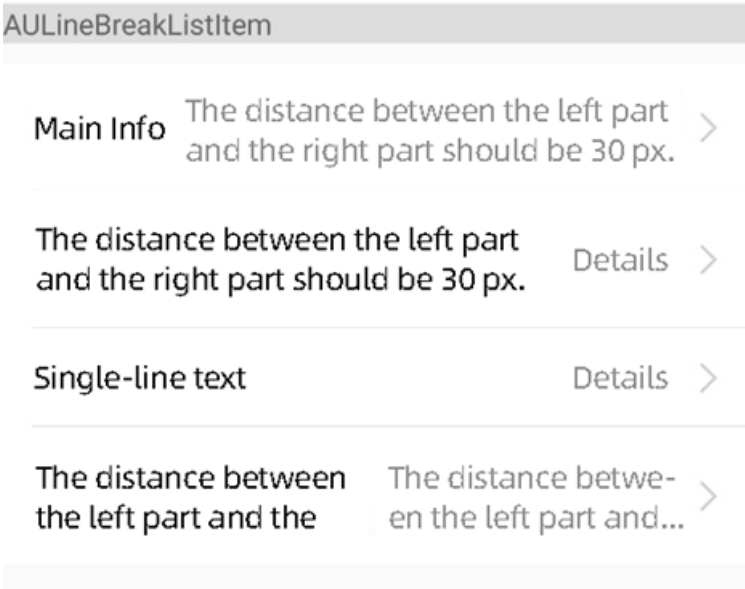
Imported: `xmlns:app="http://schemas.android.com/apk/res/com.alipay.mobile.antui"`

AUParallelListItem



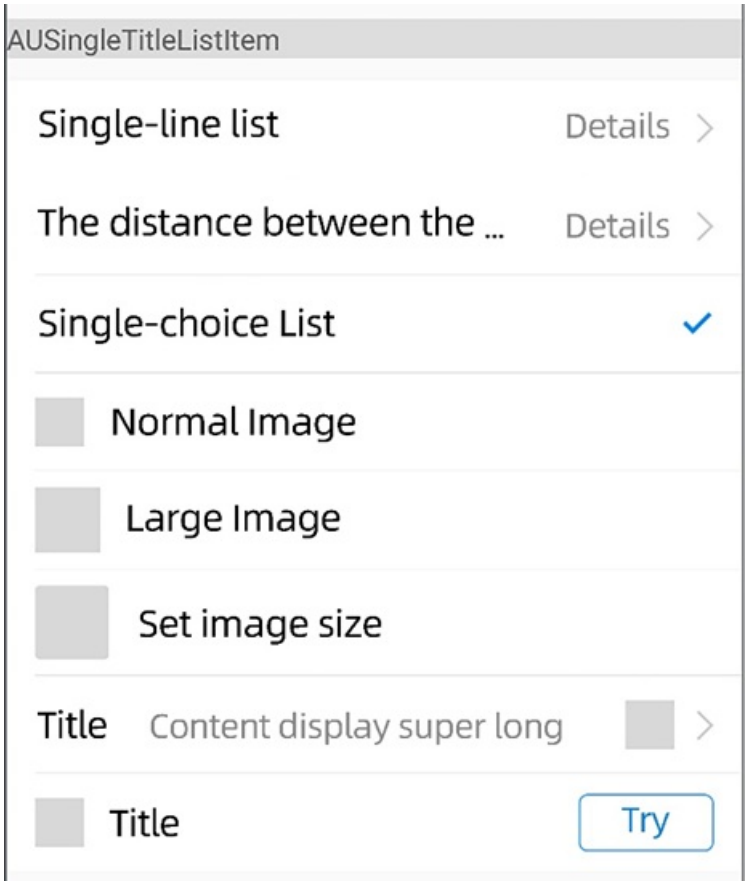

```
<com.alipay.mobile.antui.tablelist.AUParallelTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:listItemType="top"
    app:listLeftText="Title 1"
    app:listLeftSubText="Content 1"
    app:listRightText="Title 2"
    app:listRightSubText="Content 2"
    app:listShowArrow="false" />

<com.alipay.mobile.antui.tablelist.AUParallelTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:listItemType="center"
    app:listLeftText="Title 1"
    app:listLeftSubText="Content 1"
    app:listRightSubText="Content 2"
    app:listShowArrow="false" />

<com.alipay.mobile.antui.tablelist.AUParallelTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:listItemType="center"
    app:listLeftText="Title 1"
    app:listLeftSubText="Content 1"
    app:listRightText="Title 2"
    app:listShowArrow="false" />
```

AULineBreakListItem




```
<com.alipay.mobile.antui.tablelist.AULineBreakListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:listItemType="top"
    app:listLeftText="Main info"
    app:listRightText="The distance between the left part and the right part should be
30 px."/>

<com.alipay.mobile.antui.tablelist.AULineBreakListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:listItemType="center"
    app:listLeftText="The distance between the left part and the right part should be 3
0 px."
    app:listRightText="Details"/>

<com.alipay.mobile.antui.tablelist.AULineBreakListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:listItemType="center"
    app:listLeftText="Single-line text"
    app:listRightText="Details"/>

<com.alipay.mobile.antui.tablelist.AULineBreakListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:listItemType="bottom"
    app:listLeftText="The distance between the left part and the right part should be 3
0 px."
    app:listRightText="The distance between the left part and the right part should be
30 px."/>
```

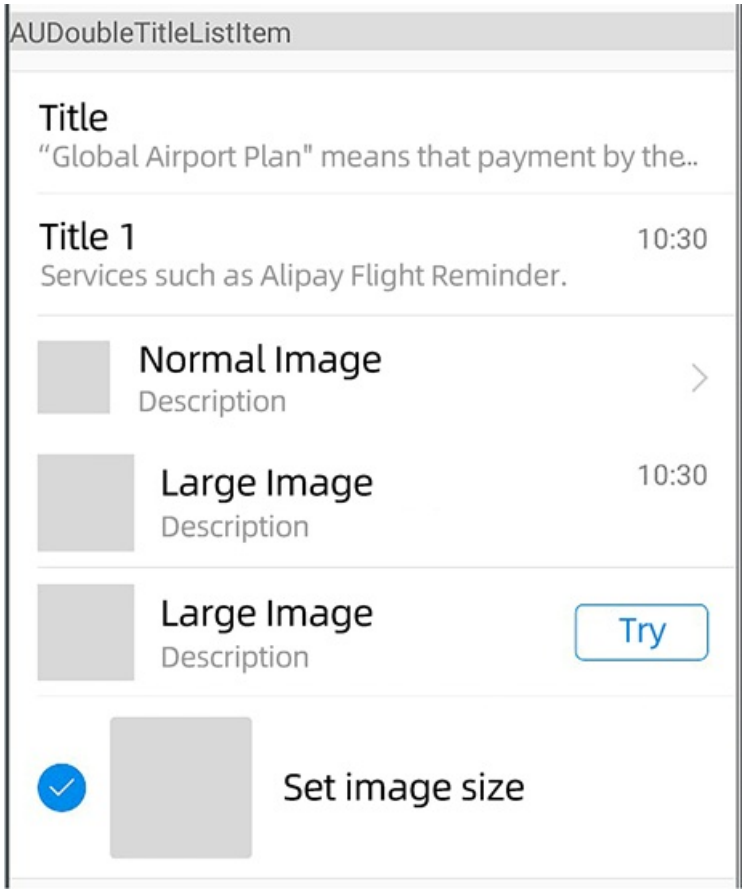
AUSingleTitleListItem




```
<com.alipay.mobile.antui.tablelist.AUSingleTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:listItemType="top"
    app:listLeftText="Single-line list"
    app:listRightText="Details" />

<com.alipay.mobile.antui.tablelist.AUSingleTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:listItemType="center"
    app:listLeftText="The distance between the left part and the right part should be 3
0 px."
    app:listRightText="Details" />

<com.alipay.mobile.antui.tablelist.AUSingleTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:listItemType="center"
    app:listLeftText="Single-choice list"
    app:listShowCheck="true" />

<com.alipay.mobile.antui.tablelist.AUSingleTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
```

```
    app:listItemType="center"
    app:listLeftImage="@drawable/image"
    app:listLeftText="Normal Image"
    app:listShowArrow="false" />

<com.alipay.mobile.antui.tablelist.AUSingleTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:listItemType="center"
    app:listLeftImage="@drawable/image"
    app:listLeftImageSizeType="size_large"
    app:listLeftText="Large Image"
    app:listShowArrow="false" />

<com.alipay.mobile.antui.tablelist.AUSingleTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:hasRound="true"
    app:listItemType="center"
    app:listLeftImage="@drawable/image"
    app:listLeftImageHeight="36dp"
    app:listLeftImageWidth="36dp"
    app:listLeftText="Set image size"
    app:listShowArrow="false" />

<com.alipay.mobile.antui.tablelist.AUSingleTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:listItemType="center"
    app:listLeftText="Title"
    app:listRightImage="@drawable/image"
    app:listRightText="Content display extra long" />


<com.alipay.mobile.antui.tablelist.AUSingleTitleListItem
    android:id="@+id/button_item"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:listItemType="bottom"
    app:listLeftImage="@drawable/image"
    app:listLeftText="Title"
    app:listRightText="Try"
    app:listRightType="button"/>
```

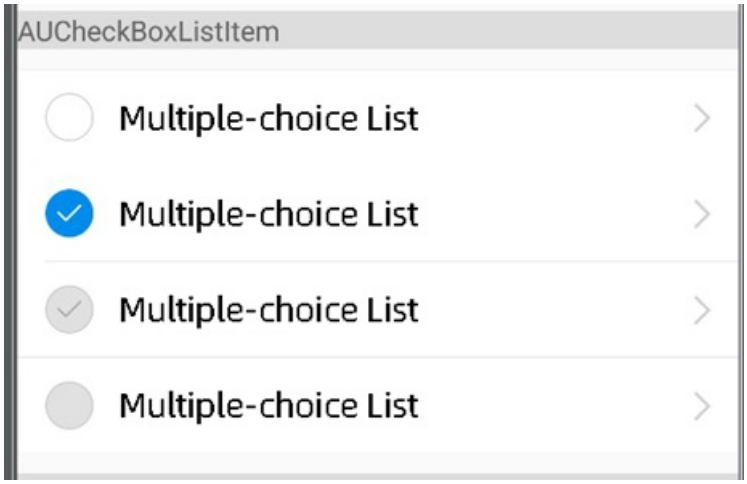
AUDoubleTitleListItem




```
<com.alipay.mobile.antui.tablelist.AUDoubleTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:listItemType="center"
    app:listLeftSubText="Services such as Alipay Flight Reminder."
    app:listLeftText="Title"
    app:listRightText="10:30"
    app:listShowArrow="false" />

<com.alipay.mobile.antui.tablelist.AUDoubleTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:listItemType="center"
    app:listLeftImage="@drawable/testapp_icon"
    app:listLeftSubText="Description text"
    app:listLeftText="Normal Image" />

<com.alipay.mobile.antui.tablelist.AUDoubleTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:listItemType="center"
    app:listLeftImage="@drawable/testapp_icon"
    app:listLeftImageSizeType="size_large"
    app:listLeftSubText="Description text"
```

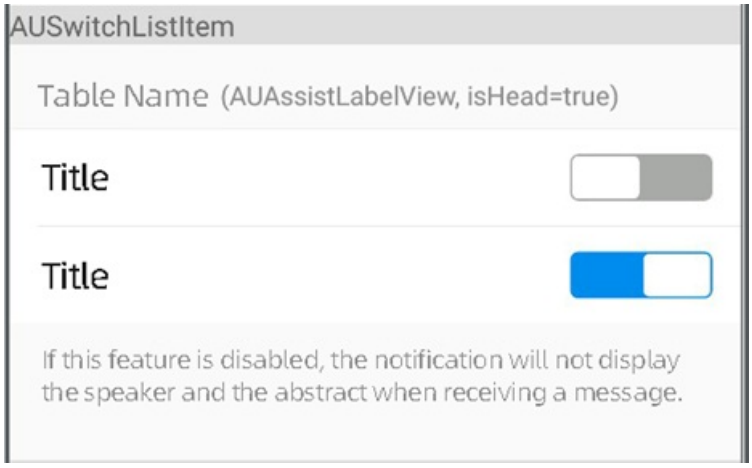
```
    app:listLeftText="Large Image"
    app:listRightText="10:30"
    app:listShowArrow="false" />

<com.alipay.mobile.antui.tablelist.AUDoubleTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:listItemType="bottom"
    app:listLeftImage="@drawable/testapp_icon"
    app:listLeftImageSizeType="size_multi"
    app:listLeftSubText="Global Airport Plan" means Alipay will give tourists in overse
as airports access to services such as Flight Reminder.
    app:listLeftText="Pics & Text list"
    app:listShowArrow="false" />

<com.alipay.mobile.antui.tablelist.AUDoubleTitleListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:listItemType="center"
    app:listLeftImage="@drawable/image"
    app:listLeftImageSizeType="size_large"
    app:listLeftSubText="Description"
    app:listLeftText="Large Image"
    app:listRightText="Try"
    app:listRightType="button" />


<com.alipay.mobile.antui.tablelist.AUDoubleTitleListItem
    android:id="@+id/testLitItem"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginBottom="20dp"
    android:layout_marginTop="10dp"
    android:clickable="true"
    app:listItemType="normal"
    app:listLeftImage="@drawable/testapp_icon"
    app:listLeftImageHeight="70dp"
    app:listLeftImageWidth="70dp"
    app:listLeftSubText="Click the button to set the type"
    app:listLeftText="Set image size" />
```

AUCheckBoxListItem




```
<com.alipay.mobile.antui.tablelist.AUCheckBoxListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:listItemType="top"
    app:listLeftText="Multiple-choice List" />

<com.alipay.mobile.antui.tablelist.AUCheckBoxListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:checkIconState="checked"
    app:listItemType="center"
    app:listLeftText="Multiple-choice List" />

<com.alipay.mobile.antui.tablelist.AUCheckBoxListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:checkIconState="cannot_uncheck"
    app:listItemType="bottom"
    app:listLeftText="Multiple-choice List" />

<com.alipay.mobile.antui.tablelist.AUCheckBoxListItem
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:clickable="true"
    app:checkIconState="cannot_check"
    app:listItemType="bottom"
    app:listLeftText="Multiple-choice List" />
```

AUSwitchListItem




```
<com.alipay.mobile.antui.tablelist.AUSwitchListItem
    android:layout_width="match_parent"
    android:layout_height="48dp"
    app:listItemType="top"
    app:listLeftText="Title" />

<com.alipay.mobile.antui.tablelist.AUSwitchListItem
    android:id="@+id/disable_switch_list_item"
    android:layout_width="match_parent"
    android:layout_height="48dp"
    app:listItemType="bottom"
    app:listLeftText="Title" />
```

1.4.5. Result page components

1.4.5.1. Progress page

AUFlowResultView displays a result page with progress. FlowResult is used to represent a node. Each node can be set with different types and auxiliary texts.

Dependency

See Quick start.

API description

```
/**
     * Clear all FlowStepView.
     */
    public void clearFlows() {
        removeAllViews();
    }

    /**
     * Set the FlowResult list and generate corresponding FlowStepView
     *
     * @param flowResultList
     */
    public void setFlows(List<FlowResult> flowResultList) {
```

FlowResult API

```
/**
     * Construct FlowResult.
     *
     * @param resultStatus  The node status. The value is
ResultConstant.RESULT_STATUS_ENUM_XX.
     * @param statusIcon    The status icon, which indicates ResultStatusIcon
enumeration.
     * @param mainInfoText  Main text.
     * @param subTitles     The sub text list.
     */
    public FlowResult(int resultStatus, ResultStatusIcon statusIcon, String
mainInfoText,
            List<String> subTi    tles);

    /**
     * Construct FlowResult.
     *
     * @param resultStatus  The node status. The value is
ResultConstant.RESULT_STATUS_ENUM_XX.
     * @param statusIconId  The status icon res id.
     * @param mainInfoText  The Main text.
     * @param subTitles     The sub text list.
     */
    public FlowResult(int resultStatus, int statusIconId, String mainInfoText,
            List<String> subTitles);
```

Sample code

```
AUFlowResultView flowResultView = (AUFlowResultView)
findViewById(R.id.flow_result_view);
List<FlowResult> flows = new ArrayList<FlowResult>();
flows.add(new FlowResult(ResultConstant.RESULT_STATUS_ENUM_OK, ResultStatusIcon.OK,
        "Payment succeeded", Arrays.asList("Auxiliary text", "Auxiliary text")));
flows.add(new FlowResult(ResultConstant.RESULT_STATUS_ENUM_OK,
ResultStatusIcon.PENDING,
        "Label text", Arrays.asList("Auxiliary text", "Auxiliary text")));
flows.add(new FlowResult(ResultConstant.RESULT_STATUS_ENUM_NORMAL,
ResultStatusIcon.PENDING,
        "Label text", Arrays.asList("Auxiliary text", "Auxiliary text")));
flowResultView.setFlows(flows);
```

1.4.5.2. Net error page

AUNetErrorView (formerly APFlowTipView) provides a blank page indicating that there is a network exception.

Dependency

See Quick start.

API description

```
/**
     * Set the simple mode.
     * @param isSimple
     */
    public void setIsSimpleType(boolean isSimple);

    /**
     * Set the network exception mode.
     * @param type
     */
    public void resetFlowTipType(int type);

    /**
     * Set the button properties.
     *
     * @param text
     * @param clickListener
     */
    public void setAction(String text, OnClickListener clickListener) ;

    /**
     * Set the Cancel button.
     */
    public void setNoAction();

    /**
     * Set prompt message.
     *
     * @param text
     */
    public void setTips(String text) ;

    /**
     * Set the auxiliary prompt message.
     * @param text
     */
    public void setSubTips(String text) ;

    /**
     * Obtain the Operation button.
     * @return
     */
    public AUButton getActionButton();

    /**
     * Obtain image view.
     * @return
     */
    public AUImageView getImageView() ;
```

Custom properties

Property	Description
netErrorType	Network exception state. Available values: `signalError` , `empty` , `warning` , `overflow` .
isSimpleMode	Whether the simple mode is used. Boolean type.

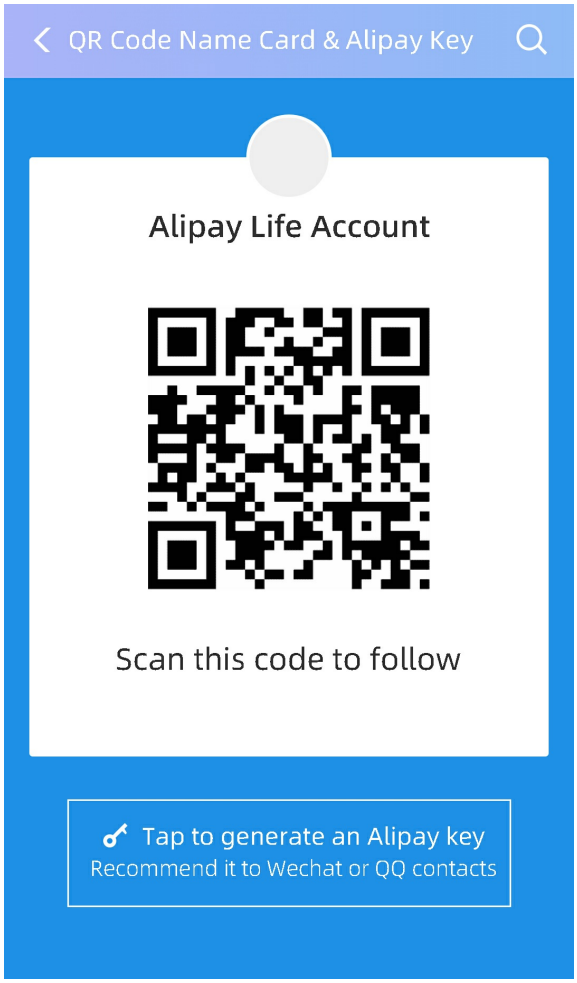
Sample code

```
<com.alipay.mobile.antui.basic.AUNetErrorView
        android:id="@+id/net_error"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        app:netErrorType="signalError"/>
```

1.4.5.3. QR code page

AUQRCodeView generates a QR code of current page.

Sample image



Dependency

See Quick start.

API description

```
/**
* Set the avatar name.
* @param name
*/
public void setAvatarName(CharSequence name)

/**
* Set QR code information.
* @param title
* @param description
*/
public void setCodeInfo(CharSequence title, CharSequence description)

/**
* Set the QR code title.
* @param title
*/
public void setCodeTitle(CharSequence title)

/**
```

```
* Set QR code description.
* @param description
*/
public void setCodeDescription(CharSequence description)

/**
* Set the button information with a Zhi Token icon.
* @param title
* @param content
*/
public void setButtonInfo(CharSequence title, CharSequence content)

/**
* Set button information.
* @param title
* @param content
* @param isToken Whether a Zhi Token icon is provided.
*/
public void setButtonInfo(CharSequence title, CharSequence content, boolean isToken)

/**
* Set the button title.
* @param title
*/
public void setButtonTitle(CharSequence title)

/**
* Whether the title includes an icon.
* @param isToken
*/
public void setButtonToken(boolean isToken)

/**
* Whether the button is visible.
* @param isVisible
*/
public void setButtonVisibility(boolean isVisible)

/**
* Set button content.
* @param content
*/
public void setButtonContent(CharSequence content)

/**
* Obtain vatar imageView.
* @return
*/
public AUImageView getAvatarImage()

/**
* Obtain avatar name View.
* @return
*/
```

```
public AUTextView getAvatarName()

/**
* Obtain QR code imageView.
* @return
*/
public AUImageView getCodeImage()

/**
* Obtain the QR code title.
* @return
*/
public AUTextView getCodeTitle()

/**
* Obtain the QR code description.
* @return
*/
public AUEmptyGoneTextView getCodeDescription()

/**
* Obtain the button.
* @return
*/
public AULinearLayout getButton()

/**
* Obtain the button title.
* @return
*/
public AUTextView getButtonTitle()

/**
* Obtain button content.
* @return
*/
public AUEmptyGoneTextView getButtonContent()
```

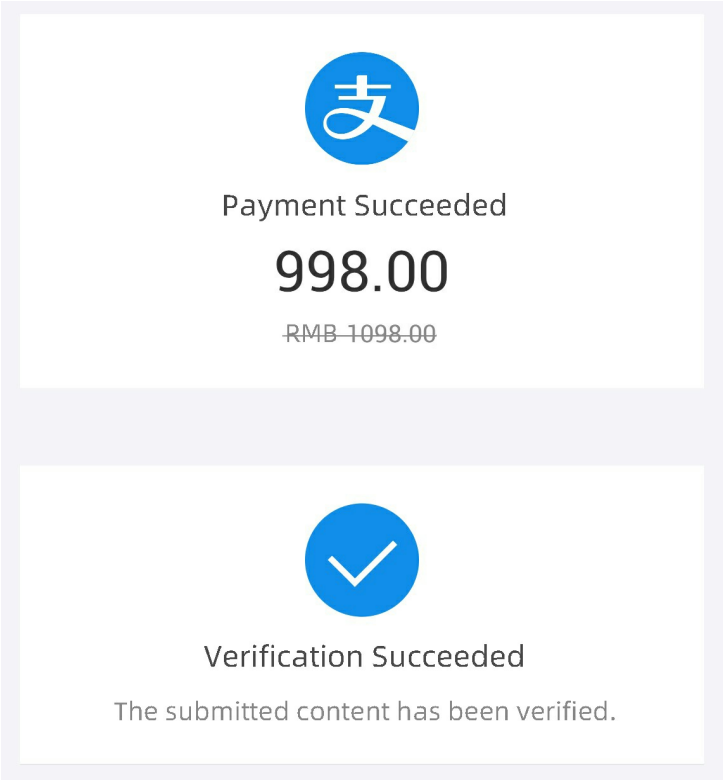
Code sample

```
AUQRCodeView codeView = new AUQRCodeView(this);
codeView.setAvartarName("Lifestyle name");
codeView.setCodeInfo("Scan the QR code with Alipay to join the Social Circle","The QR c
ode will become invalid on November 05, 2017");
codeView.setButtonInfo("Click to generate a Zhi Token","Recommend Lifestyle to WeChat a
nd QQ friends");
codeView.getCodeImage().setImageResource(R.drawable.qr_default);
```

1.4.5.4. Result page

AUResultView provides a result page containing icons and three-level text.

Sample images



Dependency

See Quick start.

API description

```
    /**
     * Set the icon.
     *
     * @param iconRes   The icon resource ID.
     */
    public void setIcon(@DrawableRes int iconRes);

    /**
     * Set main title text.
     *
     * @param text  The text content.
     */
    public void setMainTitleText(CharSequence text);

    /**
     * Set sub title text.
     *
     * @param text  The text content.
     */
    public void setSubTitleText(CharSequence text);

    /**
     * Set auxiliary title text.
     *
     * @param text  The text content.
     */
    public void setThirdTitleText(CharSequence text);

    /**
     * Set auxiliary title text with a strikethrough.
     *
     * @param text          The text content.
     * @param strikeThrough Whether to display the strikethrough.
     */
    public void setThirdTitleText(CharSequence text, boolean strikeThrough);
```

Custom properties

Property	Description	Type
icon	The icon.	Reference
mainTitleText	First-level text.	String, Reference
subTitleText	Second-level text.	String, Reference
thirdTitleText	Third-level text.	String, Reference

Code sample

XML

```
<com.alipay.mobile.antui.status.AUResultView
    android:id="@+id/result_view2"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_marginTop="20dp"
    app:icon="@drawable/icon_result_alipay"
    app:mainTitleText="Payment succeeded"
    app:subTitleText="998.00"
    app:thirdTitleText="CNY 1098.00"/>
```

1.4.6. Loading component

AULoadingView provides loading pages containing the progress pattern, loading progress, and loading text.

Dependency

See Quick start.

API description

AULoadingView

```
    /**
    * The constructor.
    * @param context    The page context including the antu dependency.
    */
    public AULoadingView(Context context)
    /**
    * Set the progress.
    * @param curentProgress     The progress.
    */
    public void setCurrentProgress(int curentProgress)
```

AUPullLoadingView

```
    /**
     * The constructor.
     * @param context   The page context including the antu dependency.
     */
    public AUPullLoadingView(Context context)

        /**
     * Set the progress pattern.
     * @param drawable
     */
    public void setProgressDrawable(Drawable drawable)

    /**
     * Set the bounce pattern.
     * @param mIndicatorUpDrawable
     */
    public void setIndicatorUpDrawable

    /**
     * Set the loading text.
     * @param loadingText
     */
    public void setLoadingText(String loadingText)

    /**
     * Set the dragging text.
     * @param indicatorText
     */
    public void setIndicatorText(String indicatorText)
```

AUDragLoadingView

```
/**
     * The constructor.
     * @param context   The page context including the antu dependency.
     */
    public AUDragLoadingView(Context context)
    /**
     * Set the loading text.
     * @param text
     */
    public void setLoadingText(CharSequence text)
```

Code sample

AULoadingView

```
private AULoadingView mAULoadingView mAULoadingView = (AULoadingView)
findViewById(R.id.loadingView);
    private Handler mHandler = new Handler() {
        @Override
        public void handleMessage(Message msg) {
            super.handleMessage(msg);
            mAULoadingView.setCurrentProgress(mCurrentProgress);
        }
    };
    protected void onResume() {
        super.onResume();
        new Thread(new Runnable() {
            @Override
            public void run() {
                while (mCurrentProgress < 100) {
                    try {
                        Thread.currentThread().sleep(500);
                        mCurrentProgress++;
                        mHandler.sendEmptyMessage(0);
                    } catch (Exception e) {
Log.e("EmptyPageLoadingActivity",e.getMessage());
                    }
                }
            }
        }).start();
    }
```

AUPullLoadingView

```
@Override
    public AUPullLoadingView getOverView() {

        mAUPullLoadingView2 = (AUPullLoadingView) LayoutInflater.from(getBaseContext())
                .inflate(R.layout.au_framework_pullrefresh_overview, null);
        return mAUPullLoadingView2;
    }
```

AUDragLoadingView

```
mAUDragLoadingView = (AUDragLoadingView) findViewById(R.id.dragLoadingView);
    findViewById(R.id.modifyLoadingText).setOnClickListener(new View.OnClickListener()
{
        @Override
        public void onClick(View v) {
            mAUDragLoadingView.setLoadingText("Text after modification...") ;
        }
    });
```

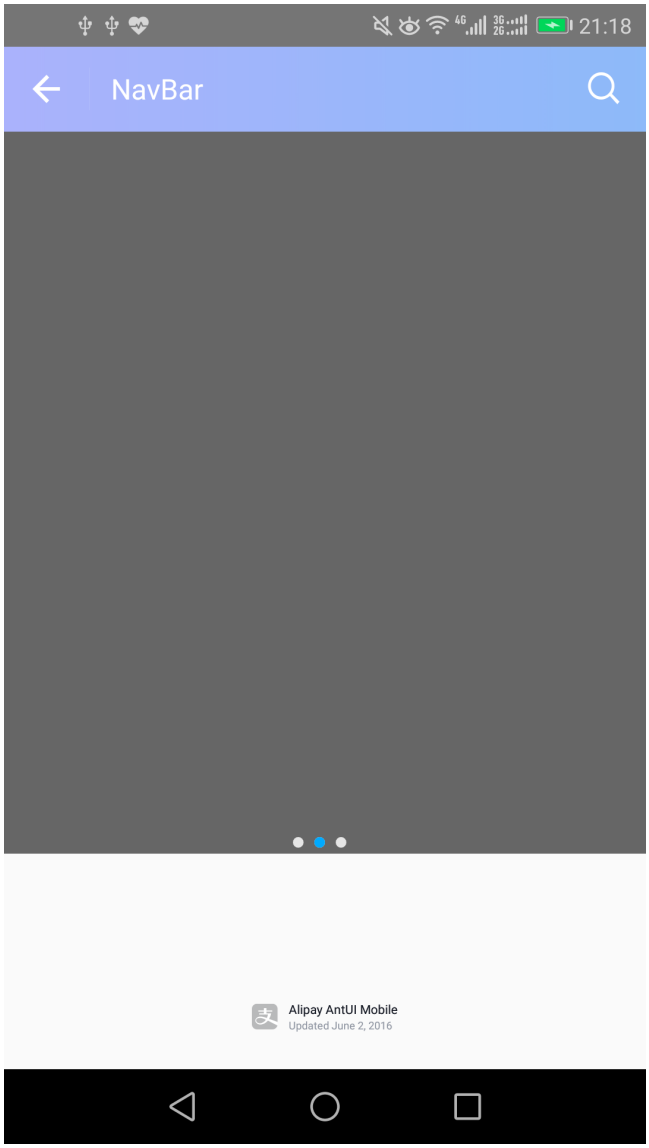
1.4.7. Navigation component

1.4.7.1. Carousel component

AUBannerView is used for achieving image carousel.

Sample image

The AUTitleBar control in white is provided by default.



Dependency

See Quick start.

Sample code

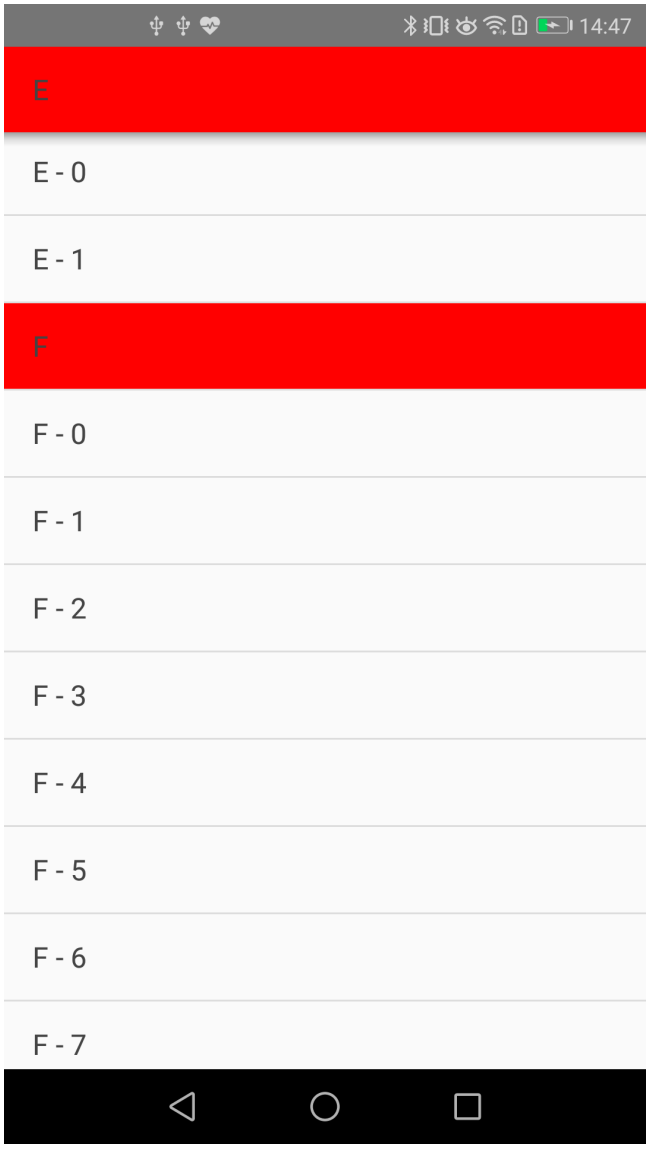
```
        BannerView bannerView = new BannerView(this, 1000);
        layout.addView(bannerView);

        List<BannerView.BannerItem> items = new ArrayList<BannerView.BannerItem>();
        items.add(new BannerView.BannerItem());
        items.add(new BannerView.BannerItem());
        items.add(new BannerView.BannerItem());
        final List<String> list = new ArrayList<String>();
        String color1 = "#111111";
        String color2 = "#666666";
        String color3 = "#eeeeee";
        list.add(color1);
        list.add(color2);
        list.add(color3);

        BannerView.BaseBannerPagerAdapter  adapter = new
BannerView.BaseBannerPagerAdapter(bannerView,items) {
            @Override
            public View getView(ViewGroup container, int position) {
                TextView tv = new TextView(CarouselActivity.this);
                tv.setBackgroundColor(Color.parseColor(list.get(position)));
                container.addView(tv);
                return tv;
            }
        };

        bannerView.setAdapter(adapter);
```

1.4.7.2. List component

AUPinnedSectionListView provides ListView by group. Titles of groups are fixed during sliding.

> **Note**
>
> If you use this control, you need to distinguish data model types. Otherwise, it is an ordinary ListView.

Sample image



Dependency

See Quick start.

Sample code

```
    public class PinnedSectionActivity extends Activity{

    private AUPullRefreshView pullRefreshView;
    AUPullLoadingView mAUPullLoadingView;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.pinned_layout);
        pullRefreshView = (AUPullRefreshView) findViewById(R.id.pull_refresh);
        final AUPinnedSectionListView pinnedSectionListView = (AUPinnedSectionListView)
findViewById(R.id.list_view);

        TextView tv = new TextView(this);
        tv.setText("nihao");
```

```
        pinnedSectionListView.addHeaderView(tv);
        pullRefreshView.setRefreshListener(new AUPullRefreshView.RefreshListener() {

            @Override
            public void onRefresh() {

                pullRefreshView.autoRefresh();

                pullRefreshView.postDelayed(new Runnable() {

                    @Override
                    public void run() {
                        pullRefreshView.refreshFinished();

                    }
                }, 1000);

            }

            @Override
            public AUPullLoadingView getOverView() {

                mAUPullLoadingView = (AUPullLoadingView)
LayoutInflater.from(getBaseContext())

.inflate(com.alipay.mobile.antui.R.layout.au_framework_pullrefresh_overview, null);
                Date date = new Date(1466577757265L);
                SimpleDateFormat formatter = new SimpleDateFormat("yyyy-MM-dd HH:mm:ss")
;
                String dateString = formatter.format(date);
                mAUPullLoadingView.setIndicatorText(dateString);
                mAUPullLoadingView.setLoadingText(dateString);
                return mAUPullLoadingView;
            }

            @Override
            public boolean canRefresh() {
                return true;
            }
        });


        final SimpleAdapter adapter  = new SimpleAdapter(this,
android.R.layout.simple_list_item_1, android.R.id.text1);

        pinnedSectionListView.setAdapter(adapter);

        pinnedSectionListView.onFinishLoading(true);
        pinnedSectionListView.setOnLoadMoreListener(new
AUPinnedSectionListView.OnLoadMoreListener() {
            @Override
            public void onLoadMoreItems() {

                pinnedSectionListView.postDelayed(new Runnable() {
```

```
                    @Override
                    public void run() {
                        pinnedSectionListView.onFinishLoading(false);
                    }
                }, 3000);

            }
        });
    }


    static class SimpleAdapter extends ArrayAdapter<Item> implements
AUPinnedSectionListView.PinnedSectionListAdapter {


        public SimpleAdapter(Context context, int resource, int textViewResourceId) {
            super(context, resource, textViewResourceId);
            generateDataset('A', 'Z', false);
        }

        public void generateDataset(char from, char to, boolean clear) {

            if (clear) clear();

            final int sectionsNumber = to - from + 1;
            prepareSections(sectionsNumber);

            int sectionPosition = 0, listPosition = 0;
            for (char i=0; i<sectionsNumber; i++) {
                Item section = new Item(Item.SECTION, String.valueOf((char)('A' + i)));
                section.sectionPosition = sectionPosition;
                section.listPosition = listPosition++;
                onSectionAdded(section, sectionPosition);
                add(section);

                final int itemsNumber = (int) Math.abs((Math.cos(2f*Math.PI/3f * section
sNumber / (i+1f)) * 25f));
                for (int j=0;j<itemsNumber;j++) {
                    Item item = new Item(Item.ITEM,
section.text.toUpperCase(Locale.ENGLISH) + " - " + j);
                    item.sectionPosition = sectionPosition;
                    item.listPosition = listPosition++;
                    add(item);
                }

                sectionPosition++;
            }
        }

        protected void prepareSections(int sectionsNumber) { }
        protected void onSectionAdded(Item section, int sectionPosition) { }

        @Override public View getView(int position, View convertView, ViewGroup parent)
{
```

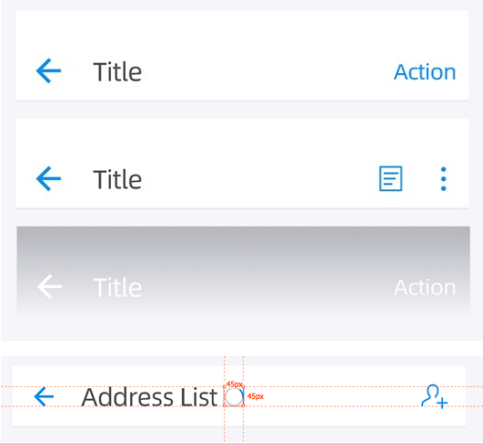
```
            TextView view = (TextView) super.getView(position, convertView, parent);
            view.setTextColor(Color.DKGRAY);
            view.setTag("" + position);
            Item item = getItem(position);
            if (item.type == Item.SECTION) {
                //view.setOnClickListener(PinnedSectionListActivity.this);
                view.setBackgroundColor(Color.parseColor("#ff0000"));
            }
            return view;
        }

        @Override public int getViewTypeCount() {
            return 2;
        }

        @Override public int getItemViewType(int position) {
            return getItem(position).type;
        }

        @Override
        public boolean isItemViewTypePinned(int viewType) {
            return viewType == Item.SECTION;
        }

    }

    static class Item {

        public static final int ITEM = 0;
        public static final int SECTION = 1;

        public final int type;
        public final String text;

        public int sectionPosition;
        public int listPosition;

        public Item(int type, String text) {
            this.type = type;
            this.text = text;
        }

        @Override public String toString() {
            return text;
        }

    }
}
```

1.4.7.3. Title bar component

AUTitleBar provides a title bar with a Back button, title text, a progress bar, a left button (text and icon), and a right button (text and icon).

Sample image

The AUTitleBar control with white background is provided by default.



Dependency

See Quick start.

API description

```
/**
     * Set the button drawable.
     * @param iconView
     * @param resId
     */
    public void setBtnImage(AUIconView iconView, int resId);

    /**
     * Set the button size and color.
     * @param iconView
     * @param size
     * @param color
     */
    public void setIconFont(AUIconView iconView, int size, int color);


    /**
     * Get the Back button.
     * @return
     */
    public AUIconView getBackButton() ;

    /**
     * Get the left button.
     * @return
     */
    public AURelativeLayout getLeftButton() ;

    /**
     * Get the right button.
     * @return
     */
    public AURelativeLayout getRightButton() ;
```

```
    public AURelativeLayout getRightButton() ;

    /**
     * Get the loading icon.
     * @return
     */
    public AUProgressBar getProgressBar() ;

    /**
     * Get the title text view.
     * @return
     */
    public AUTextView getTitleText() ;

    /**
     * Get the title container.
     * @return
     */
    public AURelativeLayout getTitleContainer() ;


    /**
     * Get the title bar area.
     * @return
     */
    public AURelativeLayout getTitleBarRelative() ;

    @Override
    public void setBackgroundDrawable(Drawable backgroundDrawable) ;

    /**
     * Set the progress circular.
     * @param progressDrawable
     */
    public void setProgressBarDrawable(Drawable progressDrawable) ;

    /**
     * Set the text and style of the title. If you need to use the default text and sty
le, set text, textsize, and textcolor to null or 0.
     * @param text
     * @param textSize
     * @param textColor
     */
    public void setTitleText(String text, int textSize, int textColor) ;

    /**
     * Set the title text.
     * @param text
     */
    public void setTitleText(String text) ;

    /**
     * Set the value of resource, size, and color of the Back button. Keep the default
value if the value is null or 0.
     * @param drawable
```

```
     * @param size
     * @param color
     */
    public void setBackBtnInfo(Object drawable, int size, int color);

    /**
     * Set the resource of the Back button.
     * @param drawable
     */
    public void setBackBtnInfo(Object drawable);

    /**
     * Set the resource, size, and color of the left button. Keep the default value if
the value is null or 0.
     * @param drawable
     * @param size
     * @param color
     * @param isText
     */
    public void setLeftBtnInfo(Object drawable, int size, int color, boolean isText);

    /**
     * Set the resource of the left button.
     * @param drawable
     */
    public void setLeftButtonIcon(Drawable drawable);

    public void setLeftButtonIcon(String unicode);

    public void setLeftButtonText(String text);

    /**
     * Set the color and size of the left button.
     * @param size
     * @param color
     * @param isText
     */
    public void setLeftButtonFont(int size, int color, boolean isText);

    /**
     * Set the resource, size, and color of the right button. Keep the default value if
the value is null or 0.
     * @param drawable
     * @param size
     * @param color
     * @param isText
     */
    public void setRightBtnInfo(Object drawable, int size, int color, boolean isText) ;

    /**
     * Set the resource of the right button.
     * @param drawable
     */
    public void setRightButtonIcon(Drawable drawable);
```

```
    public void setRightButtonIcon(String unicode);

    public void setRightButtonText(String text);

    /**
     * Set the color and size of the right button.
     * @param size
     * @param color
     * @param isText
     */
    public void setRightButtonFont(int size, int color, boolean isText);

    /**
     * Make the progress bar start rotation.
     */
    public void startProgressBar();

    /**
     * Make the progress bar stop and disappear.
     */
    public void stopProgressBar() ;

    /***
     * Default processing of the gradual change during sliding. Use the default value f
or totalHeight.
     * @param currentHeight     The current height.
     */
    public void handleScrollChange(int currentHeight);


    /***
     * Default processing of the gradual change during sliding.
     *
     * @param totalHeight   The total height.
     * @param currentHeight The current height.
     */
    public void handleScrollChange(int totalHeight, int currentHeight) ;

    /**
     * Set the pattern color (white) with transparent background.
     */
    public void setColorWhiteStyle();

    /**
     * Set the pattern color with white background.
     */
    public void setColorOriginalStyle();

    /**
     * Make the Back button not displayed.
     */
    public void setBackButtonGone();
```

```
    /**
     * Add a search box (input is not allowed) used only for visual adjustment.
     * @param search
     */
    public void setTitle2Search(String search);

    /**
     * Convert the search box into a title.
     */
    public void setSearch2Title();

    /**
     * The font color in the search box is set to black and the background is set to wh
ite.
     */
    public void setSearchColorOriginalStyle();

    /**
     * The font color in the search box is set to white and the background is set to tr
ansparent.
     */
    public void setSearchColorTransStyle();

    /**
     * Add a red dot to the left icon.
     * @param flagView
     */
    public void attachFlagToLeftBtn(AUWidgetMsgFlag flagView);

    /**
     * Add a red dot to the right icon
     * @param flagView
     */
    public void attachFlagToRightBtn(AUWidgetMsgFlag flagView) ;

    /**
     * Add a red dot to the targetView.
     * @param targetView
     * @param flagView
     */
    public void attachFlagView(AURelativeLayout container, View targetView,
AUWidgetMsgFlag flagView;
```

Custom properties

Property	Description	Type
backgroundDrawable	The whole background of the title bar.	Reference

Property	Description	Type
backIconColor	The color of the back arrow.	Color, Reference
titleText	Title text.	String, Reference
titleTextSize	The font size of the title.	Dimension, Reference
titleTextColor	The font color of the title.	Color, Reference
leftIconResid	ID of the .png or .jpg image corresponding to the left icon.	Reference
leftIconUnicode	The Unicode character of the left icon.	String, Reference
leftIconColor	The color of the left icon.	Color, Reference
leftIconSize	The size of the left icon.	Dimension, Reference
leftText	Content of the left text.	String, Reference
leftTextColor	The color of the left text.	Color, Reference
leftTextSize	The size of the left text.	Dimension, Reference
rightIconResid	ID of the .png or .jpg image corresponding to the right icon.	Reference
rightIconUnicode	The Unicode character of the right icon.	String, Reference
rightIconColor	The color of the right icon.	Color, Reference
rightIconSize	The size of the right icon.	Dimension, Reference
rightText	Content of the right text.	String, Reference
rightTextColor	The color of the right text.	Color, Reference

Property	Description	Type
rightTextSize	The size of the right text.	Dimension, Reference

Sample code

In the following sample code, the reference path of `aui` is: `xmlns:aui="http://schemas.android.com/apk/res/com.alipay.mobile.antui"`.

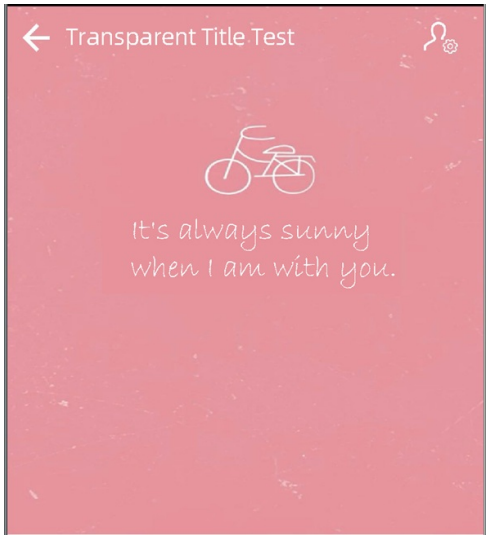
Basic usage

```
<com.alipay.mobile.antui.basic.AUTitleBar
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dp"
        aui:aui_titleText="Title"
        aui:aui_titleTextSize="@dimen/AU_TEXTSIZE2"
        aui:aui_titleTextColor="#f64219"
        aui:leftIconUnicode="@string/iconfont_user_setting"
        aui:rightText="Test2"/>
```

Transparent scrolling

```
<com.alipay.mobile.antui.basic.AUTitleBar
        android:id="@+id/title_bar"
        android:layout_width="fill_parent"
        android:layout_height="wrap_content"
        aui:rightIconUnicode="@string/iconfont_user_setting"
        aui:aui_titleText="Transparent Title Test" />
```

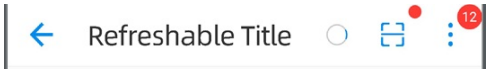
```
titleBar.handleScrollChange(testImg.getMeasuredHeight(), 0);
testScroll.setScrollViewListener(new AUScrollViewListener() {
            @Override
            public void onScrollChanged(ScrollView scrollView, int x, int y, int oldx,
int oldy) {
                titleBar.handleScrollChange(y);
            }
        });
```



Title with a red dot

```
<com.alipay.mobile.antui.basic.AUTitleBar
        android:id="@+id/progress_title"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_marginTop="10dp"
        aui:aui_titleText="Refreshable Title"
        aui:leftIconUnicode="@string/iconfont_scan"
        aui:rightIconUnicode="@string/iconfont_more"/>
```

```
AUTitleBar processBar = (AUTitleBar) findViewById(R.id.progress_title);

        processBar.startProgressBar();

        WidgetMsgFlag j = new WidgetMsgFlag(this);
        j.showMsgFlag();
        processBar.attachFlagToLeftBtn(j);

        WidgetMsgFlag i = new WidgetMsgFlag(this);
        i.showMsgFlag(12);
        processBar.attachFlagToRightBtn(i);
```



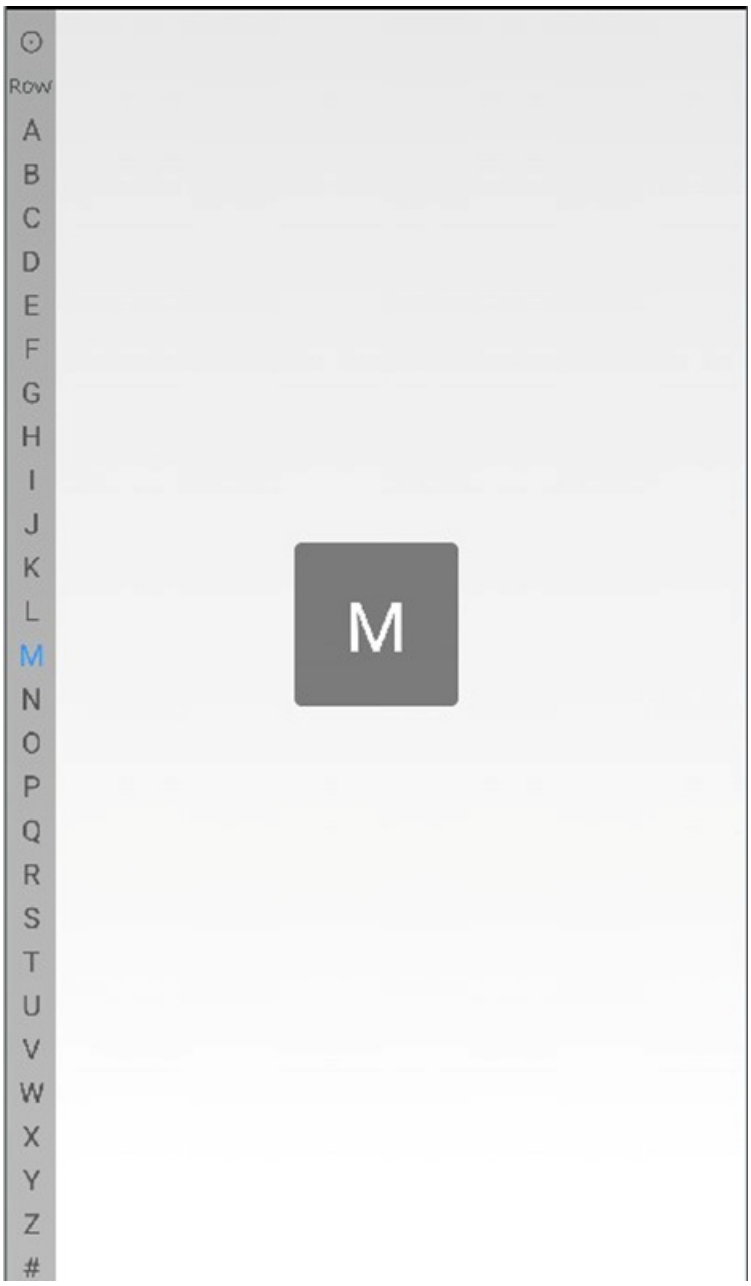
1.4.8. Other component

1.4.8.1. Index component

AUBladeView works with ListView which is sorted alphabetically. On the letter index on the left or right side of the page, when you click or slide to the corresponding letter, the event in the corresponding letter position is triggered. The default index ranges from letter A to letter Z. One or two customized single characters can be added to the top of the index.

Sample image

The two characters above A are customized, as shown in the following figure. The default character ranges from A to Z.



Dependency

See Quick start.

API description

```
/**
     * Set the letter selection listener.
     */
        public void setOnItemClickListener(OnItemClickListener listener)

        public interface OnItemClickListener {

        /**
         * Set the letter selection listener.
         * @param clickChar The letter clicked or selected.
         */
        void onItemClick(String clickChar);

        /**
         * The finger raising event. You do not need to pay attention to this method if
there is no special requirement.
         */
        void onClickUp();
    }
```

Custom properties

Property	Description	Type
top1Text	The first customized text character.	Reference
top2Text	The second customized text character.	Reference
showSelectPop	whether to show the floating layer popped-up in the middle during sliding or clicking.	Boolean

Code sample

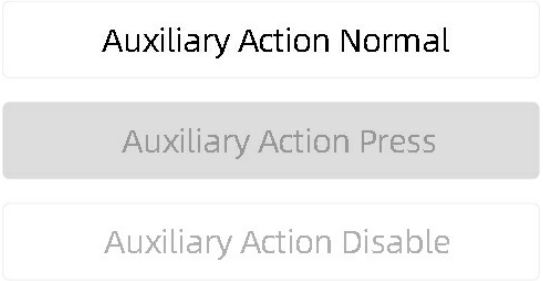
```
<com.alipay.mobile.antui.basic.AUBladeView
        android:layout_width="24dp"
        android:layout_height="wrap_content"
        app:top1Text="⊙"
        app:top2Text="Row"/>
```

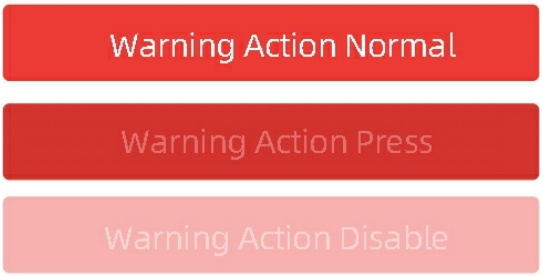
As shown in Sample image, top1Text and top2Text can be omitted by default.

1.4.8.2. Button component

AUButton provides buttons of different patterns.

Sample image





Dependency

See Quick start.

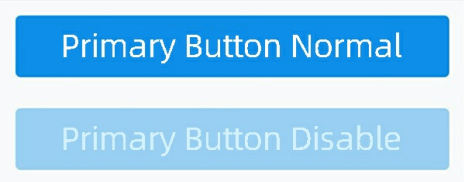
Style API

Property	Description
mainButtonStyle	The main button on a page.
subButtonStyle	The secondary button on a page.
warnButtonStyle	The warning button.

Property	Description
assMainButtonStyle	The auxiliary main button.
assButtonStyle	The auxiliary secondary button.
listButtonStyle	The list button.

Code sample

- **Main button on a page**

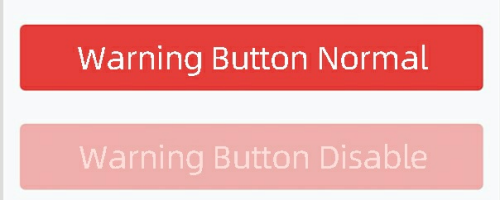



```
<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/mainButtonStyle"
    android:layout_margin="12dp"
    android:clickable="true"
    android:text="The main button on a page is normal." />

<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/mainButtonStyle"
    android:layout_margin="12dp"
    android:enabled="false"
    android:text="The main button on a page is disabled."
    app:dynamicThemeDisable="true" />
```

- **Secondary button on a page**

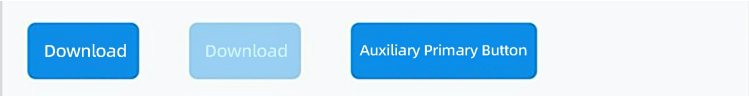

```
<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/subButtonStyle"
    android:layout_margin="12dp"
    android:clickable="true"
    android:text="The secondary operation on a page is normal." />

<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/subButtonStyle"
    android:layout_margin="12dp"
    android:enabled="false"/>
```

- **The warning button.**




```
<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/warnButtonStyle"
    android:layout_margin="12dp"
    android:clickable="true"
    android:text="The warning button is normal." />

<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/warnButtonStyle"
    android:layout_margin="12dp"
    android:enabled="false"
    android:text="The warning button is disabled." />
```

- **Auxiliary main button**

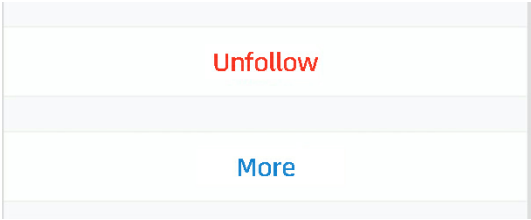



```
<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/assMainButtonStyle"
    android:layout_margin="12dp"
    android:clickable="true"
    android:text="Download" />

<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/assMainButtonStyle"
    android:layout_margin="12dp"
    android:enabled="false"
    android:text="Download" />

<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/assMainButtonStyle"
    android:layout_margin="12dp"
    android:text="Auxiliary Primary button" />
```

- **Auxiliary secondary button**

```
<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/assButtonStyle"
    android:layout_margin="12dp"
    android:clickable="true"
    android:text="Download" />

<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/assButtonStyle"
    android:layout_margin="12dp"
    android:enabled="false"
    android:text="Download" />

<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/assButtonStyle"
    android:layout_margin="12dp"
    android:text="Auxiliary button" />
```

- **List button**




```
<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/listButtonStyle"
    android:layout_marginTop="12dp"
    android:layout_marginBottom="12dp"
    android:clickable="true"
    android:text="Unfollow" />

<com.alipay.mobile.antui.basic.AUButton
    style="@com.alipay.mobile.antui:style/listButtonStyle"
    android:layout_marginTop="12dp"
    android:layout_marginBottom="12dp"
    android:clickable="true"
    android:textColor="@com.alipay.mobile.antui:color/AU_COLOR_LINK"
    android:text="More services" />
```

1.4.8.3. Operation bar component

AUCardOptionView is a combined view providing functions such as giving likes, commenting, and rewarding. It is inherited from AULinearLayout and supporting the access of the XML layout.

Dependency

See Quick start.

API description

```
/**
```

```
     * Set the information for the entire view.
     * @param itemArrayList
     * @param textVisible
     */
    public void setViewInfo(ArrayList<CardOptionItem> itemArrayList, boolean
textVisible)

 /**
     * Set the information for the entire view.
     * @param itemArrayList
     * @param textType = CardOptionView.TEXT_NOT_CHANGE Text is constantly displayed wi
thout switching to digits.
     */
    public void setViewInfo(ArrayList<CardOptionItem> itemArrayList, String textType)

/**
     * Set the information for the entire view.
     * @param itemArrayList
     */
    public void setViewInfo(ArrayList<CardOptionItem> itemArrayList)

/**
     * Set the information for the entire view.
     * @param itemArrayList
     * @param height
     * @param textVisible
     */
    public void setViewInfo(ArrayList<CardOptionItem> itemArrayList, int height, boolea
n textVisible)

    /**
     * Set the information for the entire view.
     * @param itemArrayList
     * @param height
     */
    public void setViewInfo(ArrayList<CardOptionItem> itemArrayList, int height)

/**
     * Increase the sub view count.
     * @param childView
     */
    public void unitIncrease(View childView)

/**
     * Decrease the sub view count.
     * @param childView
     */
    public void unitDecrease(View childView)

/**
     * Obtain the count.
     * @param position
     * @return
     */
```

```
    public int getCount(int position)

/**
     * Return type view.
     * @param type
     * @return
     */
    public View getChildView(String type)

/**
     * Set listening.
     * @param cardOptionListner
     */
    public void setCardOptionListner(CardOptionClickListner cardOptionListner) {
        this.mListner = cardOptionListner;
    }
```

Custom properties

It is a common ViewGroup without new custom properties.

Code sample

```
    AUCardOptionView.CardOptionItem optionItem1 = new
AUCardOptionView.CardOptionItem();
    optionItem1.type = AUCardOptionView.TYPE_PRAISE;
    optionItem1.hasClicked = false;


    AUCardOptionView.CardOptionItem optionItem2 = new
AUCardOptionView.CardOptionItem();
    optionItem2.type = AUCardOptionView.TYPE_REWARD;
    optionItem2.hasClicked = false;


    AUCardOptionView.CardOptionItem optionItem3 = new
AUCardOptionView.CardOptionItem();
    optionItem3.type = AUCardOptionView.TYPE_COMMENT;
    optionItem3.hasClicked = false;


    ArrayList<AUCardOptionView.CardOptionItem> optionItems = new
ArrayList<AUCardOptionView.CardOptionItem>();
    optionItems.add(optionItem1);
    optionItems.add(optionItem2);
    optionItems.add(optionItem3);
    mAUCardOptionView.setViewInfo(optionItems,AUCardOptionView.TEXT_NOT_CHANGE);
    mAUCardOptionView.setCardOptionListner(new
AUCardOptionView.CardOptionClickListner() {
    @Override
    public void onCardOptionClick(View v, AUCardOptionView.CardOptionItem optionItem, i
nt position) {
    mAUCardOptionView.unitIncrease(v);
    }
    });
```

1.4.8.4. Check icon component

AUCheckIcon is used to implement the IconView of a select box.

Dependency

See Quick start.

API description

```
/** Selected.*/
public static final int STATE_CHECKED = 0x01;
/** Deselected.*/
public static final int STATE_UNCHECKED = 0x02;
/** Deselection unavailable.*/
public static final int STATE_CANNOT_UNCHECKED = 0x03;
/** Selection unavailable.*/
public static final int STATE_CANNOT_CHECKED = 0x04;

/**
 * Set the checkIcon state.
 * @param state
 */
public void setIconState(int state);

/**
 * Get the checkIcon state.
 * @return
 */
public int getIconState() ;
```

1.4.8.5. Icon component

AUIconView is an iconfont vector graphic control which implements the functions of TextView and ImageView simultaneously.

The iconfont control (can be used as TextView) actually defines special Unicode characters to map a type of images and font through the TTF font file of TextView. That is, the function of iconfont is equivalent to the effect of loading a font that maps multiple images, in which each image has a Unicode character.

Each iconfont set is actually a TTF font file. Therefore, multiple TTF font files can be loaded. Each TTF font file has a name. The default TTF font file name of the AntUI is auiconfont.

Sample image

Dependency

For how to add dependency, follow the relevant instructions in Quick Start.

Icon resources

Resource ID	Corresponding name
com.alipay.mobile.antui.R.string.iconfont_more	More
com.alipay.mobile.antui.R.string.iconfont_cancel	Cancel
com.alipay.mobile.antui.R.string.iconfont_voice	Voice

Resource ID	Corresponding name
com.alipay.mobile.antui.R.string.iconfont_collect_money	Collect money
com.alipay.mobile.antui.R.string.iconfont_back	Back
com.alipay.mobile.antui.R.string.iconfont_user_setting	User settings
com.alipay.mobile.antui.R.string.iconfont_user	User
com.alipay.mobile.antui.R.string.iconfont_add	Add
com.alipay.mobile.antui.R.string.iconfont_praise	Like
com.alipay.mobile.antui.R.string.iconfont_map	Map
com.alipay.mobile.antui.R.string.iconfont_checked	Select
com.alipay.mobile.antui.R.string.iconfont_notice	Announcement
com.alipay.mobile.antui.R.string.iconfont_add_user	Add User
com.alipay.mobile.antui.R.string.iconfont_comment	Comment
com.alipay.mobile.antui.R.string.iconfont_selected	Select
com.alipay.mobile.antui.R.string.iconfont_bill	Bill
com.alipay.mobile.antui.R.string.iconfont_pulldown	Pull down
com.alipay.mobile.antui.R.string.iconfont_scan	Scan
com.alipay.mobile.antui.R.string.iconfont_list	List

Resource ID	Corresponding name
com.alipay.mobile.antui.R.string.iconfont_delete	Delete
com.alipay.mobile.antui.R.string.iconfont_share	Share
com.alipay.mobile.antui.R.string.iconfont_search	Search
com.alipay.mobile.antui.R.string.iconfont_complain	Complain
com.alipay.mobile.antui.R.string.iconfont_qrcode	QR code
com.alipay.mobile.antui.R.string.iconfont_unchecked	Deselect
com.alipay.mobile.antui.R.string.iconfont_right_arrow	Right arrow
com.alipay.mobile.antui.R.string.iconfont_help	Help
com.alipay.mobile.antui.R.string.iconfont_group_chat	Group chat
com.alipay.mobile.antui.R.string.iconfont_contacts	Contact
com.alipay.mobile.antui.R.string.iconfont_setting	Settings
com.alipay.mobile.antui.R.string.iconfont_phone_book	Address book
com.alipay.mobile.antui.R.string.iconfont_phone_contact	Contacts

API description

```
    /**
     * Set the image resource ID.
     * @param resId
     * @return
     */
    @Override
    public AUIconView setImageResource(int resId) {
```

```
        if (resId == 0) {
            return this;
        }
        clearView();
        initImageView();
        imageView.setImageResource(resId);
        this.addView(imageView);
        return this;
    }

    /**
     * Set the image resource drawable.
     * @param drawable
     * @return
     */
    @Override
    public IconfontInterface setImageDrawable(Drawable drawable)

    /**
     * Set the iconfont color.
     * @param color
     * @return
     */
    public AUIconView setIconfontColor(int color)

    /**
     * Set the ColorStateList for the iconfont color.
     * @param color
     * @return
     */
    public AUIconView setIconfontColorStates(ColorStateList color)


    /**
     * Set the view size, in the unit of px.
     *
     * @param size
     */
    public AUIconView setIconfontSize(float size)


    /**
     * Set the iconfont resource or text of the view.
     * @param text
     * @return
     */
    @Override
    public AUIconView setIconfontUnicode(String text)
```

Sample code

- Set the icon information:

```
AUIconView iconView = (AUIconView) convertView.findViewById(R.id.icon_view);
iconView.setIconfontUnicode(iconUnicode);

//For example
//iconView.setIconfontUnicode(getResources().getString(com.alipay.mobile.antui.R.string.i
nfont_phone_contact));
```

- Set the icon color:

```
<com.alipay.mobile.antui.iconfont.AUIconView
        android:id="@+id/icon_view"
        android:layout_width="@dimen/size"
        android:layout_height="@dimen/size"
        app:iconfontColor="@com.alipay.mobile.antui:color/AU_COLOR_APP_GREEN"
        app:iconfontUnicode="@com.alipay.mobile.antui:string/iconfont_back"/>

//or:
iconView.setIconfontColor(color)
iconView.setIconfontColorStates(colorStateList)
```

1.4.8.6. Refresh component

AURefreshListView is a ListView that supports pull-down refresh and pull-up-to-load.

Dependency

See Quick start.

API description

```
/**
* Listen to the pull-down refresh state.
*
* @param onPullRefreshListener
*/
public void setOnPullRefreshListener(OnPullRefreshListener onPullRefreshListener)

/**
* Listen to the state of loading more.
*
* @param onLoadMoreListener
*/
public void setOnLoadMoreListener(OnLoadMoreListener onLoadMoreListener)

/**
* Enable pull-down refresh by using the code.
*/
public void startRefresh()

/**
* End the pull-down refresh.
*/
public void finishRefresh()

/**
* Update the state of loading more on the bottom.
*
* @param isShowLoad
* @param hasMore
*/
public void updateLoadMore(boolean isShowLoad, boolean hasMore)
```

Code sample

```
<com.alipay.mobile.antui.load.AURefreshListView
    android:id="@+id/refresh_list_view"
    android:layout_width="match_parent"
    android:layout_height="wrap_content" />
```

```
listView.setOnPullRefreshListener(new OnPullRefreshListener() {
    @Override
    public void onRefresh() {
        listView.finishRefresh();
        listView.updateLoadMore(true, true);
    }

    @Override
    public void onRefreshFinished() {

    }
});
listView.setOnLoadMoreListener(new OnLoadMoreListener() {
    @Override
    public void onLoadMore() {
        for (int i = 0; i < 3; i++) {
            Map<String, Object> map = new HashMap<String, Object>();
            map.put("PIC", "Pull down to load more lists");
            map.put("TITLE", "Pull up to load more");
            contents.add(map);
        }
        adapter.notifyDataSetChanged();
        if(contents.size() > 13) {
            listView.updateLoadMore(true, false);
        } else {
            listView.updateLoadMore(true, true);
        }
    }

    @Override
    public void onLoadingFinished() {

    }
});
```

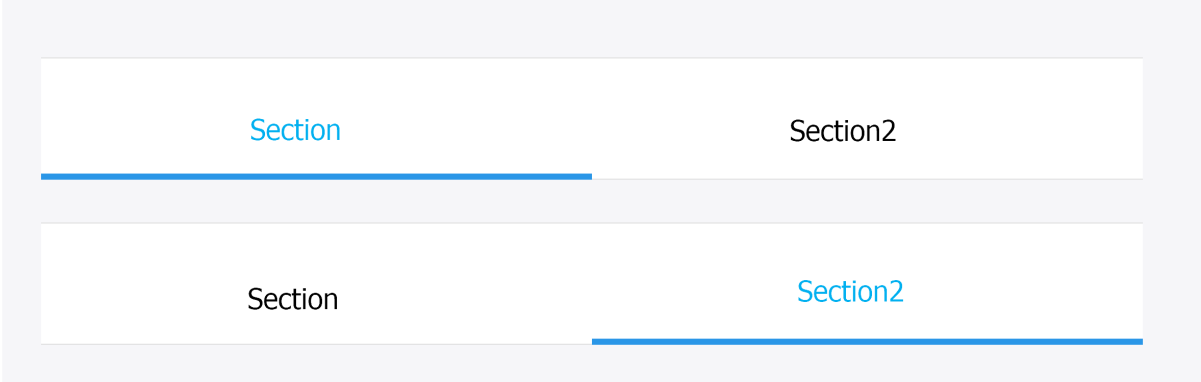
1.4.8.7. Switch tab component

AUSegment is used to replace APSwitchTab, with related codes reconstructed and the original APIs reserved for smooth scrolling.

If the SDK version is later than 10.0.20, this component supports switching by scrolling a tab. The left and right spacing of each Tab is 14dp:

- Scrolling switching is supported when the width of all tabs exceeds the initial width.
- When the width of all tabs is less than the initial width, the option indicating whether to equally divide the APIs is provided. By default, equal division is selected.

Sample image



Dependency

See Quick start.

API description

```
  /**
   * Reset the tab view.
   */
  public void resetTabView(String[] tabNameArray)

  /**
   * Adjust the position of the selected line at the bottom. Generally, this method is
called in the onPageScrolled callback of ViewPager.
   *
   * @param position        The start position.
   * @param positionOffset  The offset of the start position (in percentage).
   */
 public void adjustLinePosition(int position, float positionOffset)

  /**
   * Select a tab but do not adjust the position of the bottom line, which is suitable
for tab switching using ViewPager.
   * Implement the selected line at the bottom by calling adjustLinePosition in the onP
ageScrolled callback of ViewPager.
   *
   * @param position    The position.
   */
 public void selectTab(int position)

  /**
   * Select a tab and adjust the position of the bottom line.<br>
   * Used in non-ViewPager tab switching scenarios. The duration of the cutscene before
each tab switching interval is 250 ms
   *
   * @param position    The target selected tab.
   */
  public void selectTabAndAdjustLine(int position)

  /**
   * Select a tab and adjust the position of the bottom line.<br>
   * Used in non-ViewPager tab switching scenarios. The duration of the cutscene before
```

```
each tab switching interval is customized.<br>
   * If the next animation is enabled before the previous animation finished, the previ
ous animation is immediately terminated. The next animation starts after the final posi
tion of the previous animation is located.
   *
   * @param position    The target position.
   * @param during      The duration of the cutscene before each tab switching interval
.
   */
  public void selectTabAndAdjustLine(int position, int during)

  /**
   * Set the tab switching listener.
   *
   * @param tabSwitchListener
   */
  public void setTabSwitchListener(TabSwitchListener tabSwitchListener)

  /**
   * Add a red dot to the specified position.
   * @param view Red dot view.
   * @param position
   */
  public void addTextRightView(View view, int position)

  /**
   * Add a red dot to the specified position.
   * @param view Red dot view.
   * @param params The relative position of the red dot.
   * @param position
   */
  public void addTextRightView(View view, RelativeLayout.LayoutParams params, int posit
ion)
```

Description of the tab scrolling switching API

To use the scrolling function, set the custom property parameter `scroll` to true, for example, adding `app:scroll="true"` to the layout file. The scrolling tab supports only the following four APIs. Other APIs are invalid to the scrollable tab.

```
  /**
   * Set the tab switching listener.
   * @param tabSwitchListener
   */
  public void setTabSwitchListener(TabSwitchListener tabSwitchListener)

  /**
   * Set the data source.
   * @param list
   */
  public void init(List<ItemCategory> list)
  /**
   * Set the selected tab.
   * @param position
   */
  public void setCurrentSelTab(int position)

  /**
   * Each tab has a fixed left-right spacing of 14dp. An option indicating whether to e
qually dividing the APIs is provided when the width of all tabs is less than the initia
l width.
   * By default, equal division is selected. If you set this parameter to false, equal
division is not allowed.
   * @param divideAutoSize
   */
  public void setDivideAutoSize(boolean divideAutoSize)
```

Custom properties

The `scroll` property is added to the SDK of a version of 10.0.20 or later.

Property	Purpose	Type
tabCount	The tab quantity.	Integer
tab1Text	Tab1 text.	String, Reference
tab2Text	Tab2 text.	String, Reference
tab3Text	Tab3 text.	String, Reference
tab4Text	Tab4 text.	String, Reference
tabTextArray	The tab text array.	String, Reference
uniformlySpaced	Whether self-adaptive.	Boolean

tabTextColor	The text color.	Reference, Color
tabTextSize	The text size.	Dimension
buttomLineColor	The color of the bottom line.	Color, Reference
scroll	Whether to support scrolling.	Boolean

Code sample

XML

```
<com.alipay.mobile.antui.segement.AUSegment
        android:id="@+id/switchtab_three"
        android:layout_width="fill_parent"
        android:layout_height="50dp"
        android:layout_marginTop="10dp"
        app:tab1Text="Left text"
        app:tab2Text="Middle text"
        app:tab3Text="Right text"
        app:tabCount="3"/>
```

1.4.8.8. TabBar item component

AUTabBarItem is used to provide TabBar items in the mPaaS framework.

Dependency

For how to add dependency, follow the relevant instructions in Quick Start.

Custom properties

Property	Description	Type
topIconSid	The icon.	Reference
topIconSize	The icon size.	Dimension
textColor	The text color.	Color, Reference

Code sample

Here is the sample of using the component in XML.

```
<com.alipay.mobile.antui.bar.AUTabBarItem
        android:id="@+id/tab_2"
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="1"
        android:text="Koubei"
        android:textSize="@dimen/AU_ICONSIZE2"
        app:topIconSize="@dimen/AU_ICONSIZE2"
        app:topIconSid="@drawable/tab_bar_alipay"
        app:textColor="@color/tabbar_text_color1"/>
```

1.5. Native based - iOS component library

1.5.1. Quick start

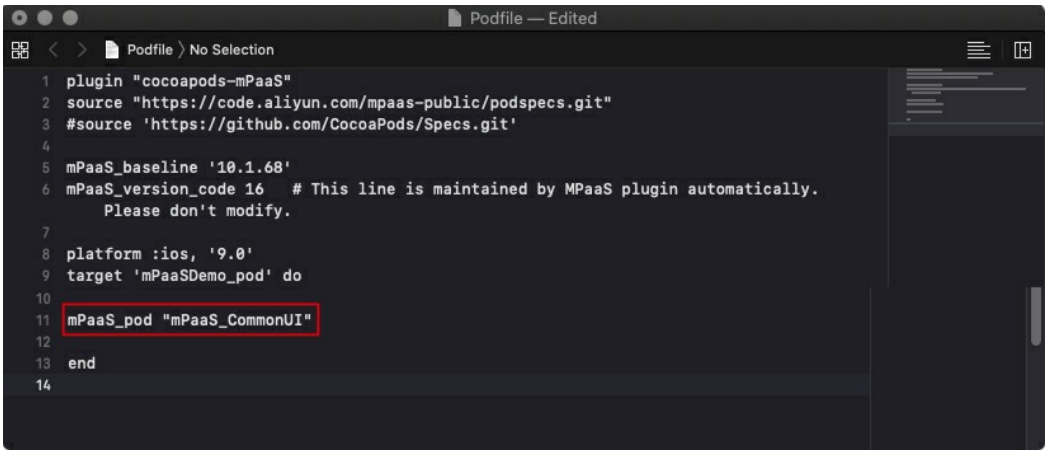
mPaaS provides a unified component library to meet the needs of users for different native controls. To enable clients to access the unified component library, you must add the SDK of the unified component library, and then call the SDK API method in the code to add controls.

Prerequisite

The project is connected to mPaaS. For more information, refer to: Access based on native framework and using Cocoapods.

Add the SDK

1. In the Podfile file, enter `mPaaS_pod "mPaaS_CommonUI"` to add the dependency on the Common UI component.



2. Run `pod install` to connect the component to the mPaaS.

Use the SDK

Use Common UI SDK of the baseline version 10.1.60 and later. You can refer to the official demo of Common UI.

1.5.2. Basic components

1.5.2.1. Activity Indicator base class

- The activity indicator base class AUActivityIndicatorView is the UIActivityIndicatorView version in mPaaS.
- To facilitate subsequent extension, use AUActivityIndicatorView instead of UIActivityIndicatorView of the system in all mPaaS apps.
- Since current AUActivityIndicatorView is completely inherited from UIActivityIndicatorView without additional properties and methods, this topic does not describe APIs and code examples.

1.5.2.2. Switch base class

The switch base class AUSwitch in mPaaS is equivalent to UISwitch. To facilitate subsequent extension, AUSwitch instead of UISwitch must be used in all mPaaS apps.

Since the current switch base class is completely inherited from UISwitch without additional properties or methods, this topic does not provide APIs and code examples.

1.5.2.3. Check box control

- AUCheckBox is a radio button control.
- AUCheckBox is migrated from the APCheckbox of APCommonUI. Use latest AUCheckBox.

API description

```
/**
The check box type.

- AUCheckBoxStyleDefault:   The default style, similar to the check box of the web.
- AUCheckBoxStyleCheckmark: The checkmark style of tableview.
*/
typedef NS_ENUM(NSInteger, AUCheckBoxStyle) {
AUCheckBoxStyleDefault,
AUCheckBoxStyleCheckmark
};


/**
The radio button control.
*/
@interface AUCheckBox : UIControl

/**
Initialize the AUCheckBox method according to the type.

@param style    The type of the check box.

@return AUCheckBox
*/
- (instancetype)initWithStyle:(AUCheckBoxStyle)style;

/**
Whether to select a property.
*/
@property(nonatomic, assign, getter = isChecked) BOOL checked;

/**
Whether to disable a property.
*/
@property(nonatomic, assign, getter = isDisabled) BOOL disabled;

/**
The check box type (read-only, set only upon initialization).
*/
@property (nonatomic, assign, readonly) AUCheckBoxStyle style;


@end
```

Code sample

```
AUCheckBox *checkbox = [[AUCheckBox alloc] initWithStyle:AUCheckBoxStyleDefault];
checkbox.checked = YES;
checkbox.disabled = NO;
checkbox.origin = CGPointMake(100, 250);
[checkbox addTarget:self action:@selector(checkboxValueChanged:)
forControlEvents:UIControlEventValueChanged];
[self.view addSubview:checkbox];

- (void)checkboxValueChanged:(id)sender
{
AUCheckBox *checkbox = (AUCheckBox *)sender;
NSLog(@"%@", checkbox);
}
```

1.5.2.4. Image base class

- The image base class AUImage is the version of UIImage in mPaaS.
- To facilitate subsequent extension, use AUImage instead of system UIImage in all mPaaS apps.
- Since the current image base class is completely inherited from the UIImage without additional properties and methods, this topic does not describe APIs and code examples.

1.5.2.5. Label base class

The label base class AULabel in mPaaS is equivalent to UILabel. To facilitate subsequent extension, AULabel instead of UILabel must be used in all mPaaS apps.

Since the current label base class is completely inherited from UILabel with no additional properties or methods, this topic does not provide APIs and code examples.

> **Note**
>
> For complex label settings, `TTTAttributedLabel` (already imported to AntUI) can be used.

1.5.2.6. Footer base class

The footer control mainly contains the text link component, the copyright component, and the combination of the text link and copyright.

AUTextLinkView - text link

```
    @protocol AUTextLinkDelegate <NSObject>

@optional
/* Callback upon text link tapping.
 * textLinkView     The text link.
 * Index            Click a subscript, which starts from 0 and corresponds to the
params subscript.
 * Button           The button to click.
 */
- (void)textLinkView:(AUTextLinkView *)textLinkView didClickOnIndex:(NSInteger)index at
Button:(UIButton *)button;

@end

//
@interface AUTextLinkView : UIView

@property (nonatomic, strong) UIView *containerView;    // The container.
@property (nonatomic, weak) id <AUTextLinkDelegate> delegate;

// titles: The text description array.
- (instancetype)initWithFrame:(CGRect)frame params:(NSArray *)params;

@end
```

AUCopyrightView - copyright

```
@interface AUCopyrightView : UIView

@property (nonatomic, strong) AULabel *copyrightLabel;

//
- (instancetype)initWithFrame:(CGRect)frame string:(NSString *)string;

@end
```

AUPageAnkletView - combination of the text link and copyright

```
@interface AUPageAnkletModel : NSObject

@property (nonatomic, strong) NSMutableArray *textLinkInfos;
@property (nonatomic, strong) NSString *copyrightInfo;

@end

typedef void(^paramsBlock)(AUPageAnkletModel *model);

@interface AUPageAnkletView : UIView

@property (nonatomic, strong) AUTextLinkView *textLinkView;        // The text link.
@property (nonatomic ,strong) AUCopyrightView *copyrightInfoView;  // Copyright text.

//
- (instancetype)initWithFrame:(CGRect)frame params:(paramsBlock)params;

@end
```

Code sample

- Text link:

```
 AUTextLinkView *textLinkBtns = [[AUTextLinkView alloc] initWithFrame:CGRectMake(0, C
GRectGetMaxY(copyRightView1.frame)+40, self.view.width, 50) params:@[@"Bottom link",
@"Bottom link", @"Bottom link"]];
  textLinkBtns.centerX = self.view.centerX;
  [self.view addSubview:textLinkBtns];
```

- Copyright:

```
 AUCopyrightView *copyRightView1 = [[AUCopyrightView alloc]
initWithFrame:CGRectMake(0, 80, self.view.width, 40) string:@"© 2004-2017 Alipay.com.
All rights reserved."];
  copyRightView1.centerX = self.view.centerX;
  [self.view addSubview:copyRightView1];
```

- Combination of text link and copyright:

```
 AUPageAnkletView *ankletView = [[AUPageAnkletView alloc] initWithFrame:CGRectMake(0,
CGRectGetMaxY(textLinkBtns.frame)+40, self.view.width, 100)
params:^(AUPageAnkletModel *model) {
  model.textLinkInfos = [[NSMutableArray alloc] initWithArray:@[@"Bottom link", @"Bot
tom link", @"Bottom link"]];
  model.copyrightInfo = @"© 2004-2017 Alipay.com. All rights reserved.";
   }];
  ankletView.centerX = self.view.centerX;
  [self.view addSubview:ankletView];
```

1.5.2.7. mPaaS customized loading control

- AULoadingIndicatorView is a custom loading control of mPaaS.

- The mPaaS-customized loading control is migrated from the APActivityIndicatorView of APCommonUI. Use latest AULoadingIndicatorView.

API description

```
typedef enum{
AULoadingIndicatorViewStyleTitleBar,   //Navigation bar loading box, diameter: 36 px, r
ing width: 3 px.
AULoadingIndicatorViewStyleRefresh,    //List loading box, diameter: 48px, ring width:
4px
AULoadingIndicatorViewStyleToast,      //Toast loading box, diameter: 72px, ring width:
6px
AULoadingIndicatorViewStyleLoading,    //Page loading box, diameter: 90px, ring width:
6px
}AULoadingIndicatorViewStyle;



/**
The mPaaS-customized loading control.
*/
@interface AULoadingIndicatorView : UIView

@property (nonatomic, assign) BOOL    hidesWhenStopped;    //Whether to hide when stopp
ed.
@property (nonatomic, strong) UIColor *trackColor;         //The color of the ring.
@property (nonatomic, strong) UIColor *progressColor;      //The color of the loading i
ndicator.
@property (nonatomic, assign) float progressWidth;         //Set the width of the ring
when customizing the ring size. Default value: 2.
@property (nonatomic, assign) CGFloat progress;            //The ratio of the arch
length of the loading indicator to the perimeter of the ring. Default value: 0.1

/**
* The circlular loading box.
* Note: If the default style is not used, define the size of the circle and use initWit
hFrame to initialize the circle. The default width of the ring is 2, which can be adjus
ted by setting progressWidth.
*
* @param style  The current loading type.
*
*/
- (instancetype)initWithLoadingIndicatorStyle:(AULoadingIndicatorViewStyle)style;

/**
Start an animation.
*/
- (void)startAnimating;

/**
End an animation.
*/
- (void)stopAnimating;

/**
```

```
Whether an animation is being executed.

@return YES: An animation is being executed. NO: No animation is being executed.
*/
- (BOOL)isAnimating;


@end
```

Code sample

```
AULoadingIndicatorView *view = [[AULoadingIndicatorView alloc]
initWithLoadingIndicatorStyle:AULoadingIndicatorViewStyleLoading];
view.hidesWhenStopped = YES;
view.center = CGPointMake(280, 250);
view.trackColor = [UIColor redColor];
view.progressColor = [UIColor blueColor];
[view startAnimating];
[self.view addSubview:view];
```

1.5.2.8. Button base class

AUButton follows the new UED requirements, currently contains two styles, and cannot be fully interconnected with APButton in APCommonUI. These two styles do not include the operation button of the warning type.

Dependency

The dependency of AUButton is as follows:

```
import <UIKit/UIKit.h>
```

API description

```
/**
     Initialization method
     @param style The style.
     @return The created initialization object.
     */
    + (instancetype)buttonWithStyle:(AUButtonStyle)style;

    /**
     * An auxiliary method of the initialization, used for creating and initializing a
button object.
     *
     * @param buttonType    The button type. It must be one of the values defined in AU
ButtonStyle.
     *  @param title        Button title.
     *  @param target       The object responding to the button tap event.
     *  @param action       The function responding to the button tap event.
     *
     * @return The button object newly created and initialized.
     *
     * The initialization object of this method. A frame needs to be set.
     */
    + (instancetype)buttonWithStyle:(AUButtonStyle)style title:(NSString *)title target
:(id)target action:(SEL)action;

    /**
     Display the loading icon animation and text (the loading icon is on the left and t
he text is on the right). When there is no text, the loading icon is centered.

     @param loadingTitle    The text to be displayed along with the loading icon. If th
is parameter is set to nil or an empty string, text is not displayed and the loading ic
on is centered.
     @param currentVC       The current VC that is used to remove the mask after the lo
ading is complete.
     */
    - (void)startLoadingWithTitle:(NSString *)loadingTitle currentViewController:(UIVie
wController *)currentVC;


    /**
     Stop the rotation of the loading icon.
     */
    - (void)stopLoading;
```

Custom properties

Property	Description
AUButtonStyleNone	The default style.

AUButtonStyle1	Blue background, white text, borderless, and large button.
AUButtonStyle2	White background, black text, light gray border, and large button.
AUButtonStyle3	Transparent background, blue text, blue border, and small button.
AUButtonStyle4	White background, with upper and lower separation lines by default, and red text; applicable to page bottom operation scenarios (unfollow); default height: 44 units; width: same as screen width.
AUButtonStyle5	White background, with upper and lower separation lines by default, and ant blue text; applicable to page bottom operation scenarios (more services); default height: 44 units, and width: same as screen width
AUButtonStyle6	Red background, white text, for operations of the warning type, and large button.
AUButtonStyle7	White background, black text, light gray border, and small button.
AUButtonStyle8	Blue background, white text, borderless, and small button.

Code sample

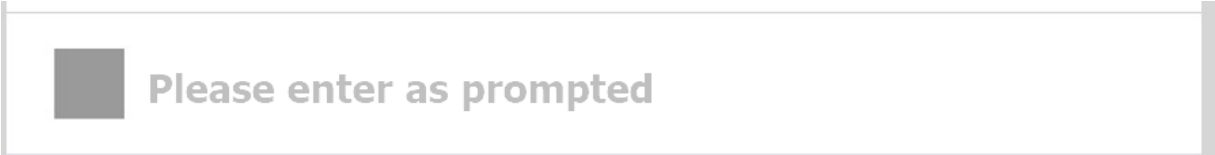
```
AUButton *button = [AUButton buttonWithStyle:AUButtonStyle2     title:@"AUButtonStyle2"
target:self action:@selector(onButtonClicked:)];
   button.frame = CGRectMake(XX, XX,XX, XX);

    AUButton *buttonDisable = [AUButton buttonWithStyle:AUButtonStyle1];
   buttonDisable.enabled = NO;
   [buttonDisable setTitle:@"Style1disable" forState:UIControlStateNormal];
   buttonDisable.frame = CGRectMake(XX, XX,XX, XX);

    //Set the loading icon on the button.
    [button startLoadingWithTitle:@"Loading" currentViewController:self];

    //Stop the rotation of the loading icon on the button.
    [button stopLoading];
```

1.5.3. Input components

1.5.3.1. Image input box

AUImageInputBox is an input box with an icon on the left and is inherited from AUInputBox.

Sample image



API description

```
/**
The input box with an icon on the left side.
*/
@interface AUImageInputBox : AUInputBox

/**
Left-side icon view (read-only).
*/
@property (nonatomic, strong, readonly) UIImageView *iconView;

/**
Set the left-side icon.

@param image The icon image.
*/
- (void)setIconImage:(UIImage *)image;
```

Code sample

```
AUImageInputBox *imageInputBox = [AUImageInputBox inputboxWithOriginY:startY inputboxTy
pe:AUInputBoxTypeNone];
imageInputBox.textField.placeholder = @"Enter as promoted";
[imageInputBox setIconImage:image];
[self.view addSubview:imageInputBox];
```

1.5.3.2. Paragraph input box

AUParagraphInputBox is a multi-line input box control. The maximum number of characters allowed in specific business can be specified for it.

API description

```
// The multi-line text input box.

@interface AUParagraphInputBox : UIView

@property (nonatomic, strong) UITextView *textView;      // Imput box
@property (nonatomic, assign) NSInteger maxInputLen;     // Set the character limit (as
required)

// Initialization.
- (instancetype)initWithFrame:(CGRect)frame placeHolder:(NSString *)placeHolder;

// Set the placeHolder text.
- (void)setPlaceHolder:(NSString *)placeHolder;

@end
```

Code sample

```
_paragraphInputBox = [[AUParagraphInputBox alloc] init];
_paragraphInputBox.frame = CGRectMake(0, startY, AUCommonUIGetScreenWidth(), 10);
_paragraphInputBox.maxInputLen = 1240;
_paragraphInputBox.textView.delegate = self;
[_paragraphInputBox setPlaceHolder:@"Please enter text here"];
[self.view addSubview:_paragraphInputBox];
```

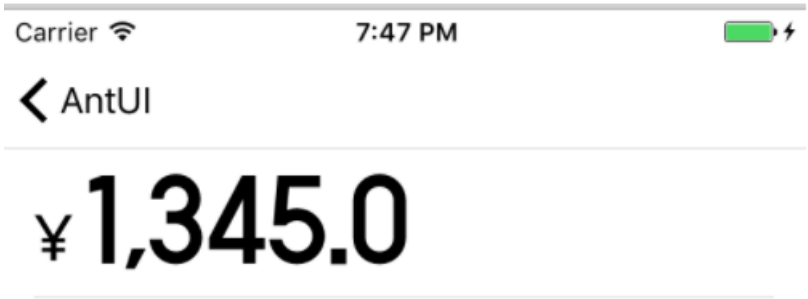
1.5.3.3. Simplified amount input box

The simplified amount input box AUAmountEditTextField can be used together with the amount display component AUAmountLabelText.

AUAmountEditTextField

Currently, the verification and preprocessing logic of input content is not contained, but can be realized by setting delegate in the business.

Sample image



API description

```
NS_ASSUME_NONNULL_BEGIN

@interface AUAmountEditTextField : UITextField

@end


/**
  The simplified amount input component with the "¥" symbol and an underscore.
  The font size of the input content is scaled with the content length.
 */
@interface AUAmountEditText : UIView


/**
    The amount input box, you can modify properties or set the delegate as needed.
    When a clear event occurs, [amountTextField
sendActionsForControlEvents:UIControlEventEditingChanged] is called.
 */
@property(nonatomic,strong) AUAmountEditTextField *amountTextField;


/**
 It is open to AUAmountLabelText for adjusting the font size when the length of inputTe
xt changes.
 Business parties do not use.

 @param textLength inputText length.
 @return UIFont
 */
+ (UIFont *)resetFontSize:(NSUInteger) textLength;

@end

NS_ASSUME_NONNULL_END

// amountTextField Initialization settings.
_amountTextField.textColor = RGB(0x000000);
_amountTextField.backgroundColor = [UIColor clearColor];
_amountTextField.font = [UIFont fontWithCustomName:kAmountNumberFontName size:45.0];
_amountTextField.contentVerticalAlignment= UIControlContentVerticalAlignmentCenter;
_amountTextField.inputView = [AUNumKeyboards
sharedKeyboardWithMode:AUNumKeyboardModeCommon];
_amountTextField.rightViewMode = UITextFieldViewModeWhileEditing;
_amountTextField.rightView = self.rightView;//Use rightView to implement clearButton.
```

Sample code

```
field = [[AUAmountEditText alloc] init];//Set the width to the screen width and the hei
ght to 70.
field.amountTextField.delegate = self;
[view addSubview:field];
```

AUAmountLabelText

AUAmountLabelText is an amount display component used in conjunction with AUAmountEditTextField.

Sample image

API description

```
NS_ASSUME_NONNULL_BEGIN

/**
 The amount display component used in conjunction with the AUAmountEditTextField.
 */
@interface AUAmountLabelText : UIView

@property (nonatomic, copy) NSString *amountText;//Amount, without the "¥" symbol, for
example, "80.01".

@end

NS_ASSUME_NONNULL_END
```

Sample code

```
label = [[AUAmountLabelText alloc] init];//Set the width to the screen width and the he
ight to 64.
label.amountText = @"1,345.0";
[view addSubview:label];
```

1.5.3.4. Amount input box

AUAmountInputBox, composed of AUAmountInputField and AUAmountInputFieldFooterView, is an amount input box with the combination function.

AUAmountInputBox

- Currently, it allows you to set titles (plain text) and add footers (plain text/input box).
- Input content verification and preprocessing logic is not contained, but can be realized by setting delegate in the business.

API description

```
NS_ASSUME_NONNULL_BEGIN

/**
The amount input box with the combination function.
Currently, it allows you to set titles (plain text) and add footers (plain text/input b
ox).
Input content verification and preprocessing logic is not contained, but can be realize
d by setting delegate in the business.
*/
@interface AUAmountInputBox : UIView

/**
 AUAmountInputBox initialization method

 @param views @[AUAmountInputField,AUAmountInputFieldFooterView]
 @return AUAmountInputBox
 */
+ (AUAmountInputBox *)amountInputBoxWithViews:(NSArray *) views;

@end

NS_ASSUME_NONNULL_END
```

Sample code

```
AUAmountInputField *inputField = [AUAmountInputField amountInputWithTitle:@"Transfer am
ount"];
AUAmountInputFieldFooterView *footerView = [AUAmountInputFieldFooterView
footerWithInput:@"Add notes (within 50 words)"];
AUAmountInputBox *inputBox = [AUAmountInputBox amountInputBoxWithViews:[NSArray arrayWi
thObjects:inputField,footerView,nil]];
inputField.textField.delegate = self;
footerView.inputTextField.delegate = self;
[_scrollView addSubview:inputBox];
```

AUAmountInputField

It is extended based on the AUAmountEditText combination. Currently, it supports title setting.

API description

```
NS_ASSUME_NONNULL_BEGIN


/**
 It is extended based on the AUAmountEditText combination. Currently, it supports title
setting.
 */
@interface AUAmountInputField : UIView

- (AUAmountEditTextField *)textField;

+ (AUAmountInputField *)amountInputWithTitle:(NSString *) title;

@end

NS_ASSUME_NONNULL_END
```

Code sample

See Code sample of AUAmountInputBox.

AUAmountInputFieldFooterView

Description

AUAmountInputFieldFooterView is footerView of AUAmountInputBox, and currently supports both “plain text” and “input box” .

Dependency

The dependency of AUAmountInputFieldFooterView is as follows:

```
pod 'AntUI'
```

API description

```
NS_ASSUME_NONNULL_BEGIN

@interface AUAmountInputFieldFooterView : UIView

@property (nonatomic, strong) UITextField * inputTextField;
@property (nonatomic, strong) UILabel * descTextLabel;

+ (AUAmountInputFieldFooterView *)footerWithInput:(nullable NSString *)placeholder;
+ (AUAmountInputFieldFooterView *)footerWithDesc:(nullable NSString *)text;

@end

NS_ASSUME_NONNULL_END
```

Sample code

See Code sample of AUAmountInputBox.

1.5.3.5. Normal input box

AUInputBox is a single-line input box that supports the arrangement of a title on the left side and an image button on the right side.

API description

```
typedef NS_ENUM(NSInteger, AUInputBoxType)
{
AUInputBoxTypeMobileNumber,     // Mobile phone number
AUInputBoxTypeCreditCard,       // Credit card
AUInputBoxTypeBankCard,         // Debit card
AUInputBoxTypeAmount,           // Amount
AUInputBoxTypeIDNumber,         // ID card
AUInputBoxTypeNotEmpty,         // Not empty
AUInputBoxTypeAlipayAccount,    // mPaaS app account
AUInputBoxTypeNone              // No authentication
};

typedef enum AUInputBoxStyle
{
AUInputBoxStyleNone,    // No background image.
AUInputBoxStyleiOS6,    // Rounded background image.
AUInputBoxStyleiOS7     // Non-rounded background image.
} AUInputBoxStyle;


/**
The single-line input box with title text and a button image.
*/
@interface AUInputBox : UIView

#pragma mark - AUInputBox property.

// The text input box.
@property(strong, nonatomic)   AUTextField      *textField;
@property(strong, nonatomic)   NSString         *textFieldText;
@property(strong, nonatomic)   NSString         *textFieldFormat;
@property(assign, nonatomic)   CGFloat          horizontalMargin;
@property(assign, nonatomic)   CGFloat          textFieldHorizontalMargin;


// The button.
@property(strong, nonatomic)   UIButton         *iconButton;
@property(assign, nonatomic)   BOOL             hidesButtonWhileNotEmpty;
@property(assign, nonatomic)   BOOL             hidesButton;


// The label displayed on the left part of the input box.
@property(nonatomic, readonly) UILabel          *titleLabel;
@property(nonatomic, assign)   CGFloat          titleLabelWidth;


The style, authenticator, background image, and input box type.
```

```
@property(assign, nonatomic)  AUInputBoxStyle style;
@property(readonly, nonatomic) UIImageView      *backgroundImage;
@property(assign, nonatomic)  AUInputBoxType inputBoxType;

#pragma mark - The AUInputBox static method.
/**
* Create an input box component.
* @param  originY   The Y coordinator of the input box.
* @param  type      The type of the text input box.
* @return           The input box component.
*/
+ (instancetype)inputboxWithOriginY:(CGFloat)originY inputboxType:(AUInputBoxType)type;

/**
* Create an input box component with an icon button.
* @param originY    The Y coordinator of the input box.
* @param icon       The icon on the button, 44x44.
* @param type       The type of the text input box.
* @return           The input box component with a button.
*/
+ (instancetype)inputboxWithOriginY:(CGFloat)originY buttonIcon:(UIImage *)icon inputbo
xType:(AUInputBoxType)type;

/**
* @return The control height. The default value is 44. The value is 47 for iPhone6 plus
.
*/
+ (float)heightOfControl;


#pragma mark - The AUInputBox instance method.

- (instancetype)initWithFrame:(CGRect)frame inputboxType:(AUInputBoxType)type;

- (void)buildIconButton:(UIImage *)icon;

/**
* Add a space to the text in the specified format.
* @param text   The text content.
* @return       The text to which a space has been added.
*/
- (NSString *)formatText:(NSString *)text;

/**
* Add an icon by using this method for inputBox without any icon specified during the i
nitialization.
* @param icon   The icon on the button.
*
*/
- (void)setRightButtonIcon:(UIImage *)icon;

/**
* Check the input validity.
*/
```

```
- (BOOL)checkInputValidity;

/**
* Filter text. Only digits are allowed. The maximum length is specified.
* The parameter is the delegate parameter and the maximum length is specified by maxLen
gth.
*/
- (BOOL)shouldChangeRange:(NSRange)range replacementString:(NSString *)string withMaxLe
ngth:(int)maxLength;

/**
* Specify the maximum length.
* @maxLength Maximum length, excluding format spaces.
*/
- (BOOL)shouldChangeRange:(NSRange)range replacementString:(NSString *)string withForma
tStringMaxLength:(int)maxLength;
```

Code sample

- Single-line input box

```
AUInputBox *inputBox = [AUInputBox inputboxWithOriginY:startY
inputboxType:AUInputBoxTypeNone];
    inputBox.titleLabel.text = @"Label";
    inputBox.textField.placeholder = @"Please enter text as prompted";
    [self.view addSubview:inputBox];
```

- Icon

```
AUInputBox *iconInputBox = [AUInputBox inputboxWithOriginY:startY buttonIcon:image in
putboxType:AUInputBoxTypeNone];
    iconInputBox.titleLabel.text = @"Label";
    iconInputBox.textField.placeholder = @"Please enter text as prompted";
    [self.view addSubview:iconInputBox];
```

1.5.3.6. Search input box

AUSearchTitleView is a search bar control. It is similar to a search bar but can only be tapped. It supports the following styles:

- `AUSearchTitleStyleDefault = 0` : search box with black text, which is applicable when a light color background is used.

  Example: search box displayed on the navigation pane on an mPaaS app page.
- `AUSearchTitleStyleMiddleAlign` : search box with centered black text, which is applicable when a light color background is used.

  Example: search box on the contact page.
- `AUSearchTitleStyleContent` : search box with white text, which is applicable when a deep color background is used

  Example: search box displayed on the navigation pane on the mPaaS app homepage.

Dependency

The dependency of AUSearchTitleView is as follows:

```
    AntUI(iOS)
    1.0.0.161108003457
    APCommonUI(iOS)
    1.2.0.161108102201
```

API description

```
    typedef NS_ENUM(NSInteger, AUSearchTitleStyle) {
        AUSearchTitleStyleDefault = 0,    // Search box with black text, which is
applicable when a light color background is used.
        AUSearchTitleStyleMiddleAlign,    // Search box with centered black text, which
is applicable when a light color background is used.
        AUSearchTitleStyleContent,        // Search box with white text, which is applic
able when a deep color background is used.
};

@class AUSearchTitleView;

@protocol AUSearchTitleViewDelegate <NSObject>

@optional

// The search bar control.
- (void)didPressedTitleView:(AUSearchTitleView *)titleView;

// The voice icon of the search bar control.
- (void)didPressedVoiceButton:(AUSearchTitleView *)titleView;

@end



/**
The search bar control. (The width is the same as that of the screen by default.)
*/
@interface AUSearchTitleView : UIView

@property(nonatomic, assign)AUSearchTitleStyle style;         // The background style o
f the search box. The light color background is used by default

@property(nonatomic,strong) NSString *placeHolder;            // The search box
placeholder, which is "Search" by default.
@property(nonatomic,strong) UIColor *placeHolderColor;        // The text color of the
search box placeholder.

@property (nonatomic, weak) id<AUSearchTitleViewDelegate> delegate;

@property(nonatomic,strong) UIImage *searchIconImage;         // The search icon.
@property(nonatomic,strong) UIColor *normalBackgroundColor;   // The background color o
f the search box.
@property(nonatomic,assign) BOOL isShowVoiceIcon;             // Whether to display the
Voice icon. Default value: No.
```

```
/**
* The padding to the left and right of the outer-layer transparent view. The default va
lue is 9. To configure the space between the view of the instance to be initialized and
another view for a business, consider the padding as well to prevent a visual error.
* Note: If the instance to be initialized is defined as the titleView of a
navigationItem, the system specifies the spacing between the titleView and the views on
its left and right in an adaptive manner. To meet the visual requirements, the system s
ets the padding between the search box and the outer-layer view.
*
* If there are any special requirements, change the padding.
*
*/
@property(nonatomic,assign) CGFloat marginBetweenItem;

/**
*  The method for getting the instance.
*
*  @param style The search box style.
*
*  @return      Return the instance.
*/
- (id)initWithSearchStyle:(AUSearchTitleStyle)style;

/**
 *  This method calls the global search page by default. To define the event of tapping
the search box for a business, override this method in the subclass.
 */
- (void)onClicked;

@end
```

Code sample

- Used in a navigation bar

```
AUSearchTitleView *titleView = [[AUSearchTitleView alloc]
initWithSearchStyle:AUSearchTitleStyleDefault];
    titleView.placeHolder = @"The search bar style";
    titleView.placeHolderColor = [UIColor blackColor];
    titleView.normalBackgroundColor = [UIColor orangeColor];
    titleView.isShowVoiceIcon = YES;
    titleView.delegate = self;
    self.navigationItem.titleView = titleView;
```

- Used in a common view

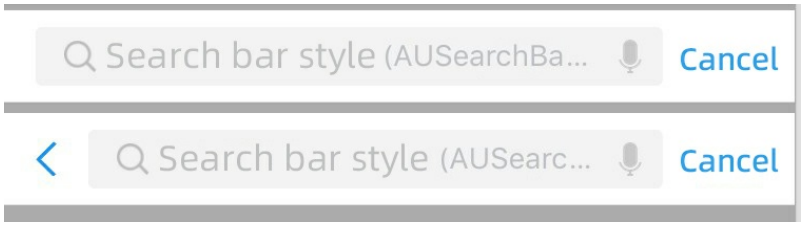
```
titleView = [[AUSearchTitleView alloc]
initWithSearchStyle:AUSearchTitleStyleMiddleAlign];
    titleView.placeHolder = @"The AUSearchTitleStyleMiddleAlign style";
    titleView.isShowVoiceIcon = YES;
    titleView.delegate = self;
    [self.view addSubview:titleView];
```

1.5.3.7. Search bar component

The dependency of AUSearchBar is as follows:

- AUSearchBar is a search bar control of mPaaS.
- It supports the following styles:
  - `AUSearchBarStyleNormal` : search bar with a Cancel button, for example, search bar on the homepage for global search
  - `AUSearchBarStyleDetail` : search bar with a Cancel button and a back icon, for example, search bar on a level-2 page for global search

Sample images



Dependency

The dependency of AUSearchBar is as follows:

```
AntUI(iOS)
1.0.0.161108003457
APCommonUI(iOS)
1.2.0.161108102201
```

API description

```
@class AUSearchBar;

@protocol AUSearchBarDelegate <NSObject>

@optional

#pragma mark - Proxy methods corresponding to UITextField.
//
- (BOOL)searchBarTextShouldBeginEditing:(AUSearchBar *)searchBar;
//
- (BOOL)searchBarTextShouldEndEditing:(AUSearchBar *)searchBar;
// Called when text starts editing.
- (void)searchBarTextDidBeginEditing:(AUSearchBar *)searchBar;
// Called when text ends editing.
- (void)searchBarTextDidEndEditing:(AUSearchBar *)searchBar;
// Called when text changes (including clear).
- (void)searchBar:(AUSearchBar *)searchBar textDidChange:(NSString *)searchText;
// Called before text changes.
- (BOOL)searchBar:(AUSearchBar *)searchBar shouldChangeTextInRange:(NSRange)range repla
cementText:(NSString *)text;

- (BOOL)searchBarShouldClear:(AUSearchBar *)searchBar;
```

```
#pragma mark - Other proxy methods.

// Called when the search icon is clicked.
- (void)searchBarSearchButtonClicked:(AUSearchBar *)searchBar;

// Called when the Cancel button is clicked.
- (void)searchBarCancelButtonClicked:(AUSearchBar *) searchBar;

// Called when the back icon is clicked (valid for the AUSearchBarStyleDetail style).
- (void)searchBarBackButtonClicked:(AUSearchBar *)searchBar;

// Called when the voice icon is clicked (valid when shouldShowVoiceButton is set to YE
S).
- (void)searchBarOpenVoiceAssister:(AUSearchBar *)searchBar;

@end



typedef NS_ENUM(NSUInteger, AUSearchBarStyle) {
AUSearchBarStyleNormal = 0,//normal.
AUSearchBarStyleDetail, //has back Button
};



/**
The search bar control. (By default, the width is the same as that of the screen, and t
he height is 44.)
*/
@interface AUSearchBar : UIView

@property (nonatomic, strong) NSString *text;                          // The search bo
x text.
@property (nonatomic, assign) BOOL isSupportHanziMode;                 // Whether to su
pport search while input. Default value: YES.
@property (nonatomic, assign) AUSearchBarStyle style;                  // The style of
the search box.
@property (nonatomic, assign) BOOL shouldShowVoiceButton;              // Whether to di
splay the Voice button. Default value: NO.
@property (nonatomic, strong, readonly) UITextField *searchTextField;   // The search b
ox.
@property (nonatomic, weak) id<AUSearchBarDelegate> delegate;

/**
The initialization method.

@param style The search bar style.

@return Return an AUSearchBar instance.
*/
- (instancetype)initWithStyle:(AUSearchBarStyle)style;

@end
```

Code sample

- Add to the navigation bar

```
AUSearchBar *searchBar = [[AUSearchBar alloc] initWithStyle:AUSearchBarStyleNormal];
    searchBar.searchTextField.placeholder = @"The search bar style
(AUSearchBarStyleNormal)";
    searchBar.delegate = self;
    searchBar.isSupportHanziMode = YES;
    searchBar.shouldShowVoiceButton = YES;
    self.navigationItem.titleView = searchBar;
    self.navigationItem.leftBarButtonItem = nil;   // Add no button to the left of the
search bar.
    self.navigationItem.rightBarButtonItem = nil;  // Add no button to the right of the
search bar.
    self.navigationItem.hidesBackButton = YES;     // Hide the back icon.
```

- Add to a normal view

```
searchBar = [[AUSearchBar alloc] initWithStyle:AUSearchBarStyleDetail];
    searchBar.searchTextField.placeholder = @"The search bar style
(AUSearchBarStyleDetail)";
    searchBar.delegate = self;
    searchBar.isSupportHanziMode = YES;
    searchBar.shouldShowVoiceButton = YES;
    [self.view addSubview:searchBar];
```

1.5.3.8. Verification code input box

AUTextCodeInputBox is a verification code input control.

API description

```
/**
The SMS verification code input box with a countdown timer.
*/
@interface AUTextCodeInputBox : AUSecurityCodeBox

/**
The wait time before an SMS message is sent.
*/
@property (nonatomic, assign) NSTimeInterval interval;

/**
*  Create an SMS verification code input box.
*  @param frame     The position and size in the parent class.
*  @param interval  The wait time before an SMS message is sent.
*  @return          The input box for the text message verification code.
*/
- (AUTextCodeInputBox *)initWithFrame:(CGRect)frame interval:(NSTimeInterval)interval;

/**
*  Create an SMS verification code input box.
*  @param originY   The Y-coordinate of the component.
*  @param interval  The wait time before an SMS message is sent.
*  @return          The input box for the text message verification code.
*/
- (AUTextCodeInputBox *)initWithOriginY:(CGFloat)originY interval:
(NSTimeInterval)interval;

/**
*  Set a block to be executed when countdown ends.
*  @param block     The block to be executed.
*/
- (void)setCountdownDidCompleteBlock:(void (^)(void))block;
```

Code sample

```
AUTextCodeInputBox *smsInputBox = [[AUTextCodeInputBox alloc] initWithOriginY:startY in
terval:60];
[smsInputBox.actionButton addTarget:self action:@selector(onSmsButtonClicked:) forContr
olEvents:UIControlEventTouchUpInside]; // The callback for processing the event that th
e button on the right is tapped.
[self.view addSubview:smsInputBox];
```

1.5.4. Item component

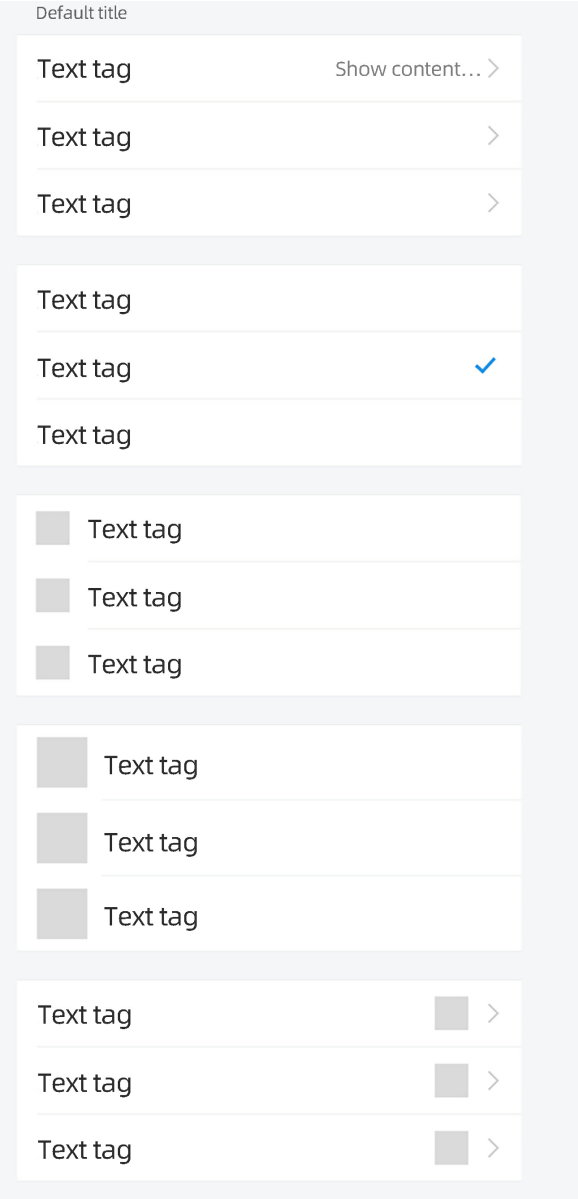
AUListItem is a series of controls designed based on the new UED requirements. It cannot be used interchangeably with the APTableView control in the original APCommonUI because most UED styles are different.

AUListItem contains four ListItems. The following table lists the elements supported by them respectively.

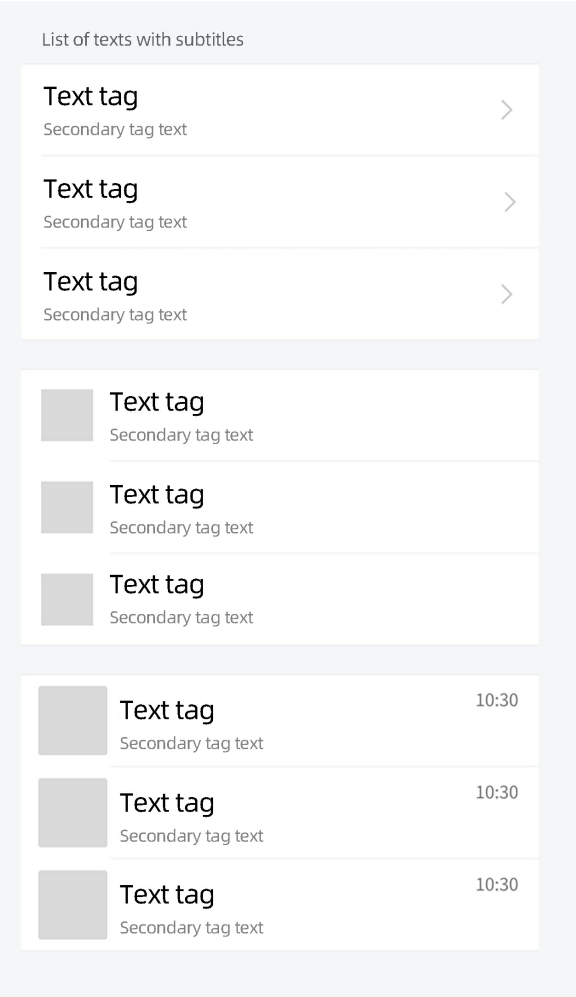
AUListItem	Title	Subtitle	Left icon	Right icon	Left icon in a customized size	Show a check mark when selected	Rightmost assistant arrow
AUSingleTitleListItem	YES	YES	YES	YES	YES	YES	YES
AUDoubleTitleListItem	YES	YES	YES	-	YES	-	YES
AUCheckBoxListItem	YES	-	-	-	-	-	YES
AUSwitchListItem	YES	-	-	-	-	-	-

Sample images

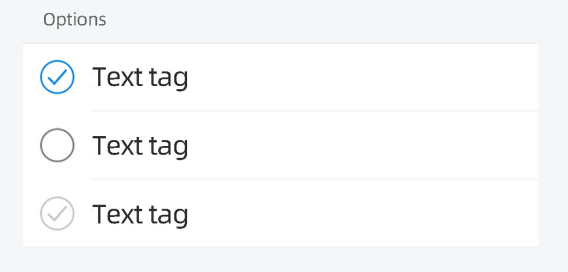
- AUSingleTitleListItem



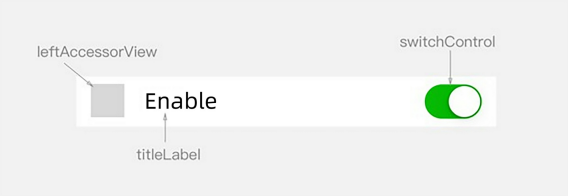
- AUDoubleTitleListItem



- AUCheckBoxListItem



- AUSwitchListItem



Dependency

The dependency of AUListItem is as follows:

```
import <UIKit/UIKit.h>
```

API description

Common APIs

Model layer

Multiple delegates are set to standardize parameter transfer by external clients. For elements that are not supported, external clients cannot transfer the corresponding parameters. For example, AUDoubleTitleListItem does not support the right icon. Therefore, AUDoubleTitleListItemModelDelegate does not contain the rightImage parameter.

```
AUListItemProtocols.h
    /**
Data items that can be set and accessed in AUSingleTitleListItem.
*/
@protocol AUSingleTitleListItemModelDelegate <NSObject>

@property (nonatomic, copy)      NSString   *subtitle;          // The subtitle.
@property (nonatomic, strong)    UIImage    *leftImage;         // The left-side image.
@property (nonatomic, strong)    UIImage    *rightImage;        // The image before the
text on the right side.
@property (nonatomic, strong)    UIImage    *rightAssistImage;  // The image after the
text on the right side.
@property (nonatomic, assign)    CGSize  leftimageSize;         // You can set the size
of the left-side image. Default size: 22.
@property (nonatomic, assign)    CGSize  rightAssistImageSize;  // You can set the size
of the image after the text on the right side. Default size: 22.

@end


/**
Data items that can be set and accessed in AUDoubleTitleListItem.

*/
@protocol AUDoubleTitleListItemModelDelegate <NSObject>

@property (nonatomic, copy)      NSString   *subtitle;          // The subtitle.
@property (nonatomic, strong)    UIImage    *leftImage;         // The left-side image.
@property (nonatomic, assign)    CGSize  leftimageSize;         // You can set the size
of the left-side image. The default size is used if you do not set this parameter.
@property (nonatomic, copy)      NSString   *timeString;        // The time displayed
on the right side.
@property (nonatomic, copy)      NSString   *rightAssistString; // The auxiliary inform
ation on the right side, which is centered by default.
@property (nonatomic, assign)    NSInteger subtitleLines;       // The number of
auxiliary subtitle lines, which must be specified by the client.
//@property (nonatomic, assign)   BOOL    showAccessory;        // Whether to display th
e auxiliary icon.

@end

/**
Data items that can be set and accessed in AUCheckBoxListItem.

*/
```

```
@protocol AUCheckBoxListItemModelDelegate <NSObject>
//@property (nonatomic, assign)   BOOL    showAccessory;          // Whether to display
the auxiliary icon.

@end

/**
Data items that can be set and accessed in AUMultiListItemDelagate.

*/
@protocol AUMultiListItemDelagate <NSObject>

@property (nonatomic, copy)   NSString *subtitle;          // The subtitle.
@property (nonatomic, strong) UIImage    *leftImage;       // The left-side image.
//@property (nonatomic, assign) CGSize    leftimageSize;   // The size of the left-side
image.
@property (nonatomic, assign) BOOL    showAccessory;       // Whether to display the au
xiliary icon.
@property (nonatomic, assign) NSInteger subtitleLines;     // Set the number of subtitl
e lines.

@end


/**
Data items that can be set and accessed in AUMultiListBottomAssistDelagate.

*/
@protocol AUMultiListBottomAssistDelagate <NSObject>

@property (nonatomic, strong) NSString *originalText;    // The source of the text.
@property (nonatomic, strong) NSString *timeDesc;        // The time description.
@property (nonatomic, strong) NSString *othersDesc;      // Other description.

@end


/**
Data items that can be set and accessed in AUParallelTitleListItem.

*/
@protocol AUParallelTitleListItemModelDelegate <NSObject>
@property (nonatomic, copy)      NSString   *subtitle;          // Title 2
@property (nonatomic, copy)      NSString   *describe;          // Description 1
@property (nonatomic, copy)      NSString   *subDescribe;       // Description 2

@end


/**
Data items that can be set and accessed in AULineBreakListItem.

*/
@protocol AULineBreakListItemModelDelegate <NSObject>
```

```
@property (nonatomic, copy)      NSString   *subtitle;          // The subtitle.
@end


/**
Data items that can be set and accessed in AUCouponsItemDelagate.

*/
@protocol AUCouponsItemDelagate <NSObject>

@property (nonatomic, copy)   NSString *subtitle;          // The subtitle.
@property (nonatomic, strong) UIImage    *leftImage;       // The left-side image.
@property (nonatomic, strong) UIImage    *leftImageUrl;    // The URL of the left-side
image.
@property (nonatomic, strong) NSString *assistDesc;        // The text assisted descrip
tion.
@property (nonatomic, assign) NSInteger totalWidth;        // Set the width of the card
.

@end


/**
The rich text protocol of TTTAttributeLabelDelagate.

*/

@protocol TTTAttributeLabelDelagate <NSObject>

@property (nonatomic, copy)   NSString *attributeText;             // The rich-text
content.
@property (nonatomic, copy)   NSString *linkText;                  // The rich-text link
text.
@property (nonatomic, copy)   NSString *linkURL;                   // The URL of the ric
h-text content.

@end


AUListItemModel.h
import "AUListItemProtocols.h"
@interface AUListItemModel : NSObject
@property (nonatomic, copy)      NSString   *title;                 // The title.
@property (nonatomic, assign)   UIEdgeInsets    separatorLineInset; // You can set the
margin between the left-side and right-side separation lines and the cell.
@end
```

View layer

```
AUBaseListItem.h:

@interface AUBaseListItem : UITableViewCell
// The following data items are open so that external clients can set extra properties,
such as the title color.
```

```
@property(nonatomic,strong) UILabel *titleLabel;
@property(nonatomic,strong) UIView *separatorLine;
/**
The initialization function.
@param reuseIdentifier The reuse identifier.
@param block          The block imported externally. Generally, title and leftimage are
set in this block externally.
@return                Return a self instance.
*/
- (instancetype)initWithReuseIdentifier:(NSString *)reuseIdentifier  model:(void(^)(AUL
istItemModel*model))block;
/**
Return the cell height.
@return             Return the cell height.
*/
+ (CGFloat)cellHeight ;
@end

#ifdef AUBaseListItem_protected
// This identifier is open only to the subclass. Before importing AUBaseListItem in the
subclass, set AUBaseListItem_protected to 1.
@interface AUBaseListItem ()
@property (nonatomic,strong) AUListItemModel* baseModel;
@end

#endif
/**
Generally, a client simply needs to call the initWithReuseIdentifier:model: method in t
he AUBaseListItem subclass to meet the requirement.
Here, independent methods oriented to parameters such as title are provided.
All parameters, except title, are implemented in the subclass and isolated from each ot
her.
*/
@interface AUBaseListItem (Extensions)
/**
Set the title.
@param title The title string.
*/
- (void)setTitle:(NSString* )title;

/**
The method for getting the title.
@return Return the title string.
*/
- (NSString*)title ;

/**
Set the spacing between the separation line and the left or right side of a cell.
@param separatorLineInset UIEdgeInsets parameter
*/
- (void)setSeparatorLineInset:(UIEdgeInsets)separatorLineInset;

/**
Get the inset of the separation line.
```

```
@return Return the inset of the separation line.
*/
- (UIEdgeInsets)separatorLineInset;
```

AUSingleTitleListItem

```
typedef NS_ENUM(NSInteger, AUSingleTitleListItemStyle) {
AUSingleTitleListItemStyleDefault,  // Height: 92; icon: 58.
AUSingleTitleListItemStyleValue1,   // Height: 110; icon: 72.
};

@interface AUSingleTitleListItem : AUBaseListItem

@property(nonatomic,strong) UILabel *subtitleLabel;
@property(nonatomic,strong) UIImageView *leftImageView;
@property(nonatomic,strong) UIImageView *rightImageView;
@property(nonatomic,strong) UIImageView *rightAssistImageView;

/**Important
The initialization function.

@param reuseIdentifier The reuse identifier.
@param block           The block imported externally. Generally, title and leftimage
are set in this block externally.

@return                Return a self instance.
*/
- (instancetype)initWithReuseIdentifier:(NSString*)reuseIdentifier model:(void(^)(AULis
tItemModel<AUSingleTitleListItemModelDelegate>*model))block  __deprecated_msg("Do not u
se this method because it will be discarded.");



/**
Set all data required for showing a cell.

@param block The block to be transferred.
*/
- (void)setModelBlock:(void(^)
(AUListItemModel<AUSingleTitleListItemModelDelegate>*model))block;


/**
The initialization function.

@param reuseIdentifier The reuse identifier.
@param style The custom style. For more information, see AUSingleTitleListItemStyle.
@return Return a self instance.
*/
- (instancetype)initWithReuseIdentifier:(NSString*)reuseIdentifier customStyle:(AUSingl
eTitleListItemStyle)style;
```

```
/**
Return a height based on the style.

@param style
@return Return a custom style. For more information, see AUSingleTitleListItemStyle.
*/
+ (CGFloat)cellHeightForStyle:(AUSingleTitleListItemStyle)style;

@end
```

AUDoubleTitleListItem

```
typedef NS_ENUM(NSInteger, AUDoubleTitleListItemStyle) {
    AUDoubleTitleListItemStyleDefault, // Has a left icon; height: 120 px; icon: 76.
    AUDoubleTitleListItemStyleValue1,  // Has no left icon; height: 120 px.
    AUDoubleTitleListItemStyleValue2,  // Has a left icon; height: 144 px; icon: 88.
};

@interface AUDoubleTitleListItem : AUBaseListItem<AUDoubleTitleListItemModelDelegate, T
TTAttributeLabelDelagate>

@property(nonatomic,strong) UILabel *subtitleLabel;
@property(nonatomic,strong) UIImageView *leftImageView;
@property(nonatomic,strong) UILabel* timeLabel;
@property(nonatomic,strong) UILabel *rightAssistLabel;


/**
 Set all data required for showing a cell.

 @param block The block to be transferred.
 */
- (void)setModelBlock:(void(^)(AUListItemModel<AUDoubleTitleListItemModelDelegate, TTTA
ttributeLabelDelagate>*model))block;

/**
 The initialization function.

 @param reuseIdentifier The reuse identifier.
 @param style The custom style. For more information, see AUDoubleTitleListItemStyle.
 @return Return a self instance.
 */
- (instancetype)initWithReuseIdentifier:(NSString*)reuseIdentifier customStyle:(AUDoubl
eTitleListItemStyle)style;


/**
 Return a height aaccording to the style.

 @param style The custom style. For more information, see AUDoubleTitleListItemStyle.
 @return Return the cell height.
 */
+ (CGFloat)cellHeightForStyle:(AUDoubleTitleListItemStyle)style;
```

```
/**
 Return a dynamic height according to the style.

 @param style The custom style. For more information, see AUDoubleTitleListItemStyle.
 @param block The data model. For more information, see
AUDoubleTitleListItemModelDelegate.
 Note: 1. The method must transfer a exact value of model.accessoryType.
          2. If line feeds are required, use subtitleLines to specify the number of
lines.
 @return Return the cell height.
 */
+ (CGFloat)cellHeightForStyle:(AUDoubleTitleListItemStyle)style
                   modelBlock:(void(^)
(AUListItemModel<AUDoubleTitleListItemModelDelegate,
TTTAttributeLabelDelagate>*model))block;

@end
```

AUCheckBoxListItem

```
@protocol AUCheckBoxListItemDelegate <NSObject>

/**
 The callback to be triggered when the check box status changes.

 @param item The check box instance.
 */
- (void)checkboxValueDidChanged:(AUCheckBox *)item;// Take the tag of the cell as the t
ag of the item.

@end

@interface AUCheckBoxListItem : AUBaseListItem<AUCheckBoxListItemModelDelegate>

@property(nonatomic, assign, getter = isChecked) BOOL checked;// Set the check box to t
he selected state.
@property(nonatomic, assign, getter = isDisableCheck) BOOL disableCheck;// Specify whet
her to disable the check box.
@property(nonatomic, weak) id <AUCheckBoxListItemDelegate> delegate;

@end
```

AUSwitchListItem

```
@interface AUSwitchListItem : AUNBaseListItem

@property (nonatomic,strong)  UISwitch *switchControl;   // The switch control in a cel
l.

// Specify whether to show or hide the loading icon.
- (void)showLoadingIndicator:(BOOL)show;

@end
```

Custom properties

Property	Purpose	Type
title	The title.	NSString
titleLabel	The title label.	UILabel
subtitle	The subtitle.	NSString
subtitleLabel	The subtitle label.	UILabel
leftImage	The left-side icon.	UIImage
leftImageView	The view of the left-side icon.	UIImageView
rightImage	The right-side icon.	UIImage
rightImageView	The view of the right-side icon.	UIImageView
leftimageSize	The size of the left-side icon.	CGSize
timeString	The time string on the right.	NSString
timeLabel	The time label on the right.	UILabel
showMarkWhenSelected	Whether to show a checkmark for a selected cell.	BOOL
showAccessory	Whether to show an assistant icon.	BOOL

Property	Purpose	Type
checked	Whether AUCheckBoxListItem is selected.	BOOL
disableCheck	Whether AUCheckBoxListItem is disabled.	BOOL

> **Note**
> Note: The following code sample shows the properties supported in each control.

Code sample

AUSingleTitleListItem

- The recommended usage is as follows:

```
AUSingleTitleListItem*cell = [[AUSingleTitleListItem alloc]
initWithReuseIdentifier:identifierSingle1
model:^(AUListItemModel<AUSingleTitleListItemModelDelegate> *model) {
                                                            model.title = @"Title";
                                                            model.subtitle = @"Subtitle";
                                                            model.showAccessory = YES;
                                                            model.XXX = XXXX;
                                                            // The supported properties a
e contained in AUListItemModel and AUSingleTitleListItemDelegate. For more information,
see their API descriptions.
                                                        }];
```

- You can also set the provided properties separately. The property names are the same as those in model in the preceding recommended usage.

```
AUSingleTitleListItem*cell = [[AUSingleTitleListItem alloc]
initWithStyle:UITableViewCellStyleDefault reuseIdentifier:@"testsingle"];
cell.title = @"Subtitle";
```

- Each element on the control can be set.

```
AUSingleTitleListItem*cell = [[AUSingleTitleListItem alloc]
initWithStyle:UITableViewCellStyleDefault reuseIdentifier:@"testsingle"];
cell.titleLabel.backgroundColor = [UIColor redColor];
```

AUDoubleTitleListItem

- The recommended usage is as follows:

```
AUDoubleTitleListItem*cell = [[AUDoubleTitleListItem alloc]
initWithReuseIdentifier:identifierDouble3
model:^(AUListItemModel<AUDoubleTitleListItemModelDelegate> *model) {
                                                                model.title = @"Right icon no
supported";
                                                                model.leftImage = [UIImage im
geNamed:@"AntUI.bundle/ilustration_ap_expection_limit.png"];
                                                                model.leftimageSize = CGSizeM
ke(100, 100);
                                                                model.showAccessory = YES;

                                                                // The supported properties a
e contained in AUListItemModel and AUSingleTitleListItemDelegate. For more information,
see their API descriptions.
                                                        }];
```

- You can also set provided properties separately.

```
AUDoubleTitleListItem*cell = [[AUDoubleTitleListItem alloc]
initWithStyle:UITableViewCellStyleDefault reuseIdentifier:@"testdouble"];
cell.leftImage = [UIImage
imageNamed:@"AntUI.bundle/ilustration_ap_expection_limit.png"];
```

- Each element on the control can be set.

```
AUDoubleTitleListItem*cell = [[AUDoubleTitleListItem alloc]
initWithStyle:UITableViewCellStyleDefault reuseIdentifier:@"testdouble"];
cell.leftImageView.image =   [UIImage
imageNamed:@"AntUI.bundle/ilustration_ap_expection_limit.png"];
```

AUCheckBoxListItem

- The recommended usage is as follows:

```
AUCheckBoxListItem* cell = [[AUCheckBoxListItem alloc]
initWithReuseIdentifier:identifierChecbkox
model:^(AUListItemModel<AUCheckBoxListItemModelDelegate> *model) {
                                                                model.title = @"Selected by d
fault";
                                                                model.showAccessory = NO;
                                                                // Only the preceding two pro
erties can be set.
                                                        }];
cell.disableCheck = YES;// Set the check button to the disabled state.
```

- You can also set provided properties separately.

```
AUCheckBoxListItem*cell = [[AUCheckBoxListItem alloc]
initWithStyle:UITableViewCellStyleDefault reuseIdentifier:@"testcheck"];
cell.showAccessory =YES;
```

- Each element on the control can be set.

```
AUCheckBoxListItem*cell = [[AUDoubleTitleListItem alloc]
initWithStyle:UITableViewCellStyleDefault reuseIdentifier:@"testcheck"];
cell.titleLabel.text = @"Selected by default";
```

AUSwitchListItem

```
AUSwitchListItem *switchCell = [[AUSwitchListItem alloc]
initWithStyle:UITableViewCellStyleDefault reuseIdentifier:@"switchCell"];
AUListItemModel *model = _datas[indexPath.row];
switchCell.titleLabel.text = model.title;
switchCell.leftAccessorView = [[UIImageView alloc] initWithImage:[UIImage
imageNamed:@"certify.png"]];
switchCell.leftAccessorType = AUListItemLeftAccessorTypeIcon;
switchCell.switchControl.on = NO;
UISwitch *switchView = (UISwitch *)switchCell.accessoryView;
[switchView addTarget:self action:@selector(switchValueDidChanged:)
forControlEvents:UIControlEventValueChanged];
return switchCell;
```

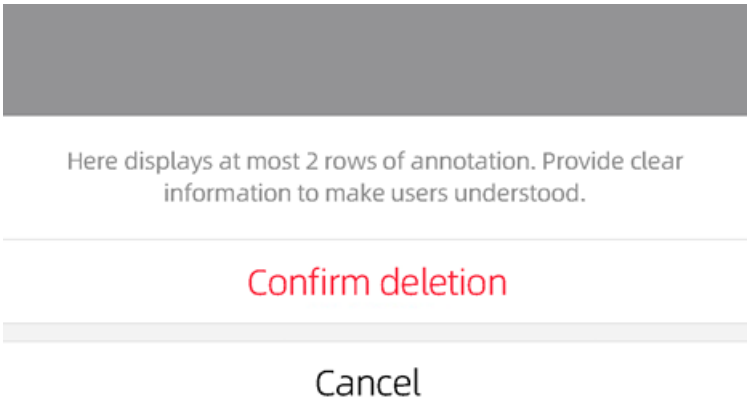
1.5.5. Pop-up window component

1.5.5.1. Action sheet

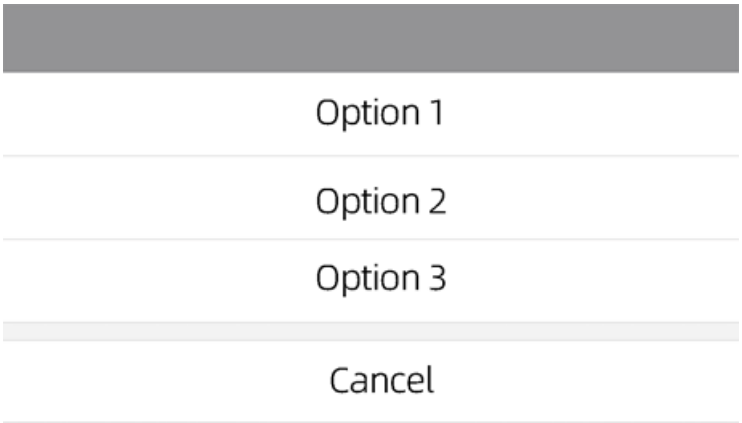
AUActionSheet is migrated from APActionSheet. The style is slightly adjusted, supporting the common layout with the deletion button and the common sheet layout.

Sample images

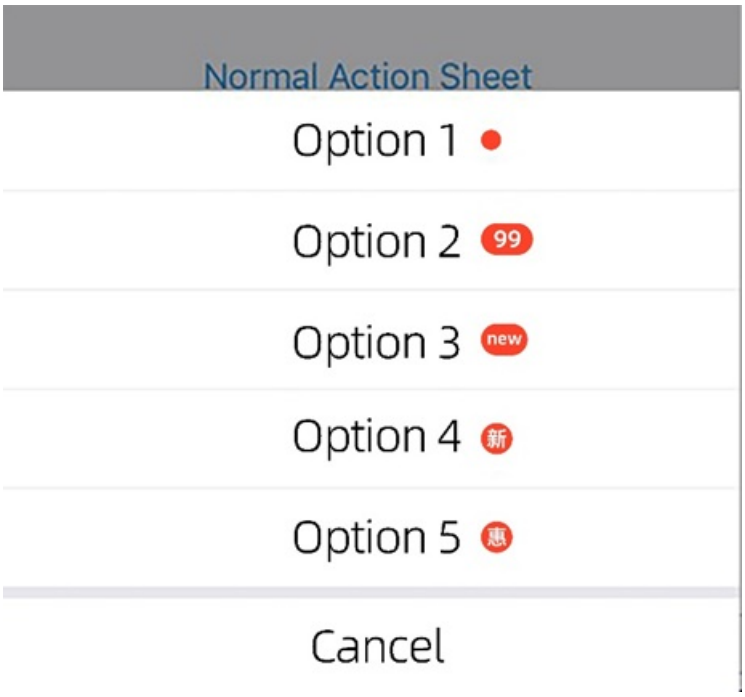
- Common layout with the delete button:



- Tab layout:



- Badges:



Dependency

The dependency of AUActionSheet is as follows:

```
    AntUI(iOS)
    1.0.0.161108003457
    APCommonUI(iOS)
    1.2.0.161108102201
```

API description

```
typedef NS_ENUM(NSInteger, AUActionSheetButtonType) {
AUActionSheetButtonTypeDefault = 0,          // The default type.
AUActionSheetButtonTypeDisabled,             // The button cannot be tapped.
AUActionSheetButtonTypeDestructive,          // The red destructive button.
AUActionSheetButtonTypeCustom                // The customized type.
};

/**
```

```
AUActionSheet The API is migrated from APActionSheet, and the style is adjusted.
*/
@interface AUActionSheet: UIView<UIAppearanceContainer>

/// The button height is 42 by default.
@property (nonatomic) CGFloat buttonHeight UI_APPEARANCE_SELECTOR;
/// The height of the Cancel button.
@property (nonatomic) CGFloat cancelButtonHeight UI_APPEARANCE_SELECTOR;
/// The color of the separation line, which is AU_COLOR_LINE by default.
@property (strong, nonatomic) UIColor *separatorColor UI_APPEARANCE_SELECTOR;
/// The background color of a tapped button.
@property (strong, nonatomic) UIColor *selectedBackgroundColor UI_APPEARANCE_SELECTOR;
// The attributes of UI components.
@property (copy, nonatomic) NSDictionary *titleTextAttributes UI_APPEARANCE_SELECTOR;
@property (copy, nonatomic) NSDictionary *buttonTextAttributes UI_APPEARANCE_SELECTOR;
@property (copy, nonatomic) NSDictionary *disabledButtonTextAttributes
UI_APPEARANCE_SELECTOR;
@property (copy, nonatomic) NSDictionary *destructiveButtonTextAttributes
UI_APPEARANCE_SELECTOR;
@property (copy, nonatomic) NSDictionary *cancelButtonTextAttributes
UI_APPEARANCE_SELECTOR;

/// The duration for showing or hiding an animation, which is 0.5s by default.
@property (nonatomic) NSTimeInterval animationDuration UI_APPEARANCE_SELECTOR;
/// The title.
@property(nonatomic,copy) NSString *title;
/// Whether the item is visible
@property(nonatomic, readonly, getter=isVisible) BOOL visible;
/// The header view of a custom button.
@property (strong, nonatomic) UIView *headerView;
/// The keyWindow before the ActionSheet instance is displayed.
@property (weak, nonatomic, readonly) UIWindow *previousKeyWindow;
/// The protocol delegate.
@property(nonatomic,weak)id<UIActionSheetDelegate> delegate;
/// The title of the Cancel button.
@property (copy, nonatomic) NSString *cancelButtonTitle;
/// The number of buttons.
@property(nonatomic, readonly) NSInteger numberOfButtons;
/// The index of the Cancel button, which is -1 by default.
@property(nonatomic) NSInteger cancelButtonIndex;
/// The index of a destructive red button, which is -1 by default and can be ignored if
only one button exists.<UActionSheetButtonTypeDestructive,         // The red
destructive button.>
@property(nonatomic) NSInteger destructiveButtonIndex;
/**
The AUActionSheet initialization method

@param title                    The title information.
@param delegate                 The delegate object.
@param cancelButtonTitle        The title of the Cancel button.
@param destructiveButtonTitle   The title of a destructive button.
@param otherButtonTitles        The list of other button title parameters.
@return The AUActionSheet instance.
*/
```

```
- (instancetype)initWithTitle:(NSString *)title delegate:
(id<UIActionSheetDelegate>)delegate cancelButtonTitle:(NSString *)cancelButtonTitle des
tructiveButtonTitle:(NSString *)destructiveButtonTitle otherButtonTitles:(NSString *)ot
herButtonTitles, ... NS_REQUIRES_NIL_TERMINATION;

/**
The AUActionSheet initialization method.

@param title                    The title information.
@param delegate                 The delegate object.
@param cancelButtonTitle        The title of the Cancel button.
@param destructiveButtonTitle   The title of a destructive button.
@param items                    The customOption data list (with custom title colors and
badges).
@return                         The AUActionSheet instance.
*/
- (instancetype)initWithTitle:(NSString *)title
delegate:(id<UIActionSheetDelegate>)delegate
cancelButtonTitle:(NSString *)cancelButtonTitle
destructiveButtonTitle:(NSString *)destructiveButtonTitle
items:(NSArray<AUActionSheetItem *> *)items;

/**
Add a button of a default type.

@param title    The button title.
@return         The button index, starting from 0.
*/
- (NSInteger)addButtonWithTitle:(NSString *)title;

/**
Add a button.

@param title    The button title.
@param type     The button type.
@return         The button index, starting from 0.
*/
- (NSInteger)addButtonWithTitle:(NSString *)title type:(AUActionSheetButtonType)type;

/**
Obtain the button title based on the index.

@param buttonIndex  The button index.
@return             The button title.
*/
- (NSString *)buttonTitleAtIndex:(NSInteger)buttonIndex;

/**
Set a button in a position.

@param item The button type after information encapsulation.
@param index The index of the button to be replaced. The index is less than the number
of existing buttons.
*/
```

```
- (void)setButton:(AUActionSheetItem *)item atIndex:(NSInteger)index;

/** The ActionSheet display method. */
- (void)show;

/**
Manually call the hiding method.

@param animate Whether a hiding animation is available.
*/
- (void)closeWithAnimate:(BOOL)animate;

/**
Manually simulate the hiding method based on button tapping (a protocol method related
to button tapping is called back).

@param buttonIndex  The button index.
@param animated     Whether a hiding animation is available.
*/
- (void)dismissWithClickedButtonIndex:(NSInteger)buttonIndex animated:(BOOL)animated;

/**
* Dynamically add an item.
* Note: Call this method after the actionSheet is shown on the screen. To add a button
before the action sheet is shown, use addButtonWithTitle.
*
* @param item   The custom item.
* @param index  The position where the item is added.
*/
- (void)addButton:(AUActionSheetItem *)item atIndex:(NSInteger)index;

// Set the background mode. If the value is YES or @(YES), all displayed action sheets
are hidden. The default value is NO.
+(void)setIsBackGroundMode:(BOOL)isBackGroundMode;
+(void)weakSetIsBackGroundMode:(id)isBackGroundMode;

- (void)showFromToolbar:(UIToolbar *)view;
- (void)showFromTabBar:(UITabBar *)view;
- (void)showFromBarButtonItem:(UIBarButtonItem *)item animated:(BOOL)animated
NS_AVAILABLE_IOS(3_2);
- (void)showFromRect:(CGRect)rect inView:(UIView *)view animated:(BOOL)animated NS_AVAI
LABLE_IOS(3_2);
- (void)showInView:(UIView *)view;

@end


/** The ActionSheet button class after encapsulation. */
@interface AUActionSheetItem: NSObject
/// The button title.
@property (copy, nonatomic) NSString *title;
/// The button type.
@property (nonatomic) AUActionSheetButtonType type;
/// The color of the button title. When you set this value, manually change the button
type to AUActionSheetButtonTypeCustom.
```

```
@property (strong,nonatomic) UIColor *titleColor;

/**
* Set the style for displaying badges.
*
*        badgeValue:  @"."   A red dot is displayed.
*                     @"new" "new" is displayed.
*                     @"digit" A digit is displayed. If the digit is larger than 99, the
more (...) image is displayed.
*                     @"a Chinese character for "xin""  "xin" is displayed.
*                     @"a Chinese character for "hui""  "hui" is displayed.
*                     nil    Clear the displayed content.
*/
@property (nonatomic, copy) NSString *badgeValue;

@end
```

Code sample

- Common layout with the delete button:

```
AUActionSheet *actionSheet = [[AUActionSheet alloc] initWithTitle:@ "Provide one or two
lines of comments for information classification."
                                                          delegate:self
                                                cancelButtonTitle:@"Cancel"
                                           destructiveButtonTitle:@"Delete"
                                                otherButtonTitles:nil];
[actionSheet show];
```

- Tab layout:

```
AUActionSheet *actionSheet = [[AUActionSheet alloc] initWithTitle:nil
                                                          delegate:self
                                                cancelButtonTitle:@"Cancel"
                                           destructiveButtonTitle:nil
                                                otherButtonTitles:@"Option
1",@"Option 2",@"Option 3", nil];
[actionSheet show];
```

- Add a badge to an option:

```
    AUActionSheet *actionSheet = [[AUActionSheet alloc] initWithTitle:nil
                                                              delegate:self
                                                     cancelButtonTitle:@"Cancel"
                                                destructiveButtonTitle:nil
                                                     otherButtonTitles:@"Option
1",@"Option 2",@"Option 3", nil];
    AUActionSheetItem *item = [[AUActionSheetItem alloc] init];
    item.title = @"Option 3";
    item.type = AUActionSheetButtonTypeCustom;
    item.badgeValue = @"new";
    item.titleColor = [UIColor redColor];
    [actionSheet setButton:item atIndex:2];

    [actionSheet show];
```

1.5.5.2. Date picker component

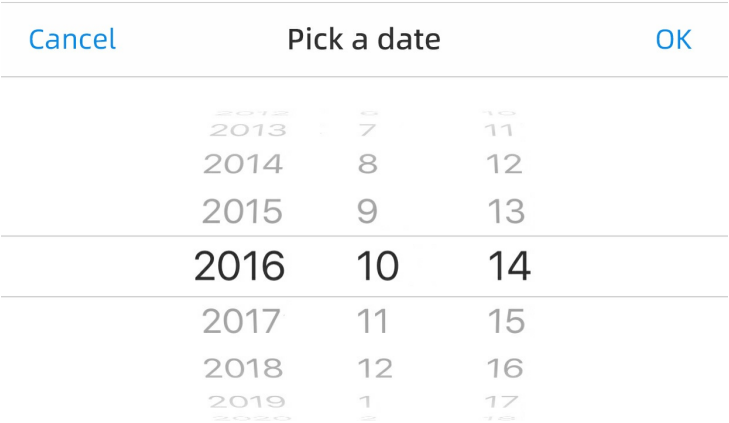
AUDatePicker is a date selection control.

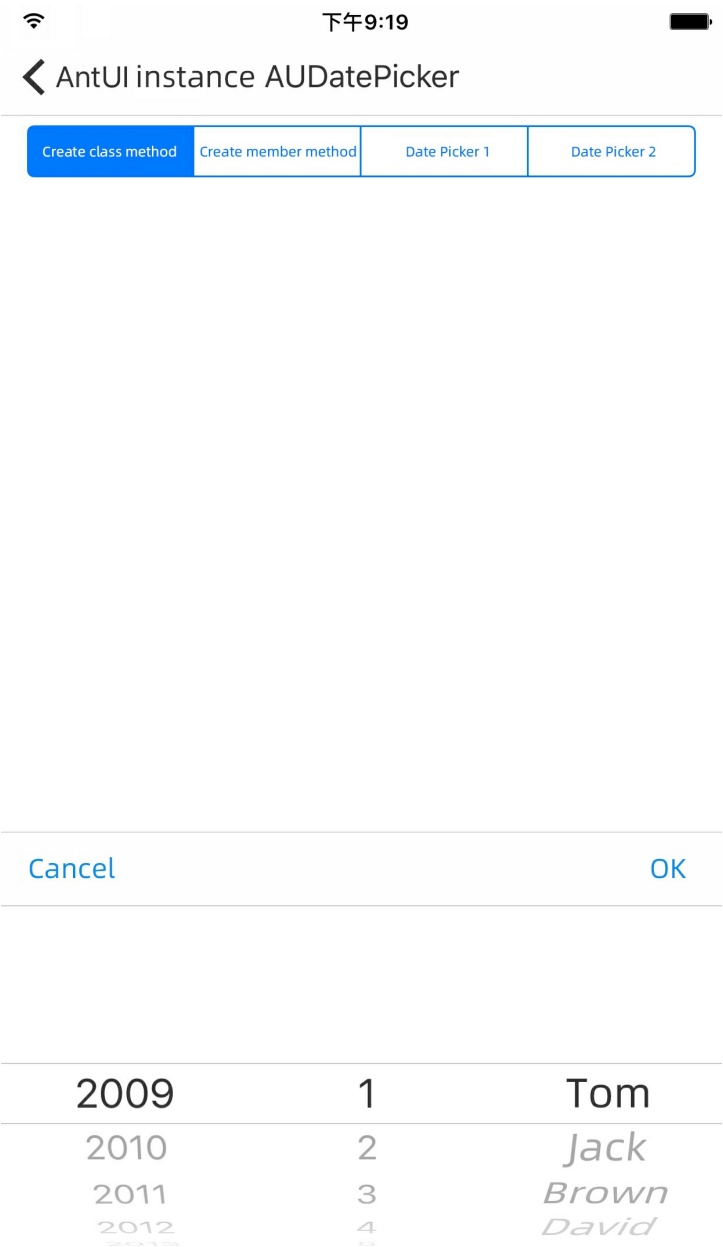
Sample images


下午9:20
AntUI instance AUDatePicker
Create class method
Create member method
Date Picker 1
Date Picker 2


Cancel
Pick a date
OK
2016 12 18
2017 1 19
2018 2 20
2019 3 21
2020 4 22
2021 5 23
2022 6 24


下午9:20
AntUI instance AUDatePicker
Create class method
Create member method
Date Picker 1
Date Picker 2


Cancel
Pick a date
OK
2013 7 11
2014 8 12
2015 9 13
2016 10 14
2017 11 15
2018 12 16
2019 1 17



API description

- **AUDatePicker.h**

```
//
//  ALPPicketView.h
//  TestCell
//

#import <UIKit/UIKit.h>

@class AUDatePicker;

@protocol AUDatePickerDelegate <UIPickerViewDataSource, UIPickerViewDelegate>

/*
 * Callback is performed when Cancel is clicked.
```

```
 */
- (void)cancelPickerView:(AUDatePicker *)pickerView;

/*
 * Callback is performed when Completed is clicked. The selected items can be returned
through pickerView/Users/zhuwei/ios-phone-
antui/ANTUI/Sources/Views/pickerView/AUDatePicker.h selectedRowInComponent.
 */
- (void)selectedPickerView:(AUDatePicker *)pickerView;

@end
/*!
 @class         AUDatePicker
 @abstract      UIView
 @discussion    The frame-encapsulated picker with the Cancel and Completed buttons.
 */

@interface AUDatePicker : UIView

@property(nonatomic, strong) UIPickerView *pickerView;      // The general transaction
picker.
@property(nonatomic, strong) UIDatePicker *datePickerView;  // The time picker.

@property(nonatomic, assign) BOOL       isDatePicker;       // Whether the current picke
r is the time picker. The default value is NO.

@property(nonatomic, weak) id<AUDatePickerDelegate> delegate;


/*
 * Create components.
 *
 * @param title     The title. Its value can be nil.
 * @return          The created component, not shown by default. The show method needs
to be called to show it.
 */
+ (AUDatePicker *)pickerViewWithTitle:(NSString *)title;

/*
 * Initialize objects.
 *
 * @param frame     The display position.
 * @param title     Show the title. Set the value to nil if you do not want to show the
title.
 * @return          Do not show the object by defaut. call the show method if showing t
he object.
 */
- (id)initWithFrame:(CGRect)frame withTitle:(NSString *)title;

/*
 * Show
 */
- (void)show;

/*
```

```
 * Hide
 */
- (void)hide;

/**
 * Reload data.
 */
- (void)reload;


/**
 When isDatePicker is YES, select the time using datePickerView.

 @param minDate     The earliest time.
 @param maxDate     The latest time.
 */
- (void) setTimeDateminDate:(NSDate *)minDate MaxDate:(NSDate *)maxDate;



/**
 When isDatePicker is YES, set the current time for datePickerView.

 @param currentDate     Set the current date.
 */
- (void) setCurrentDate:(NSDate *) currentDate;


/**
 When isDatePicker is YES, set the time selected in the time picker.

 @param date        The selected date.
 @param animated    Whether an animation is available.
 */
- (void)setAUDatePickerDate:(NSDate *)date animated:(BOOL)animated; // if animated is Y
ES, animate the wheels of time to display the new date

@end
```

Sample code

```
//
//  APPickerViewViewController.m
//  UIDemo
//

#import "APPickerViewViewController.h"
#import "AUDatePicker.h"

@interface APPickerViewViewController ()
<AUDatePickerDelegate,UIPickerViewDelegate,UIPickerViewDataSource>
@property(nonatomic,strong)AUDatePicker* apPickerView;
@property(nonatomic,strong)AUDatePicker* apPickerView2;
```

```
@property(nonatomic,strong)AUDatePicker* apPickerView3;
@property(nonatomic,strong)AUDatePicker* apPickerView4;

@property(nonatomic,strong)UILabel* textLabel;
@property(nonatomic,strong)NSArray* yearArray;
@property(nonatomic,strong)NSArray* monthArray;
@property(nonatomic,strong)NSArray* nameArray;
@end

@implementation APPickerViewViewController

- (id)initWithNibName:(NSString *)nibNameOrNil bundle:(NSBundle *)nibBundleOrNil
{
    self = [super initWithNibName:nibNameOrNil bundle:nibBundleOrNil];
    if (self) {
        // Custom initialization
        self.yearArray =
@[@"2009",@"2010",@"2011",@"2012",@"2013",@"2014",@"2015",@"2016"];
        self.monthArray =
@[@"1",@"2",@"3",@"4",@"5",@"6",@"7",@"8",@"9",@"10",@"11",@"12"];
        self.nameArray = @[@"Tom",@"Jack",@"Brown",@"David"];
    }
    return self;
}

- (void)viewDidLoad
{
    [super viewDidLoad];
    // Do any additional setup after loading the view.
    [self.view setBackgroundColor:[UIColor whiteColor]];

    NSArray* items = @[@"Class Method",@"Member Method",@"Time Picker 1",@"Time Picker
2"];
    UISegmentedControl* segmentControl = [[UISegmentedControl
alloc]initWithItems:items];
    [segmentControl addTarget:self action:@selector(onClick:)
forControlEvents:UIControlEventValueChanged];
    segmentControl.selectedSegmentIndex = 0;
    [segmentControl setFrame:CGRectMake(15, 70, AUCommonUIGetScreenWidth() - 30, 30)];
    [self.view addSubview:segmentControl];

    // The label is used to display the item selected by pickerView.
    self.textLabel = [[UILabel alloc]initWithFrame:CGRectMake(0, 110, 220, 50)];
    self.textLabel.frame = CGRectOffset(self.textLabel.frame,
(AUCommonUIGetScreenWidth()-self.textLabel.frame.size.width)/2, 0);
    self.textLabel.layer.cornerRadius = 12.f;
    self.textLabel.lineBreakMode = NSLineBreakByWordWrapping;
    self.textLabel.numberOfLines = 0;
    self.textLabel.textAlignment = NSTextAlignmentCenter;
    [self.view addSubview:self.textLabel];

    // pickerView created by the class method.
    self.apPickerView = [AUDatePicker pickerViewWithTitle:nil];
    self.apPickerView.delegate = self;
```

```
    self.apPickerView.tag = 1000;
    [self.view addSubview:self.apPickerView];
    [self.apPickerView show];

    // pickerView created by the member method.
    _apPickerView2 = [[AUDatePicker alloc]initWithFrame:CGRectMake(0, 200, 200, 200) wi
thTitle:nil];
    _apPickerView2.delegate = self;
    _apPickerView2.tag = 1001;
    [self.view addSubview:_apPickerView2];

    // Time picker 1.
    self.apPickerView3 = [AUDatePicker pickerViewWithTitle:@"Select time"];
    self.apPickerView3.tag = 1002;
    self.apPickerView3.isDatePicker = YES;
    NSDate * curretntDate = [NSDate date];
    NSDate * minxDate = [NSDate dateWithTimeInterval:-(3600*24*3000)
sinceDate:curretntDate];
    NSDate * maxDate = [NSDate dateWithTimeInterval:3600*24*3000
sinceDate:curretntDate];
    [self.apPickerView3 setTimeDateminDate:minxDate MaxDate:maxDate];
    [self.apPickerView3 setCurrentDate:curretntDate];
    [self.view addSubview:self.apPickerView3];

    // Time picker 2.
    self.apPickerView4 = [AUDatePicker pickerViewWithTitle:@"Select time"];
    self.apPickerView4.tag = 1003;
    self.apPickerView4.isDatePicker = YES;
    [self.apPickerView4 setTimeDateminDate:minxDate MaxDate:maxDate];
    [self.apPickerView4 setCurrentDate:curretntDate];
    NSDate * selectDate =[NSDate dateWithTimeInterval:3600*24*888
sinceDate:curretntDate];
    [self.apPickerView4 setAUDatePickerDate:selectDate animated:NO];
    [self.view addSubview:self.apPickerView4];


//    self.navigationItem.rightBarButtonItem = [APUtil
getBarButtonWithTitle:RightBarButtonTitle target:self];
}

- (void)didReceiveMemoryWarning
{
    [super didReceiveMemoryWarning];
    // Dispose of any resources that can be recreated.
}

#pragma mark - Button onClick
- (void)onBarButtonClick:(id)sender
{
}

- (void)onClick:(id)sender
{
    [self.apPickerView hide];
    [self.apPickerView2 hide];
```

```
    [self.apPickerView2 hide];
    [self.apPickerView3 hide];
    [self.apPickerView4 hide];
    UISegmentedControl* segmentControl = (UISegmentedControl*)sender;

    switch (segmentControl.selectedSegmentIndex) {
        case 0:
            [self.apPickerView show];
            break;
        case 1:

            [self.apPickerView2 show];
            break;
        case 2:

            [self.apPickerView3 show];
            break;
        case 3:

            [self.apPickerView4 show];
            break;

        default:
            break;
    }
}


#pragma APPickerDelegate delegate
- (void)cancelPickerView:(AUDatePicker *)pickerView
{
    switch (pickerView.tag) {
        case 1000:
            [self.apPickerView hide];
            break;
        case 1001:
            [self.apPickerView2 hide];
            break;
        case 1002:
            [self.apPickerView3 hide];
            break;
        case 1003:
            [self.apPickerView4 hide];
            break;

        default:
            break;
    }
    [self.textLabel setText:@"The callback when the Cancel button is clicked."];

}

- (void)selectedPickerView:(AUDatePicker *)pickerView
{
    NSInteger index = [pickerView.pickerView selectedRowInComponent:0];
```

```
    NSString *result = [self.yearArray objectAtIndex:index];

    index = [pickerView.pickerView selectedRowInComponent:1];
    result = [result stringByAppendingString:[NSString stringWithFormat:@"  %@",[self.m
onthArray objectAtIndex:index]]];

    index = [pickerView.pickerView selectedRowInComponent:2];
    result = [result stringByAppendingString:[NSString stringWithFormat:@"  %@",[self.n
ameArray objectAtIndex:index]]];

    [self.textLabel setText:result];
}

#pragma UIPickerView delegate
- (NSString *)pickerView:(UIPickerView *)pickerView titleForRow:(NSInteger)row
forComponent:(NSInteger)component
{
    if (component == 0) {
        return [self.yearArray objectAtIndex:row];
    } else if (component == 1){
        return [self.monthArray objectAtIndex:row];
    } else {
        return [self.nameArray objectAtIndex:row];
    }
}

- (NSInteger)numberOfComponentsInPickerView:(UIPickerView *)pickerView
{
    return 3;
}

- (NSInteger)pickerView:(UIPickerView *)pickerView numberOfRowsInComponent:
(NSInteger)component
{
    if (component == 0) {
        return [self.yearArray count];
    } else if (component == 1){
        return [self.monthArray count];
    } else {
        return [self.nameArray count];
    }
}

@end
```

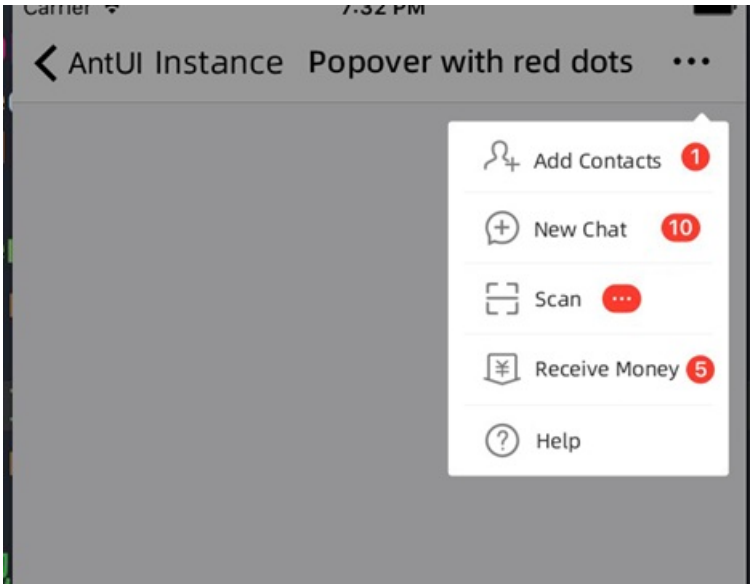
1.5.5.3. Menu component

The floating layer menu provides a menu containing icons and an option list.

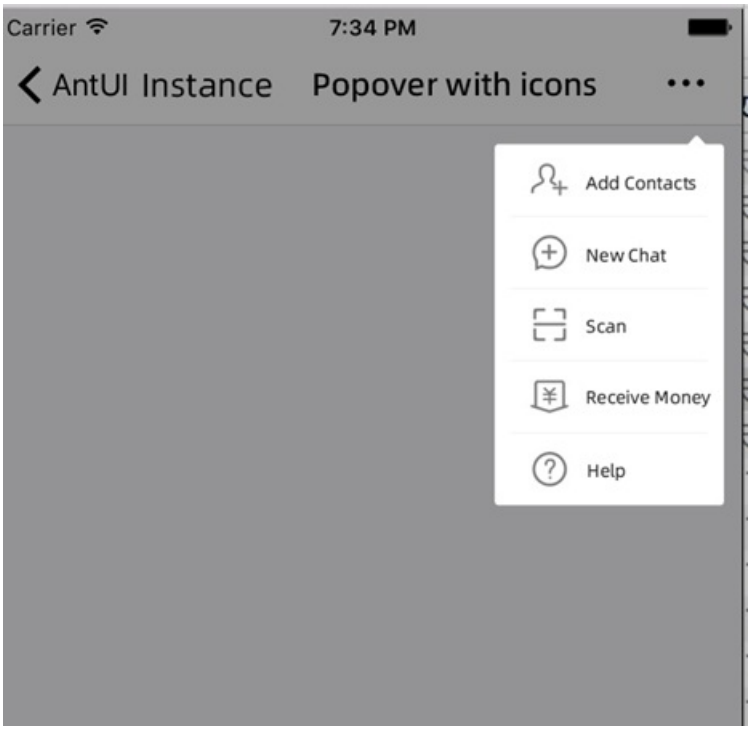
When using it, you need to change the APNavPopview and APNavItemView in the original AntUI frameWork to AUFloatMenu and AUNavItemView.

Sample images

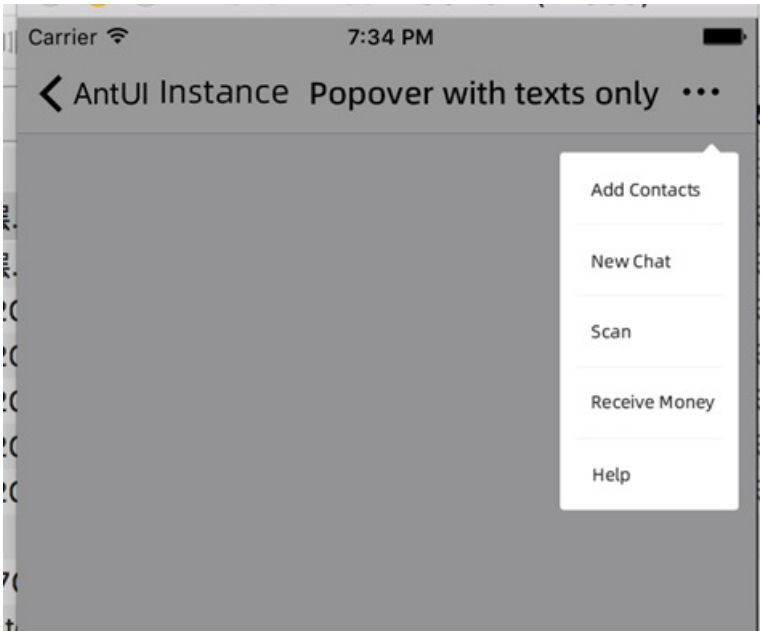
- Popover with red dots



- Popover with icons



- Popover with texts only



API description

- **AUFloatMenu.h**

```
//
//  AUFloatMenu.h
//  AntUI
//

#import <UIKit/UIKit.h>
/* The notice of popview hiding. */
static NSString * const APExtUIPopViewDissmissedNotification =
@"APExtUIPopViewDissmissedNotification";



@class AUNavItemView;
/*!
 @class       AUFloatMenu
 @abstract    UIView
 @ Discussion floatViewMenu The floating layer.
 */
@interface AUFloatMenu : UIView<UIGestureRecognizerDelegate>
@property(nonatomic, assign) CGFloat marginToRight;  // The right margin of a white pop
view, which is 10 by default.

/**
 * Create a floating menu view.
 *
 * @param position The position where the floating menu is displayed on the screen.
 * @param items The array of displayed content, which is generally an APNavItemView obj
ect.
 *
 * @return The floating menu view.
 */
+(AUFloatMenu *)showAtPostion:(CGPoint)position items:(NSArray<AUNavItemView *> *)items
```

```
;

/**
 * Create a floating menu view.
 *
 * @param position The position where the floating menu is displayed on the screen.
 * @param orignY The y-coordinate value of the floating menu on the screen.
 * @param items The array of displayed content, which is generally an APNavItemView obj
ect.
 *
 * @return The floating menu view.
 */
+(AUFloatMenu *)showAtPostion:(CGPoint)position startOrignY:(CGFloat)orignY items:(NSAr
ray<AUNavItemView *> *)items;

/**
 * The interface method for hiding a floating menu.
 */
-(void)dismiss;

/**
 * After the menu is open, RPC is executed to load dynamically delivered menu items. Af
ter RPC is completed, the update() method is called to remove the original view and add
a new view.
 */
- (void)updateWithItems:(NSArray<AUNavItemView*> *)items;

@end
```

- **AUNavItemView.h**

```
//
//  AUNavItemView.h
//  AntUI
//

#import <UIKit/UIKit.h>

typedef NS_ENUM(NSInteger, AUCurrentTabType)  {
    AUCurrentTabTypeHome = 0,
    AUCurrentTabTypeKouBei,
    AUCurrentTabTypeFriend,
    AUCurrentTabTypeWealth
};
/*!
 @class                 AUNavItemView
 @abstract              UIView
 @ Discussion floatMenu The view of each column at the floating layer.
 */
@interface AUNavItemView : UIView
/**
 *  title
 */
@property(nonatomic,strong)NSString *itemTitle;
```

```
@property(nonatomic,strong,NSString *itemTitle;

@property(nonatomic,strong,readonly)UIFont *titleFont;

/**
 * The normal state.
 */
@property(nonatomic,strong)UIImage *nomarlStateIconImage;

/*
 * IconFont Name: If iconFont needs to be set, the AUNavItemView.h but not AUFloatMenu.
h API is invoked.
 */
@property(nonatomic,strong)NSString *nomarlStateIconFontName;

/**
 * If widgetId is set, badgeNumber does not need to be set.
 */
@property(nonatomic,strong)NSString *badgeNumber;

/**
 *  widgetId
 */
@property(nonatomic, copy) NSString *widgetId;

/**
 * The required prompt text for VoiceOver. The default value is the value of itemTitle.
If itemTitle is not set, you need to manually set this attribute to support VoiceOver.
 */
@property(nonatomic,strong)NSString *voiceOverText;

@property(nonatomic,assign)BOOL isNavigationItem;

@property(nonatomic,assign,readonly)CGFloat touchEventMargin;

@property(nonatomic,assign)AUCurrentTabType currentTabType;

@property(nonatomic,assign,readonly)CGFloat marginBetweenIconTitle;

@property(nonatomic,assign,readonly)CGFloat marginBetweenLeftIcon;

@property(nonatomic,assign,readonly)CGFloat badgeViewWidth;

/**
 * This method needs to be rewritten for a sub-class, and then the clicking event is pr
ocessed.
 */
- (void)onClicked;

/**
 Return the size of the icon view.

 @return size
 */
- (CGSize) iconViewSize;
```

```
@end
```

Sample code

- Example of a popover with red dots:

```
//
//  APNavPopViewViewController.m
//  UIDemo
//

#import "APNavPopViewViewController.h"
#import "AUUtils.h"
#import "AUNavItemView.h"
#import "AUFloatMenu.h"
#import "AntUIShellObject.h"
#import "AUIconView.h"

@interface APNavPopViewViewController ()

@end

@implementation APNavPopViewViewController

- (void)viewDidLoad {
    [super viewDidLoad];
    self.view.backgroundColor = RGB(0xF5F5F9);

    self.navigationItem.title = @"Popover with red dots";
    UIBarButtonItem *rightItem = [[UIBarButtonItem alloc]initWithImage:[UIImage
imageNamed:@"APCommonUI_ForDemo.bundle/more.png"] style:UIBarButtonItemStylePlain targe
t:self action:@selector(onClick:)];
    self.navigationItem.rightBarButtonItem = rightItem;
    [[AURegisterManager shareInstance] registerAUObject:[[AntUIShellObject alloc] init]
];
}

- (void)didReceiveMemoryWarning {
    [super didReceiveMemoryWarning];
    // Dispose of any resources that can be recreated.
}

- (void)onClick:(id)sender
{
    NSMutableArray *array = [[NSMutableArray alloc]initWithCapacity:4];

    NSArray *items = @[@"Add Contacts",@"New Chat",@"Scan",@"Receive Money",@"Help"];
    int i = 0;
    for (NSString *typeName in items)  {
        AUNavItemView *item = [[AUNavItemView alloc]initWithFrame:CGRectMake(20, 0, 0,
40)];
        item.itemTitle = typeName;
        item.isNavigationItem = NO;
```

```
        // iconfont is supported.
   //     item.nomarlStateIconFontName = kICONFONT_USER_ADD;
        if (i == 0 ) {
            item.badgeNumber = @"1";
            UIImage *image = [UIImage imageNamed:@"ap_add_friend.png"];
            item.nomarlStateIconImage = image;
        } else if(i == 1) {
            item.badgeNumber = @"10";
            UIImage *image = [UIImage imageNamed:@"ap_group_talk.png"];
            item.nomarlStateIconImage = image;
        } else if(i == 2) {
            item.badgeNumber = @"100";
            UIImage *image = [UIImage imageNamed:@"ap_scan.png"];
            item.nomarlStateIconImage = image;
        } else if(i == 3) {
            item.badgeNumber = @"5";
            UIImage *image = [UIImage imageNamed:@"ap_qrcode.png"];
            item.nomarlStateIconImage = image;
        } else if(i == 4) {
            UIImage *image = [UIImage imageNamed:@"ap_help.png"];
            item.nomarlStateIconImage = image;
        }
        i++;

        [array addObject:item];
    }

    [AUFloatMenu showAtPostion:CGPointMake(0, 0) startOrignY:70 items:array];
}

- (void)onBarButtonClick:(id)sender
{
}


@end
```

- Example of a popover with icons:

```
//
//  APNavPopViewViewController.m
//  UIDemo
//

#import "APNavPopViewNoneRedViewController.h"
#import "AUUtils.h"
#import "AUNavItemView.h"
#import "AUFloatMenu.h"
#import "AntUIShellObject.h"
#import "AUIconView.h"

@interface APNavPopViewNoneRedViewController ()

@end
```

```
@implementation APNavPopViewNoneRedViewController

- (void)viewDidLoad {
    [super viewDidLoad];
    self.view.backgroundColor = RGB(0xF5F5F9);

    self.navigationItem.title = @"Popover with icons";
    UIBarButtonItem *rightItem = [[UIBarButtonItem alloc]initWithImage:[UIImage
imageNamed:@"APCommonUI_ForDemo.bundle/more.png"] style:UIBarButtonItemStylePlain targe
t:self action:@selector(onClick:)];
    self.navigationItem.rightBarButtonItem = rightItem;
    [[AURegisterManager shareInstance] registerAUObject:[[AntUIShellObject alloc] init]
];
}

- (void)didReceiveMemoryWarning {
    [super didReceiveMemoryWarning];
    // Dispose of any resources that can be recreated.
}

- (void)onClick:(id)sender
{
    NSMutableArray *array = [[NSMutableArray alloc]initWithCapacity:4];

    NSArray *items = @[@"Add Contacts",@"New Chat",@"Scan",@"Receive Money",@"Help"];
    int i = 0;
    for (NSString *typeName in items)  {
        AUNavItemView *item = [[AUNavItemView alloc]initWithFrame:CGRectMake(20, 0, 0,
40)];
        item.itemTitle = typeName;
        item.isNavigationItem = NO;
        // iconfont is supported.
   //     item.nomarlStateIconFontName = kICONFONT_USER_ADD;
        if (i == 0 ) {
//            item.badgeNumber = @"1";
            UIImage *image = [UIImage imageNamed:@"ap_add_friend.png"];
            item.nomarlStateIconImage = image;
        } else if(i == 1) {
//            item.badgeNumber = @"10";
            UIImage *image = [UIImage imageNamed:@"ap_group_talk.png"];
            item.nomarlStateIconImage = image;
        } else if(i == 2) {
//            item.badgeNumber = @"100";
            UIImage *image = [UIImage imageNamed:@"ap_scan.png"];
            item.nomarlStateIconImage = image;
        } else if(i == 3) {
//            item.badgeNumber = @"5";
            UIImage *image = [UIImage imageNamed:@"ap_qrcode.png"];
            item.nomarlStateIconImage = image;
        } else if(i == 4) {
            UIImage *image = [UIImage imageNamed:@"ap_help.png"];
            item.nomarlStateIconImage = image;
        }
```

```
        i++;

        [array addObject:item];
    }

    [AUFloatMenu showAtPostion:CGPointMake(0, 0) startOrignY:70 items:array];
}

- (void)onBarButtonClick:(id)sender
{
}


@end
```

- Example of a popover with texts only:

```
//
//  APNavPopViewViewController.m
//  UIDemo
//

#import "APNavPopViewOnlyViewController.h"
#import "AUUtils.h"
#import "AUNavItemView.h"
#import "AUFloatMenu.h"
#import "AntUIShellObject.h"
#import "AUIconView.h"

@interface APNavPopViewOnlyViewController ()

@end

@implementation APNavPopViewOnlyViewController

- (void)viewDidLoad {
    [super viewDidLoad];
    self.view.backgroundColor = RGB(0xF5F5F9);

    self.navigationItem.title = @"Popover with texts only";
    UIBarButtonItem *rightItem = [[UIBarButtonItem alloc]initWithImage:[UIImage
imageNamed:@"APCommonUI_ForDemo.bundle/more.png"] style:UIBarButtonItemStylePlain targe
t:self action:@selector(onClick:)];
    self.navigationItem.rightBarButtonItem = rightItem;
    [[AURegisterManager shareInstance] registerAUObject:[[AntUIShellObject alloc] init]
];
}

- (void)didReceiveMemoryWarning {
    [super didReceiveMemoryWarning];
    // Dispose of any resources that can be recreated.
}

- (void)onClick:(id)sender
```

```
{
    NSMutableArray *array = [[NSMutableArray alloc]initWithCapacity:4];

    NSArray *items = @[@"Add Contacts",@"New Chat",@"Scan",@"Receive Money",@"Help"];
    int i = 0;
    for (NSString *typeName in items)  {
        AUNavItemView *item = [[AUNavItemView alloc]initWithFrame:CGRectMake(0, 0, 0,
40)];
        item.itemTitle = typeName;
        item.isNavigationItem = NO;
        // iconfont is supported.
   //     item.nomarlStateIconFontName = kICONFONT_USER_ADD;
//        if (i == 0 ) {
////            item.badgeNumber = @"1";
//            UIImage *image = [UIImage imageNamed:@"ap_add_friend.png"];
//            item.nomarlStateIconImage = image;
//        } else if(i == 1) {
////            item.badgeNumber = @"10";
//            UIImage *image = [UIImage imageNamed:@"ap_group_talk.png"];
//            item.nomarlStateIconImage = image;
//        } else if(i == 2) {
////            item.badgeNumber = @"100";
//            UIImage *image = [UIImage imageNamed:@"ap_scan.png"];
//            item.nomarlStateIconImage = image;
//        } else if(i == 3) {
////            item.badgeNumber = @"5";
//            UIImage *image = [UIImage imageNamed:@"ap_qrcode.png"];
//            item.nomarlStateIconImage = image;
//        } else if(i == 4) {
//            UIImage *image = [UIImage imageNamed:@"ap_help.png"];
//            item.nomarlStateIconImage = image;
//        }
        i++;

        [array addObject:item];
    }

    [AUFloatMenu showAtPostion:CGPointMake(0, 0) startOrignY:70 items:array];
}

- (void)onBarButtonClick:(id)sender
{
}


@end
```

1.5.5.4. Recording status layer

AURecordFloatTip is a floating layer that displays the recording status. It provides users with more direct voice recording experience.

Sample image

API description

```
@interface AURecordFloatTip : UIView

@property (nonatomic, strong) UILabel *messageLabel; // The prompt for voice recording.
Default value: Recording...

// Show the floating layer.
- (void)showRecodingInView:(UIView *)view;

// Hide the floating layer.
- (void)dismissRecordView;


@end
```

Code sample

```
AURecordFloatTip *_tipView = [[AURecordFloatTip alloc] init];
    [_tipView showRecodingInView:self.view];
```

1.5.5.5. Image dialog

AUImageDialog is a dialog box with images. The dialog box has rounded corners, and the style can be customized. The window level of AUImageDialog is: `self.windowLevel = UIWindowLevelAlert - 1` .

API description

```
// The index corresponding to button clicking.
    typedef NS_ENUM(NSInteger, AUImageDialogButtonIndex) {
            AUImageDialogButtonIndex_Close  = -2,
            AUImageDialogButtonIndex_Link   = -1,
            AUImageDialogButtonIndex_Action =  0
    };


    /**
     The image dialog box is a special-style dialog box meeting the UED requirements, t
he shape of the images is round.
     Two modes are available:
            Common image mode: The Add button is a common button.
            Action button mode: An action button and a link button can be added. A cros
s icon (X) is displayed in the upper right corner for users to exit.
     The buttons in one mode cannot be added in the other mode. Otherwise, the adding c
annot pass the assert check.
     */
    @interface AUImageDialog : AUDialogBaseView

    /**
     The method of dialog box initialization without the button title.

     @param image       The image.
     @param title       The title.
     @param message     The message details.
     @param delegate    The AUDialogDelegate-compliant protocol object.
     @return            The AUImageDialog instance.
     */
    - (instancetype)initWithImage:(UIImage *)image
                                                    title:(NSString *)title
                                                message:(NSString *)message
                                            delegate:(id<AUDialogDelegate>)delegate;

    /**
     The method of dialog box initialization with the button title.

     @param image       The image.
     @param title       The title.
     @param message     The message details.
     @param delegate    The AUDialogDelegate-compliant protocol object.
     @param buttonTitle The list of button title parameters.
     @return            The AUImageDialog instance.
     */
    - (instancetype)initWithImage:(UIImage *)image
                                                    title:(NSString *)title
```

```
                                                    message:(NSString *)message
                                                delegate:(id<AUDialogDelegate>)delegate
                                        buttonTitles:(NSString *)buttonTitle, ...
NS_REQUIRES_NIL_TERMINATION;

    /**
     The initialization method with a blue action button.

     @param image       The image.
     @param title       The title.
     @param message     The message details.
     @param delegate    The AUDialogDelegate-compliant protocol object.
     @param actionTitle The title of the action button.
     @return            The AUImageDialog instance.
     */
    - (instancetype)initWithImage:(UIImage *)image
                                                        title:(NSString *)title
                                                    message:(NSString *)message
                                                delegate:(id<AUDialogDelegate>)delegate
                              actionButtonTitle:(NSString *)actionTitle;

    /**
     The initialization method with a blue action button and a link button.

     @param image       The image.
     @param title       The title.
     @param message     The message details.
     @param delegate    The AUDialogDelegate-compliant protocol object.
     @param linkText    The link text.
     @param actionTitle The title of the action button.
     @return            The AUImageDialog instance.
     */
    - (instancetype)initWithImage:(UIImage *)image
                                                        title:(NSString *)title
                                                    message:(NSString *)message
                                                delegate:(id<AUDialogDelegate>)delegate
                                                linkText:(NSString *)linkText
                              actionButtonTitle:(NSString *)actionTitle;

    - (instancetype)init NS_UNAVAILABLE;

    - (instancetype)initWithCustomView:(UIView *)customView; // The custom view, with t
he X button in the upper right corner by default.

    /**
     The dialog box display method.
     */
    - (void)show;

    /**
     Set the text color to gray. Default value: NO.
     */
    - (void)setGrayMessage:(BOOL)grayMessage;
```

```
    /**
     Set the text alignment mode.

     @param alignment   The alignment mode.
     */
    - (void)setMessageAlignment:(NSTextAlignment)alignment;

    /**
     Set the custom image size. The width cannot exceed the dialog box's maximum width
of 270. Default value: 135 x 135.
     */
    - (void)configImageAreaSize:(CGSize)imageSize;

    /**
     Add a common button and its callback method (The common button cannot contain an a
ction or a link).

     @param buttonTitle     The common button title.
     @param actionBlock     The callback of the button.
     */
    - (void)addButton:(NSString *)buttonTitle actionBlock:
(AUDialogActionBlock)actionBlock;

    /**
     Add an action button and its callback method.

     @param actionTitle     The title of the action button.
     @param actionBlock     The callback of the action button.
     */
    - (void)addActionButton:(NSString *)actionTitle actionBlock:
(AUDialogActionBlock)actionBlock;

    /**
     Add a link button and its callback method.

     @param linkText        The link text.
     @param actionBlock     The callback of the link button.
     */
    - (void)addLinkButton:(NSString *)linkText actionBlock:
(AUDialogActionBlock)actionBlock;

    /**
     Hide the close button in the upper right corner.
     */
    - (void)setCloseButtonHidden:(BOOL) hidden;
```

API for a large image style AUImageDialog

```
/**
 The image dialog box has a special UED-required style.
 * Style: The large icon style. In this style, the image has a fixed height of 312 px,
and the close button is in the upper right corner of the image.
 * The icon font of the close button. Default value: white.
 */

@interface AUImageDialog (largeImageStyle)

/**
 The method of dialog box initialization without the button title.

 @param image       The image.
 @param title       The title.
 @param message     The message details.
 @param delegate    The AUDialogDelegate-compliant protocol object.
 @return            The AUImageDialog instance.
 */
- (instancetype)initWithLargeImage:(UIImage *)image
                             title:(NSString *)title
                           message:(NSString *)message
                          delegate:(id<AUDialogDelegate>)delegate;

/**
 * Set the color of the close button in the upper right corner. Default value: white.
 */
- (void)resetCloseIconColor:(UIColor *)color;


@end
```

Sample code

- With common buttons

```
UIImage *image = [UIImage imageNamed:@"panghu.jpg"];
  AUImageDialog *dialog = [[AUImageDialog alloc] initWithImage:image title:@"Goda Tak
eshi" message:@"Strict match. The one not in the delegate is not a standard control.
The one not in the delegate but has been used in many places should be delivered in t
he candidate control set. A delegate, such as the title delegate, may not be implemen
ted as a single control." delegate:self];
  [dialog addButton:@"Cancel" actionBlock:nil];
  [dialog addButton:@"OK" actionBlock:nil];
  [dialog show];
```

- Custom style

```
UIView *customView = [[UIView alloc] initWithFrame:CGRectMake(0, 0, 240, 60)];
  customView.backgroundColor = [UIColor greenColor];
  AUImageDialog *dialog = [[AUImageDialog alloc] initWithCustomView:customView];
  [dialog addButton:@"Cancel" actionBlock:nil];
  [dialog addButton:@"OK" actionBlock:nil];
  [dialog show];
```

- With a large image

```
UIImage *image = [UIImage imageWithColor:[UIColor colorWithRGB:0xD8D8D8] size:CGSizeM
ake(100, 100)];
  AUImageDialog *dialog = [[AUImageDialog alloc] initWithLargeImage:image
title:@"Title in a line" message:@"Illustrate the status and prompt a solution. No mo
re than two lines." delegate:self];
  [dialog addButton:@"Cancel" actionBlock:nil];
  [dialog addButton:@"OK" actionBlock:nil];
  [dialog resetCloseIconColor:[UIColor redColor]];
  [dialog show];
```

1.5.5.6. Input dialog

AUInputDialog specifies the style of a pop-up window with an input box. The Window level of the pop-up window follows the logic `self.windowLevel = UIWindowLevelAlert - 1`.

API description

```
@interface AUInputDialog : AUDialogBaseView

/// The input box.
@property (nonatomic, strong, readonly) UITextField *textField;

/**
Specify whether this instance is displayed. This applies when a pointer points at this
instance.
If another dialog box overrides this one, the attribute value is fixed as YES.
*/
@property (nonatomic, assign, readonly) BOOL isDisplay;

/**
* The title.
*/
@property (nonatomic, strong) NSString *title;

/**
* The text message.
*/
@property (nonatomic, strong) NSString *message;

/**
The method of dialog box initialization without the button title.

@param title    The title.
@param message  The message details.
@return         The AUInputDialog instance.
*/
- (instancetype)initWithTitle:(NSString *)title
message:(NSString *)message;


/**
The AUInputDialog instance initialization method.
```

```
@param title        The title.
@param message      The message details.
@param placeholder  The placeholder in the text box.
@param delegate     The delegate object.
@param buttonTitle  The button title.
@return             The AUInputDialog instance.
*/
- (instancetype)initWithTitle:(NSString *)title
message:(NSString *)message
placeholder:(NSString *)placeholder
delegate:(id<AUDialogDelegate>)delegate
buttonTitles:(NSString *)buttonTitle, ... NS_REQUIRES_NIL_TERMINATION;

- (instancetype)initWithCustomView:(UIView *)customView; // The custom view.

/// The disabled initialization method.
- (instancetype)init NS_UNAVAILABLE;

/**
The dialog box display method.
*/
- (void)show;

/**
The method of closing the dialog box. If will/didDismissWithButtonIndex is monitored, t
he index called back is 0 by default.
*/
- (void)dismiss;

/**
Hide all dialog views in the dialog window.
*/
+ (void)dismissAll;

/**
Set the color of the text to gray. Default value: YES.
*/
- (void)setGrayMessage:(BOOL)grayMessage;

/**
Set the text alignment mode.

@param alignment The alignment mode.
*/
- (void)setMessageAlignment:(NSTextAlignment)alignment;

/**
Add a button and its callback method.

@param buttonTitle  The button title.
@param actionBlock  The callback of the button tapping action.
*/
- (void)addButton:(NSString *)buttonTitle actionBlock:(AUDialogActionBlock)actionBlock;
```

Code sample

- Common style

```
AUInputDialog *dialog = [[AUInputDialog alloc] initWithTitle:@"Title" message:@"The mes
sage may contain the sound icon and button of a notification alarm. This message can be
sent to " placeholder:@"To friends." delegate:self buttonTitles:@"Cancel", @"Main actio
n", nil];
[dialog show];
```

- Custom style

```
UIView *customView = [[UIView alloc] initWithFrame:CGRectMake(0, 0, 240, 60)];
customView.backgroundColor = [UIColor greenColor];
AUInputDialog *dialog = [[AUInputDialog alloc] initWithCustomView:customView];
[dialog addButton:@"Cancel" actionBlock:nil];
[dialog addButton:@"OK" actionBlock:nil];
[dialog show];
```

1.5.5.7. Toast component

AUToast defines Toast controls for mPaaS. AUToast is developed from APToast of APCommonUI. Use AUToast instead of APToast.

This component contains two types of Toast controls:

- **Common Toast**
- **Modal Toast**

The modal Toast has a transparent background layer, but the common Toast does not. Users cannot click the area covered by the background layer.

API description

```
// The declaration of the log output function, which is set by the external system.
typedef void(*AUToastLogFunc)(NSString *tag, NSString *format, ...);
extern AUToastLogFunc g_ToastExternLogFunc; // The global variables of the log output f
unction are set by external system.
#define AUToastLog(fmt, ...)
{if(g_ToastExternLogFunc)g_ToastExternLogFunc(@"@AUToast",fmt,##__VA_ARGS__);}


#define AUToast_Default_Duration 2.0    // AUToast Default display duration.
#define AUToast_Strong_Duration 1.5     // AUToast Display duration of the strong promp
t.
#define AUToast_Weak_Duration 1.0       // AUToast Display duration of the weak prompt.

/**
* Add a new toast icon to the end of the existing icons instead of in the middle. Other
wise, an error will occurs in business use.
*/
typedef enum{
AUToastIconNone = 0,     // No icon.
AUToastIconSuccess,      // The success icon.
```

```
AUToastIconFailure,     // The failure icon.
AUToastIconLoading,     // The loading icon.
AUToastIconNetFailure,  // Network failure.
AUToastIconSecurityScan,// Security scanning.
AUToastIconNetError,    // The network error causing connection failure.
AUToastIconProgress,    // The loading icon indicating the loading progress.
AUToastIconAlert,       // The alarm icon.
} AUToastIcon;

/**
* The Toast control.
*/
@interface AUToast : UIView

@property (nonatomic, assign) CGFloat xOffset; // Set the offset to the central point o
f the parent view in the x-axis.
@property (nonatomic, assign) CGFloat yOffset; // Set the offset to the central point o
f the parent view in the y-axis.

/*
* The modal display prompt displayed in the key window. The system does not respond to
user operations.
* Call the dismissToast method to hide the Toast.
*
* @param text The displayed text. Default value: loading.
* @param logTag The log ID.
*
* @return The displayed Toast object.
*/
+ (AUToast *)presentToastWithText:(NSString *)text
logTag:(NSString*)logTag;

/**
* Show the Toast. To hide the Toast, call the dismissToast method.
*
* @param superview The parent view.
* @param text      Displayed text.
* @param logTag    The log tag.
*
* @return The displayed Toast object.
*/
+ (AUToast *)presentToastWithin:(UIView *)superview
text:(NSString *)text
logTag:(NSString*)logTag;

/**
* Show the Toast. To hide the Toast, call the dismissToast method.
*
* @param superview The parent view.
* @param icon      The icon type.
* @param text      Displayed text.
* @param logTag    The log tag.
*
* @return The displayed Toast object.
```

```
*/
+ (AUToast *)presentToastWithin:(UIView *)superview
withIcon:(AUToastIcon)icon
text:(NSString *)text
logTag:(NSString*)logTag;

/**
* Show the Toast.
*
* @param superview The parent view.
* @param icon      The icon type.
* @param text      Displayed text.
* @param duration The display duration.
* @param logTag    The log tag.
*
* @return The displayed Toast object.
*/
+ (AUToast *)presentToastWithin:(UIView *)superview
withIcon:(AUToastIcon)icon
text:(NSString *)text
duration:(NSTimeInterval)duration
logTag:(NSString*)logTag;



/**
* Show the Toast.
*
* @param superview     In which view of Toast is displayed.
* @param icon          The icon type.
* @param text          Displayed text.
* @param duration      Display duration.
* @param logTag        The log tag.
* @param completion   Callback after Toast automatically disappears.
*
* @return The displayed Toast object.
*/
+ (AUToast *)presentToastWithin:(UIView *)superview
withIcon:(AUToastIcon)icon
text:(NSString *)text
duration:(NSTimeInterval)duration
logTag:(NSString*)logTag
completion:(void (^)())completion;


/**
* Show the Toast.
*
* @param superview     In which the view of Toast is displayed.
* @param icon          The icon type.
* @param text          Displayed text.
* @param duration      Display duration.
* @param delay         Display delay duration.
* @param logTag        The log tag.
* @param completion    Callback after Toast automatically disappears.
```

```
* @param completion    Callback after Toast automatically disappears.
*
* @return The displayed Toast object.
*/
+ (AUToast *)presentToastWithin:(UIView *)superview
withIcon:(AUToastIcon)icon
text:(NSString *)text
duration:(NSTimeInterval)duration
delay:(NSTimeInterval)delay
logTag:(NSString*)logTag
completion:(void (^)())completion;



/*
* Show the modal Toast. To hide the Toast, call the dismissToast method.
* Different from the common Toast, the modal Toast has a transparent background layer,
which prevents users from clicking the screen.
*
* @param superview The parent view.
* @param text      Displayed text.
* @param logTag    The log tag.
*
* @return The displayed Toast object.
*/
+ (AUToast *)presentModelToastWithin:(UIView *)superview
text:(NSString *)text
logTag:(NSString*)logTag;


/**
* Show the modal Toast.
* Different from the common Toast, the modal Toast has a transparent background layer,
which prevents users from clicking the screen.
*
* @param superview     In which view of Toast is displayed.
* @param icon          The icon type.
* @param text          Displayed text.
* @param duration      Display duration.
* @param logTag        The log tag.
* @param completion    Callback after Toast automatically disappears.
*
* @return The displayed Toast object.
*/
+ (AUToast *)presentModalToastWithin:(UIView *)superview
withIcon:(AUToastIcon)icon
text:(NSString *)text
duration:(NSTimeInterval)duration
logTag:(NSString*)logTag
completion:(void (^)())completion;


/**
* Show the modal Toast.
* Different from the common Toast, the modal Toast has a transparent background layer,
```

```
 Different from the common Toast, the modal Toast has a transparent background layer,
which prevents users from clicking the screen.
*
* @param superview     In which the view of Toast is displayed.
* @param icon          Icon type.
* @param text          Displayed text.
* @param duration      Display duration.
* @param delay         Display delay duration.
* @param logTag        The log tag.
* @param completion    Callback after Toast automatically disappears.
*
* @return The displayed Toast object.
*/
+ (AUToast *)presentModalToastWithin:(UIView *)superview
withIcon:(AUToastIcon)icon
text:(NSString *)text
duration:(NSTimeInterval)duration
delay:(NSTimeInterval)delay
logTag:(NSString*)logTag
completion:(void (^)())completion;


/*
* Hide the Toast.
*/
- (void)dismissToast;

/**
* Set the prefix text of the progress. If this parameter is not set, the default value
is "Loading data".
* The setting is effective only when the Toast type is AUToastIconProgress. Otherwise,
ignore this parameter.
*
*  @param prefix The text.
*/
- (void)setProgressPrefix:(NSString*)prefix;

/**
* Show the data loading progress in percentage.
* The setting is effective only when the Toast type is AUToastIconProgress. Otherwise,
ignore this parameter.
*
* @param value      Currently loaded data. The value range is 0.0 to 1.0.
*
*/
- (void)setProgressText:(float)value;

@end
```

Sample code

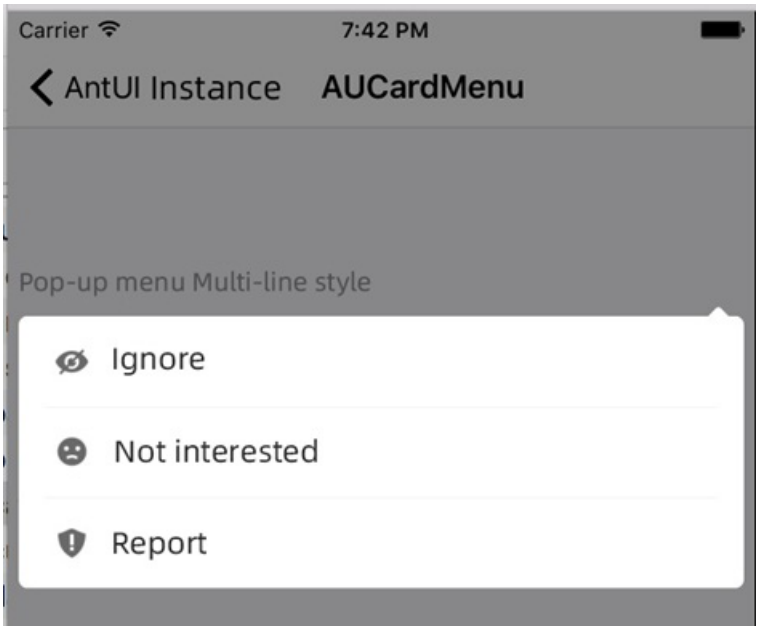
```
[AUToast presentToastWithin:self.view withIcon:AUToastIconNetFailure text:@"System Busy
" logTag:@"demo"];
[AUToast presentToastWithin:self.view withIcon:AUToastIconSuccess text:@"Success" logTa
g:@"demo"];
[AUToast presentToastWithin:self.view withIcon:AUToastIconFailure text:@"Failure" logTa
g:@"demo"];
[AUToast presentToastWithin:self.view withIcon:AUToastIconAlert text:@"Alarm"
logTag:@"demo"];

// Loading.
[AUToast presentToastWithin:self.view withIcon:AUToastIconLoading text:nil
logTag:@"demo"];

// Set the scenario where the progress appears.
AUToast *toast = [AUToast presentToastWithin:self.view withIcon:AUToastIconProgress tex
t:@"Loading" logTag:@"demo"];
toast.origin = point;
[toast setProgressPrefix:@"~~~"];
[toast setProgressText:0.5];

// The modal Toast.
[AUToast presentModalToastWithin:weakSelf.view withIcon:AUToastIconLoading text:@"Modal
toast,There are so many longest texts,is too long" duration:3 logTag:@"demo" completion
:NULL];
[AUToast presentModalToastWithin:weakSelf.view withIcon:AUToastIconLoading text:@"Modal
toast,There are so many longest texts,is too long" duration:3 delay:2  logTag:@"demo" c
ompletion:NULL];
```

1.5.5.8. Card menu

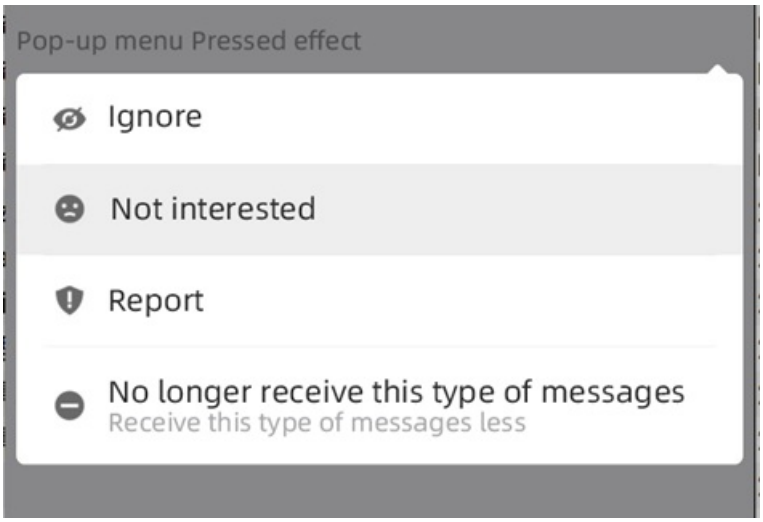
The card menu is used to pop up a selection menu when the user clicks a card on the client page. In iOS, `beeviews:BEEPopMenuView` needs to be replaced with `AUCardMenu.h`.

Sample images

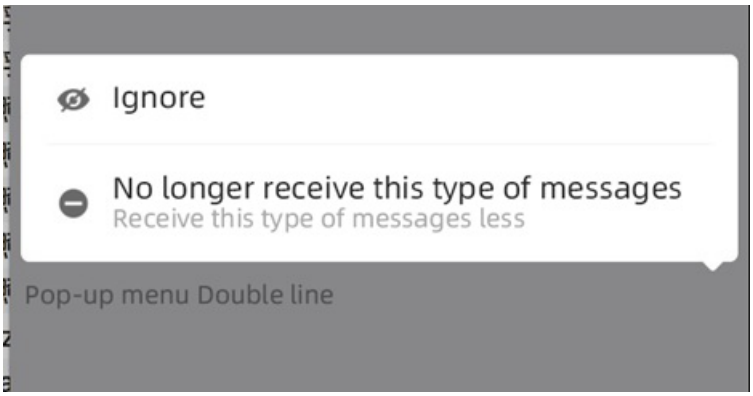
- Pop-up menu / Multi-line style



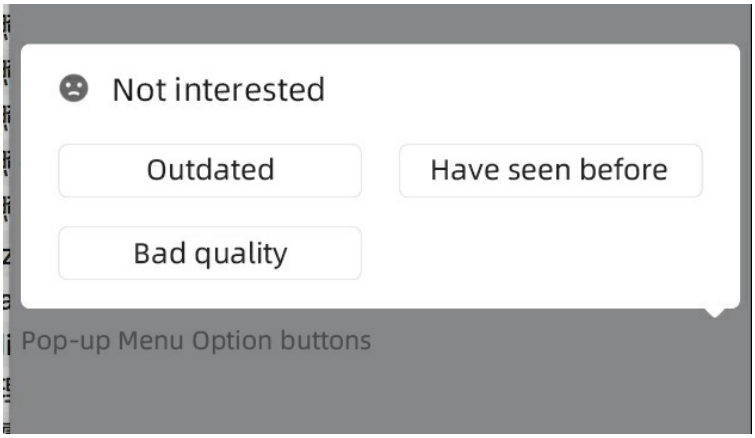
- Pop-up menu / Pressed effect



- Pop-up menu / Double line



- Pop-up menu + Option buttons



API description

- **AUCardMenu.h**

```
//
//  AUCardMenu.h
//  AntUI
//


@class AUMultiStyleCellView;
@class AUWindow;
/*!
 @class         AUCardMenu
 @abstract      AUWindow
 @discussion    The pop-up menu with a mask for the other part of the screen and an arr
ow-like corner in the upper right of the menu.
*/

@interface AUCardMenu : AUWindow
{

}

/**
 * The AUMultiStyleCellDelegate protocol needs to be implemented for cellView to respon
d to clicking events.
 * Assign the value in your own viewcontroller. popMenuView.cellView.delegate = self
 */
@property (nonatomic, strong) AUMultiStyleCellView *cellView;

/**
 * The initialization method (highly recommended).
 *
 * @param data      The array storage object model CellDataModel.
 * @param location  The reference point of the arrow-like corner.
 * @param offset    The offset of the arrow-like corner relative to the reference point
.
 *
 *  @return self
 */
```

```
- (instancetype)initWithData:(NSArray *)data
                    location:(CGPoint)location
                      offset:(CGFloat)offset;

/**
 * Show the pop-up menu.
 *
 * @param superView superView of PopMenuView
 */
- (void)showPopMenu:(UIView *)superView;

// Hide the pop-up menu, whose calling is also recommended in the dealloc method.
- (void)hidePopMenu;

// Note: If a menu is shown with animation, the menu must be hidden with animation. If
a menu is shown without animation, the menu must be hidden without animation.

// Show a menu with animation.
- (void)showPopMenu:(UIView *)superView animation:(BOOL) isAnimation;

// Hide a menu with animation.
- (void)hidePopMenuWithAnimation:(BOOL)isAnimation;

@end
```

- **AUCellDataModel.h**

```
//
//  AUCellDataModel.h
//  AntUI
//

#import <Foundation/Foundation.h>

/*!
 @class       AUMultiStyleCellView
 @abstract    UIView
 @discussion  The sub-view in a menu.
 */

@interface AUCellDataModel : NSObject

@property (nonatomic, strong) NSString *iconUrl;
@property (nonatomic, strong) NSString *titleText;
@property (nonatomic, strong) NSString *descText;
@property (nonatomic, strong) NSString *checkMarkUrl;  // The check mark URL.
@property (nonatomic, strong) NSString *indicatorUrl;  // The right arrow URL.
@property (nonatomic, strong) NSArray *buttonsArray;   // NSArray<NSString>
@property (nonatomic, strong) NSDictionary *extendDic; // The extended field for the cl
ient.
@property (nonatomic, assign) BOOL selectedState;      // Whether the current model is
selected. The default value is NO.

@end
```

- **AUMultiStyleCellView.h**

```
//
//  AUMultiStyleCellView.h
//  AntUI
//

#import <UIKit/UIKit.h>
#import "AUCellDataModel.h"

@class AUMultiStyleCellView;
@protocol AUMultiStyleCellDelegate <NSObject>

@optional
/**
 * The clicking event callback.
 *
 * @param dataModel     The data model corresponding to the clicked view.
 * @param indexPath     The index of the clicked view in CellDataModel. (If
CellDataModel.buttonsArray == nil, the default value of row is - 1.)
 */
- (void)DidClickCellView:(AUCellDataModel *)dataModel ForRowAtIndexpath:(NSIndexPath *)
indexPath;
- (void)DidClickCellButton:(AUCellDataModel *)dataModel ForRowAtIndexpath:(NSIndexPath
*)indexPath;
- (void)DidClickCellView:(AUCellDataModel *)dataModel ForRowAtIndexpath:(NSIndexPath *)
indexPath cellView:(AUMultiStyleCellView *)cellView;
@end


/**
 * cellView integrating multiple styles.
 * 1. Icon + Main title
 * 2. Icon + Main title + Subtitle below the main title
 * 3. Icon + Main title + Framed button controls in multiple lines and multiple rows
 */

@interface AUMultiStyleCellView : UIView

@property (nonatomic, weak) id<AUMultiStyleCellDelegate> delegate;
@property (nonatomic, strong) NSArray *cellDataArray;

// If cellDataArray is empty, this method is equal to the initWithFrame method.
- (instancetype)initWithFrame:(CGRect)frame
                cellDataArray:(NSArray *)cellDataArray
                     isUpward:(BOOL)isUpward;

// Process the status indicating whether cellView is selected.
- (void)updateSelectedState;


@end
```

Sample code

```
//
//  cardMenuController.m
//  AntUI
//

#import "cardMenuController.h"
#import "AUCardMenu.h"
#import "AUCellDataModel.h"
#import "AUMultiStyleCellView.h"

@interface cardMenuController ()<AUMultiStyleCellDelegate>

@property (nonatomic,strong)     AUCardMenu * popMenuView;

@end

@implementation cardMenuController

- (void)viewDidLoad {
    [super viewDidLoad];
    // Do any additional setup after loading the view.
    self.view.backgroundColor = RGB(0xF5F5F9);
    UIButton * button = [UIButton buttonWithType:UIButtonTypeCustom];
    [button setFrame:CGRectMake(0, 100, self.view.width, 100)];
    [button setTitle:@"Pop-up menu/Multi-line style" forState:UIControlStateNormal];
    [button setTitleColor:RGB(0x888888) forState:UIControlStateNormal];
    [button addTarget:self
               action:@selector(handleButton:)
     forControlEvents:UIControlEventTouchUpInside];
    [button.titleLabel setTextAlignment:NSTextAlignmentLeft];
    [button.titleLabel setFont:[UIFont systemFontOfSize:14]];
    [button setTitleEdgeInsets:UIEdgeInsetsMake(0, 5, 0, 0)];
    [button setContentHorizontalAlignment:UIControlContentHorizontalAlignmentLeft];

    [self.view addSubview:button];

    UIButton * button2 = [UIButton buttonWithType:UIButtonTypeCustom];
    [button2 setFrame:CGRectMake(0, 220, self.view.width, 100)];
    [button2 setTitle:@"Pop-up menu/Pressed effect" forState:UIControlStateNormal];
    [button2 addTarget:self
               action:@selector(handleButton2:)
     forControlEvents:UIControlEventTouchUpInside];
    [button2.titleLabel setTextAlignment:NSTextAlignmentLeft];
    [button2 setTitleEdgeInsets:UIEdgeInsetsMake(0, 5, 0, 0)];
    [button2 setContentMode:UIViewContentModeLeft];
    [button2 setContentHorizontalAlignment:UIControlContentHorizontalAlignmentLeft];

    [button2 setTitleColor:RGB(0x888888) forState:UIControlStateNormal];
    [button2.titleLabel setFont:[UIFont systemFontOfSize:14]];

    [self.view addSubview:button2];

    UIButton * button3 = [UIButton buttonWithType:UIButtonTypeCustom];
    [button3 setFrame:CGRectMake(0, 320, self.view.width, 100)];
```

```
    [button3 setTitle:@"Pop-up menu/Double line" forState:UIControlStateNormal];
    [button3 addTarget:self
                action:@selector(handleButton3:)
      forControlEvents:UIControlEventTouchUpInside];
    [button3.titleLabel setTextAlignment:NSTextAlignmentLeft];
    [button3 setTitleEdgeInsets:UIEdgeInsetsMake(0, 5, 0, 0)];
    [button3 setContentHorizontalAlignment:UIControlContentHorizontalAlignmentLeft];
    [button3.titleLabel setFont:[UIFont systemFontOfSize:14]];


    [button3 setTitleColor:RGB(0x888888) forState:UIControlStateNormal];

    [self.view addSubview:button3];


    UIButton * button4 = [UIButton buttonWithType:UIButtonTypeCustom];
    [button4 setFrame:CGRectMake(0, 420, self.view.width, 100)];
    [button4 setTitle:@"Pop-up Menu + Select button" forState:UIControlStateNormal];
    [button4 addTarget:self
                action:@selector(handleButton4:)
      forControlEvents:UIControlEventTouchUpInside];
    [button4.titleLabel setTextAlignment:NSTextAlignmentLeft];
    [button4 setTitleEdgeInsets:UIEdgeInsetsMake(0, 5, 0, 0)];
    [button4 setContentHorizontalAlignment:UIControlContentHorizontalAlignmentLeft];
    [button4.titleLabel setFont:[UIFont systemFontOfSize:14]];

    [button4 setTitleColor:RGB(0x888888) forState:UIControlStateNormal];

    [self.view addSubview:button4];

}

- (void)handleButton4:(UIButton *)button
{
    AUCellDataModel * model = [[AUCellDataModel alloc] init];
    model.iconUrl = @"APCommonUI_ForDemo.bundle/hc_popmenu_dislike.png";
    model.titleText = @"Not interested";
    model.buttonsArray = @[@"Outdated",@"Have seen before",@"Bad quality"];
    model.extendDic =
@{@"type":@"reject",@"cardId":@"20160926151503272020000009112829160695000090268 8",@"CCard
@""};


    AUCardMenu *tmpView=[[AUCardMenu alloc]initWithData:@[model]
location:CGPointMake(button.width - 20, button.centerY) offset:13];
    tmpView.cellView.delegate=self;
    [tmpView showPopMenu:button animation:YES];
    self.popMenuView=tmpView;

}

- (void)handleButton3:(UIButton *)button
{
    AUCellDataModel * model = [[AUCellDataModel alloc] init];
    model.iconUrl = @"APCommonUI_ForDemo.bundle/hc_popmenu_ignore.png";
```

```
    model.iconUrl = @"APCommonUI_ForDemo.bundle/hc_popmenu_ignore.png";
    model.titleText = @"Ignore";
    //    model.buttonsArray = @[@"Hello",@"do you stutter?",@"I'm not
hungry",@"Hello",@"I'm fine"];
    model.extendDic =
@{@"type":@"reject",@"cardId":@"2016092615150327202000000911282916069500009026 88",@"CCard
@""};

    AUCellDataModel * model4 = [[AUCellDataModel alloc] init];
    model4.iconUrl = @"APCommonUI_ForDemo.bundle/hc_popmenu_reject.png";
    model4.titleText = @"No longer receive this type of messages";
    model4.descText = @"Receive this type of messages less";
    model4.extendDic =
@{@"type":@"reject",@"cardId":@"2016092615150327202000000911282916069500009026 88",@"CCard
@""};
    AUCardMenu *tmpView=[[AUCardMenu alloc]initWithData:@[model,model4]
location:CGPointMake(button.width - 20, button.centerY) offset:13];
    tmpView.cellView.delegate=self;
    [tmpView showPopMenu:button animation:YES];
    self.popMenuView=tmpView;

}

- (void)handleButton2:(UIButton *)button
{
    AUCellDataModel * model = [[AUCellDataModel alloc] init];
    model.iconUrl = @"APCommonUI_ForDemo.bundle/hc_popmenu_ignore.png";
    model.titleText = @"Ignore";
    //    model.buttonsArray = @[@"Hello",@"do you stutter?",@"I'm not
hungry",@"Hello",@"I'm fine"];
    model.extendDic =
@{@"type":@"reject",@"cardId":@"2016092615150327202000000911282916069500009026 88",@"CCard
@""};
    AUCellDataModel * model2 = [[AUCellDataModel alloc] init];
    model2.iconUrl = @"APCommonUI_ForDemo.bundle/hc_popmenu_dislike.png";
    model2.titleText = @"Not interested";
    model2.extendDic =
@{@"type":@"reject",@"cardId":@"2016092615150327202000000911282916069500009026 88",@"CCard
@""};
    model2.highlightState = YES;
    AUCellDataModel * model3 = [[AUCellDataModel alloc] init];
    model3.iconUrl = @"APCommonUI_ForDemo.bundle/hc_popmenu_inform.png";
    model3.titleText = @"Report";
    model3.extendDic =
@{@"type":@"reject",@"cardId":@"2016092615150327202000000911282916069500009026 88",@"CCard
@""};
    AUCellDataModel * model4 = [[AUCellDataModel alloc] init];
    model4.iconUrl = @"APCommonUI_ForDemo.bundle/hc_popmenu_reject.png";
    model4.titleText = @"No longer receive this type of messages";
    model4.descText = @"Receive this type of messages less";
    model4.extendDic =
@{@"type":@"reject",@"cardId":@"2016092615150327202000000911282916069500009026 88",@"CCard
@""};
    AUCardMenu *tmpView=[[AUCardMenu alloc]initWithData:@[model,model2,model3,model4] l
ocation:CGPointMake(button.width - 20, button.centerY) offset:13];
```

```
    tmpView.cellView.delegate=self;
    [tmpView showPopMenu:button animation:YES];
    self.popMenuView=tmpView;

}
- (void)handleButton:(UIButton *)button
{
    AUCellDataModel * model = [[AUCellDataModel alloc] init];
    model.iconUrl = @"APCommonUI_ForDemo.bundle/hc_popmenu_ignore.png";
    model.titleText = @"Ignore";
//    model.buttonsArray = @[@"Hello",@"do you stutter?",@"I'm not
hungry",@"Hello",@"I'm fine"];
    model.extendDic =
@{@"type":@"reject",@"cardId":@"20160926151503272020000009112829160695000090268 8",@"CCard
@""};
    AUCellDataModel * model2 = [[AUCellDataModel alloc] init];
    model2.iconUrl = @"APCommonUI_ForDemo.bundle/hc_popmenu_dislike.png";
    model2.titleText = @"Not interested";
    model2.extendDic =
@{@"type":@"reject",@"cardId":@"20160926151503272020000009112829160695000090268 8",@"CCard
@""};
    AUCellDataModel * model3 = [[AUCellDataModel alloc] init];
    model3.iconUrl = @"APCommonUI_ForDemo.bundle/hc_popmenu_inform.png";
    model3.titleText = @"Report";
    model3.extendDic =
@{@"type":@"reject",@"cardId":@"20160926151503272020000009112829160695000090268 8",@"CCard
@""};
    AUCardMenu *tmpView=[[AUCardMenu alloc]initWithData:@[model,model2,model3]
location:CGPointMake(button.width - 20, button.centerY) offset:13];
    tmpView.cellView.delegate=self;
    [tmpView showPopMenu:button animation:YES];
    self.popMenuView=tmpView;


}


- (void)didReceiveMemoryWarning {
    [super didReceiveMemoryWarning];
    // Dispose of any resources that can be recreated.
}

- (void)hidePopMenu
{
    if (self.popMenuView) {
        [self.popMenuView hidePopMenuWithAnimation:YES];
        self.popMenuView.cellView.delegate = nil;
        self.popMenuView = nil;

    }
}


#pragma mark --- AUMultiStyleCellDelegate
```

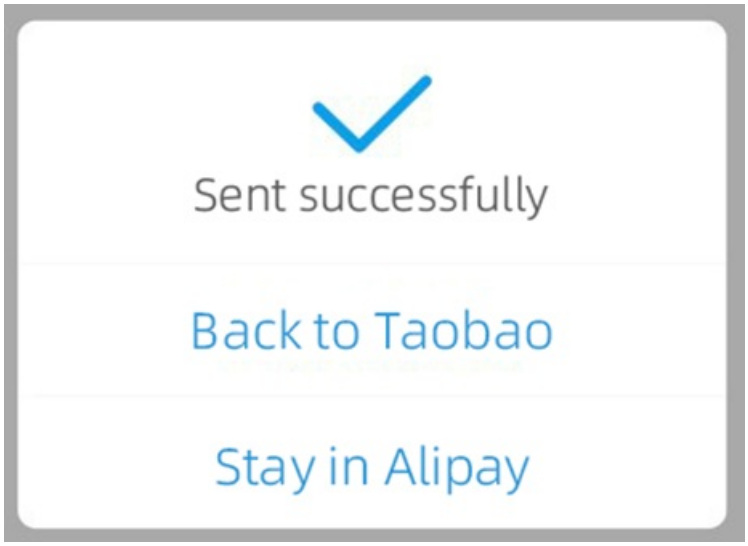
```
/**
 * The clicking event callback.
 *
 * @param dataModel     The data model corresponding to the tapped view.
 * @param indexPath     The index of the tapped view in CellDataModel. (If
CellDataModel.buttonsArray == nil, the default value of row is - 1.)
 */
- (void)DidClickCellView:(AUCellDataModel *)dataModel ForRowAtIndexpath:(NSIndexPath *)
indexPath
{
    [self hidePopMenu];
}
- (void)DidClickCellButton:(AUCellDataModel *)dataModel ForRowAtIndexpath:(NSIndexPath
*)indexPath
{
    [self hidePopMenu];
}
- (void)DidClickCellView:(AUCellDataModel *)dataModel ForRowAtIndexpath:(NSIndexPath *)
indexPath cellView:(AUMultiStyleCellView *)cellView
{
    [self hidePopMenu];
}


- (void)dealloc
{
    self.popMenuView = nil;

}

/*
#pragma mark - Navigation

// In a storyboard-based application, you will often want to do a little preparation be
fore navigation
- (void)prepareForSegue:(UIStoryboardSegue *)segue sender:(id)sender {
    // Get the new view controller using [segue destinationViewController].
    // Pass the selected object to the new view controller.
}
*/

@end
```

1.5.5.9. Operation result dialog

AUOperationResultDialog is a dialog box with a result image. The default size of the image is 90 x 58, in pixels. UED requires the style. The window level of AUOperationResultDialog is: `self.windowLevel = UIWindowLevelAlert - 1` .

> **Note**
>
> AUOperationResultDialog applies only to social sharing and checkout counter business. For the dialog box applying to other business, see AUImageDialog.

Sample image



API description

```
@interface AUOperationResultDialog : AUDialogBaseView

/**
 Specify whether this instance is displayed. This applies when a pointer points at this
instance.
 If another dialog box overrides this one, the attribute value is fixed as YES.
 */
@property (nonatomic, assign, readonly) BOOL isDisplay;

/**
 * The dialog box description.
 */
@property (nonatomic, strong) NSString *describe;

/**
 The method of dialog box initialization without the button title.

 @param image       The image.
 @param describe    The message details.
 @param delegate    The AUDialogDelegate-compliant protocol object.
 @return            The AUImageDialog instance.
 */
- (instancetype)initWithImage:(UIImage *)image
                      message:(NSString *)message
                     delegate:(id<AUDialogDelegate>)delegate;

/**
 The method of dialog box initialization with the button title.
```

```
 @param image       The image.
 @param describe    The message details.
 @param delegate    The AUDialogDelegate-compliant protocol object.
 @param buttonTitle The list of button title parameters.
 @return            The AUImageDialog instance.
 */
- (instancetype)initWithImage:(UIImage *)image
                      message:(NSString *)message
                     delegate:(id<AUDialogDelegate>)delegate
                  buttonTitles:(NSString *)buttonTitle, ... NS_REQUIRES_NIL_TERMINATION;

/**
 With a download link.

 @param imageUrl    The URL of the image.
 @param placeholder The placeholder image.
 @param describe    The message details.
 @param delegate    The AUDialogDelegate-compliant protocol object.
 @return            The AUImageDialog instance.
 */
- (instancetype)initWithImageUrl:(NSString *)imageUrl
                     placeholder:(UIImage *)placeholder
                         message:(NSString *)message
                        delegate:(id<AUDialogDelegate>)delegate;

/// The disabled initialization method.
- (instancetype)init NS_UNAVAILABLE;

/**
 The dialog box display method.
 */
- (void)show;

/**
 The method of closing the dialog box. If will/didDismissWithButtonIndex is monitored,
the index called back is 0 by default.
 */
- (void)dismiss;

/**
 Hide all dialog views in the dialog window.
 */
+ (void)dismissAll;

/**
 Add a common button and its callback method. The common button cannot contain an actio
n.

 @param buttonTitle The common button title.
 @param actionBlock The callback of the button.
 */
- (void)addButton:(NSString *)buttonTitle actionBlock:(AUDialogActionBlock)actionBlock;

@end
```

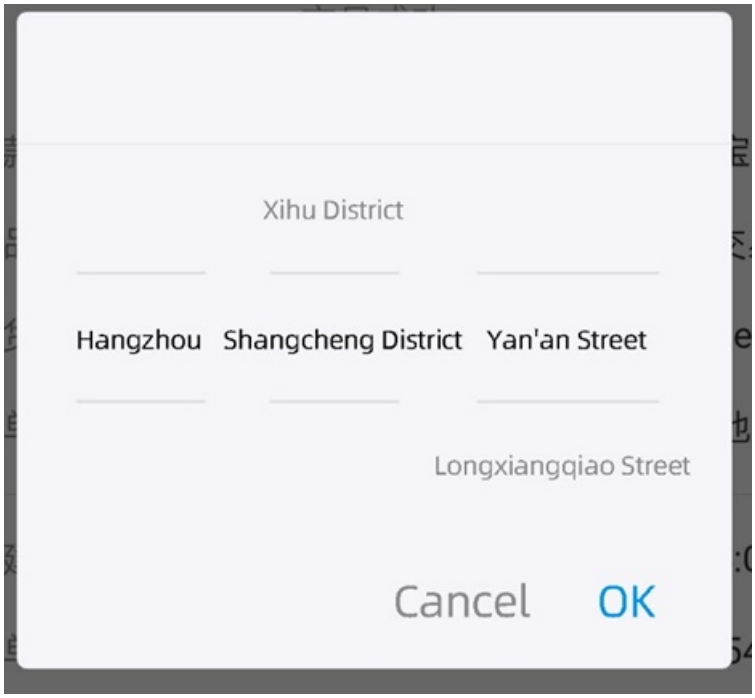
Sample code

```
UIImage *image = [UIImage imageNamed:@"panghu.jpg"];
    AUOperationResultDialog *dialog = [[AUOperationResultDialog alloc]
initWithImage:image message:@"Sent successfully" delegate:self];
    [dialog addButton:@"Back to Taobao" actionBlock:nil];
    [dialog addButton:@"Stay in Alipay" actionBlock:nil];
    [dialog show];
```

1.5.5.10. Cascade picker

AUCascadePicker is a multi-level cascade picker control that supports up to three levels.

Sample image



API description

```
// Set the selected item for the picker.
@interface AUCascadePickerSelectedRowItem : NSObject

@property (nonatomic, strong) NSString *selectedLeftTitle;    // The title selected for
the sublist on the left.
@property (nonatomic, strong) NSString *selectedMiddleTitle;  // The title selected for
the sublist in the middle.
@property (nonatomic, strong) NSString *selectedRightTitle;   // The title selected for
the sublist on the right.

@end

@interface  AUCascadePickerRowItemModel : NSObject
```

```
@property (nonatomic, strong) NSString *rowTitle;
@property (nonatomic, strong) NSArray<AUCascadePickerRowItemModel *> *rowSubList;

@end

// The data model required for the linkage effect.
@interface AUCascadePickerModel : NSObject

@property (nonatomic,strong) AUCascadePickerSelectedRowItem            *preSelected;   /
/ The selected item transferred from the client.
@property (nonatomic, strong) AUCascadePickerSelectedRowItem           *selectedItem;
// The selected data list that is automatically recorded in the current component.
@property (nonatomic, strong) NSArray<AUCascadePickerRowItemModel *>   *dataList;
// The data list.
@property (nonatomic, strong) NSString *title;                                          //
The picker title.

@end


@interface AUCascadePicker : AUPickerBaseView <UIPickerViewDataSource,
UIPickerViewDelegate>

@property (nonatomic, strong) AUCascadePickerModel *dataModel;
@property (nonatomic, assign) NSInteger numberOfComponents;
@property (nonatomic, weak) id <AUCascadePickerDelegate> linkageDelegate;

- (instancetype)initWithPickerModel:(AUCascadePickerModel *)model;

@end

// The callback for the Cancel and Completed buttons at the top.
@protocol AUCascadePickerDelegate <AUPickerBaseViewDelegate>
/*
 * Callback is performed when Cancel is clicked.
 */
- (void)cancelPickerView:(AUCustomDatePicker *)pickerView;

/*
 * Callback is performed when Completed is clicked. The selected items can be returned
through selectedRowInComponent.
 */
- (void)selectedPickerView:(AUCustomDatePicker *)pickerView

@end
```

JSAPI description

API

`antUIGetCascadePicker`

Usage

```
AlipayJSBridge.call('antUIGetCascadePicker',
{
    title: 'nihao',// The cascade option title.
    selectedList:[{"name":"Hangzhou",subList:[{"name":"Shangcheng district"}]}],
    list: [
        {
            name: "Hangzhou",// The entry name.
            subList: [
                {
                    name: "Xihu district",
                    subList: [
                        {
                            name: "Gucui Street"
                        },
                        {
                            name: "Wenxin Street"
                        }
                    ]
                },
                {
                    name: "Shangcheng district",
                    subList: [
                        {
                            name: "Yan'an Street"
                        },
                        {
                            name: "Longxiangqiao Street"
                        }
                    ]
                }
            ]// The cascade sub-data list.
        }
    ]// The cascade data list.
},
function(result){
    console.log(result);
});
```

Input parameters

Name	Type	Description	Required	Version
title	String	The cascade control title.	NO	10.1.2
selectedList	Json	The selected sub-items, in the same format as Input parameters. `([{"name":"Hangzhou",subList:[{"name":"Shangcheng District"}]}])`	NO	10.1.2

Name	Type	Description	Required	Version
list	Json	The selector data list.	YES	10.1.2
name	String	The entry name in `list`.	YES	10.1.2
subList	Json	The sub-list in `list`.	NO	10.1.2
fn	function	The callback function after selection is complete.	NO	10.1.2

Output parameters

Name	Type	Description	Version
success	Bool	Whether selection is complete. If selection is canceled, false is returned.	10.1.2
result	Json	The selected items, for example, `[{"name":"Hangzhou",subList:[{"name":"Shangcheng District"}]}]`	10.1.2

Sample code

```
model = [[AULinkagePickerModel alloc] init];

    NSMutableArray *modelList = [[NSMutableArray alloc] init];
    for (int i=0; i<6; i++)
    {
        AULinkagePickerRowItemModel *item = [[AULinkagePickerRowItemModel alloc] init];
        item.rowTitle = [NSString stringWithFormat:@"Level-1 %d", i];
        NSMutableArray *array = [[NSMutableArray alloc] init];
        for (int j=0; j<7; j++)
        {
            if (i == 0)
            {
                break;
            }
            AULinkagePickerRowItemModel *item1 = [[AULinkagePickerRowItemModel alloc] i
nit];
            item1.rowTitle = [NSString stringWithFormat:@"Level-2 %d", j];
            NSMutableArray *array1 = [[NSMutableArray alloc] init];
            for (int k=0; k<5; k++) {
                AULinkagePickerRowItemModel *item2 = [[AULinkagePickerRowItemModel alloc
] init];
                item2.rowTitle = [NSString stringWithFormat:@"Level-3 %d", k];
                [array1 addObject:item2];
                if (j == 1 || j== 2) {
                    break;
                }
            }
            item1.rowSubList = array1;
            [array addObject:item1];
            if (i == 3 || i== 5) {
                break;
            }
        }
        item.rowSubList = array;
        [modelList addObject:item];
    }

    model.dataList = modelList;


    AULinkagePickerSelectedRowItem *item = [[AULinkagePickerSelectedRowItem alloc] init
];
    item.selectedLeftTitle = @"Level-1 0";
    item.selectedMiddleTitle = @"Level-2 0";
    item.selectedRightTitle = @"Level-3 0";

    model.selectedItem = item;

self.linkagePickerView = [[AULinkagePickerView alloc] initWithPickerModel:model];
self.linkagePickerView.linkageDelegate = self;
[self.linkagePickerView show];
```

1.5.5.11. Notification dialog

AUNoticeDialog specifies the style of a common dialog box. It references AlertView but does not contain the blur background. The Window level of the dialog box follows the logic `self.windowLevel = UIWindowLevelAlert - 1`.

API description

```
/**
The common dialog box style. It is the same as the system style but does not contain th
e blur background.
*/
@interface AUNoticeDialog : AUDialogBaseView

/**
The method of dialog box initialization without the button title.

@param title    The title.
@param message  The message details.
@return         The AUNoticeDialog instance.
*/
- (instancetype)initWithTitle:(NSString *)title
message:(NSString *)message;

/**
The method of initializing the dialog box with the button title.

@param title        The title.
@param message      The message details.
@param delegate     The AUDialogDelegate-compliant protocol object.
@param buttonTitle  The button title list.
@return             The AUNoticeDialog instance.
*/
- (instancetype)initWithTitle:(NSString *)title
message:(NSString *)message
delegate:(id<AUDialogDelegate>)delegate
buttonTitles:(NSString *)buttonTitle, ... NS_REQUIRES_NIL_TERMINATION;

- (instancetype)initWithCustomView:(UIView *)customView; // The custom view.

- (instancetype)init NS_UNAVAILABLE;

/**
The dialog box display method.
*/
- (void)show;

/**
Add a button and its callback method.

@param buttonTitle  The button title.
@param actionBlock  The callback of the button tapping action.
*/
- (void)addButton:(NSString *)buttonTitle actionBlock:(AUDialogActionBlock)actionBlock;
```

```
/**
The method of closing the dialog box. It is similar to the
dismissWithClickedButtonIndex method of APAlertView.
*/
- (void)dismissWithClickedButtonIndex:(NSInteger)buttonIndex animated:(BOOL)animated;

/**
Set the text alignment mode.
@param alignment    The alignment mode.
*/
- (void)setMessageAlignment:(NSTextAlignment)alignment;
```

Add a new dialog box

- Use the block to add a callback of the button tapping action.

```
 AUNoticeDialog *dialog = [[AUNoticeDialog alloc] initWithTitle:@"Title" message:@"Me
ssage details"];
  [dialog addButton:@"Got it" actionBlock:^{
      NSLog(@"print pressed")
  }];
  [dialog addButton:@"OK" actionBlock:nil];
  [dialog show];
```

- Use the delegate to add a callback of the button tapping action.

```
 AUNoticeDialog *dialog = [[AUNoticeDialog alloc] initWithTitle:@"Title" message:@"Me
ssage details" delegate:delegate buttonTitles:@"OK", nil];
  [dialog show];

  The delegate protocol is AUDialogDelegate, similar to UIAlertViewDelegate.
```

- Create a dialog box in a simple way.

```
 NS_INLINE AUNoticeDialog *AUNoticeDialogWithTitle(NSString *title)
  NS_INLINE AUNoticeDialog *AUNoticeDialogWithTitleAndMessage(NSString *title, NSStri
ng *message)
```

Use APAlertView and UIAlertView

This section describes how to modify APAlertView and UIAlertView to AUNoticeDialog.

Most APIs of AUNoticeDialog support APAlertView and UIAlertView. In most cases, you may only need to modify the class name. The detailed operations are as follows:

- Use an API of AUNoticeDialog that supports APAlertView to create a dialog box.

```
  - (instancetype)initWithTitle:(NSString *)title
                        message:(NSString *)message
                       delegate:(id<AUDialogDelegate>)delegate
              cancelButtonTitle:(NSString *)cancelButtonTitle
              otherButtonTitles:(NSString *)otherButtonTitles, ...
NS_REQUIRES_NIL_TERMINATION;
```

Change the class name from `[[APAlertView alloc] initWithxxxxxx]` to `[[AUNoticeDialog alloc] initWithxxxxxx]`.

- Use the following method to create UIAlertView. **No modification is required**, because relevant modification has been added to the API.

```
  NS_INLINE UIAlertView *UIAlertViewWithTitleAndMessage(NSString *title, NSString *message)
  //
  NS_INLINE UIAlertView *UIAlertViewWithTitle(NSString *title)
  NS_INLINE UIAlertView *UIAlertViewWithMessage(NSString *message)
```

- Use the addButtonWithTitle API that supports APAlertView to create a dialog box. **No modification is required.**

```
  - (NSInteger)addButtonWithTitle:(NSString *)title callback:(void (^)(int index, NSSTring *title))callback;

  /**
   @brief Add a cancel button and its callback.
   @param title The button title.
   @param callback The callback.
   */
  - (NSInteger)addCancelButtonWithTitle:(NSString *)title callback:(void (^)(int index, NSString *title))callback;

  /**
   @brief Add a button.
   @param title The button title.
   */
  - (NSInteger)addButtonWithTitle:(NSString *)title;

  /**
   @brief Add a cancel button.
   @param title The button title.
   */
  - (NSInteger)addCancelButtonWithTitle:(NSString *)title;

  +(void)setBackgroundMode:(BOOL)isBackMode;
```

- Use the following method of UIAlertView to create a dialog box. **No modification is required**. AUNoticeDialog has a method of the same name.

```
  /**
  The method of closing the dialog box. It is similar to the
dismissWithClickedButtonIndex method of APAlertView.
  */
  - (void)dismissWithClickedButtonIndex:(NSInteger)buttonIndex animated:
(BOOL)animated
  - (nullable NSString *)buttonTitleAtIndex:(NSInteger)buttonIndex;
  /**
   Specify the number of buttons. (It is similar to numberOfButtons of APAlertView.)
   */
  @property(nonatomic,readonly) NSInteger numberOfButtons;

  /**
   The index of the cancel button. (It is similar to cancelButtonIndex of
APAlertView.)
   */
  @property(nonatomic) NSInteger cancelButtonIndex;
```

- When you call the following APIs of APAlertView, **you only need to change the method name**.
  - Change the `showAlert` method to `show`.

    For example, change `[alertView showAlert]` to `[alertView show]`.
  - Change the `removeAllAlerviews` method to `dismissAll`.

    For example, change `[APAlertView removeAllAlerviews]` to `[AUNoticeDialog dismissAll]`.
- To use the input box feature of APAlertView or UIAlertView, replace the corresponding methods with those of AUInputDialog. The operations are the same as those of AUNoticeDialog.

> **Note**
>
> The class file is AUInputDialog.h.

Use UIAlertController

- Modify the creation method as follows:

```
 [UIAlertController alertControllerWithTitle:title message:message
preferredStyle:UIAlertControllerStyleAlert]
  Modified to:
  [[AUNoticeDialog alloc] initWithTitle:@"Title" message:@"Message details"]
```

- Modify the button and callback addition method as follows:

```
 [UIAlertAction actionWithTitle:title style:(UIAlertActionStyle)style
handler:handler]
  Modified to:
  [dialog addButton:@"Got it" actionBlock:^{
      NSLog(@"xxxx");
  }]
```

Code sample

- Standard style

```
 AUNoticeDialog *dialog = [[AUNoticeDialog alloc] initWithTitle:@"Standard control" m
essage:@"The controls of the same type must have the same name on two platforms. The
prefix in a control name is \"AU\". Custom properties of a control are named in the c
amel-case format. Note: Some controls may be implemented in one platform but not in t
he other platform."] ;
  [dialog addButton:@"Got it" actionBlock:nil];
  [dialog addButton:@"OK" actionBlock:nil];
  [dialog show];
```

- Custom style

```
 UIView *customView = [[UIView alloc] initWithFrame:CGRectMake(0, 0, 240, 60)];
  customView.backgroundColor = [UIColor greenColor];

  AUNoticeDialog *dialog = [[AUNoticeDialog alloc] initWithCustomView:customView];
  [dialog addButton:@"Cancel" actionBlock:nil];
  [dialog addButton:@"OK" actionBlock:nil];
  [dialog show];
```

1.5.5.12. Custom date picker

ACustomDatePicker is a custom date selection control and currently supports the following modes:

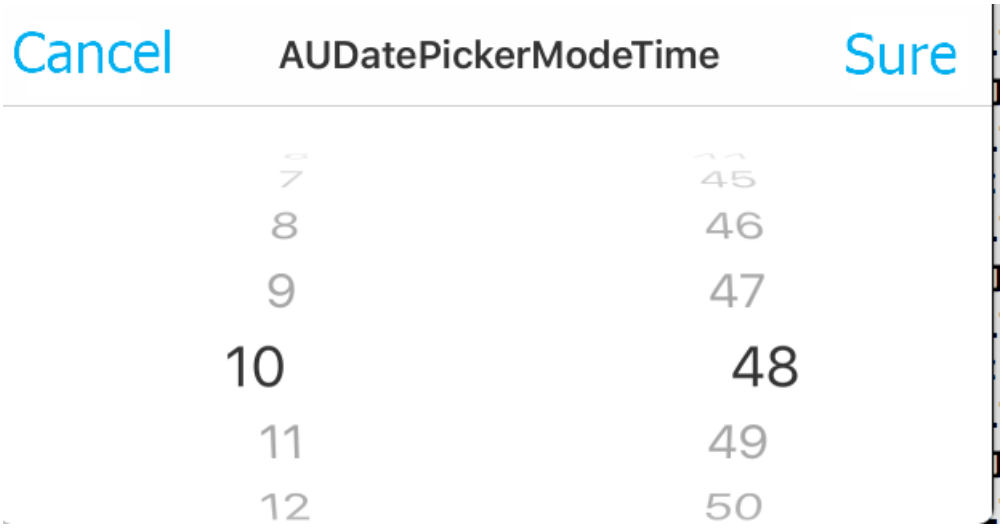
- `AUDatePickerModeTime` : hour/minute, 24-hour clock
- `AUDatePickerModeDate` : year/month/day
- `AUDatePickerModeDateAndTime` : month/day/day of week/hour/minute, 24-hour clock

> **Note**
>
> The year is defined based on minimumDate and is 2000 (leap year) by default. Therefore, February 29 exists.

- `AUDatePickerYear` : year
- `AUDatePickerYearMonth` : year/month

Sample images

- AUDatePickerModeTime



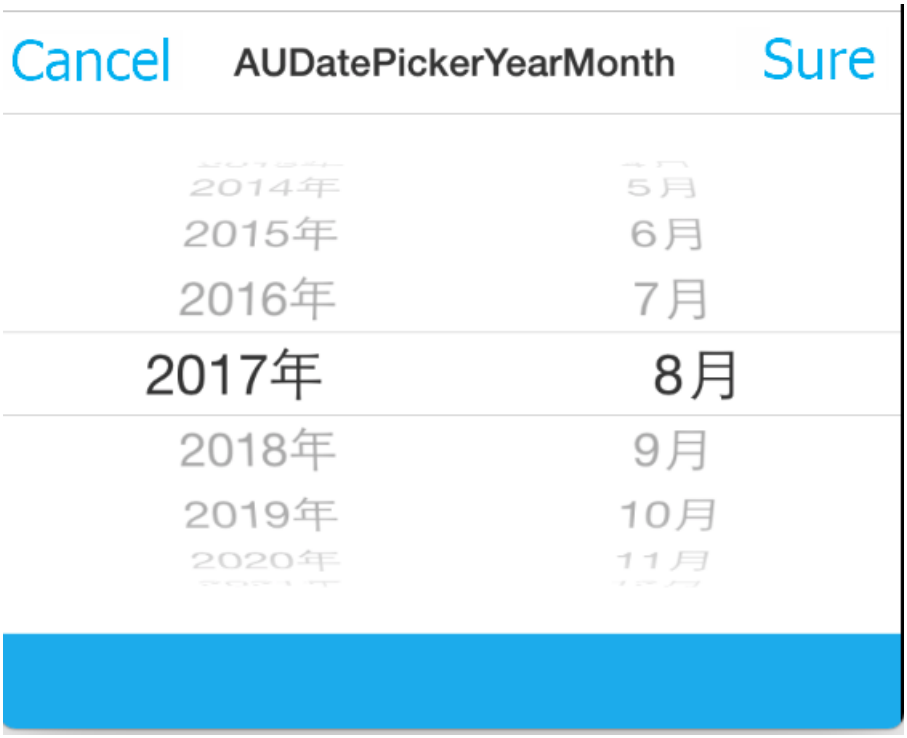
- AUDatePickerModeDate

- AUDatePickerModeDateAndTime

- AUDatePickerYear

- AUDatePickerYearMonth

- With a custom bottom view



API description

AUCustomDatePicker.h

```
// The custom bottom view.
@property (nonatomic,strong) UIView *bottomView;


/**
 * Create a picker, in AUDatePickerModeDate mode by default.
 *
 */
+ (AUCustomDatePicker *)pickerViewWithTitle:(NSString *)title;

+ (AUCustomDatePicker *)pickerViewWithTitle:(NSString *)title pickerMode:
(AUCustomDatePickerMode)mode;


/**
 * Set an available date range.
 @param minDate The earliest time (included), which is 00:00:00 on January 1, 2000 by d
efault.
 @param maxDate The latest time (included), which is 23:59:59 on December 31, 2050 by d
efault.
 */
- (void) setTimeDateminDate:(NSDate *)minDate MaxDate:(NSDate *)maxDate;



/**
 @param currentDate The time selected by default.
 */
- (void) setCurrentDate:(NSDate *) currentDate animated:(BOOL) animated;



/**
 Show the date selection control.
 */
-(void) show;

/**
 Hide the date selection control.
 */
-(void) hide;
```

Code sample

- Create

```
 self.apCustomDatePickerView = [AUCustomDatePicker
pickerViewWithTitle:@"AUDatePickerYearMonth" pickerMode:AUDatePickerYearMonth];

  UIView *customBottomView = [[UIView alloc]initWithFrame:CGRectMake(0, 0, AUCommonUI
GetScreenWidth(), 40)];
  customBottomView.backgroundColor = RGB(0x00AAEE);
  self.apCustomDatePickerView.bottomView = customBottomView;

  [self.apCustomDatePickerView setCurrentDate:[NSDate date] animated:NO];
  self.apCustomDatePickerView.tag = 1004;
  self.apCustomDatePickerView.delegate = self;
  [self.view addSubview:self.apCustomDatePickerView];
```

- Show/Hide

```
 [self.apCustomDatePickerView show];
  [self.apCustomDatePickerView hide];
```

- Value

```
 - (void)cancelPickerView:(AUCustomDatePicker *)pickerView
  {
    [self.apCustomDatePickerView hide];
  }

  - (void)selectedPickerView:(AUCustomDatePicker *)pickerView
  {

    NSDate *selectedDate = picker.selectedDate;

    NSDateFormatter *formatter = [[NSDateFormatter alloc]init];
    formatter.dateFormat = @"YYYY-MM-dd HH:mm:ss";

    [self.textLabel setText:[formatter stringFromDate:selectedDate]];

    [pickerView hide];

  }
```

1.5.6. Loading components

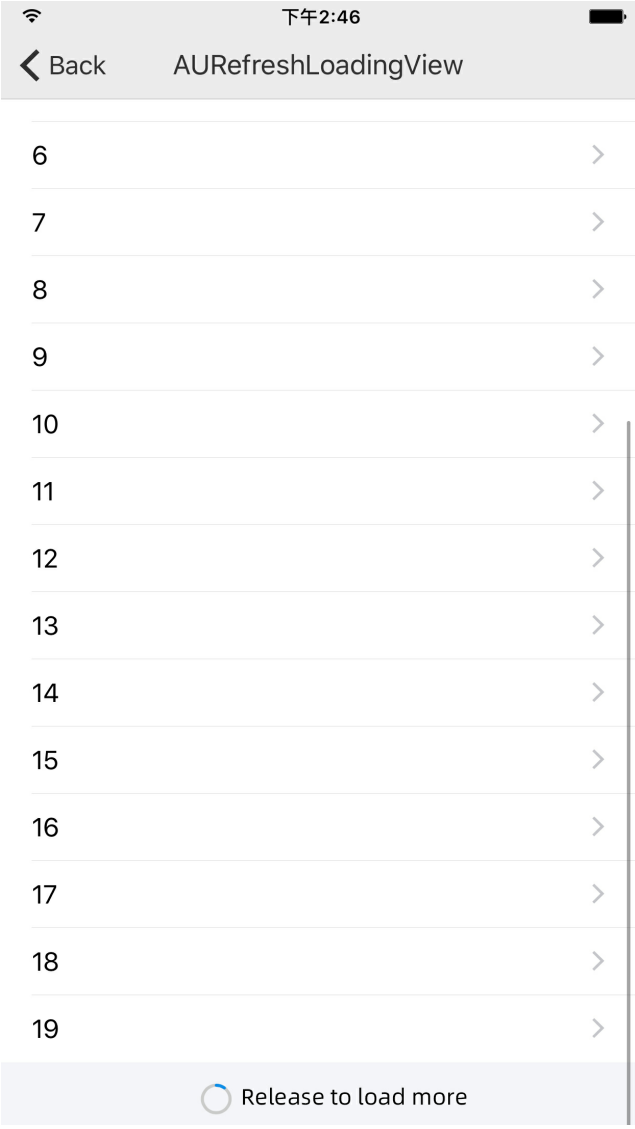
1.5.6.1. Pull-up refresh control

AUDragLoadingView and Aupullloadingview provide the loading style when the page is pulled up or down.

The following controls are not customized for businesses and must be switched to the AUPullLoadingView or AUDragLoadingView control:

CommonUI: ODRefreshControl, APCircleRefreshControl, EGORefreshTableHeaderView, and APNextPagePullView

Sample image



API description

- **AUDragLoadingView.h**

```
//
//  AUDragLoadingView.h
//  AntUI
//

#import <AntUI/AntUI.h>

@interface AUDragLoadingView : AUPullLoadingView

@end
```

- **AUPullLoadingView.h**

  For more information, see Pull loading view control.

Sample code

```
//
```

```
//  APRefreshTableViewController.m
//  UIDemo
//

#import "APRefreshTableViewController.h"
@interface APRefreshTableViewController ()
{
    BOOL _headerReloading;
    BOOL _footerReloading;
    BOOL _isHeader;
}
@property(nonatomic,strong)AUPullLoadingView *refreshHeaderView;
@property(nonatomic,strong)AUDragLoadingView *refreshFooterView;
@property(nonatomic, strong) UITableView *tableView;
@property(nonatomic, strong) NSMutableArray* listArray;


@end

@implementation APRefreshTableViewController

- (id)initWithNibName:(NSString *)nibNameOrNil bundle:(NSBundle *)nibBundleOrNil
{
    self = [super initWithNibName:nibNameOrNil bundle:nibBundleOrNil];
    if (self) {
        // Custom initialization
        NSArray *array = @[@"0",
                           @"1",
                           @"2",
                           @"3",
                           @"4",
                           @"5",
                           @"6",
                           @"7",
                           @"8",
                           @"9",
                           @"10",
                           @"11",
                           @"12",
                           @"13",
                           @"14",
                           @"15",
                           @"16",
                           @"17",
                           @"18",
                           @"19"];
        self.listArray = [NSMutableArray arrayWithArray:array];
    }
    return self;
}

- (void)viewDidLoad
{
    [super viewDidLoad];
    // Do any additional setup after loading the view
```

```
    // Do any additional setup after loading the view.
    self.edgesForExtendedLayout = UIRectEdgeNone;
//    self.navigationItem.rightBarButtonItem = [APUtil
getBarButtonWithTitle:RightBarButtonTitle target:self];

    self.tableView = [[UITableView alloc]initWithFrame:self.view.bounds
style:UITableViewStylePlain];
    self.tableView.dataSource = self;
    self.tableView.delegate = self;
    self.tableView.backgroundColor = [UIColor colorWithRGB:0xf5f5f9];
    self.tableView.separatorColor = [UIColor colorWithRGB:0xdddddd];
    [self.view addSubview:self.tableView];

    if (_refreshHeaderView == nil) {

        AUPullLoadingView *view = [[AUPullLoadingView alloc]
initWithFrame:CGRectMake(0.0f, 0.0f - self.tableView.bounds.size.height,
self.view.frame.size.width, self.tableView.bounds.size.height)];
        view.delegate = self;
        [view ShowLastPullDate:YES];
        [view ShowStatusLabel:NO];

        [self.tableView addSubview:view];
        _refreshHeaderView = view;
    }
    [_refreshHeaderView refreshLastUpdatedDate];

    if (_refreshFooterView == nil) {
        AUDragLoadingView *view = [[AUDragLoadingView alloc]
initWithFrame:CGRectMake(0, 0, self.view.bounds.size.width, 48)];
        view.delegate = self;
        [view setPullUp:@"release to load more"];
        [view setRelease:@"Relax"];
        self.tableView.tableFooterView = view;
        _refreshFooterView = view;
    }

    _isHeader = YES;
}

- (void)didReceiveMemoryWarning
{
    [super didReceiveMemoryWarning];
    // Dispose of any resources that can be recreated.
}

#pragma tableview datasource
- (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
{
    return 1;
}

- (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:
(NSInteger)section
{
```

```
    return _listArray.count;
}

- (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexP
ath *)indexPath
{
    static NSString *CellIdentifier = @"RefreshCell";
    UITableViewCell *cell = [tableView
dequeueReusableCellWithIdentifier:CellIdentifier];
    if (nil == cell)
    {
        cell = [[UITableViewCell alloc] initWithStyle:UITableViewCellStyleDefault
                                        reuseIdentifier:CellIdentifier];
    }
    cell.textLabel.text = _listArray[indexPath.row];
    cell.accessoryType = UITableViewCellAccessoryDisclosureIndicator;

    return cell;
}

#pragma mark -
#pragma mark Data Source Loading / Reloading Methods

- (void)reloadHeaderTableViewDataSource{

    //  should be calling your tableviews data source model to reload
    //  put here just for demo
    NSInteger first = [_listArray[0] integerValue] - 1;
    [_listArray insertObject:[NSString stringWithFormat:@"%li",(long)first] atIndex:0];

    _headerReloading = YES;
}

- (void)doneLoadingHeaderTableViewData{

    //  model should call this when its done loading
    _headerReloading = NO;
    [_refreshHeaderView
egoRefreshScrollViewDataSourceDidFinishedLoading:self.tableView];
    [self.tableView reloadData];

}

- (void)reloadFooterTableViewDataSource{

    //  should be calling your tableviews data source model to reload
    //  put here just for demo
    NSInteger count = [_listArray count];
    NSInteger last = [_listArray[count-1] integerValue] + 1;
    [_listArray addObject:[NSString stringWithFormat:@"%li",(long)last]];

    _footerReloading = YES;
}
```

```
- (void)doneLoadingFooterTableViewData{

    //  model should call this when its done loading
    _footerReloading = NO;
    [_refreshFooterView
egoRefreshScrollViewDataSourceDidFinishedLoading:self.tableView];
    [self.tableView reloadData];

}

#pragma mark -
#pragma mark UIScrollViewDelegate Methods

- (void)scrollViewDidScroll:(UIScrollView *)scrollView
{
    if (scrollView.contentInset.top + scrollView.contentOffset.y < 0) {
        _isHeader = YES;
    } else {
        _isHeader = NO;
    }

    if (_isHeader) {
        [_refreshHeaderView egoRefreshScrollViewDidScroll:scrollView];
    } else {
        [_refreshFooterView egoRefreshScrollViewDidScroll:scrollView];
    }
}

- (void)scrollViewDidEndDragging:(UIScrollView *)scrollView willDecelerate:
(BOOL)decelerate
{
    if (_isHeader) {
        [_refreshHeaderView egoRefreshScrollViewDidEndDragging:scrollView];
    } else {
        [_refreshFooterView egoRefreshScrollViewDidEndDragging:scrollView];
    }
}

#pragma mark -
#pragma mark EGORefreshTableHeaderDelegate Methods

- (void)egoRefreshTableHeaderDidTriggerRefresh:(AUPullLoadingView*)view
{
    if (_isHeader) {
        [self reloadHeaderTableViewDataSource];
        [self performSelector:@selector(doneLoadingHeaderTableViewData) withObject:nil
afterDelay:2.0];
    } else {
        [self reloadFooterTableViewDataSource];
        [self performSelector:@selector(doneLoadingFooterTableViewData) withObject:nil
afterDelay:2.0];
    }

}
```

```
- (BOOL)egoRefreshTableHeaderDataSourceIsLoading:(AUPullLoadingView*)view
{
    if (_isHeader) {
        return _headerReloading;
    } else {
        return _footerReloading; // should return if data source model is reloading
    }

}

- (NSDate*)egoRefreshTableHeaderDataSourceLastUpdated:(AUPullLoadingView*)view{

    return [NSDate date]; // should return date data source was last changed

}

@end
```

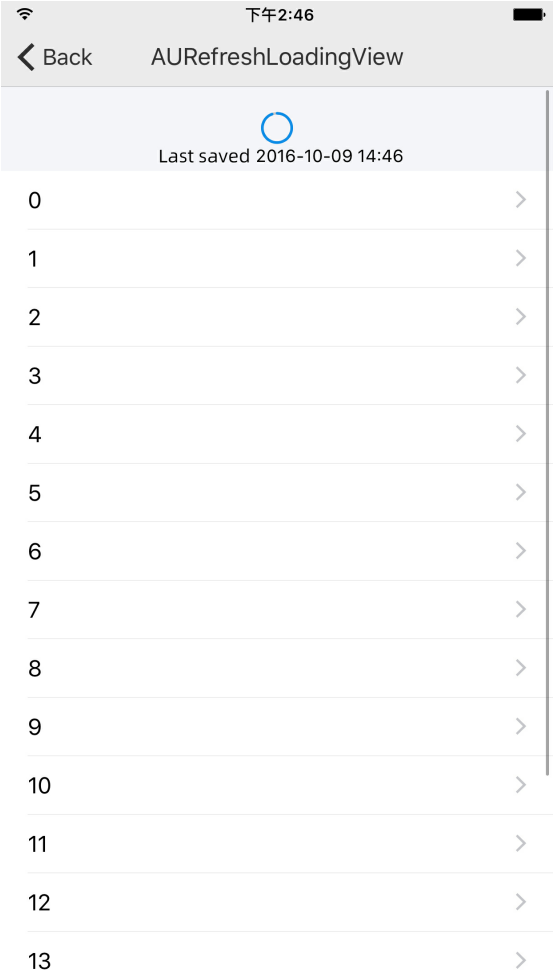
1.5.6.2. Pull-down refresh component

The AUDragLoadingView and the Aupullloadingview provide the loading style when the page is pulled up or down.

The following controls are not customized for businesses and must be switched to the AUPullLoadingView or AUDragLoadingView control.

CommonUI: ODRefreshControl, APCircleRefreshControl, EGORefreshTableHeaderView, and APNextPagePullView.

Sample image



API description

- **AUPullLoadingView.h**

```
//
//  EGORefreshTableHeaderView.h
//  Demo
//

#import <UIKit/UIKit.h>
#import <QuartzCore/QuartzCore.h>

typedef enum {
    AUEGOPullingDown = 1000,
    AUEGOPullingUp
} AUEGOPullDirection;

typedef enum{
    AUEGOOPullRefreshPulling = 0,
    AUEGOOPullRefreshNormal,
    AUEGOOPullRefreshLoading,
} AUEGOPullRefreshState;

@class AULoadingIndicatorView;
@protocol AURefreshLoadingViewDelegate;
```

```
  /*!
   @class         AURefreshLoadingView
   @abstract      UIView
   @discussion    This class is migrated from EGORefreshTableHeaderView. The class is
used to load more views through pulling up or down.
   */

  @interface AUPullLoadingView : UIView {

      __weak id _delegate;
      AUEGOPullRefreshState _state;

      UILabel *_lastUpdatedLabel;
      UILabel *_statusLabel;
  //    APActivityIndicatorView *_activityView;
      AUEGOPullDirection _pullDirection;

      BOOL    isAutoPullFlag;
  }
  @property(nonatomic, strong) AULoadingIndicatorView *activityView;

  /**
   *  Set the text for pull-up-to-load in initial state. The default value is "Pull u
p to load more", which is displayed upon pull-up.
   *
   *  @param tip The tip text.
   *
   */
  - (void)setPullUp:(NSString *)tip;

  /**
   *  Set the text for pull-down fresh in initial state. The default value is "Pull d
own to refresh", which is not displayed upon pull-down.
   *
   *  @param tip The tip text.
   *
   */
  - (void)setPullDown:(NSString *)tip;

  /**
   *  Set the text for the loading process displayed after release. The default value
is "Loading".
   *  Note: The tip text is displayed in the loading process upon pull-up but not pul
l-down by default.
   *
   *  @param tip The tip text.
   *
   */
  - (void)setLoading:(NSString *)tip;

  /**
   *  The text displayed to prompt a user to release. The default value is "Release t
o refresh".
   *
```

```
   *  @param tip The tip text.
   *
   */
  - (void)setRelease:(NSString *)tip;

  /**
   *  Specify whether to display the text about the last update. The text is not disp
layed by default.
   *
   *  @param isOpen If this parameter is set to YES, the text is displayed.
   *
   */
  - (void)ShowLastPullDate:(BOOL)isOpen;

  /**
   *  Specify whether to display the text for the loading process.
   *
   *  Default: No text is displayed upon pull-down refresh, and "Loading" is displaye
d upon pull-up-to-load.
   *
   *  @param isShow If this parameter is set to YES, the text is displayed.
   *
   */
  - (void)ShowStatusLabel:(BOOL)isShow;

  - (void)setDateFormat:(NSDateFormatter *)dateFromatter;

  - (void)setAutoPull:(BOOL)isAutoPull;

  @property(nonatomic,weak) id <AURefreshLoadingViewDelegate> delegate;

  - (void)refreshLastUpdatedDate;
  - (void)egoRefreshScrollViewDidScroll:(UIScrollView *)scrollView;
  - (void)egoRefreshScrollViewDidEndDragging:(UIScrollView *)scrollView;
  - (void)egoRefreshScrollViewDataSourceDidFinishedLoading:(UIScrollView
*)scrollView;
  - (void)egoRefreshScrollViewDataSourceDidFinishedLoadingWithoutUpdate:(UIScrollView
*)scrollView;

  - (void)autoUpdateScrollView:(UIScrollView *)scrollView;

  #pragma Mark -- for LegacySystem not recommend
  @property(nonatomic,assign) AUEGOPullRefreshState state;
  @property(nonatomic,retain) NSString *statusText;
  @property (nonatomic, retain) UILabel *lastUpdatedLabel;
  @property (nonatomic, retain) UILabel *statusLabel;

  - (void)setCurrentDate;

  @end

  @protocol AURefreshLoadingViewDelegate
  - (void)egoRefreshTableHeaderDidTriggerRefresh:(AUPullLoadingView*)view;
  - (BOOL)egoRefreshTableHeaderDataSourceIsLoading:(AUPullLoadingView*)view;
  @optional
```

```
    - (NSDate*)egoRefreshTableHeaderDataSourceLastUpdated:(AUPullLoadingView*)view;
    @end
```

- **AUDragLoadingView.h**

  For more information, see Drag loading view control.

Sample code

```
//
//  APRefreshTableViewController.m
//  UIDemo
//

#import "APRefreshTableViewController.h"
@interface APRefreshTableViewController ()
{
    BOOL _headerReloading;
    BOOL _footerReloading;
    BOOL _isHeader;
}
@property(nonatomic,strong)AUPullLoadingView *refreshHeaderView;
@property(nonatomic,strong)AUDragLoadingView *refreshFooterView;
@property(nonatomic, strong) UITableView *tableView;
@property(nonatomic, strong) NSMutableArray* listArray;


@end

@implementation APRefreshTableViewController

- (id)initWithNibName:(NSString *)nibNameOrNil bundle:(NSBundle *)nibBundleOrNil
{
    self = [super initWithNibName:nibNameOrNil bundle:nibBundleOrNil];
    if (self) {
        // Custom initialization
        NSArray *array = @[@"0",
                           @"1",
                           @"2",
                           @"3",
                           @"4",
                           @"5",
                           @"6",
                           @"7",
                           @"8",
                           @"9",
                           @"10",
                           @"11",
                           @"12",
                           @"13",
                           @"14",
                           @"15",
                           @"16",
                           @"17",
                           @"18",
```

```
                                @"19"];
        self.listArray = [NSMutableArray arrayWithArray:array];
    }
    return self;
}

- (void)viewDidLoad
{
    [super viewDidLoad];
    // Do any additional setup after loading the view.
    self.edgesForExtendedLayout = UIRectEdgeNone;
//    self.navigationItem.rightBarButtonItem = [APUtil
getBarButtonWithTitle:RightBarButtonTitle target:self];

    self.tableView = [[UITableView alloc]initWithFrame:self.view.bounds
style:UITableViewStylePlain];
    self.tableView.dataSource = self;
    self.tableView.delegate = self;
    self.tableView.backgroundColor = [UIColor colorWithRGB:0xf5f5f9];
    self.tableView.separatorColor = [UIColor colorWithRGB:0xdddddd];
    [self.view addSubview:self.tableView];

    if (_refreshHeaderView == nil) {

        AUPullLoadingView *view = [[AUPullLoadingView alloc]
initWithFrame:CGRectMake(0.0f, 0.0f - self.tableView.bounds.size.height,
self.view.frame.size.width, self.tableView.bounds.size.height)];
        view.delegate = self;
        [view ShowLastPullDate:YES];
        [view ShowStatusLabel:NO];

        [self.tableView addSubview:view];
        _refreshHeaderView = view;
    }
    [_refreshHeaderView refreshLastUpdatedDate];

    if (_refreshFooterView == nil) {
        AUDragLoadingView *view = [[AUDragLoadingView alloc]
initWithFrame:CGRectMake(0, 0, self.view.bounds.size.width, 48)];
        view.delegate = self;
        [view setPullUp:@"Pull up to load more"];
        [view setRelease:@"Relax"];
        self.tableView.tableFooterView = view;
        _refreshFooterView = view;
    }

    _isHeader = YES;
}

- (void)didReceiveMemoryWarning
{
    [super didReceiveMemoryWarning];
    // Dispose of any resources that can be recreated.
}
```

```
#pragma tableview datasource
- (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
{
    return 1;
}

- (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:
(NSInteger)section
{
    return _listArray.count;
}

- (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexP
ath *)indexPath
{
    static NSString *CellIdentifier = @"RefreshCell";
    UITableViewCell *cell = [tableView
dequeueReusableCellWithIdentifier:CellIdentifier];
    if (nil == cell)
    {
        cell = [[UITableViewCell alloc] initWithStyle:UITableViewCellStyleDefault
                                      reuseIdentifier:CellIdentifier];
    }
    cell.textLabel.text = _listArray[indexPath.row];
    cell.accessoryType = UITableViewCellAccessoryDisclosureIndicator;

    return cell;
}

#pragma mark -
#pragma mark Data Source Loading / Reloading Methods

- (void)reloadHeaderTableViewDataSource{

    //  should be calling your tableviews data source model to reload
    //  put here just for demo
    NSInteger first = [_listArray[0] integerValue] - 1;
    [_listArray insertObject:[NSString stringWithFormat:@"%li",(long)first] atIndex:0];

    _headerReloading = YES;
}

- (void)doneLoadingHeaderTableViewData{

    //  model should call this when its done loading
    _headerReloading = NO;
    [_refreshHeaderView
egoRefreshScrollViewDataSourceDidFinishedLoading:self.tableView];
    [self.tableView reloadData];

}

- (void)reloadFooterTableViewDataSource{
```

```
    //  should be calling your tableviews data source model to reload
    //  put here just for demo
    NSInteger count = [_listArray count];
    NSInteger last = [_listArray[count-1] integerValue] + 1;
    [_listArray addObject:[NSString stringWithFormat:@"%li",(long)last]];

    _footerReloading = YES;
}

- (void)doneLoadingFooterTableViewData{

    //  model should call this when its done loading
    _footerReloading = NO;
    [_refreshFooterView
egoRefreshScrollViewDataSourceDidFinishedLoading:self.tableView];
    [self.tableView reloadData];

}

#pragma mark -
#pragma mark UIScrollViewDelegate Methods

- (void)scrollViewDidScroll:(UIScrollView *)scrollView
{
    if (scrollView.contentInset.top + scrollView.contentOffset.y < 0) {
        _isHeader = YES;
    } else {
        _isHeader = NO;
    }

    if (_isHeader) {
        [_refreshHeaderView egoRefreshScrollViewDidScroll:scrollView];
    } else {
        [_refreshFooterView egoRefreshScrollViewDidScroll:scrollView];
    }
}

- (void)scrollViewDidEndDragging:(UIScrollView *)scrollView willDecelerate:
(BOOL)decelerate
{
    if (_isHeader) {
        [_refreshHeaderView egoRefreshScrollViewDidEndDragging:scrollView];
    } else {
        [_refreshFooterView egoRefreshScrollViewDidEndDragging:scrollView];
    }
}

#pragma mark -
#pragma mark EGORefreshTableHeaderDelegate Methods

- (void)egoRefreshTableHeaderDidTriggerRefresh:(AUPullLoadingView*)view
{
    if (_isHeader) {
        [self reloadHeaderTableViewDataSource];
```

```
        [self performSelector:@selector(doneLoadingHeaderTableViewData) withObject:nil
afterDelay:2.0];
    } else {
        [self reloadFooterTableViewDataSource];
        [self performSelector:@selector(doneLoadingFooterTableViewData) withObject:nil
afterDelay:2.0];
    }

}

- (BOOL)egoRefreshTableHeaderDataSourceIsLoading:(AUPullLoadingView*)view
{
    if (_isHeader) {
        return _headerReloading;
    } else {
        return _footerReloading; // should return if data source model is reloading
    }

}

- (NSDate*)egoRefreshTableHeaderDataSourceLastUpdated:(AUPullLoadingView*)view{

    return [NSDate date]; // should return date data source was last changed

}

@end
```

1.5.6.3. Loading component

AULoadingView is a new loading control that provides a loading page with progress indicator, loading progress, and loading text.

API description

AULoadingView.h

```
//
//  AULoadingView.h
//  AntUI
//

#import <UIKit/UIKit.h>

/**
  Set the middle loading control to display a percentage.
 */
@interface AULoadingView : UIView

@property (nonatomic,assign) BOOL isShowProgressPer; // Specify whether to display the
progress percentage. The default value is NO.
@property (nonatomic,assign) BOOL isShowLoadingText; // Specify whether to display the
loading text. The default value is NO.


/**
  Set the progress percentage.

 @param progress The percentage.
 */
- (void) setProgressPer:(CGFloat) progress;


@end
```

Sample code

```
//
//  AULoadingViewController.m
//  AntUI
//

#import "AULoadingViewController.h"
#import "AULoadingView.h"

@interface AULoadingViewController ()
@property (nonatomic,strong) AULoadingView * loadingView;
@property (nonatomic,strong) AULoadingView * loadingView2;
@property (nonatomic,strong) AULoadingView * loadingView3;

@property (nonatomic,assign) CGFloat progress;

@end

@implementation AULoadingViewController

- (void)viewDidLoad {
    [super viewDidLoad];
    self.view.backgroundColor = [UIColor whiteColor];
    // Do any additional setup after loading the view.
```

```
    self.loadingView = [[AULoadingView alloc] init];
    self.loadingView.center = CGPointMake(200, 200);
    self.loadingView.isShowProgressPer = YES;
    self.loadingView.isShowLoadingText = YES;
    [self.view addSubview:self.loadingView];

    self.loadingView2 = [[AULoadingView alloc] init];
    self.loadingView2.center = CGPointMake(200, 150);
//    self.loadingView2.isShowProgressPer = YES;
//    self.loadingView2.isShowLoadingText = YES;
    [self.view addSubview:self.loadingView2];


    self.loadingView3 = [[AULoadingView alloc] init];
    self.loadingView3.center = CGPointMake(200, 300);
//    self.loadingView3.isShowProgressPer = YES;
    self.loadingView3.isShowLoadingText = YES;
    [self.view addSubview:self.loadingView3];


    [NSTimer scheduledTimerWithTimeInterval:0.1
                                                      target:self
                                                    selector:@selector(loadingTimer:)
                                                    userInfo:nil
                                                     repeats:YES];

}


- (void) loadingTimer:(id)timer
{
    self.progress += 0.01;
    if ((int)(self.progress *100) > 100) {
        self.progress = 0.0;
        [timer invalidate];
        return;
    }
    [self.loadingView setProgressPer:self.progress];
    [self.loadingView2 setProgressPer:self.progress];
    [self.loadingView3 setProgressPer:self.progress];

}


- (void)didReceiveMemoryWarning {
    [super didReceiveMemoryWarning];
    // Dispose of any resources that can be recreated.
}

/*
#pragma mark - Navigation

// In a storyboard-based application, you will often want to do a little preparation be
fore navigation
```

```
- (void)prepareForSegue:(UIStoryboardSegue *)segue sender:(id)sender {
    // Get the new view controller using [segue destinationViewController].
    // Pass the selected object to the new view controller.
}
*/

@end
```

1.5.7. Result page component

1.5.7.1. Result page component

AUResultView displays status result views with an image.

API description

```
/**
The result view that displays the status.
*/
@interface AUResultView : UIView

/**
The image at the top.
*/
@property (nonatomic, strong) UIImage *icon;

/**
The middle-sized title in black at the top of the text field.
*/
@property (nonatomic, strong) NSString *mainTitleText;

/**
The large-sized title in black in the middle.
*/
@property (nonatomic, strong) NSString *midTitleText;

/**
The message in gray at the bottom.
*/
@property (nonatomic, strong) NSString *bottomMessage;

/**
Specify whether strikethrough is added to the message at the bottom.
*/
@property (nonatomic, assign) BOOL messageThrough;

/**
The expected height of the view. You can obtain the value after initialization is compl
eted.
*/
@property (nonatomic, assign, readonly) CGFloat expectHeight;

/**
The ResultView instance method.

@param icon             The image.
@param mainTitleText    The first title.
@param midTitleText     The large-sized title in the middle.
@param bottomMessage    The message in gray at the bottom.
@param messageThrough   Specify whether strikethrough is added to the message.
@return                 The AUResultView instance.
*/
- (instancetype)initWithIcon:(UIImage *)icon mainTitleText:(NSString *)mainTitleText mi
dTitleText:(NSString *)midTitleText bottomMessage:(NSString *)bottomMessage messageThro
ugh:(BOOL)messageThrough;
```

Code sample

```
UIImage *image = AUBundleImage(@"alipay-60");
AUResultView *resultView = [[AUResultView alloc] initWithIcon:image
mainTitleText:@"Payment succeeded"
midTitleText:@"998.00"
bottomMessage:@"CNY 1098.00"
messageThrough:YES];
resultView.frame = CGRectMake(marginX, originY, AUCommonUIGetScreenWidth()-2*marginX, r
esultView.expectHeight);
[self.view addSubview:resultView];
```

1.5.7.2. Exception page component

AUNetErrorView is the control that displays empty page errors, including two prompt styles:

- Simple style (default): includes five types.
- Illustrated style: includes five types.

The two styles differ in the used prompt images, as shown in the following sample images.

Sample images

- Simple style (half-screen)

- Complex style (full-screen)

API description

```
typedef NS_ENUM(NSInteger, AUNetErrorType) {

    AUNetErrorTypeLimit,         // Throttling.
    AUNetErrorTypeAlert,         // System busy(error) or warning.
    AUNetErrorTypeNetworkError, // Poor network
    AUNetErrorTypeEmpty,         // Empty content.
    AUNetErrorTypeNotFound,      // Page not found. (The image is the same as that used
in AUNetErrorTypeAlert.)
    AUNetErrorTypeUserLogout,    // User logout.

    AUNetErrorTypeFailure __attribute__((deprecated)) = AUNetErrorTypeNetworkError,
    AUNetErrorTypeError __attribute__((deprecated)) = AUNetErrorTypeNetworkError,
// No network connection.
    AUNetErrorTypeSystemBusy __attribute__((deprecated)) = AUNetErrorTypeAlert,
// Warning.
    APExceptionEnumNetworkError __attribute__((deprecated)) =
AUNetErrorTypeNetworkError,     // No network connection.
    APExceptionEnumEmpty __attribute__((deprecated)) = AUNetErrorTypeEmpty,            /
/ Empty content.
    APExceptionEnumAlert __attribute__((deprecated)) = AUNetErrorTypeAlert,            /
/ Warning.
    APExceptionEnumLimit __attribute__((deprecated)) = AUNetErrorTypeLimit,            /
/ Throttling.
    APExceptionEnumNetworkFailure __attribute__((deprecated)) =
AUNetErrorTypeNetworkError, // The network signal strength is poor
};


typedef NS_ENUM(NSInteger, AUNetErrorStyle) {
    AUNetErrorStyleMinimalist,     // The simple style.
    AUNetErrorStyleIlustration,    // The complex style.

    APExceptionStyleIlustration __attribute__((deprecated)) =
AUNetErrorStyleIlustration,  // The complex style.
    APExceptionStyleMinimalist __attribute__((deprecated)) =  AUNetErrorStyleMinimalist
// The simple style.
};
```

```
/**
     The control that displays empty page errors.

     Two prompt styles are supported:
            1. Simple style (default): includes three types.
            2. Illustrate style: includes seven types.

     The two styles differ in the used prompt images.
     */
    @interface AUNetErrorView : UIView

    @property(nonatomic, strong, readonly) UIButton *actionButton;      // The default
text is refresh.
    @property(nonatomic, strong, readonly) UIImageView *iconImageView;  // The icon vie
w.
    @property(nonatomic, strong, readonly) UILabel *infoLabel;          // The label of
the primary prompt text.
    @property(nonatomic, strong, readonly) UILabel *detailLabel;        // The label of
the detailed prompt text.

    @property(nonatomic, strong) NSString *infoTitle;                   // The primary t
ext.
    @property(nonatomic, strong) NSString *detailTitle;                 // The secondary
text.

    /**
     * Initialize the error view and set the error style and type.
     * (When target and action are empty, the refresh button will not be displayed.)
     *
     *  @param frame    Required. The coordinates of the view.
     *  @param style    Required. The complex or simple style.
     *  @param type     Required. The error type.
     *  @param target   The object to be processed in the refresh event.
     *  @param action   The method of processing the refresh event.
     *
     *  @return APExceptionView
     */
    - (id)initWithFrame:(CGRect)frame
                              style:(AUNetErrorStyle)style
                              type:(AUNetErrorType)type
                          target:(id)target
                          action:(SEL)action;

    /**
     * Initialize the error view and display it on the specified view.
     * (When target and action are empty, the refresh button will not be displayed.)
     *
     *  @param parent   Required. The superView of view.
     *  @param style    Required. error style, the complex or simple style.
     *  @param type     Required. The error type.
     *  @param target   The object to be processed in the refresh event.
     *  @param action   The method of processing the refresh event.
     *
     *  @return APExceptionView
```

```
     */
    + (id)showInView:(UIView *)parent
                        style:(AUNetErrorStyle)style
                        type:(AUNetErrorType)type
                        target:(id)target
                        action:(SEL)action;

    /**
     * Cancel the display of the error view.
     */
    - (void)dismiss;

    /**
 * The countdown, which can only be used in the case of throttling.
 * If completeBlock is nil and the business does not set a clicking response event for
actionButton, the countdown function does not take effect.
 * If completeBlock isn't nil, directly execute completeBlock and hide actionButton whe
n the countdown is over.
 * To call getActionButton to add a button response event, ensure that the actionButton
response event has been added.
 */
- (void)setCountdownTimeInterval:(NSInteger)startTime  // The countdown start time.
                    completeBlock:(void (^)(void))completeBlock; // Countdown ends.

    @end
```

Sample code

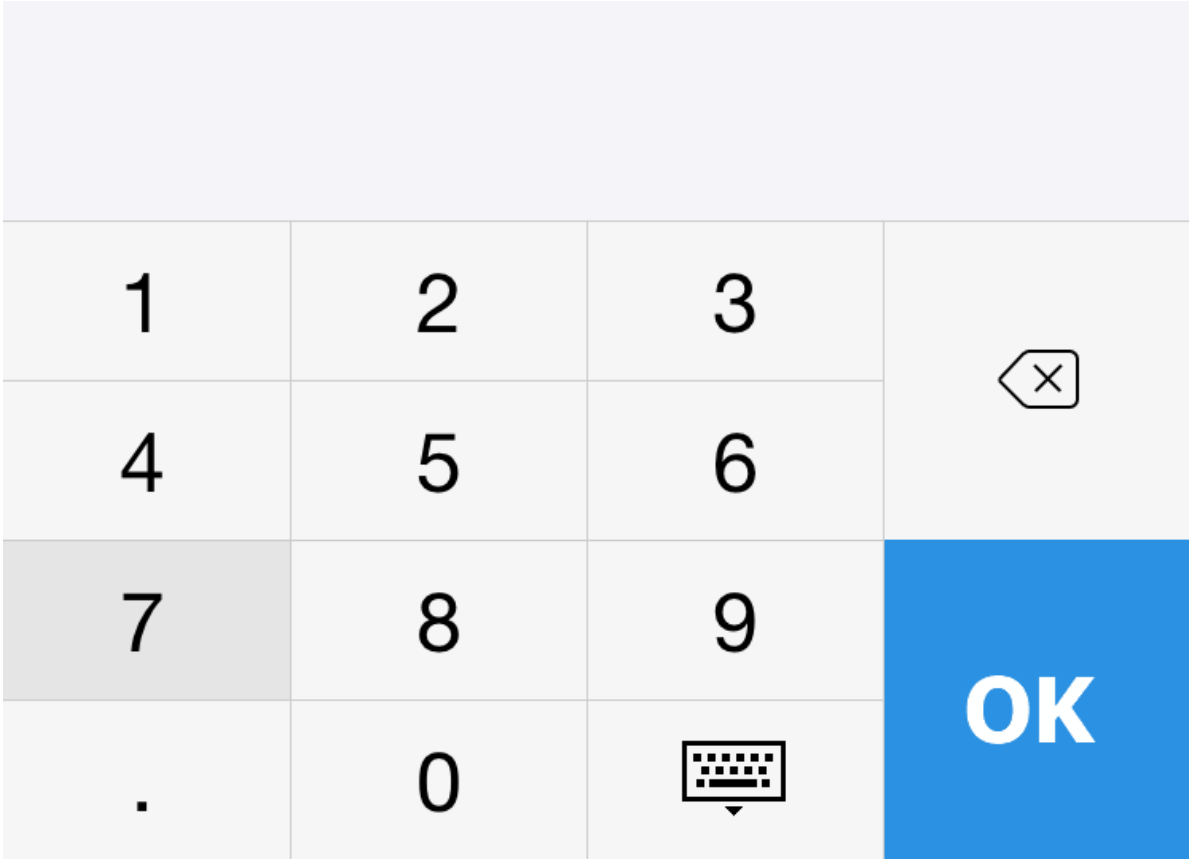
```
netErrorView = [[AUNetErrorView alloc] initWithFrame:CGRectMake(0,
CGRectGetMaxY(label.frame) + 5, self.view.width, 300) style:AUNetErrorStyleIlustration
type:AUNetErrorTypeError target:self action:@selector(pressedNetErrorView)];
    netErrorView.detailTitle = @"AUNetErrorTypeError type";
    [self.view addSubview:netErrorView];

    // Set the countdown.
    [netErrorView setCountdownTimeInterval:10 completeBlock:^{
            NSLog(@"Countdown ends");
    }];
```

1.5.8. Numeric keypad component

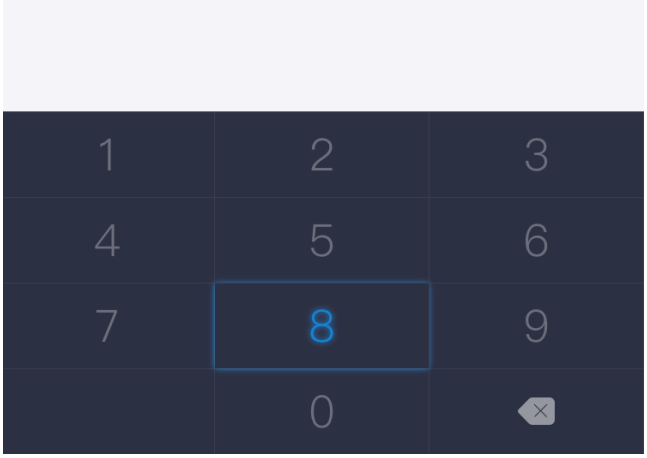
AUNumKeyboards is a custom numeric keypad component.

Sample images

- Common mode



- Chat mode



API description

```
typedef NS_ENUM(NSInteger, AUNumKeyboardMode) {
        AUNumKeyboardModeCommon,  // The numeric keypad is in common mode.
        AUNumKeyboardModeChat,    // The keypad is in chat mode.
        AUNumKeyboardModeInvalid  // The keypad is in invalid mode and unavailable.
};


/**
 Define a numeric keypad.
 */
@interface AUNumKeyboards : UIView
```

```
/**
 *  Create a numeric keypad component, which uses the common mode by default.
 *
 *  @return         Return the initialized numeric keypad component.
 */
+ (AUNumKeyboards *)sharedKeyboard;

/**
 *  Create a numeric keypad component.
 *
 *  @param mode     The numeric keypad mode.
 *
 *  @return         Return the initialized numeric keypad component.
 */
+ (AUNumKeyboards *)sharedKeyboardWithMode:(AUNumKeyboardMode)mode;

/**
 *  Manually set textInput. The Y-coordinate of the numeric keypad needs to be set exte
rnally.
 */
@property (nonatomic, weak) id<UITextInput> textInput;

/**
 *  The ID card number.
 */
@property (nonatomic, assign) BOOL idNumber;

/**
 *  Set the numeric keypad mode.
 */
@property (nonatomic, assign, readonly) AUNumKeyboardMode mode;

/**
 *  Specify whether to hide the decimal point.
 */
@property (nonatomic, assign) BOOL dotHidden;

/**
 *  Specify whether to hide the numeric keypad.
 */
@property (nonatomic, assign) BOOL dismissHidden;

/**
 *  Specify whether the submit button is clickable.
 */
@property (nonatomic, assign) BOOL submitEnable;

/**
 *  The text of the submit button.
 *  Note: To ensure the visual requirement, the text supports a maximum of six characte
rs.
 */
@property (nonatomic, strong) NSString *submitText;
```

Code sample

```
UITextField *numTextField = ...
numTextField.inputView = [AUNumKeyboards
sharedKeyboardWithMode:AUNumKeyboardModeCommon] ; // The chat mode parameter: AUNumKeyb
oardModeChat.
[self.view addSubview:numTextField];
```

1.5.9. Guidance component

1.5.9.1. Prompt component

AUPopTipView is a boot prompt component.

API description

```
typedef NS_ENUM(NSInteger, AUPopViewIndicatorDirection) {
    AUPopViewIndicatorDirectionUp,
    AUPopViewIndicatorDirectionDown,
};

@interface AUPopTipView : AUPopDrawBoardView

AU_UNAVAILABLE_INIT

@property (nonatomic, assign) AUPopViewIndicatorDirection indicatorDirection;

- (void)dismiss:(BOOL)animated;

+ (instancetype)showFromView:(UIView *)fromView
                   fromPoint:(CGPoint)fromPoint
                      toView:(UIView *)toView
                    animated:(BOOL)animated
                    withText:(NSString *)text
                 buttonTitle:(NSString *)buttonTitle;

@end
```

Sample code

```
// Display
AUPopTipView *popTipView = [AUPopTipView showFromView:button
                                          fromPoint:CGPointZero
                                             toView:self.view
                                           animated:YES
                                           withText:@"Text sample"
                                        buttonTitle:@"Close"]; // When buttontitle is n
ot transferred, the right button is not displayed.

// Hide
[popTipView dismiss:YES];
```

1.5.9.2. Floating layer bar component

AUPopBar is a guide floating layer bar component.

API description

```
@interface AUPopBar : AUView

AU_UNAVAILABLE_INIT

+ (instancetype)showInViewBottom:(UIView *)view
                        animated:(BOOL)animated
                        withText:(NSString *)text
                            icon:(UIImage *)icon
                     buttonTitle:(NSString *)buttonTitle
                     actionBlock:(BOOL(^)())actionBlock;

- (void)dismiss:(BOOL)animated;

@end
```

Sample code

```
// Display
AUPopBar *popBar = [AUPopBar showInViewBottom:weakSelf.view animated:YES withText:@"Add
"City services" to the homepage" icon:[UIImage imageNamed:@"ap_scan"] buttonTitle:@"Add
now" actionBlock:^{
                    NSLog(@"Clicked");
                    return YES;
                }];

// Hide
[popBar dismiss:YES];
```

1.5.10. Pop menu component

The AUPopMenu component provides popping-up menus when the user clicks the navigation bar tabs.

- Different from AUFloatMenu, AUPopMenu has menu outlines but no bottom masks. All menus are aligned in the center. The separation lines have a fixed length and are aligned in the center.
- Basic functions: Menus in this dialog box popping out upwards or downwards, the popping positions are all defined by the business needs.

API description

- **AUPopMenu.h**

```
@protocol AUPopMenuDelegate <NSObject>

 @optional
 - (void)DidClickPopItemView:(AUPopItemModel *)viewModel;

 @end

 @interface AUPopMenu : UIView

 @property (nonatomic, weak) id<AUPopMenuDelegate> delegate;

 /*  datas           The AUPopItemModel object list.
  *  position        The position of the direction angle.
  *  superView       The parent view.
  *  isArchViewUp    The orientation of the arrow-like corner. Default value: Down.
  */
 - (instancetype)initWithDatas:(NSArray *)datas
                      position:(CGPoint)position
                      superView:(UIView *)superView
                  isArchViewUp:(BOOL)isArchViewUp;

 /* Show and hide the menus with animation by default.
  *  position The start and end positions of the arrow-like corner.
  *  superView Describe which parent view the current floating layer is displayed on
.
  */
 - (void)showMenu;

 //
 - (void)hideMenu;

 @end
```

- **AUPopItemView.h**

```
@interface AUPopItemView : AUPopItemBaseView

 @property (nonatomic, strong) AUIconView *iconView;   // Support the icon font imag
e.
 //@property (nonatomic, strong) UIView *badgeView     // The badge is not supported
currently.

 - (instancetype)initWithModel:(AUPopItemModel *)model position:(CGPoint )position;

 @end
```

- **AUPopItemBaseView.h**

```
//
 @interface AUPopItemBaseView : UIControl

 @property (nonatomic, strong) AULabel *titleLabel; //

 @end
```

- **AUPopItemModel.h**

```
// The object model.
 @interface AUPopItemModel : NSObject

 @property (nonatomic, strong) NSString *titleString;    // The main description.
 @property (nonatomic, strong) id iconImage;             // The left-side icon, which
can be a UIImage object or URL.

 @end
```

Sample code

```
_menu = [[AUPopMenu alloc] initWithDatas:array
position:CGPointMake(CGRectGetMidX(button.frame), CGRectGetMaxY(button.frame)+5) superV
iew:self.view isArchViewUp:YES];
_menu.delegate = self;
[_menu showMenu];
```

1.5.11. Navigation components

1.5.11.1. Vertical tab

AUVerticalTabView is a vertical tab-based component.

Dependency

The dependency of AUVerticalTabView is as follows:

```
AntUI
```

API description

```
#import <UIKit/UIKit.h>

@protocol AUVerticalTabViewDataProtocol <NSObject>

@required
- (NSString *) tabName;

@end

@class AUVerticalTabView;

typedef void (^AUVerticalTabSelectedCallback)(AUVerticalTabView *verticalTabView);

@interface AUVerticalTabView : UIView

/**
 The recommended initialization method. The layout parameters are standardized by AntDN
A.
 AUVerticalTabView : width=110pt
 TabCell : width=110pt,height=55pt

 @param verticalTabViewDatas Set tab data.
 @param selectedCallback Set the tapping event callback.
 @param height The height of AUVerticalTabView.
 @param business The business identifier, such as GoldWord or BeeCityPicker.
 @return AUVerticalTabView
 */
+ (AUVerticalTabView *)verticalTabViewWithDatas:(NSArray
<id<AUVerticalTabViewDataProtocol>>*) verticalTabViewDatas
                              selectedCallback:
(AUVerticalTabSelectedCallback)selectedCallback
                                        height:(CGFloat)height
                                      business:(NSString *)business;

@property(nonatomic, strong) NSArray <id<AUVerticalTabViewDataProtocol>>*
verticalTabViewDatas;
@property(nonatomic, assign) NSUInteger selectedIndex;//default 0
@property(nonatomic, copy) AUVerticalTabSelectedCallback selectedCallback;

@end
```

Code sample

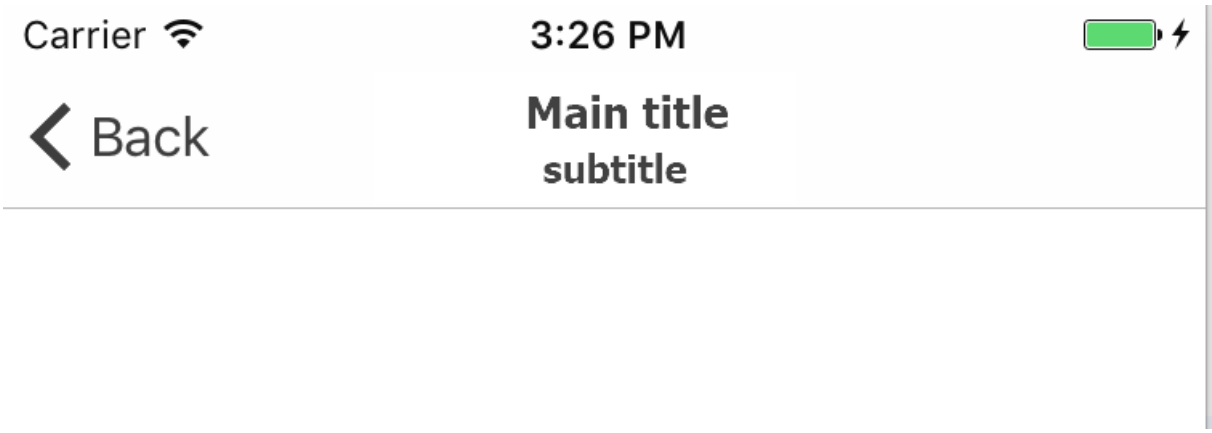
```
// The external data object implementation AUVerticalTabViewDataProtocol, which returns
the required tabName.
@interface DemoVerticalTabData : NSObject <AUVerticalTabViewDataProtocol>

- (NSString *)tabName;

@end
```

```
NSArray *datas = @[[DemoVerticalTabData new],
                       [DemoVerticalTabData new],
                       [DemoVerticalTabData new],
                       [DemoVerticalTabData new],
                       [DemoVerticalTabData new],
                       [DemoVerticalTabData new],
                       [DemoVerticalTabData new]];

        AUVerticalTabView *tabView = [AUVerticalTabView verticalTabViewWithDatas:datas

selectedCallback:^(AUVerticalTabView *verticalTabView ){
                NSUInteger selectedIndex = verticalTabView.selectedIndex;
                id<AUVerticalTabViewDataProtocol> selectedData =
[verticalTabView.verticalTabViewDatas objectAtIndex:selectedIndex];
                                                                }

height:self.view.height
                                                                business:@"AntUI"];

    [self.view addSubview:tabView];
```

1.5.11.2. Double title

AUDoubleTitleView is a view control containing a title line and a subtitle line in the navigation pane.

Sample image



API description

```
    /**
 The titleView of a navigation pane that contains two lines.
 */
@interface AUDoubleTitleView : UIView

/**
 *  Create TitleViews of the title and subtitle.
 *
 *  @param title          The main title.
 *  @param detaileTitle The subtitle.
 *
 *  @return Return the initialized APTitleView control.
 */
- (UIView *)initWithTitle:(NSString *)title detailTitle:(NSString *)detaileTitle;

/**
 *  Modify the title text.
 *
 *  @param title          Main title text.
 *
 */
- (void)updateTitle:(NSString *)title;

/**
 *  Modify the subtitle text.
 *
 *  @param detailTitle          Main title text.
 *
 */
- (void)updateDetailTitle:(NSString *)detailTitle;


/**
 Change the title font.

 @param titleFont The title font.
 */
- (void)updateTitleFont:(UIFont *)titleFont;

/**
 *  Change the subtitle font.
 *
 *  @param detailTitleFont      Main title font.
 *
 */
- (void)updateDetailTitleFont:(UIFont *)detailTitleFont;

@end
```

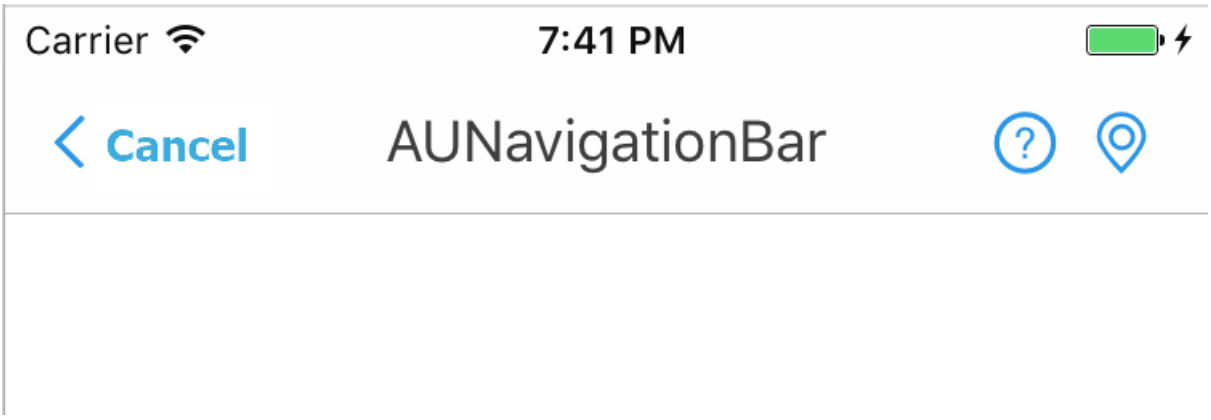
Code sample

```
self.navigationItem.titleView = [[AUDoubleTitleView alloc] initWithTitle:@"Title" detai
lTitle:@"Subtitle"];
```

1.5.11.3. Navigation bar

AUNavigationBar is a navigation bar control of mPaaS. It extends the UINavigationBar control and provides default mPaaS navigation bar styles. To facilitate subsequent extension, use AUNavigationBar rather than UINavigationBar in all mPaaS apps.

Sample image



API description

```
/**
 The mPaaS navigation bar control that contains mPaaS navigation bar styles.
 Initialize:
 UINavigationController *navBar = [[UINavigationController alloc]
initWithNavigationBarClass:NSClassFromString(@"AUNavigationBar")  toolbarClass:nil];
 */
@interface AUNavigationBar : UINavigationBar

@end


/**
 The UINavigationBar extension that defines default UINavigationBar styles.
 */
@interface UINavigationBar (AUNavigationBarExtensions)

/**
 *  Return the default color of the title of framework navigation bar. The default valu
e is #000000.
 *
 *  @return
 */
+ (UIColor*)getNavigationBarTitleDefaultColor;

/**
 *  Return the color of the item of framework navigation bar. The default value is #108
EE9.
 *
```

```
 *  @return
 */
+ (UIColor*)getNavigationBarButtonItemDefaultColor;

/**
 *  Return the color of the item of framework navigation bar. The default value is #fff
ff.
 *
 *  @return
 */
+ (UIColor*)getNavigationBarDefaultColor;

/**
 *  Get the color of the bottom line of the navigation bar. The default value is #e1e1e
1.
 *
 *  @return
 */
+ (UIColor*)getNavigationBarBotLineColor;

/**
 * Note:
 * 1. The base class DTViewController sets the default style of navigation bar in ViewW
illAppear.
 * 2. Business personnel can call the system APIs or the following APIs to change the s
tyle of navigation bar. The style is typically set in ViewWillAppear.
 * 3. If VC is a subclass of DTViewController, it must be set in ViewWillAppear, or it
will be overridden.
 * 4. Ensure that setNavigationBarDefaultStyle is used to restore the default style whe
n ViewWillDisappear is called after the modification.
 * 5. If VC defines the homepage in the UITabBarController container, do not use setNav
igationBarDefaultStyle to restore the default style, or the VC will be overridden upon
tab switching.
 */

/**
 *
 * Set the background of default navigation bar. The default background color and botto
m line color are #ffffff and #e1e1e1, respectively.
 *
 */
- (void)setNavigationBarDefaultStyle;

/**
 *
 * Set the default title style of the navigation bar.
 *
 */
- (void)setNavigationBarDefaultTitleTextAttributes;

/**
 *
 * Set the title color of the navigation bar in ViewWillAppear, or the title color will
be overridden by the default title color in the framework.
```

```
 *
 */
- (void)setNavigationBarTitleTextAttributesWithTextColor:(UIColor *)textColor;

/**
 *
 * Set the transparency of the navigation bar.
 * Note: If this method sets the navigation bar to be completely transparent, returned
animation will flash white. Currently, this issue has not been resolved. Do not call th
is method. If the method is required, evaluate whether the impact is acceptable.
 */
- (void)setNavigationBarTranslucentStyle;

/**
 * Set the color of the navigation bar. To achieve the frosted glass effect, set transl
ucent to Yes.
 * Note: After calling this API, call the bottom line setting API if necessary, or the
bottom line color will be overridden by the default color #e1e1e1.
 *
 * @param color          The color to be displayed.
 * @param translucent    Whether to be transparent.
 *
 */
- (void)setNavigationBarStyleWithColor:(UIColor *)color translucent:(BOOL)translucent;

/**
 *  There may be a separation line under the navigation bar, and the UI may fail to mee
t some UI requirements. Call this method to set the color of the separation line to pre
vent it from being recognized.
 *  Note: If you have defined the background of navigation bar, for example, by calling
setNavigationBarStyleWithColor or rewriting opaqueNavigationBarColor, call this API aft
er changing the background color.
 *  Otherwise, the bottom line color will be overridden by the default color #e1e1e1.
 */
- (void)setNavigationBarBottomLineColor:(UIColor*)color;

/**
 *  Before calling the system methods setBarTintColor, setBackGroundImage, and setBackg
roundColor to set the color of navigation bar, call this method to eliminate the defaul
t effect.
 *  Otherwise, the color will be overlaid with the default color and cause a color devi
ation.
 */
- (void)resetNavigationBarColor;

/**
 *
 *  To prevent the issue that the navigation bar flashes when a user swipes right to go
back or cancel an operation, do not call this method.
 */
- (void)setNavigationBarMaskLayerWithtColor:(UIColor *)color;

/**
 *  Return the current background color of the navigation bar.
```

```
 *
 *  @return Return the current background color of the navigation bar.
 */
- (UIColor*)getNavigationBarCurrentColor;

@end
```

Sample code

```
// Initialize UINavigationController.
UINavigationController *navBar = [[UINavigationController alloc]
initWithNavigationBarClass:NSClassFromString(@"AUNavigationBar")  toolbarClass:nil];

// Configure the navigation bar in VC.
AUBarButtonItem *cancelItem = [AUBarButtonItem backBarButtonItemWithTitle:@"Back" targe
t:self action:@selector(cancel)];
cancelItem.backButtonTitle = @"Cancel";
self.navigationItem.leftBarButtonItem = cancelItem;

UIImage *image1 = [AUIconView iconWithName:kICONFONT_MAP width:22 color:AU_COLOR_LINK];
UIImage *image2 = [AUIconView iconWithName:kICONFONT_HELP width:22
color:AU_COLOR_LINK];
AUBarButtonItem *rightItem1 = [[AUBarButtonItem alloc] initWithImage:image1 style:UIBar
ButtonItemStylePlain target:self action:@selector(rightBarItemPressed)];
AUBarButtonItem *rightItem2 = [[AUBarButtonItem alloc] initWithImage:image2 style:UIBar
ButtonItemStylePlain target:self action:@selector(rightBarItemPressed)];
self.navigationItem.rightBarButtonItems = @[rightItem1, rightItem2];
```

1.5.11.4. Custom navigation bar

AUCustomNavigationBar is a navigation bar component customized by mPaaS for the transparent navigation bar scenario.

After the native navigation bar is changed from transparent to solid, users may have bad visual experience. This class is provided for avoiding this issue.

API description

```
    /**
 Customize a transparent navigation bar as required.
 After the native navigation pane is changed from transparent to solid, users may have
bad visual experience. This class is provided for avoiding this issue.
 */
@interface AUCustomNavigationBar : UIView

@property(nonatomic, strong) UIView *backgroundView;              // Ground glass
background view.

@property(nonatomic, strong) NSString *backButtonTitle;           // The back button ti
tle (no title by default).
@property(nonatomic, strong) UIColor *backButtonTitleColor;       // The title color of
the back button.
@property(nonatomic, strong) UIImage *backButtonImage;            // The image of the
back button.
```

```
@property(nonatomic, strong) NSString *title;                    // The title.
@property(nonatomic, strong) UIColor *titleColor;                // The title color.
@property(nonatomic, strong) UIView *titleView;                  // Customized titlevie
w.

@property(nonatomic, strong) NSString *rightItemTitle;           // The right item
title.
@property(nonatomic, strong) UIColor *rightItemTitleColor;       // The color of the r
ight item title.
@property(nonatomic, strong) UIImage *rightItemImage;            // The image of the
right item.

/**
 * The VoiceOver text for the item displayed on the right.
 * The item displayed on the left, which is "Back" by default.
 * The item displayed on the right, which is specified by rightItemTitle by default. If
rightItemTitle is not set, manually set this property to support VoiceOver.
 */
@property(nonatomic,strong) NSString *rightItemVoiceOverText;

@property(nonatomic,strong) NSString *leftItemVoiceOverText;


/**
 *  Create a specified view of transparent navigation bar.
 *
 *  (1) By default, the navigation bar displays an arrow instead of "Back" on the left
for users to go back. If the current page needs to set the back text that is consistent
with the framework logic, override the (UIView *)customNavigationBar method in VC.
 *  (2) To set the title, item to be displayed on the right, and background in frosted
glass effect, call related APIs.
 *
 *  @param currentVC The current VC.
 *
 *  @return The view of transparent navigation bar.
 */
 + (AUCustomNavigationBar *)navigationBarForCurrentVC:(UIViewController *)currentVC;

/**
 *  Set the background view of frosted glass. The transparency is 0 by default.
 */
- (void)setNavigationBarBlurEffective;

/**
 *  Create an item to be displayed on the right of the navigation bar.
 *
 *  @param rightItemTitle    Displayed text.
 *  @param target            target
 *  @param action            action
 *
 */
- (void)setNavigationBarRightItemWithTitle:(NSString *)rightItemTitle target:(id)target
action:(SEL)action;
```

```
 /**
 *  Create an item to be displayed on the right of the navigation bar.
 *
 *  @param rightItemImage    Displayed image.
 *  @param target            target
 *  @param action            action
 *
 */
- (void)setNavigationBarRightItemWithImage:(UIImage *)rightItemImage target:(id)target
action:(SEL)action;


/**
 *  Create an item to be displayed on the left of the navigation bar.
 *
 *  @param leftItemTitle     Displayed text.
 *  @param target            target
 *  @param action            action
 *
 */
- (void)setNavigationBarLeftItemWithTitle:(NSString *)leftItemTitle target:(id)target a
ction:(SEL)action;

/**
 *  Create an item to be displayed on the left of the navigation bar.
 *
 *  @param leftItemTitle     Displayed image.
 *  @param target            target
 *  @param action            action
 *
 */
- (void)setNavigationBarLeftItemWithImage:(UIImage *)leftItemTitle target:(id)target ac
tion:(SEL)action;


@end
```

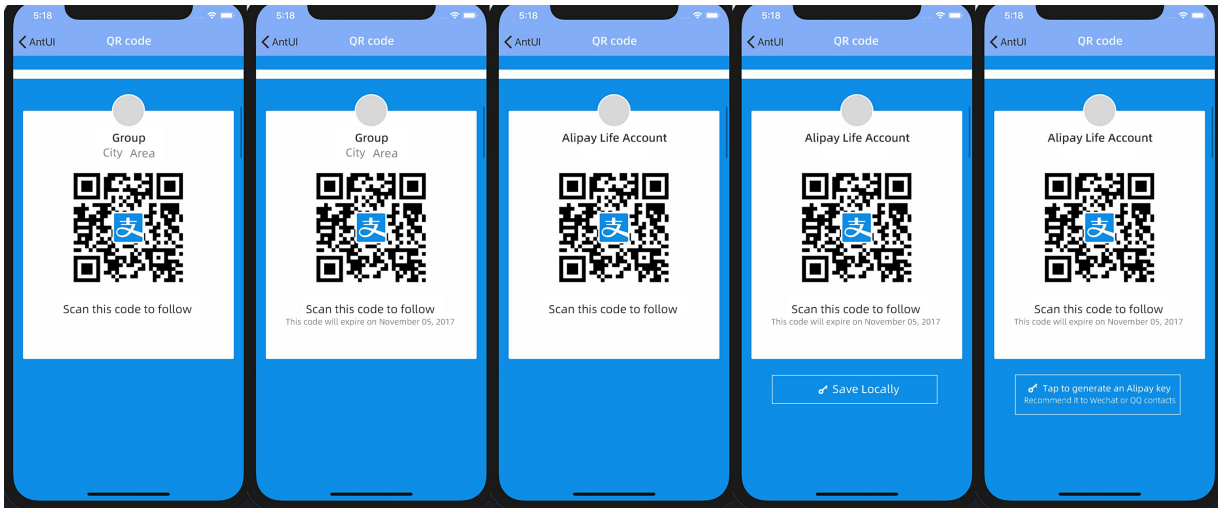
Sample code

```
AUCustomNavigationBar *navBar = [AUCustomNavigationBar navigationBarForCurrentVC:self];
[navBar setNavigationBarBlurEffective]; // The frosted glass effect.
[self.view addSubview:navBar];
navBar.title = @"Title";
navBar.backButtonImage = [AUIconView iconWithName:kICONFONT_BILL width:22 color:AU_COLO
R_LINK];
navBar.backButtonTitle = @"Bill";
navBar.rightItemImage = [AUIconView iconWithName:kICONFONT_ADD width:22
color:AU_COLOR_LINK];

// When using this API on mPaaS, override the following methods of the parent class:
- (BOOL)autohideNavigationBar
{
        return YES;
}
- (UIView *)customNavigationBar
{
        return self.navBar;
}
```

1.5.12. QR code component

AUQRCodeView is the Alert view that supports multiple option buttons. The Window level of QR code component follows the logic `self.windowLevel = UIWindowLevelAlert - 1`.

Sample image



API description

```
// The data model object.
@interface QRDataModel : NSObject

@property (nonatomic, strong) id topLeftIcon;                // An image, a URL, or clou
dID can be imported.
@property (nonatomic, strong) NSString *topTitle;            // An image, a URL, or
cloudID can be imported.
@property (nonatomic, strong) id qrCodeIcon;                 // The QR code image.
@property (nonatomic, strong) NSString *bottomTitle;
@property (nonatomic, strong) NSString *bottomMessage;
@property (nonatomic, strong) id actionButtonIcon;           // An image, a URL, or
cloudID can be imported.
@property (nonatomic, strong) NSString *actionButtonTitle;   // The primary description
of the action button at the bottom.
@property (nonatomic, strong) NSString *actionButtonMessage; // The secondary descripti
on of the action button at the bottom.

@end

// The action button under the QR code.
@interface QRActionButton : UIControl

@end


// The QR code component.
@interface AUQRCodeView : UIView

@property (nonatomic, strong) UIView *maskView;
@property (nonatomic, strong) UIView *containerView;          // The QR code container.
@property (nonatomic, strong) UIImageView *topLeftImageView;  // The image in the upper
left corner.
@property (nonatomic, strong) UILabel *topTitleLabel;         // Description text for t
he title on the top.
@property (nonatomic, strong) UIImageView *qrCodeView;        // The QR code image.
@property (nonatomic, strong) UILabel *bottomTitleLabel;      // Main description text
at the bottom.
@property (nonatomic, strong) UILabel *bottomMessageLabel;    // Secondary description
text at the bottom.
@property (nonatomic, strong) QRActionButton *actionButton;   // The action button at t
he bottom.

// The control frame used to block the initialization data model.
- (instancetype)initWithFrame:(CGRect)frame model:(void(^)(QRDataModel *model))block;

// Start loading.
- (void)startLoading;

// Stop loading.
- (void)stopLoading;

@end
```

Code sample

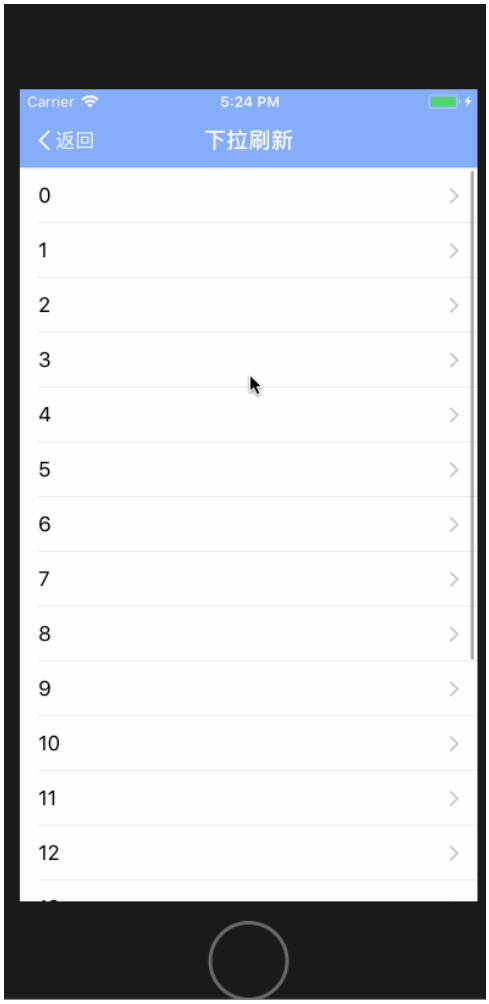
The following sample shows the code of a standard style QR code.

```
    AUQRCodeView *qrCodeView = [[AUQRCodeView alloc] initWithFrame:frame
model:^(QRDataModel *model) {
        model.topLeftIcon = [UIImage imageWithColor:[UIColor colorWithRGB:0xbbbbbb] siz
e:CGSizeMake(54, 54)];
        model.topTitle = @"Alipay life account";
        model.bottomTitle = @"Scan this QR code to follow";
        model.bottomMessage = @"This QR code will expire on November 05, 2017";
        model.actionButtonTitle = @"Save locally";
    }];
    [self.view addSubview:qrCodeView];
```

1.5.13. Refresh component

AURefreshView is a pull-down refresh view with an ant icon. At present, two colors are supported, as shown in the sample image.

Sample image



Add components

To enable AURefreshView, add the **Common UI** component and the **Lottie** component first.

1. In the Podfile file, enter `mPaaS_pod "mPaaS_CommonUI"` and `mPaaS_pod "mPaaS_Lottie"` to add the dependencies on the **Common UI** component and the **Lottie** components.

```
Podfile
plugin "cocoapods-mPaaS"
source "https://code.aliyun.com/mpaas-public/podspecs.git"
mPaaS_baseline '10.1.68'  # 请将 x.x.x 替换成真实基线版本
mPaaS_version_code 20   # This line is maintained by MPaaS plug
don't modify.

platform :ios, '9.0'

target 'MPAntUIDemo_pod' do

mPaaS_pod "mPaaS_CommonUI"
mPaaS_pod "mPaaS_Lottie"

end
```

2. Run `pod install` to complete adding the components.

Interface description

```
typedef NS_ENUM(NSUInteger, AURefreshViewState) {
    AURefreshViewStateNomal = 0,           // Restore the list to the initial position.
    AURefreshViewStateBeginPulling = 1,    // A user starts to pull the bar down.
    AURefreshViewStateLoading = 2,         // Trigger RPC loading. The contentInset
list is delivered in the default position.
    AURefreshViewStateFinishedLoading = 3, // RPC loaded. The contentInset list is abou
t to be restored to the original position.
    AURefreshViewStateBeginResetting = 4,  // The contentInset list starts to restore t
o the default inset.
};
typedef NS_ENUM(NSUInteger, AURefreshViewType) {
    AURefreshViewDefault,       // The refresh style on the page.
    AURefreshViewTypeFeature1   // Apply it to the title bar, such as the homepage or t
he fortune tab with a background.
};
@protocol AURefreshViewDelegate;
/**
 Set the animation view of mPaaS during pull-down refresh.
 */
@interface AURefreshView : UIView
@property (nonatomic, readonly) AURefreshViewState state;
@property (nonatomic, weak) id <AURefreshViewDelegate> delegate;
/**
 Set the style of the Lottie component during pull-down refresh.
 */
@property (nonatomic, strong) UIView /*LOTAnimationView */ *lottieAnimationView;
/* Specify the parent view where pull-down refresh is performed. The initial default he
ight of pull-down refresh is the height of scrollView. By default, refreshView is to ad
d the parent scrollView.
 * The default initial frame is (0, 0 - scrollView.height, scrollView.width, scrollView
.height)). */
- (instancetype)initWithSuperView:(UIScrollView *)scrollView
                                type:(AURefreshViewType)type
```

```
                                bizType:(NSString *)bizType;
// Set a text that is displayed during pull-down refresh.
- (void)setupLabelText:(NSString *)text;
// Call the following methods in "delegate" of UIScrollView:
- (void)auRefreshScrollViewWillBeginDragging:(UIScrollView *)scrollView;
- (void)auRefreshScrollViewDidScroll:(UIScrollView *)scrollView;
- (void)auRefreshScrollViewDidEndDragging:(UIScrollView *)scrollView;
// To end the animation and hide the list, call the following method:
- (void)auRefreshScrollViewDidFinishedLoading:(UIScrollView *)scrollView;
// The client needs to scroll the page to the initial position and then call the automa
tic pull-down refresh function. Otherwise, a scrolling error will occur.
- (void)autoPullRefreshScrollView:(UIScrollView *)scrollView;
//
- (void)pauseAnimation;
// Expand the page.
- (void)resumeAnimation;
@end
@protocol AURefreshViewDelegate <NSObject>
@optional
// This protocol is triggered when the bar is dropped down to the default position, whi
ch is the height of (Lottie)View.
- (void)auRefreshViewDidTriggerloading:(AURefreshView *)view;
// Complete the reset action after a pull-down refresh.
- (void)auRefreshViewDidDidFinishAnimation:(AURefreshView *)view;
@end
```

Sample code

This section provides the sample code of standard style and custom style refresh view.

Standard style

The following shows the sample code for a standard style refresh view.

```
_refreshView = [[AURefreshView alloc] initWithSuperView:self.tableView
type:AURefreshViewDefault bizType:@"demo"];
[_refreshView setupLabelText:@"Refreshing"];
[self.tableView addSubview:_refreshView];
- (void)viewDidAppear:(BOOL)animated
{
    [super viewDidAppear:animated];
    [_refreshView resumeAnimation];
}
- (void)viewDidDisappear:(BOOL)animated
{
    [super viewDidDisappear:animated];
    [_refreshView pauseAnimation];
}
- (void)scrollViewWillBeginDragging:(UIScrollView *)scrollView
{
    [_refreshView auRefreshScrollViewWillBeginDragging:scrollView];
}
- (void)scrollViewDidScroll:(UIScrollView *)scrollView
{
    [_refreshView auRefreshScrollViewDidScroll:scrollView];
}
- (void)scrollViewDidEndDragging:(UIScrollView *)scrollView willDecelerate:
(BOOL)decelerate
{
    [_refreshView auRefreshScrollViewDidEndDragging:scrollView];
 }
```

Custom style

To customize styles, you must use the Lottie component and rewrite the `Category` of `AUThemeManager`.

The following sample code is for your reference:

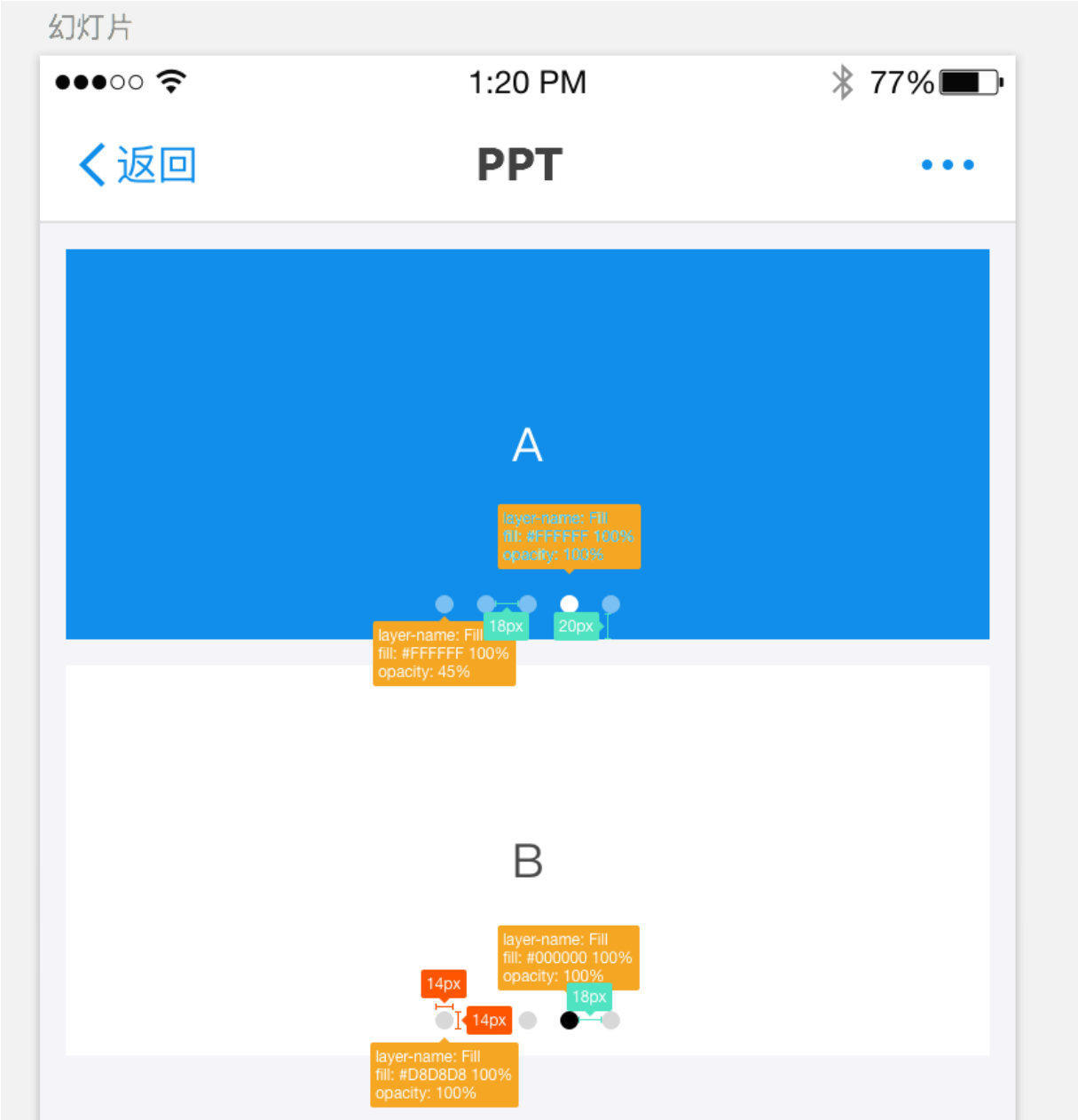
```
+ (NSString *)au_defaultTheme_refresh_lottie_path{

    NSString *path = [[NSBundle mainBundle] pathForResource:@"ani" ofType:@"json"];
    return path;

}
```

1.5.14. Other components

1.5.14.1. Carousel component

AUBannerView is a carousel component.

Sample image



API description

```
typedef NS_ENUM(NSUInteger, AUBannerStyle) {
    AUBannerStyleDeepColor, // The deep color style.
    AUBannerStyleLightColor // The light color style.
};

@interface AUBannerViewConfig : NSObject

@property (nonatomic, assign) AUBannerStyle                    style;
// The default style.
@property (nonatomic, strong) UIColor                         *pageControlNormalColor;
// The default color.
@property (nonatomic, strong) UIColor                         *pageControlSelectedColor;
// The selected color.
@property (nonatomic, assign) CGFloat                          pageControlMarginBottom;
```

```
// The margin between the pagination identifier and bottom.
@property (nonatomic, assign) BOOL                          pageControlDotTapEnabled;
// Specify whether the pagination identifier (dot) is clickable. The default value is N
O.
@property (nonatomic, assign) UIEdgeInsets                  contentViewMargin;
// The margin of the content area.
@property (nonatomic, assign) UIEdgeInsets                  contentViewPadding;
// The padding of the content area. An image will pass the padding when it scrolls.
@property (nonatomic, assign) BOOL                          autoTurn;
// Whether to enable automatic carousel. Default value: YES.
@property (nonatomic, assign) BOOL                          autoStartTurn;
// Whether to automatically start carousel.
@property (nonatomic, assign) CGFloat                       duration;
// The automatic carousel interval.

@end


@class AUBannerView;
@protocol AUBannerViewDelegate <NSObject>

@required
- (NSInteger)numberOfItemsInBannerView:(AUBannerView *)bannerView;
- (UIView *)bannerView:(AUBannerView *)bannerView itemViewAtPos:(NSInteger)pos;

@optional
- (void)bannerView:(AUBannerView *)bannerView didTapedItemAtPos:(NSInteger)pos;
- (CGFloat)bannerView:(AUBannerView *)bannerView durationOfItemAtPos:(NSInteger)pos;

@end



@interface AUBannerView : UIView

AU_UNAVAILABLE_INIT

@property (nonatomic, readonly) UIView                  *contentView;   // The content a
rea view.
@property (nonatomic, readonly) AUPageControl           *pageControl;   // The
pagination identifier view.

@property (nonatomic, copy)     NSString                *bizType;       // The business
type.
@property (nonatomic, assign)   NSInteger                currentPage;   // The current p
age, which starts from page 0.
@property (nonatomic, weak)     id<AUBannerViewDelegate> delegate;      // The data sou
rce and event delegate.


/**
 Create a banner view.

 @param frame frame
```

```
 @param bizType          The business type, which cannot be left empty.
 @param configOperation The configuration block.
 @return                 The banner view.
 */
- (instancetype)initWithFrame:(CGRect)frame
                      bizType:(NSString *)bizType
                   makeConfig:(void(^)(AUBannerViewConfig *config))configOperation;


/**
 Start automatic carousel. (Call this method only when autoStartTurn is set to NO.)
 */
- (void)startTurning;


/**
 Reload the banner. (Call this method to reload data when the data source changes.)
 */
- (void)reloadData;

@end




//##################################
//####### UIImage ################
//##################################

@interface AUBannerView (Image)

/**
 Create a banner view for images.
 Note: Ensure that the value of images is the same as that of actionURLs, or the banner
view will fail to be created.

 @param frame            The frame.
 @param bizType          The business type, which cannot be left empty.
 @param images           The image set, which can be an array of image link strings or
image objects.
 @param placeholder      The image placeholder, or the UIImage object.
 @param actionURLs       The link to which a user is redirected after the user taps the
corresponding image. The link is a string. If an image does not support redirection, se
t this parameter to [NSNull null].
 @param configOperation The banner view configuration parameter.
 @return                 The banner view of image carousel.
 */
+ (instancetype)bannerViewWithFrame:(CGRect)frame
                            bizType:(NSString *)bizType
                             images:(NSArray *)images
                        placeholder:(UIImage *)placeholder
                         actionURLs:(NSArray *)actionURLs
                         makeConfig:(void(^)(AUBannerViewConfig
*config))configOperation;
```

```
 config,,configOperation;

@end




//##################################
//####### Extension ##############
//##################################


@interface AUBannerView (Extension)

/**
 Update the banner view configuration.
 A reloading event will be automatically triggered.

 @param update  The update block.
 */
- (void)updateConfigOperation:(void(^)(AUBannerViewConfig *config))update;

@end
```

Code sample

```
// The common deep color banner.
    for (NSInteger i = 0; i < 1; i ++) {
        CGRect rect = CGRectMake(10, 10 + (height + spaceY) * i, self.view.width - 20,
height);
        AUBannerView *bannerView = [[AUBannerView alloc] initWithFrame:rect
                                                                 bizType:@"demo"

makeConfig:^(AUBannerViewConfig *config)
                                    {
                                        config.duration = 1.5;
//                                        config.contentViewMargin = UIEdgeInsetsMake(5,
5, 10, 5);
//                                        config.contentViewPadding = UIEdgeInsetsMake(0,
50, 0, 50);
                                        config.style = AUBannerStyleDeepColor;
                                        config.autoTurn = YES;
                                        config.autoStartTurn = YES;
                                    }];

        bannerView.delegate = self;
        bannerView.tag = 1;
        bannerView.backgroundColor = [UIColor colorWithWhite:0 alpha:0.1];
        [self.view addSubview:bannerView];
    }

    // The common light color banner.
    for (NSInteger i = 1; i < 2; i ++) {
        CGRect rect = CGRectMake(10, 10 + (height + spaceY) * i, self.view.width - 20,
```

```
height);
        AUBannerView *bannerView = [[AUBannerView alloc] initWithFrame:rect
                                                                 bizType:@"demo"

makeConfig:^(AUBannerViewConfig *config)
                                    {
                                        config.duration = 1.5;
                                        config.style = AUBannerStyleLightColor;
                                        config.autoTurn = NO;
                                        config.pageControlDotTapEnabled = YES;
                                    }];

        bannerView.delegate = self;
        bannerView.tag = 2;
        bannerView.backgroundColor = [UIColor colorWithWhite:0 alpha:0.1];
        [self.view addSubview:bannerView];
    }

    // The banner with images only.
    for (NSInteger i = 2; i < 3; i ++) {
        CGRect rect = CGRectMake(10, 10 + (height + spaceY) * i, self.view.width - 20,
height);
        NSMutableArray *images = [NSMutableArray array];
        for (NSInteger j = 0; j < 5; j ++) {
            UIImage *image = [UIImage imageNamed:[NSString stringWithFormat:@"%@.jpg",
@(j + 1)]];
            [images addObject:image];
        }
        AUBannerView *bannerView = [AUBannerView bannerViewWithFrame:rect
                                                             bizType:@"demo"
                                                              images:images
                                                         placeholder:nil
                                                          actionURLs:nil
                                                          makeConfig:NULL];
        bannerView.backgroundColor = [UIColor colorWithWhite:0 alpha:0.1];
        [self.view addSubview:bannerView];
    }
```

```
#pragma mark - AUBannerViewDelegate

- (NSInteger)numberOfItemsInBannerView:(AUBannerView *)bannerView
{
    return bannerView.tag == 1 ? 2 : 4;
}

- (UIView *)bannerView:(AUBannerView *)bannerView itemViewAtPos:(NSInteger)pos
{
    NSArray *array = nil;
    // The deep color.
    if (bannerView.tag == 1) {
        array = @[RGB(0x108EE9), RGB_A(0x108EE9, 0.5), [UIColor blueColor], [UIColor ye
llowColor]];
    }
    // The light color.
    else {
        array = @[RGB(0xfFFFFF),RGB_A(0xeFFFFF, 0.7),RGB(0xcFFFFF),RGB_A(0xeFFFFF, 0.5)
,RGB_A(0xeFFFFF, 0.9)];
    }

    UIView *view = [[UIView alloc] init];
    view.backgroundColor = array[pos];
    return view;
}


- (void)bannerView:(AUBannerView *)bannerView didTapedItemAtPos:(NSInteger)pos
{
    NSLog(@"didTapedItemAtPos %@", @(pos));
}

//- (CGFloat)bannerView:(AUBannerView *)bannerView durationOfItemAtPos:(NSInteger)pos
//{
//    return 1;
//}
```

1.5.14.2. Segment component

AUSegment provides a switching bar style that supports scrolling.

AUSegment is provided based on the latest UED requirements. It cannot be used interchangeably with APSegmentedControl in APCommonUI because APSegmentedControl encapsulates the system component UISegmentedControl but does not provide any other functions.

Dependency

The dependency of AUSegment is as follows:

```
import "AUSegmentedControlItem.h"
```

API description

```
@protocol AUSegmentedControlDelegate <UIScrollViewDelegate>
// The AUSegment clicking event callback.
@optional

- (void)didSegmentValueChanged:(AUSegment*)segmentControl;

- (void)didSelectSegmentItemModel:(AUSegmentItemModel*)selectedItemModel;//

@end

// The default segment height.
#define     AUSegmentHeight     AU_SPACE13

/**
    The AUSegment component.
 */
@interface AUSegment : UIScrollView

/**
 The initialization function.

 @param frame   The frame.
 @param titles  The array that contains all title strings.

 @return Return the AUSegment instance.
 */
- (instancetype)initWithFrame:(CGRect)frame titles:(NSArray<NSString*> *)titles;

/**
 Disable the init method.
 */
- (instancetype)init NS_UNAVAILABLE;

/**
 Disable the initWithFrame method.
 */
- (instancetype)initWithFrame:(CGRect)frame NS_UNAVAILABLE;

/**
 AUSegmentedControlDelegate
 */
@property (nonatomic, weak)     id <AUSegmentedControlDelegate> delegate;

/**/

/**
 The title array.
 */
@property (nonatomic, strong)   NSMutableArray *titles;

/**
 * The title font.
 */
@property (nonatomic, copy) UIFont *titleFont;
```

```
/**
 The selected segment index.
 */
@property (nonatomic, assign)   NSInteger selectedSegmentIndex;


/**
 The color of the selected item (including the text and slider).
 */
@property (nonatomic, copy)     UIColor *selecedColor;

/**
 * The left and right margins of each text menu in the horizontal direction.
 * The default value is 21 px.
 * When a menu contains a red dot, the value of fixedItemWidth is invalid and the menu
width is not fixed.
 */
@property(nonatomic, assign)    NSInteger textHorizontalPadding;

/**
 * Whether to use a fixed menu width.
 * The default value is YES, for compatibility with old menu styles.
 * When the value is YES, the value of textHorizontalPadding is invalid, and all menus
are in fixed width.
 */
@property (nonatomic, assign) BOOL fixedItemWidth;

/**
 * Whether to automatically scroll the selected menu to an appropriate position (middle
position preferred, and displayed to the side when the space is insufficient).
 * The default value is NO.
 */
@property (nonatomic, assign) BOOL autoScroll;

/**
 * Whether to automatically move the indicator bar below the index of the selected item
after clicked.
 * The default value is YES.
 */
@property (nonatomic, assign) BOOL autoChangeSelectedIndex;

/*
 * The model array.
 */
@property(nonatomic, strong) NSMutableArray<AUSegmentItemModel *> *itemModels;

/**
 Multiple items can be inserted in the middle.

 @param array The inserted title array.
 @param indexes The inserted indexes.
 */
- (void)insertTitleArray:(NSArray<NSString*> *)array atIndexes:(NSIndexSet *)indexes;
```

```
/**
 Multiple items can be added to the end.

 @param array The added title array.
 */
- (void)addTitleArray:(NSArray<NSString*>*)array;

/**
 * Set automatic scrolling to the specified subscript position. Note: Items are display
ed in scrolling mode, and the indicator bar stays in the same position.
 * The value is the same as that of selectedSegmentIndex (indicating the index of the s
elected segment) by default.
 */
- (void)autoScrollToIndex:(NSInteger)index;

- (BOOL)segmentItemIsInVisualAear:(NSInteger)index;

@end


@interface AUSegmentItemModel : NSObject

@property(nonatomic, copy) NSString *title;
@property(nonatomic, copy) UIImage *img;
@property(nonatomic, copy) NSString *imgId;
@property(nonatomic, copy) NSString *badgeNumber;
@property(nonatomic, copy) NSString *badgeWidgetId;
@property(nonatomic, assign) BOOL badgeReserved;       // Whether to reserve a red dot
position for the current item. If no red dot position is reserved, the item may flicker
when containing a red dot.
@property(nonatomic, strong) NSDictionary *extendInfo; // The extended field.

@end


@interface AUSegment (ItemModel)



/**
 * The initialization function for version 2.
 * @param frame     The frame.
 * @param menus     The item array.
 */
- (instancetype) initWithFrame:(CGRect)frame menus:(NSArray<AUSegmentItemModel *>*)menu
s;

/**
 Control items can be updated.

 @param items   The array of items that need to be updated, mainly for adding or deleti
ng model data or updating all existing model data.
 */
```

```
 */
- (void)updateItems:(NSArray<AUSegmentItemModel *>*)items;

/**
 Control items can be updated.

 @param items   Delete existing item data and replace it with new item data.
 */
- (void)updateItemModel:(AUSegmentItemModel *)model
                atIndex:(NSInteger)index;

@end


// The action button, plus sign (+) by default, is displayed on the right.
@interface AUSegment (AUActionIcon)

- (void)showActionIcon:(BOOL)showIcon target:(id)target action:(SEL)action;

@end
```

Custom properties

Property	Purpose	Type
titles	The segment title array.	NSArray
selectedSegmentIndex	The selected segment index.	NSInteger
delegate	Implement AUSegmentedControlDelegate.	ID
autoScroll	Whether to automatically scroll the selected item to an appropriate position (middle position preferred, and displayed the side when the space is insufficient).	BOOL
fixedItemWidth	Whether to use a fixed menu width.	BOOL
textHorizontalPadding	The left and right margins of each text menu in the horizontal direction.’	BOOL

titleFont	The custom title font.	UIFont

Sample code

- Segment controls without red dot:

```
  NSArray *testArray1 =
@[@"tab1",@"tab2",@"tab3",@"tab4",@"tab5",@"tab6",@"tab7",@"tab8"];
      AUSegment *segment = [[AUSegment alloc] initWithFrame:CGRectMake(0, 300, self.v
iew.width, 44) titles:testArray1];
      segment.delegate = self;
      [self.view addSubview:segment];

          // The callback.
          - (void)didSegmentValueChanged:(AUSegment*)segmentControl {
      NSLog(@"AUSegmented switched");
  }
```

- Segment controls with red dot:

```
  NSMutableArray *array = [[NSMutableArray alloc] init];
  for (int i=0; i<7; i++)
  {
      AUSegmentItemModel *model = [[AUSegmentItemModel alloc] init];
      model.title = [NSString stringWithFormat:@"Option %d", i];
      if (i == 0)
      {
          model.badgeNumber = @".";
      }
      if (i == 1)
      {
          model.badgeNumber = @"new";
      }
      if (i == 6)
      {
          model.badgeNumber = @"6";
      }
      model.badgeReserved = YES;
      [array addObject:model];
  }
  AUSegment *segment2 = [[AUSegment alloc] initWithFrame:CGRectMake(0, topMargin, sel
f.view.width, 44) menus:array];
  [self.view addSubview:segment2];
  [segment2 autoScrollToIndex:6];
  segment2.backgroundColor = [UIColor whiteColor];
  [segment2 showActionIcon:YES target:self action:@selector(clickActionIcon:)];
```

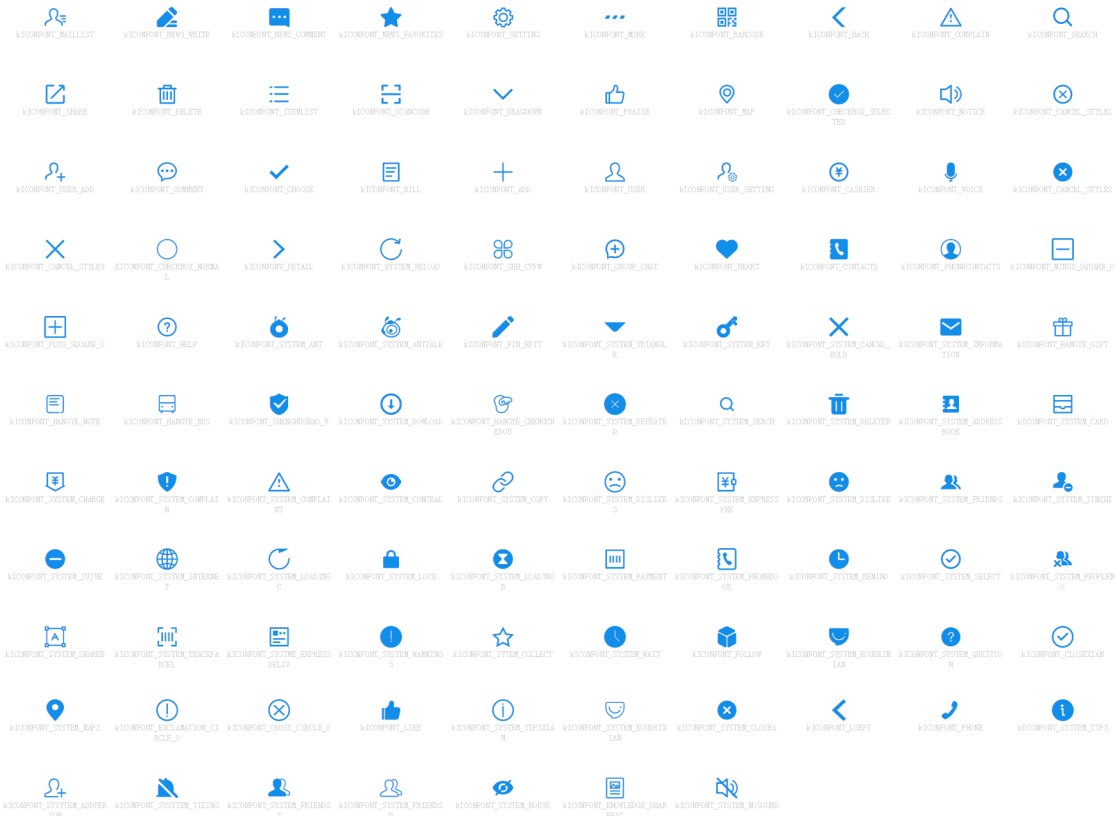
1.5.14.3. Icon component

AUIconView is an iconfont vector icon control. The usage is similar to that of UIImage.The control, which can be used as an ImageView, is an image object drawn by using the drawRect feature of the string.

> **Note**
>
> Currently, only square vector icons are supported.

- You can consider that an iconfont loads a font. The font is associated with multiple images and each image has a Unicode character. Therefore, you can set text to the corresponding Unicode character and call the drawInRect method of the string to render the iconfont.
- Each iconfont set is a .ttf font file. You can load multiple .ttf font files, each of which has a name. The default iconfont is the ttf font of AntUI, named auiconfont.

Sample image



API description

```
// The default AntUI iconfont name.
#define kICONFONT_FONTNAME              (@"auiconfont")
// The default AntUI iconfont path.
#define kICONFONT_FONTPATH              (@"APCommonUI.bundle/iconfont/auiconfont")




/**
The iconfont control, which can be used as an ImageView.
Actually, the control is an image object drawn by using the drawRect feature of the str
ing.
Note: Currently, only square vector icons are supported.

You can consider that an iconfont loads a font. The font is associated with multiple im
```

```
ages and each image has a Unicode character.
Therefore, you can set text as the corresponding Unicode character and call the drawInR
ect method of the string to render the iconfont.

Each iconfont set is a .ttf font file. You can load multiple
.ttf font files, each of which has a name. The default iconfont is the ttf font of AntU
I,
named auiconfont.
*/
@interface AUIconView : UIImageView

@property (nonatomic, strong) UIColor *color;       // The vector diagram color (ant bl
ue by default).
@property (nonatomic, strong) NSString *name;       // The vector diagram name.
@property (nonatomic, strong) NSString *fontName;   // The vector icon library name.


/**
The initialization method.

@param frame    The view frame.
@param name     The iconfont vector icon name.

@return Return an AUIconView instance.
*/
- (instancetype)initWithFrame:(CGRect)frame name:(NSString *)name;

/**
The initialization method.
(If the iconfont has been loaded, it can be rendered without fontPath.)

@param frame    The view frame.
@param name     The iconfont image name.
@param fontName The iconfont name.

@return Return an AUIconView instance.
*/
- (instancetype)initWithFrame:(CGRect)frame name:(NSString *)name fontName:(NSString *)
fontName;


/**
Get the iconView size.

@return If an iconfont is used, the iconfont size is returned. If an common ImageView i
s used, the image size is returned.
*/
- (CGSize)iconViewSize;

@end


@interface UIImage (AUIconFont)
```

```
/**
Register the iconfont. (This method needs to be called only once.)

@param fontName     The iconfont name.
@param fontPath     The iconfont path, such as @"AntUI.bundle/iconfont/auiconfont".
*/
+ (void)registerIconFont:(NSString *)fontName fontPath:(NSString *)fontPath;

/**
Get a square vector icon (with the same width and length).

@param name     The image name.
@param width    The image width.
@param color    The image color. If the value is nil, the color is ant blue by default.

@return Return a square vector icon.
*/
+ (UIImage *)iconWithName:(NSString *)name
width:(CGFloat)width
color:(UIColor *)color;


/**
Get a square vector icon (with the same width and length).

@param name        The name.
@param fontName    The vector font name.
@param width       The size.
@param color       The image color. If nil is imported, the color is ant blut by
default.

@return Return a square vector icon.
*/
+ (UIImage *)iconWithName:(NSString *)name
fontName:(NSString *)fontName
width:(CGFloat)width
color:(UIColor *)color;

@end
```

Sample code

```
// Use AUIconView.
AUIconView *view = [[AUIconView alloc] initWithFrame:CGRectZero
name:_array[indexPath.row]];
view.tag = 1;

view.size = CGSizeMake(30, 30);
view.origin = CGPointMake(100, 10);
view.color = RGB(0x2b91e2);
[cell.contentView addSubview:view];

// Use the image extension independently.
self.image = [UIImage iconWithName:self.name fontName:self.fontName width:width color:s
elf.color];
```

1.5.14.4. Index component

The AUBladeView provides alphabetical index function. clicking or sliding to the letter on the alphabetical index on the left or right side of the page to trigger the event at the corresponding region.

API description

AUBladeView.h

```
//
//  indexBar.h
//

#import <Foundation/Foundation.h>

#define kIndexSearchTitle    @"Search"

@protocol AUBladeViewDelegate;
/*!
 @class         AUBladeView
 @abstract      UIView
 @discussion    The alphabetical index view.
 */
@interface AUBladeView : UIView

- (id)init;
- (id)initWithFrame:(CGRect)frame;
- (void)clearIndex;

@property (nonatomic, weak) id<AUBladeViewDelegate> delegate;
@property (nonatomic, strong) UIColor *highlightedBackgroundColor;
@property (nonatomic, strong) UIColor *textColor;
@property (nonatomic, strong) UIFont *textFont;
@property (nonatomic, strong) NSArray * iconImageNames;
@property (nonatomic, strong) NSArray * iconTitles;
@property (nonatomic, assign) BOOL enableSearch;
@property (nonatomic, strong) NSArray * defaultIndexes;


- (void)updateIndexes;

@end

@protocol AUBladeViewDelegate<NSObject>
@optional
- (void)indexSelectionDidChange:(AUBladeView *)indexBar index:(NSInteger)index title:(N
SString*)title;
@end
```

Sample code

```
//
//  bladeViewController.m
//  AntUI
//

#import "bladeViewController.h"
#import "AUBladeView.h"

@interface bladeViewController ()
<AUBladeViewDelegate,UITableViewDelegate,UITableViewDataSource>
@property (nonatomic,strong)     AUBladeView * bladeView;
```

```
@property (nonatomic,strong)    NSArray * sectionArr;
@property (nonatomic,strong)    NSArray * mainDataIndexChar;
@property (nonatomic,strong)    UITableView * tableView;
@end

@implementation bladeViewController

- (void)viewDidLoad {
    [super viewDidLoad];
    self.title = @"Select a city";
    // Do any additional setup after loading the view.
    self.tableView = [[UITableView alloc] initWithFrame:CGRectMake(0, 0,
self.view.frame.size.width, self.view.frame.size.height) style:UITableViewStylePlain];
    self.tableView.delegate = self;
    self.tableView.dataSource = self;
    [self.view addSubview:self.tableView];
    self.bladeView = [[AUBladeView alloc]
initWithFrame:CGRectMake(self.view.frame.size.width-16.0, 80, 16.0,
self.view.bounds.size.height-60)];
    self.bladeView.delegate = self;

   NSString * plistStr = [[NSBundle mainBundle]
pathForResource:@"APCommonUI_ForDemo.bundle/citydict" ofType:@"plist"];
    NSDictionary * srcPlistDic = [NSDictionary dictionaryWithContentsOfFile:plistStr];
    NSMutableArray * citysList = [[NSMutableArray alloc] initWithCapacity:27];
    [citysList
addObject:@{@"Popular":@[@"Shanghai",@"Hangzhou",@"Guangzhou",@"Beijing",@"Shenzhen"]}];


    NSMutableArray * indexArrList = [[NSMutableArray alloc] initWithCapacity:27];
    [indexArrList addObject:@"Popular"];
    NSArray * keyList = [srcPlistDic allKeys];
    NSArray * sortedList = [keyList sortedArrayUsingComparator:^NSComparisonResult(id
_Nonnull obj1, id  _Nonnull obj2) {
        return [(NSString *)obj1 compare:obj2];

    }];
    [sortedList enumerateObjectsUsingBlock:^(id  _Nonnull obj, NSUInteger idx, BOOL * _
Nonnull stop) {
        if (obj) {

            NSDictionary * tmpDic = [[NSDictionary alloc] initWithObjectsAndKeys:
[srcPlistDic objectForKey:obj],obj, nil];
            [citysList addObject:tmpDic];
            [indexArrList addObject:obj];
        }

    }];
    self.sectionArr = citysList;
    self.mainDataIndexChar = indexArrList;
//    self.bladeView.iconTitles = secondaryIndexsTitles;
//    self.bladeView.iconImageNames = secondaryIndexsIcons;
    self.bladeView.defaultIndexes = self.mainDataIndexChar;
    [self.bladeView updateIndexes];
    [self.view addSubview:self.bladeView];
```

```
    [self.view addSubview:self.bladeView];
    self.tableView.showsVerticalScrollIndicator = NO;
    self.tableView.showsHorizontalScrollIndicator = NO ;
    [self.view bringSubviewToFront:self.bladeView];


}


#pragma mark -----UITableViewDelegate
// Display customization
// Variable height support

- (CGFloat)tableView:(UITableView *)tableView heightForRowAtIndexPath:(NSIndexPath *)in
dexPath
{
    return 44;
}// Use the estimatedHeight methods to quickly calcuate guessed values which will allow
for fast load times of the table.

- (CGFloat)tableView:(UITableView *)tableView heightForHeaderInSection:
(NSInteger)section
{
    return 35;
}
#pragma mark -----UITableViewDataSource
- (NSInteger)tableView:(UITableView *)tableView numberOfRowsInSection:
(NSInteger)section
{
    NSDictionary * test = [self.sectionArr objectAtIndex:section] ;
    NSArray * valueArr = [test objectForKey:([[test allKeys] firstObject])];

    return [valueArr count];

}

- (nullable NSString *)tableView:(UITableView *)tableView titleForHeaderInSection:(NSIn
teger)section
{
    NSDictionary * test = [self.sectionArr objectAtIndex:section] ;

    return [[test allKeys] firstObject];
}

- (UITableViewCell *)tableView:(UITableView *)tableView cellForRowAtIndexPath:(NSIndexP
ath *)indexPath
{
    UITableViewCell *cell = [tableView
dequeueReusableCellWithIdentifier:@"BladeTableViewCell"];
    if (!cell) {
        cell = [[UITableViewCell alloc] initWithStyle:UITableViewCellStyleDefault
reuseIdentifier:@"BladeTableViewCell"];
    }
    NSInteger section = [indexPath section];
    NSInteger row = [indexPath row];
```

```
    NSInteger row = [indexPath.row];
    NSDictionary * test = [self.sectionArr objectAtIndex:section] ;
    NSArray * valueArr = [test objectForKey:([[test allKeys] firstObject])];
    NSString * text = [valueArr objectAtIndex:row];
    cell.textLabel.text =text ;
    return cell;

}
- (NSInteger)numberOfSectionsInTableView:(UITableView *)tableView
{
    return [self.sectionArr count];
}// Default is 1 if not implemented

- (void)dealloc
{
    self.tableView.delegate = nil;
    self.tableView.dataSource = nil;
    self.bladeView.delegate = nil;
    self.bladeView = nil;

}
- (void)didReceiveMemoryWarning {
    [super didReceiveMemoryWarning];
    // Dispose of any resources that can be recreated.
}

/*
#pragma mark - Navigation

// In a storyboard-based application, you will often want to do a little preparation be
fore navigation
- (void)prepareForSegue:(UIStoryboardSegue *)segue sender:(id)sender {
    // Get the new view controller using [segue destinationViewController].
    // Pass the selected object to the new view controller.
}
*/

#pragma mark ---- AUBladeViewDelegate
- (void)indexSelectionDidChange:(AUBladeView *)indexBar index:(NSInteger)index title:(N
SString*)title
{
    if (self.tableView){
        NSInteger ret = 0;
        if ([title isEqualToString:kIndexSearchTitle]){
            [self.tableView scrollToRowAtIndexPath:[NSIndexPath indexPathForRow:0
inSection:ret]
                                    atScrollPosition:UITableViewScrollPositionBottom
                                            animated:NO];
            return;
        }
        else {
            ret = [self findIndexSection:title];
            if (ret != NSNotFound) {
                [self.tableView scrollToRowAtIndexPath:[NSIndexPath indexPathForRow:0 in
Section:ret]
```

```
                                        atScrollPosition:UITableViewScrollPositionTop
                                                animated:NO];
            }
        }
    }

}

- (NSInteger)findIndexSection:(NSString *)title {
    NSInteger ret = NSNotFound;
    int beginIndex = 0;
    /*
     The following shows a custom section calculation rule.
    beginIndex += self.customSectionCount;
    if (self.secondarySectionCount > 0 ){
        for (NSInteger i = 0 ; i < [self.secondarySectionTitles count]; i++) {
            NSString * secondaryTitle = [self.secondarySectionTitles
objectOrNilAtIndex:i];
            if ([secondaryTitle isEqualToString:title]) {
                ret = beginIndex + i;
                return ret;
            }
        }
        beginIndex += self.secondarySectionCount;
    }
     */
    if ([self.mainDataIndexChar count] > 0){
        for(NSInteger i = 0; i < [self.mainDataIndexChar count]; i++) {
            NSString * indexChar = [self.mainDataIndexChar objectAtIndex:i];
            if ([indexChar isEqualToString:title]) {
                ret = i;
                break;
            }
        }
    }
    if (ret != NSNotFound) {
        ret = ret + beginIndex;
    }
    return ret;
}

@end
```

1.5.14.5. Title bar segment component

AUTitleBarSegment is a segmented control used at the top of the navigation bar. AUTitleBarSegment encapsulates UISegmentedControl, simply modifies the UI style of UISegmentedControl, and provides default width and height of each segment.

API description

```
    /*
     mPaaS standard: The segment controls can be used only at the top of the navigation
bar.
     The default color value is used, and the default height of the navigation bar is 2
6 px.
     */

    #define AUTitleBarSegment_DefaultHeight             26      // The default height of
each segment is 26 px.
    #define AUTitleBarSegment_DefaultSegmentWidth       90      // The default width of
each segment is 90 px.

    @interface AUTitleBarSegment : UISegmentedControl

    @end
```

Sample code

```
AUTitleBarSegment *titleBatSegment = [[AUTitleBarSegment alloc]
initWithItems:@[@"Label", @"Label"]];
    self.navigationItem.titleView = titleBatSegment;
```

1.5.14.6. Navigation button

AUBarButtonItem in mPaaS is equivalent to UIBarButtonItem. It contains predefined items such as the color and font. To facilitate subsequent extension, AUBarButtonItem instead of UIBarButtonItem must be used in all mPaaS apps.

Currently, AUBarButtonItem completely is completely inherited from AUSwitch without any new properties or methods.

API description

```
/**
*/
@interface AUBarButtonItem : UIBarButtonItem

@property(nonatomic, strong) NSString *backButtonTitle; // The title of the Back button
.
@property(nonatomic, strong) UIImage *backButtonImage;  // The icon of the Back button.
@property(nonatomic, strong) UIColor *titleColor;       // The text color of the Back b
utton.

/**
*  Set the spacing between buttons.
*
*  @return Return an empty button of the UIBarButtonSystemItemFlexibleSpace style.
*/
+ (AUBarButtonItem *)flexibleSpaceItem;

/**
*  Create a default Back button style.
*
*  @param title     The title to be displayed.
*  @param target    The tapping target.
*  @param action    The action to be executed upon tapping.
*
*  @return APBarButtonItem
*/
+ (AUBarButtonItem *)backBarButtonItemWithTitle:(NSString *)title target:(id)target act
ion:(SEL)action;

/**
*  Create a default Back button style.
*
*  @param title     The title to be displayed.
*  @param count     The maximum number of characters to be displayed.
*  @param target    The tapping target.
*  @param action    The action to be executed upon tapping.
*
*  @return APBarButtonItem
*/
+ (AUBarButtonItem *)backBarButtonItemWithTitle:(NSString *)title maxWordsCount:(NSInte
ger)count target:(id)target action:(SEL)action;

@end
```

Code sample

```
// Define a backBarItem.
// The backBarItem contains a back icon by default.
AUBarButtonItem *cancelItem = [AUBarButtonItem backBarButtonItemWithTitle:@"Back" targe
t:self action:@selector(cancel)];
cancelItem.backButtonTitle = @"Cancel";
self.navigationItem.leftBarButtonItem = cancelItem;

AUBarButtonItem *rightItem1 = [[AUBarButtonItem alloc] initWithImage:image1 style:UIBar
ButtonItemStylePlain target:self action:@selector(rightBarItemPressed)];
```

1.5.14.7. Adaptation and dependency

As the shell of AntUI, AntUIShell is mainly used to implement third-party protocols in AntUI. It can be embedded to an mPaaS app and reduce external dependencies of AntUI.

API description

AntUIShellObject.h

```
//
//  AntUIShellObject.h
//  AntUIShell
//

#import <Foundation/Foundation.h>
#import <AntUI/AntUI.h>

@interface AntUIShellObject : NSObject<AUThirdPartyAdapter>

@end
```

Code sample

```
//
//  AntUIShellObject.m
//  AntUIShell
//

#import "AntUIShellObject.h"
#import <APMonitor/APMonitor.h>
#import <APMultimedia/APMultimedia.h>
#import <MPBadgeService/MPBadgeService.h>

@implementation AntUIShellObject


#pragma mark ----AUThirdPartyAdapter
/*********************************************************/
// The image protocol APMultimedia.
/*
 API adaptation for third-party to download image.
 It wraps mulimedia APIs and is implemented by a third party.
 */
```

```
- (NSString *)thirdPartyGetImage:(NSString *)identifier
                        business:(NSString *)business
                            zoom:(CGSize)size
                    originalSize:(CGSize)originSize
                        progress:(void (^)(double percentage,long long partialBytes,long
long totalBytes))progress
                      completion:(void (^)(UIImage *image, NSError *error))complete
{
    return  [[APImageManager manager] getImage:identifier business:business zoom:size o
riginalSize:originSize progress:progress completion:complete];

}

/*
API adaptation for third-party to download UIImageView image.
 It is implemented by a third party.
 */
- (void)thirdPartypFromImageView:(UIImageView *)fromImgView
                 setImageWithKey:(NSString *)key
                        business:(NSString *)business
                placeholderImage:(UIImage *)placeholder
                            zoom:(CGSize)zoom
                    originalSize:(CGSize)originalSize
                        progress:(void (^)(double percentage,long long partialBytes,long
long totalBytes))progress
                      completion:(void (^)(UIImage *image, NSError *error))complete
{
    if(fromImgView && [fromImgView isKindOfClass:[UIImageView class]]) {
        [fromImgView setImageWithKey:key business:business placeholderImage:placeholder
zoom:zoom originalSize:originalSize progress:progress completion:complete];
    }
}
/*********************************************************/
// The badge protocol MPBadgeService.
/*
 Initialize the badge view.
 */
- (UIView *) thirdPartyBadgeViewWithFrame:(CGRect)frame
{
    return [[MPBadgeView alloc] initWithFrame:frame];
}

/*
 Set widgetId for the badge.

 */
- (void) thirdPartyBadgeViewWith:(UIView *)badgeView
                        widgetId:(NSString *) widgetId
{
    if(badgeView && [badgeView isKindOfClass:[MPBadgeView class]]) {
        MPBadgeView * tmpBadgeView =(MPBadgeView *)badgeView;
        tmpBadgeView.widgetId = widgetId;
    }
```

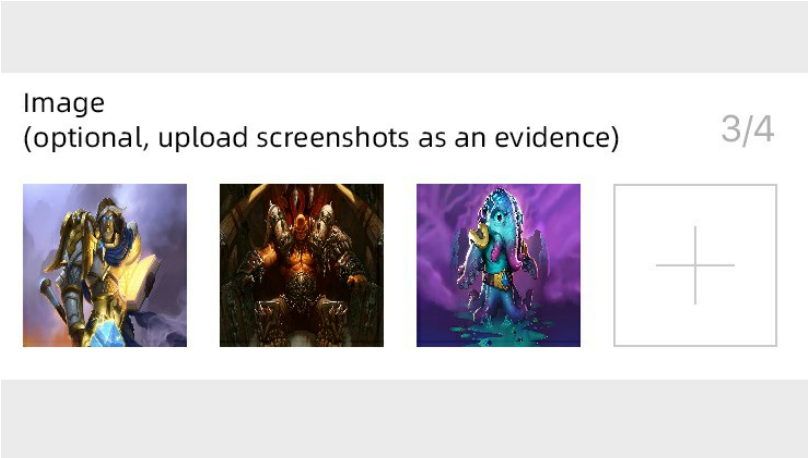
```
}
/*
 Register the badge view to MPBadgeManager.
 */
- (void) thirdPartyBadgeViewReg:(UIView *)badgeView
{
    if(badgeView && [badgeView isKindOfClass:[MPBadgeView class]]) {
        MPBadgeView * tmpBadgeView =(MPBadgeView *)badgeView;
        [[MPBadgeManager sharedInstance] registerBadgeView:tmpBadgeView];
    }

}

/**
 * Update the badge style.
 * @param badgeView The badge view.
 * @param badgeValue:  @"."   Display a red dot.
 *                     @"new" Display "new".
 *                     @"Number" Display a number. For a number greater than 99, display
the more icon (...).
 *                     @"hui"  Display "hui".
 *                     @"xin" Display "xin".
 *                     nil    Clear the currently displayed content.
 *
 * @return There is no return value.
 */
- (void) thirdPartyBadgeViewWith:(UIView *)badgeView
                     updateValue:(NSString *)badgeValue
{
    if(badgeView && [badgeView isKindOfClass:[MPBadgeView class]]) {
        MPBadgeView * tmpBadgeView =(MPBadgeView *)badgeView;
        [tmpBadgeView updateBadgeValue:badgeValue];
    }
}

/*
 Provide business personnel with an API for monitoring badge control updates.
 The type of widgetInfo is MPWidgetInfo.
 */
- (void) thirdPartyBadgeViewWith:(UIView *)badgeView
                     updateBlock:(void(^)(id widgetInfo, BOOL isShow)) updateBlock
{
    if(badgeView && [badgeView isKindOfClass:[MPBadgeView class]]) {
        MPBadgeView * tmpBadgeView =(MPBadgeView *)badgeView;
        if(updateBlock) {
            tmpBadgeView.updateBlock = updateBlock;
        }
    }

}

/*
 The tracking protocol APMonitor.
 */
// The tracking protocol of actionName of the button
```

```
// The tracking protocol of actionName of the button.
- (void) thirdPartySetButtonActionLog:(UIButton *)button
                        actionNameLog:(NSString *)actionName
{
    if(button && [button isKindOfClass:[UIButton class]]) {
        button.actionName = actionName;
    }
}

/*
 The notification protocol AUCardMenu/AUFloatMenu.
 */

/*
 AUCardMenu registers the logout notification, ensuring that AUCardMenu is destroyed up
on logout in a timely manner.
 */
- (NSString *) thirdPartyCardMenuDismissNotiName
{
    return @"SAAccountDidExitNotification";
}

/*
 AUFloatMenu registers alerView kShareTokenAlertViewShownNotification.
 */
- (NSString *) thirdPartyFloatMenuDismissFromAlertNotiName
{
    return @"kShareTokenAlertViewShownNotification";
}

/*
 AUFloatMenu registers alerView SALoginAppWillStartNotification.
 */
- (NSString *) thirdPartyFloatMenuDismissFromLoginNotiName
{
    return @"SALoginAppWillStartNotification";
}


@end
```

1.5.14.8. Image picker encapsulation

AUImagePickerSkeleton is an image selection component that encapsulates the vision and interaction functions. It does not support album calling, browsing, or uploading. Currently, the image selection functions are incomplete. The component that inherits functions will be added to BEEViews.

Sample image



Dependency

```
Currently, this component is not added to the AntUI baseline.
```

API description

```
@protocol AUImagePickerDataProtocol <NSObject>

- (UIImage *)image;

@end

@interface AUImagePickerSkeleton : UIView

- (AUImagePickerSkeleton *)initWithTitle:(NSString *)title
               maxNumberOfImages:(NSUInteger)maxNumberOfImages;

@property(nonatomic, assign, readonly) NSUInteger maxNumberOfImages;
@property(nonatomic, weak) id<AUImagePickerDelegate> delegate;
@property(nonatomic, strong, readonly) NSArray<id<AUImagePickerDataProtocol>> *imagePic
kerDatas;

- (void)updateImagePickerDatas:(NSArray <id<AUImagePickerDataProtocol>>*) datas;

@end

@protocol AUImagePickerDelegate <NSObject>

@required
- (void)imagePickerAddButtonClick:(AUImagePickerSkeleton *)imagePicker;

@optional
- (void)imagePickerImageClick:(AUImagePickerSkeleton *)imagePicker
                   clickData:(id<AUImagePickerDataProtocol>)clickData;
@end
```

Sample code

```
- (void)viewDidLoad {
    [super viewDidLoad];
    self.datas = [[NSMutableArray alloc] init];
    self.picker = [[AUImagePickerSkeleton alloc] initWithTitle:@"Image(optional, upload
screenshots as an evidence)"maxNumberOfImages:4];
    self.picker.top = 100;
    self.picker.delegate = self;
    [self.view addSubview:self.picker];
    [self.view addSubview:self.button];
    self.view.backgroundColor = RGB(0xEBEBEB);
}

- (void)imagePickerAddButtonClick:(AUImagePickerSkeleton *)imagePicker
{
    AUImagePickerData *data = [AUImagePickerData new];
    data.originalImage = [self getImageWithCount:[self.datas count]];
    [self.datas addObject:data];
    [self updatePickerAndResize];
}

-(void)imagePickerImageClick:(AUImagePickerSkeleton *)imagePicker
                   clickData:(id<AUImagePickerDataProtocol>)clickData
{
    NSString *msg = @"";
    if ([self.datas containsObject:clickData]) {
        msg = [NSString stringWithFormat:@"Tap image %d",(int)[self.datas
indexOfObject:clickData]+1];
    }else{
        msg = @"The image tapped is abnormal";
    }
    [AUToast presentModalToastWithin:self.view
                           withIcon:AUToastIconNone
                               text:msg
                           duration:1
                             logTag:@"demo"
                         completion:NULL];

}
```