第一个 flutter 程序，hello world

```dart
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return new MaterialApp(
      title: 'welcome to flutter',
      home: new Scaffold(
        appBar: new AppBar(
          title: new Text('welcome to flutter for android'),
        ),
        body: new Center(
          child: new Text('hello world'),
        ),
      ),
    );
  }
}
```

第二个程序　调用字体库

（1）打开 pubspec.yaml 文件，

```yaml
dev_dependencies:
  flutter_test:
    sdk: flutter
```

（2）输入下面这两行

```yaml
cupertino_icons: ^0.1.0
english_words: ^3.1.0
```

（3）点击右上角 Packages get，点击 run，打开控制台，可以看到这个日志

```
Performing hot reload...
```

```
Syncing files to device Lenovo L38041...

Reloaded 0 of 555 libraries in 254ms.
```

这样表示类库加载成功，然后去 lib 目录下的 main.dart 文件，输入：

```
import 'package:english_words/english_words.dart';
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    final wordPair = new WordPair.random();
    return new MaterialApp(
      title: 'welcome to flutter',
      home: new Scaffold(
        appBar: new AppBar(
          title: new Text('welcome to flutter of ios'),
        ),
        body: new Center(
          child: new Text(wordPair.asCamelCase),
        ),
      ),
    );
  }
}
```

然后运行，运行成功就可以看到字体库加载成功了

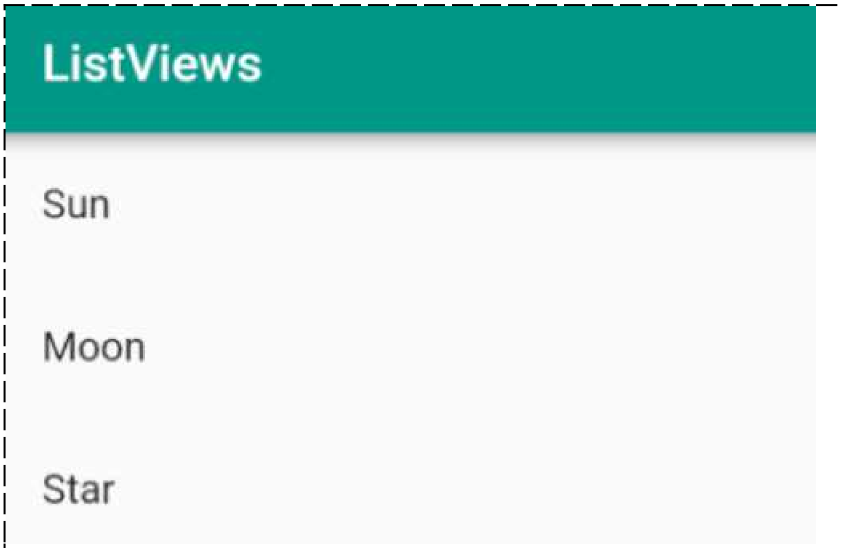
第三个程序，多个控件类调用

```
import 'package:flutter/material.dart';
import 'package:english_words/english_words.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return new MaterialApp(
      title: 'welcome to flutter',
      home: new Scaffold(
        appBar: new AppBar(
          title: new Text('welcome for mobile of this'),
        ),
        body: new Center(
          child: new RandomWords(),
        ),
      ),
    );
  }
}

class RandomWords extends StatefulWidget {
  @override
  createState() => new RandomWordsState();
}

class RandomWordsState extends State<RandomWords> {
  @override
  Widget build(BuildContext context) {
    final wordPair = new WordPair.random();
    return (new Text(wordPair.asPascalCase));
  }
}
```

第四个程序，listView

```
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'listview',
      theme: ThemeData(primarySwatch: Colors.teal),
      home: Scaffold(
        appBar: AppBar(title: Text('listviews of flutter')),
        body: BodyLayout(),
      ),
    );
  }
}

class BodyLayout extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return _myListView(context);
  }

  Widget _myListView(BuildContext context) {
    return ListView(
      children: <Widget>[
        ListTile(
          title: Text('Sun'),
        ),
        ListTile(
          title: Text('Moon'),
        ),
      ],
    );
  }
}
```

运行效果图：



ListViews

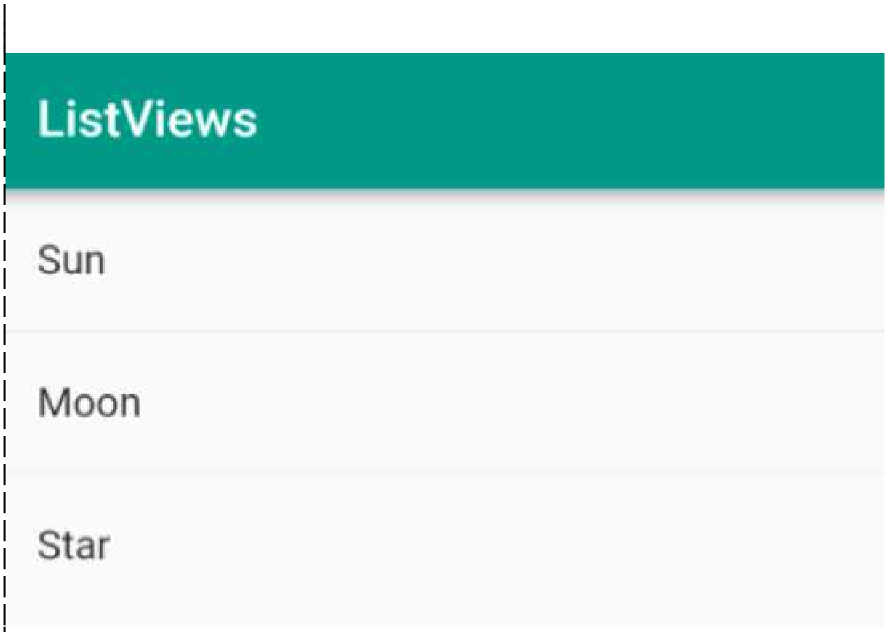
Sun

Moon

Star

（2）带下划线的 listview

```
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'listview',
      theme: ThemeData(primarySwatch: Colors.teal),
      home: Scaffold(
        appBar: AppBar(title: Text('listviews of flutter')),
        body: BodyLayout(),
      ),
    );
  }
}

class BodyLayout extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return _myListView(context);
  }

  Widget _myListView(BuildContext context) {
    return ListView(
      children: ListTile.divideTiles(context: context, tiles: [
        ListTile(
          title: Text('sun'),
        ),
        ListTile(
          title: Text('Moon'),
        ),
        ListTile(
          title: Text('start'),
        )
      ]).toList(),
    );
  }
}
```



ListViews

Sun

Moon

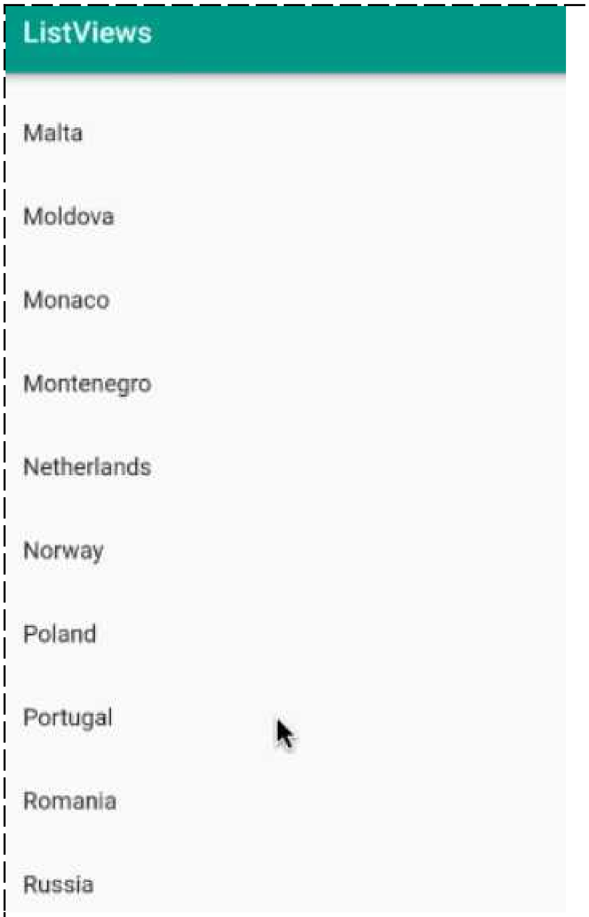
Star

（3）动态改变的 ListView，需要从服务端拿到 lists 数据，然后在界面上进行展示，多条数据可以支持滑动显示，但是滑动性能还是有点差，不如原生的流畅，如果功能涉及多条数据的网络图片加载，可能导致页面卡顿

```
import 'package:flutter/material.dart';
```

```
void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'listview',
      theme: ThemeData(primarySwatch: Colors.teal),
      home: Scaffold(
        appBar: AppBar(title: Text('listviews of flutter')),
        body: BodyLayout(),
      ),
    );
  }
}

class BodyLayout extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return _myListView(context);
  }

  Widget _myListView(BuildContext context) {
    final lists = ['武松', '张飞', '赵云', '刘娥'];
    return ListView.builder(
      itemCount: lists.length,
      itemBuilder: (context, index) {
        return ListTile(
          title: Text(lists[index]),
        );
      },
    );
  }
}
```

效果图：


ListViews

Malta

Moldova

Monaco

Montenegro

Netherlands

Norway

Poland

Portugal

Romania

Russia

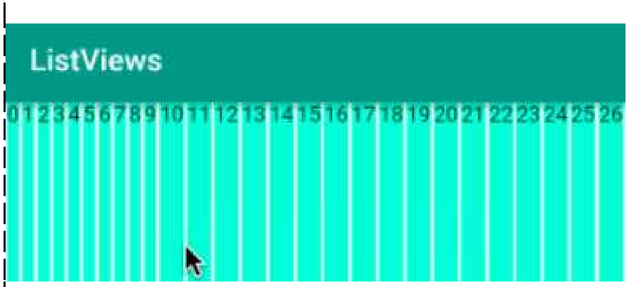
（4）listView 显示 0-99，一共 100 个 item

```
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'listview',
      theme: ThemeData(primarySwatch: Colors.teal),
      home: Scaffold(
        appBar: AppBar(title: Text('listviews of flutter')),
        body: BodyLayout(),
      ),
    );
  }
}

class BodyLayout extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return _myListView(context);
  }

  Widget _myListView(BuildContext context) {
    return ListView.builder(
      itemCount: 100,
      itemBuilder: (context, index) {
        return ListTile(
          title: Text('row $index'),
        );
      },
    );
  }
}
```

（5）水平方向的List View

```
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'listview',
      theme: ThemeData(primarySwatch: Colors.teal),
      home: Scaffold(
        appBar: AppBar(title: Text('listviews of flutter')),
        body: BodyLayout(),
      ),
    );
  }
}

class BodyLayout extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return _myListView(context);
  }

  Widget _myListView(BuildContext context) {
    return ListView.builder(
      scrollDirection: Axis.horizontal,
      itemBuilder: (context, index) {
        return Container(
          margin: const EdgeInsets.symmetric(horizontal: 1.0),
          color: Colors.tealAccent,
          child: Text('$index'),
        );
      },
    );
  }
}
```

效果图:

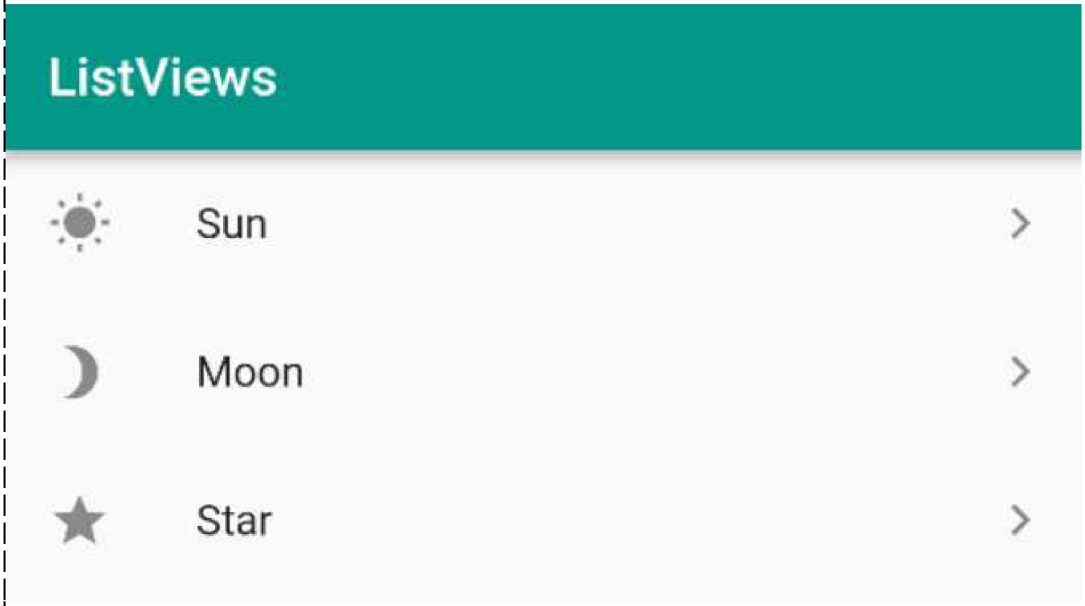


（5）带图片样式的ListView

```
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());
```

```
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'listview',
      theme: ThemeData(primarySwatch: Colors.teal),
      home: Scaffold(
        appBar: AppBar(title: Text('listviews of flutter')),
        body: BodyLayout(),
      ),
    );
  }
}

class BodyLayout extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return _myListView(context);
  }

  Widget _myListView(BuildContext context) {
    return ListView(
      children: <Widget>[
        ListTile(
          leading: Icon(Icons.wb_sunny),
          title: Text('sun'),
          trailing: Icon(Icons.keyboard_arrow_right),
        ),
        ListTile(
          leading: Icon(Icons.brightness_3),
          title: Text('Moon'),
          trailing: Icon(Icons.keyboard_arrow_right),
        ),
        ListTile(
          leading: Icon(Icons.star),
          title: Text('stat'),
          trailing: Icon(Icons.keyboard_arrow_right),
        ),
      ],
    );
  }
}
```

效果图：



（6）自定义的 listview，带图文的那种

打开 pubspec.yaml 文件，添加

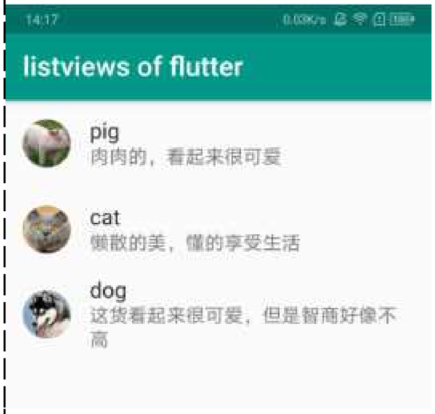
```
flutter:
  assets:
    - assets/
```

点击右上角的 packages get

开始 main.dart

```
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'listview',
      theme: ThemeData(primarySwatch: Colors.teal),
      home: Scaffold(
        appBar: AppBar(title: Text('listviews of flutter')),
        body: BodyLayout(),
      ),
    );
  }
}

class BodyLayout extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return _myListView(context);
  }

  Widget _myListView(BuildContext context) {
    return ListView(
      children: <Widget>[
        ListTile(
          leading: CircleAvatar(
            backgroundImage: AssetImage('assets/pig.png'),
          ),
          title: Text('pig'),
          subtitle: Text('肉肉的，看起来很可爱'),
        ),
        ListTile(
            leading: CircleAvatar(
              backgroundImage: AssetImage('assets/cat.png'),
            ),
            title: Text('cat'),
            subtitle: Text('懒散的美，懂的享受生活'),
        ),

        ListTile(
          leading: CircleAvatar(
            backgroundImage: AssetImage('assets/dog.png'),
          ),
          title: Text('dog'),
          subtitle: Text('这货看起来很可爱，但是智商好像不高'),
        ),
      ],
    );
  }
}
```

效果图:



14:17 0.03K/s

listviews of flutter

pig
肉肉的，看起来很可爱

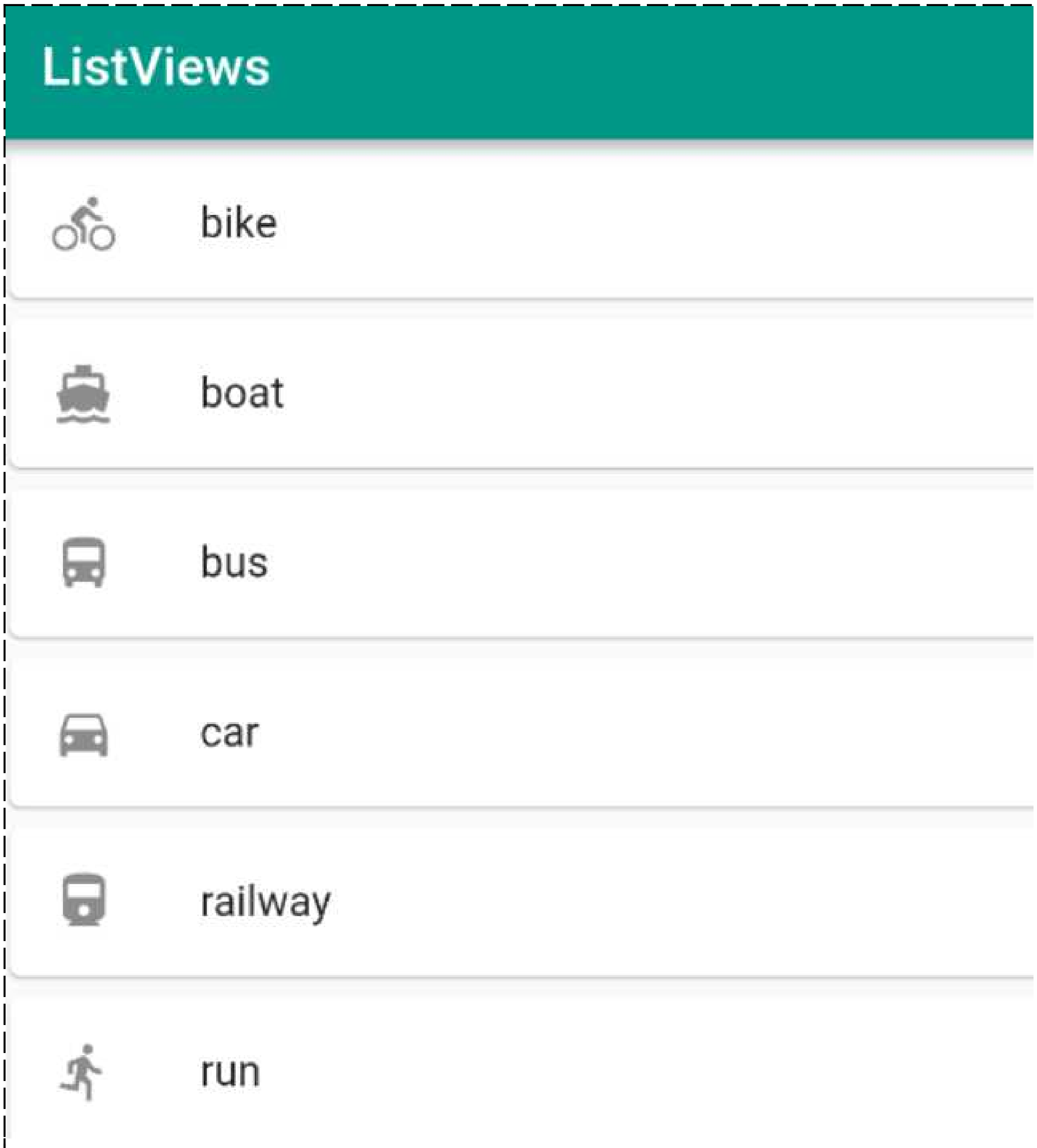
cat
慵散的美，懂的享受生活

dog
这货看起来很可爱，但是智商好像不高

（7）list 和图片　组成的 listview 视图

```
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'listview',
      theme: ThemeData(primarySwatch: Colors.teal),
      home: Scaffold(
        appBar: AppBar(title: Text('listviews of flutter')),
        body: BodyLayout(),
      ),
    );
  }
}

class BodyLayout extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return _myListView(context);
  }

  Widget _myListView(BuildContext context) {
    final titles = [
      'bike',
      'boat',
      'bus',
      'car',
      'railway',
      'run',
      'subway',
      'transit',
      'walk',
      'usage',
      'perm'
  ];
    final icons = [
      Icons.directions_bike,
      Icons.directions_boat,
      Icons.directions_bus,
      Icons.directions_car,
      Icons.directions_railway,
      Icons.directions_run,
      Icons.directions_subway,
      Icons.directions_transit,
      Icons.directions_walk,
      Icons.data_usage,
      Icons.perm_data_setting
    ];

    return ListView.builder(
      itemCount: titles.length,
      itemBuilder: (context, index) {
        return Card(
          child: ListTile(
            leading: Icon(icons[index]),
            title: Text(titles[index]),
          ),
        );
      },
    );
  }
}
```

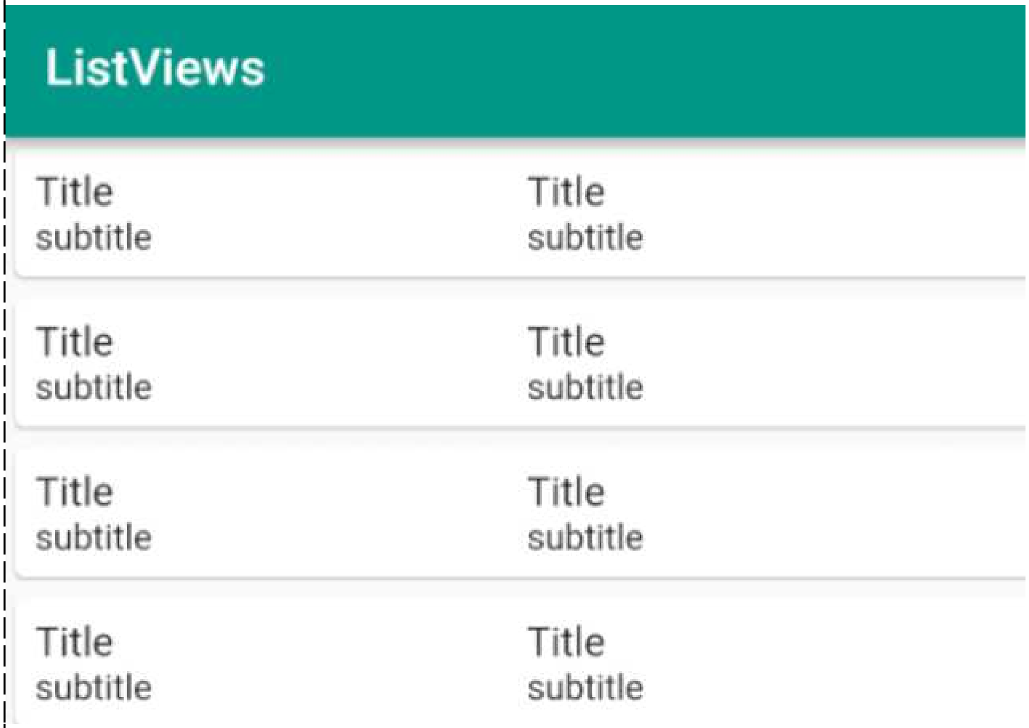
效果图：



（8）双列的ListView

```
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'listview',
      theme: ThemeData(primarySwatch: Colors.teal),
      home: Scaffold(
        appBar: AppBar(title: Text('listviews of flutter')),
        body: BodyLayout(),
      ),
    );
  }
}

class BodyLayout extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return _myListView(context);
  }

  Widget _myListView(BuildContext context) {
    Widget column = Expanded(
      child: Column(
        crossAxisAlignment: CrossAxisAlignment.start,
        children: <Widget>[
          Text(
            'title',
            style: TextStyle(fontSize: 16),
          ),
          Text('subtitle'),
        ],
      ),
    );
    return ListView.builder(itemBuilder: (context, index) {
      return Card(
        child: Padding(
          padding: const EdgeInsets.all(8.0),
          child: Row(
            children: <Widget>[
              column,
              column,
            ],
          ),
        ),
      );
    });
  }
}
```

效果图：



ListViews

Title
subtitle

Title
subtitle

Title
subtitle

Title
subtitle

Title
subtitle

Title
subtitle

Title
subtitle

Title
subtitle

（9）listView 中 Item 点击事件，onTap 就是点击事件

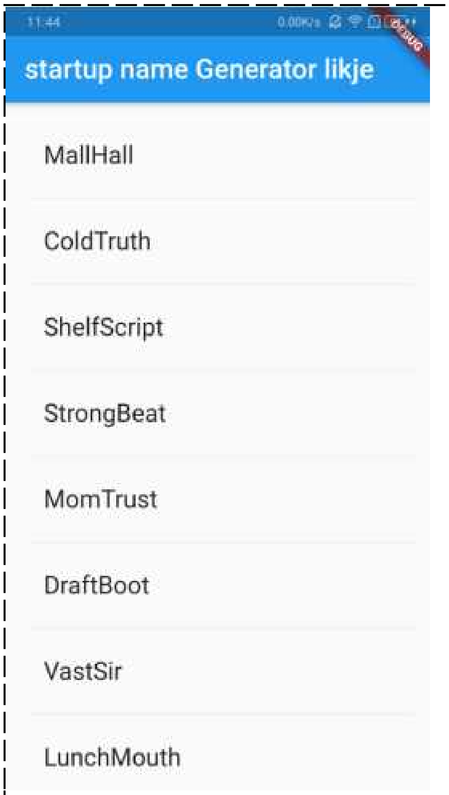
```
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'listview',
      theme: ThemeData(primarySwatch: Colors.teal),
      home: Scaffold(
        appBar: AppBar(title: Text('listviews of flutter')),
        body: BodyLayout(),
      ),
    );
  }
}

class BodyLayout extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return _myListView(context);
  }

  Widget _myListView(BuildContext context) {
    return ListView(
      children: <Widget>[
        ListTile(
          title: Text('sun'),
          trailing: Icon(Icons.keyboard_arrow_right),
          onTap: () {
            print('click sun');
          },
        ),
        ListTile(
          title: Text('Moon'),
          trailing: Icon(Icons.keyboard_arrow_right),
          onTap: () {
            print('click moon');
          },
        ),
        ListTile(
          title: Text('Star'),
          trailing: Icon(Icons.keyboard_arrow_right),
          onTap: () {
            print('click star');
          },
        ),
      ],
    );
  }
}
2020-06/com.example.flutterapp I/flutter: click sun

2020-06/com.example.flutterapp I/flutter: click moon

2020-06/com.example.flutterapp I/flutter: click star
```

（10）ListView新增和删除item

```
import 'package:flutter/material.dart';

void main() => runApp(new BodyLayout());

class BodyLayout extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    return new BodyLayoutState();
  }
}

class BodyLayoutState extends State<BodyLayout> {
  List<String> titles = ['Sun', 'Moon', 'Star'];

  @override
  Widget build(BuildContext context) {
    return _myListView();
  }

  Widget _myListView() {
    return ListView.builder(
        itemCount: titles.length,
        itemBuilder: (context, index) {
          final item = titles[index];
          return Card(
            child: ListTile(
              title: Text(item),
              onTap: () {
                setState(() {
                  titles.insert(index, 'Planet');
                });
              },
              onLongPress: () {
                setState(() {
                  titles.removeAt(index);
                });
              },
            ),
          );
        });
  }
}
```

无限循环的 listview

```
import 'package:flutter/material.dart';
import 'package:english_words/english_words.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return new MaterialApp(
      title: 'startup name generator likje',
      home: new RandomWords(),
    );
  }
}

class RandomWords extends StatefulWidget {
  @override
  createState() => new RandomWordsState();
}

class RandomWordsState extends State<RandomWords> {
  final _suggestions = <WordPair>[];
  final TextStyle _biggerFont = new TextStyle(fontSize: 18.0);

  @override
  Widget build(BuildContext context) {
    return new Scaffold(
      appBar: new AppBar(
        title: new Text('startup name Generator likje'),
      ),
      body: _buildSuggestions(),
    );
  }

  Widget _buildSuggestions() {
    return new ListView.builder(
      padding: const EdgeInsets.all(16.0),
      itemBuilder: (context, i) {
        if (i.isOdd) return new Divider();
        final index = i ~/ 2;
        if (index >= _suggestions.length) {
          _suggestions.addAll(generateWordPairs().take(10));
        }
        return _buildRow(_suggestions[index]);
      },
    );
  }

  Widget _buildRow(WordPair pair) {
    return new ListTile(
      title: new Text(
        pair.asPascalCase,
        style: _biggerFont,
      ),
    );
  }
}
```



startup name Generator likje

MallHall

ColdTruth

ShelfScript

StrongBeat

MomTrust

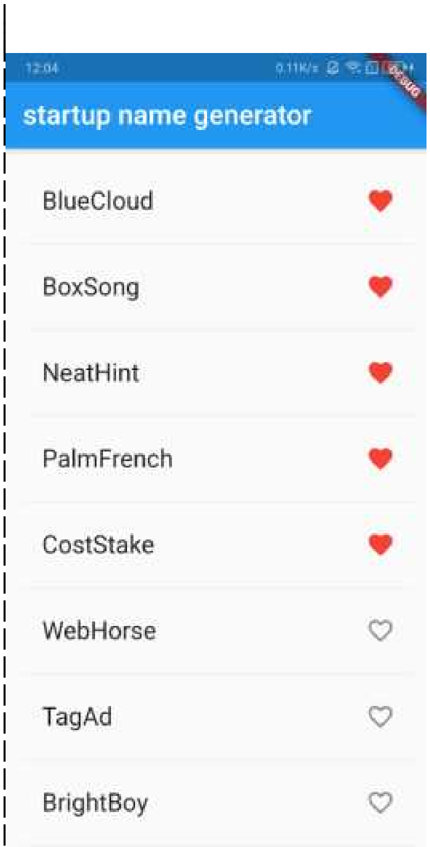
DraftBoot

VastSir

LunchMouth

带红心的 listview，onTap 是点击事件，remove 和 add，可以移除或者添加红心

```
import 'package:english_words/english_words.dart';
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return new MaterialApp(
      title: '',
      home: new RandomWords(),
    );
  }
}

class RandomWords extends StatefulWidget {
  @override
  createState() => new RandomWordsState();
}

class RandomWordsState extends State<RandomWords> {
  final _suggestions = <WordPair>[];
  final _saved = new Set<WordPair>();
  final _biggerFont = const TextStyle(fontSize: 18.0);

  @override
  Widget build(BuildContext context) {
    return new Scaffold(
      appBar: new AppBar(
        title: new Text('startup name generator'),
      ),
      body: _buildSuggestions(),
    );
  }

  Widget _buildSuggestions() {
    return new ListView.builder(
      padding: const EdgeInsets.all(16.0),
      itemBuilder: (contetx, i) {
        if (i.isOdd) return new Divider();
        final index = i ~/ 2;
        if (index >= _suggestions.length) {
          _suggestions.addAll(generateWordPairs().take(10));
        }
        return _buildRow(_suggestions[index]);
      },
    );
  }

  Widget _buildRow(WordPair pair) {
    final alreadySaved = _saved.contains(pair);
    return new ListTile(
      title: new Text(
        pair.asPascalCase,
        style: _biggerFont,
      ),
      trailing: new Icon(
        alreadySaved ? Icons.favorite : Icons.favorite_border,
        color: alreadySaved ? Colors.red : null,
      ),
      onTap: () {
        setState(() {
          if (alreadySaved) {
            _saved.remove(pair);
          } else {
            _saved.add(pair);
          }
        });
      },
    );
  }
}
```



12:04 0.11K/s

startup name generator

BlueCloud ♥

BoxSong ♥

NeatHint ♥

PalmFrench ♥

CostStake ♥

WebHorse ♡

TagAd ♡

BrightBoy ♡

导航页面跳转

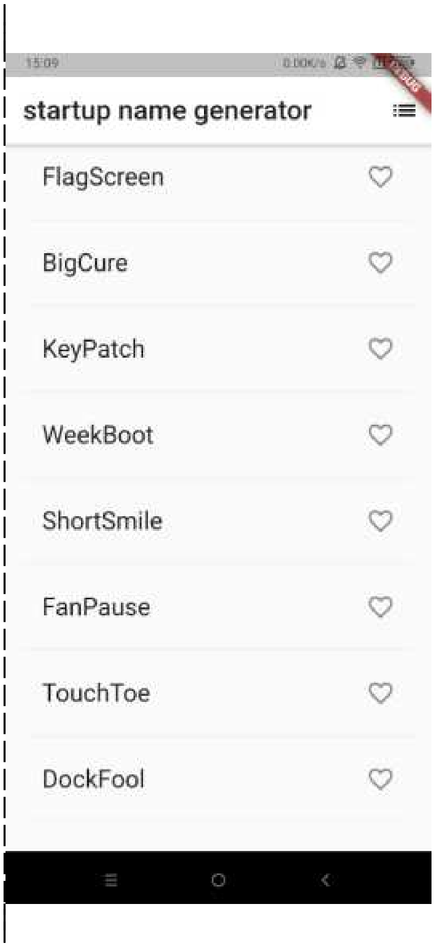
```
import 'package:flutter/material.dart';
import 'package:english_words/english_words.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return new MaterialApp(
      title: 'startip name generator',
      home: new RandomWords(),
    );
  }
}

class RandomWords extends StatefulWidget {
  @override
  createState() => new RandomWordsState();
}

class RandomWordsState extends State<RandomWords> {
  final _suggestions = <WordPair>[];
  final _saved = new Set<WordPair>();
  final _biggerFont = const TextStyle(fontSize: 18.0);

  @override
  Widget build(BuildContext context) {
    return new Scaffold(
      appBar: new AppBar(
        title: new Text('startup name generator'),
        actions: <Widget>[
          new IconButton(icon: new Icon(Icons.list), onPressed: _pushSaved)
        ],
      ),
      body: _buildSuggestions(),
    );
  }

  Widget _buildSuggestions() {
```

```
  return new ListView.builder(
    padding: const EdgeInsets.all(16.0),
    itemBuilder: (context, i) {
      if (i.isOdd) return new Divider();
      final index = i ~/ 2;
      if (index >= _suggestions.length) {
        _suggestions.addAll(generateWordPairs().take(10));
      }
      return _buildRow(_suggestions[index]);
    },
  );
}

Widget _buildRow(WordPair pair) {
  final alreadySaved = _saved.contains(pair);
  return new ListTile(
    title: new Text(
      pair.asPascalCase,
      style: _biggerFont,
    ),
    trailing: new Icon(
      alreadySaved ? Icons.favorite : Icons.favorite_border,
      color: alreadySaved ? Colors.red : null,
    ),
    onTap: () {
      setState(() {
        if (alreadySaved) {
          _saved.remove(pair);
        } else {
          _saved.add(pair);
        }
      });
    },
  );
}

void _pushSaved() {
  Navigator.of(context).push(
    new MaterialPageRoute(
        builder: (context) {
          final tiles = _saved.map(
            (pair) {
              return new ListTile(
                title: new Text(
                  pair.asPascalCase,
                  style: _biggerFont,
                ),
              );
            },
          );
          final divided =
              ListTile.divideTiles(context: context, tiles: tiles).toList();
          return new Scaffold(
            appBar: new AppBar(
              title: new Text('saved suggestions'),
            ),
            body: new ListView(children: divided),
          );
        },
      ),
    );
  }
}
```

更改白色样式

```
import 'package:flutter/material.dart';
import 'package:english_words/english_words.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return new MaterialApp(
      title: 'startup name generator',
      theme: new ThemeData(primaryColor: Colors.white),
      home: new RandomWords(),
    );
  }
}

class RandomWords extends StatefulWidget {
  @override
  createState() => new RandomWordsState();
}

class RandomWordsState extends State<RandomWords> {
  final _suggestions = <WordPair>[];
  final _saved = new Set<WordPair>();
  final _biggerFont = const TextStyle(fontSize: 18.0);

  @override
  Widget build(BuildContext context) {
    return new Scaffold(
      appBar: new AppBar(
        title: new Text('startup name generator'),
        actions: <Widget>[
          new IconButton(icon: new Icon(Icons.list), onPressed: _pushSaved)
        ],
      ),
      body: _buildSuggestions(),
    );
  }

  Widget _buildSuggestions() {
    return new ListView.builder(
      padding: const EdgeInsets.all(16.0),
      itemBuilder: (context, i) {
        if (i.isOdd) return new Divider();
        final index = i ~/ 2;
        if (index >= _suggestions.length) {
          _suggestions.addAll(generateWordPairs().take(10));
        }
        return _buildRow(_suggestions[index]);
      },
    );
```

```
}

Widget _buildRow(WordPair pair) {
  final alreadySaved = _saved.contains(pair);
  return new ListTile(
    title: new Text(
      pair.asPascalCase,
      style: _biggerFont,
    ),
    trailing: new Icon(
      alreadySaved ? Icons.favorite : Icons.favorite_border,
      color: alreadySaved ? Colors.red : null,
    ),
    onTap: () {
      setState(
        () {
          if (alreadySaved) {
            _saved.remove(pair);
          } else {
            _saved.add(pair);
          }
        },
      );
    },
  );
}

void _pushSaved() {
  Navigator.of(context).push(
    new MaterialPageRoute(
      builder: (context) {
        final tiles = _saved.map(
          (pair) {
            return new ListTile(
              title: new Text(
                pair.asPascalCase,
                style: _biggerFont,
              ),
            );
            },
          );
          final divided =
              ListTile.divideTiles(context: context, tiles: tiles).toList();
          return new Scaffold(
            appBar: new AppBar(
              title: new Text('saved suggestions'),
            ),
            body: new ListView(children: divided),
          );
        },
      ),
    );
  }
}
```



startup name generator

FlagScreen

BigCure

KeyPatch

WeekBoot

ShortSmile

FanPause

TouchToe

DockFool

顶部栏控件

```
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';

class MyAppBar extends StatelessWidget {
  MyAppBar({this.title});

  final Widget title;

  @override
  Widget build(BuildContext context) {
    return new Container(
      height: 126.0,
      padding: const EdgeInsets.symmetric(horizontal: 8.0),
      decoration: new BoxDecoration(color: Colors.blue[500]),
      child: new Row(
        children: <Widget>[
          new IconButton(
            icon: new Icon(Icons.menu),
            tooltip: 'Menu',
            onPressed: null,
          ),
          new Expanded(
            child: title,
          ),
          new IconButton(
            icon: new Icon(Icons.search),
            tooltip: 'search',
            onPressed: null,
          ),
        ],
      ),
    );
  }
}

class MyScaffold extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return new Material(
      child: new Column(
        children: <Widget>[
          new MyAppBar(
            title: new Text(
              'Example title',
              style: Theme.of(context).primaryTextTheme.title,
            ),
          ),
          new Expanded(
            child: new Center(
              child: new Text('hello world'),
            ),
          ),
        ],
      ),
    );
  }
}

void main() {
  runApp(
    new MaterialApp(
      title: 'myapp',
      home: new MyScaffold(),
    ),
  );
}
```

左侧标题栏　菜单和搜索，新增添加按钮

```
import 'package:flutter/material.dart';

void main() => runApp(
      new MaterialApp(
        title: '',
        home: new TutorialHome(),
      ),
    );
```

```
class TutorialHome extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return new Scaffold(
      appBar: new AppBar(
        leading: new IconButton(
            icon: new Icon(Icons.menu),
            tooltip: 'Navigation menu',
            onPressed: null),
        title: new Text('title'),
        actions: <Widget>[
          new IconButton(
            icon: new Icon(Icons.search),
            tooltip: 'search',
            onPressed: null,
          ),
        ],
      ),
      body: new Center(
        child: new Text('hello world'),
      ),
      floatingActionButton: new FloatingActionButton(
        tooltip: 'Add',
        child: new Icon(Icons.add),
        onPressed: null,
      ),
    );
  }
}
```

异步线程

```
import 'dart:io';

import 'package:flutter/material.dart';

void main(List<String> args) {
  doComplexJob();
  print("end" + new DateTime.now().toString());
}

doComplexJob() async {
  print("start:" + new DateTime.now().toString());
  print(await new Future.delayed(Duration(seconds: 2), () => "stop： ") +
      new DateTime.now().toString());
}
```

监听程序的生命周期

```
import 'package:english_words/english_words.dart';
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return new MaterialApp(
      title: '',
      home: new RandomWords(),
    );
  }
}

class RandomWords extends StatefulWidget {
  @override
  createState() => new RandomWordsState();



}

class RandomWordsState extends State<RandomWords> {
  final _suggestions = <WordPair>[];
  final _saved = new Set<WordPair>();
  final _biggerFont = const TextStyle(fontSize: 18.0);

  @override
```

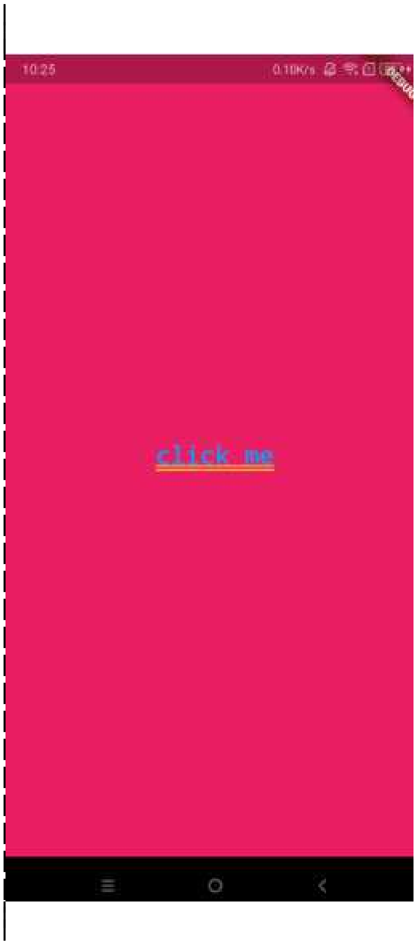
```
Widget build(BuildContext context) {
  return new Scaffold(
    appBar: new AppBar(
      title: new Text('startup name generator'),
    ),
    body: _buildSuggestions(),
  );
}

Widget _buildSuggestions() {
  return new ListView.builder(
    padding: const EdgeInsets.all(16.0),
    itemBuilder: (contetx, i) {
      if (i.isOdd) return new Divider();
      final index = i ~/ 2;
      if (index >= _suggestions.length) {
        _suggestions.addAll(generateWordPairs().take(10));
      }
      return _buildRow(_suggestions[index]);
    },
  );
}

Widget _buildRow(WordPair pair) {
  final alreadySaved = _saved.contains(pair);
  return new ListTile(
    title: new Text(
      pair.asPascalCase,
      style: _biggerFont,
    ),
    trailing: new Icon(
      alreadySaved ? Icons.favorite : Icons.favorite_border,
      color: alreadySaved ? Colors.red : null,
    ),
    onTap: () {
      setState(() {
        if (alreadySaved) {
          _saved.remove(pair);
        } else {
          _saved.add(pair);
        }
      });
    },
  );
}

@override
void initState() {
  // TODO: implement initState
super.initState();
  print("初始化");
}

@override
void didUpdateWidget(RandomWords oldWidget) {
  // TODO: implement didUpdateWidget
super.didUpdateWidget(oldWidget);
  print("重新构建组件");
}

@override
void deactivate() {
  // TODO: implement deactivate
super.deactivate();
  print("组件状态变为非活动时调用");
}

@override
void dispose() {
  // TODO: implement dispose
super.dispose();
  print("组件销毁");
}

@override
void reassemble() {
  // TODO: implement reassemble
super.reassemble();
```

```
    print("热重载时调用，仅在开发调试阶段有效");
  }

  @override
  void didChangeDependencies() {
    // TODO: implement didChangeDependencies
  super.didChangeDependencies();
    print("依赖发生改变");
  }
}
```

点击控件，显示不同的背景颜色

```
import 'package:english_words/english_words.dart';
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return new MaterialApp(title: 'flutter demo', home: new TopArea());
  }
}

//界面顶部区域
class TopArea extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return TopAreaState();
  }
}

//界面顶部区域 state
class TopAreaState extends State<TopArea> {
  var focuesd = false;

  void doClick() {
    setState(() {
      focuesd = !focuesd;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return GestureDetector(
      onTap: doClick,
      child: Container(
        child: Center(
          child: Text(
            "click me",
            style: TextStyle(fontSize: 18.0, color: Colors.blue),
          ),
        ),
        width: double.infinity,
        height: 200.0,
        decoration: BoxDecoration(
          color: focuesd ? Colors.green : Colors.pink,
        ),
      ),
    );
  }
}

class RandomWords extends StatefulWidget {
  @override
  createState() => new RandomWordsState();
}

class RandomWordsState extends State<RandomWords> {
  final _suggestions = <WordPair>[];
  final _saved = new Set<WordPair>();
  final _biggerFont = const TextStyle(fontSize: 18.0);

  @override
  Widget build(BuildContext context) {
    return new Scaffold(
      appBar: new AppBar(
        title: new Text('startup name generator'),
      ),
      body: _buildSuggestions(),
    );
  }

  Widget _buildSuggestions() {
    return new ListView.builder(
      padding: const EdgeInsets.all(16.0),
      itemBuilder: (contetx, i) {
        if (i.isOdd) return new Divider();
        final index = i ~/ 2;
        if (index >= _suggestions.length) {
          _suggestions.addAll(generateWordPairs().take(10));
        }
        return _buildRow(_suggestions[index]);
      },
    );
  }

  Widget _buildRow(WordPair pair) {
    final alreadySaved = _saved.contains(pair);
    return new ListTile(
      title: new Text(
        pair.asPascalCase,
        style: _biggerFont,
      ),
      trailing: new Icon(
        alreadySaved ? Icons.favorite : Icons.favorite_border,
        color: alreadySaved ? Colors.red : null,
      ),
      onTap: () {
        setState(() {
          if (alreadySaved) {
            _saved.remove(pair);
          } else {
            _saved.add(pair);
          }
        });
      },
    );
  }

  @override
  void initState() {
    // TODO: implement initState
  super.initState();
    print("初始化");
  }

  @override
  void didUpdateWidget(RandomWords oldWidget) {
    // TODO: implement didUpdateWidget
  super.didUpdateWidget(oldWidget);
    print("重新构建组件");
  }

  @override
  void deactivate() {
    // TODO: implement deactivate
  super.deactivate();
    print("组件状态变为非活动时调用");
  }

  @override
  void dispose() {
    // TODO: implement dispose
  super.dispose();
    print("组件销毁");
  }

  @override
  void reassemble() {
    // TODO: implement reassemble
  super.reassemble();
    print("热重载时调用，仅在开发调试阶段有效");
  }
```

```
  @override
  void didChangeDependencies() {
    // TODO: implement didChangeDependencies
  super.didChangeDependencies();
    print("依赖发生改变");
  }
}
```

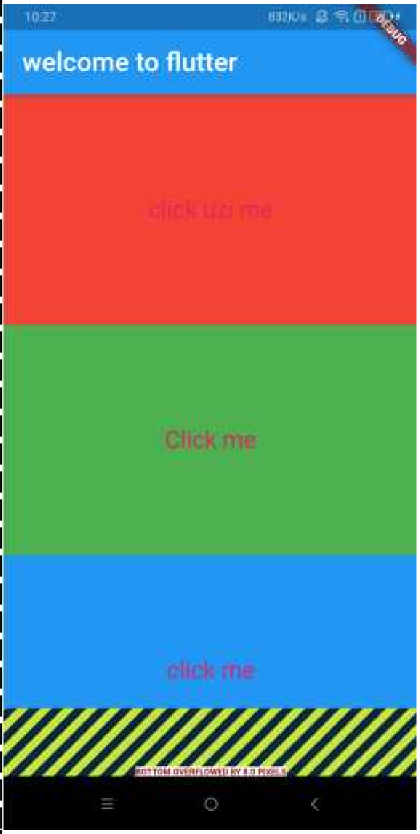


点击显示不同的背景颜色

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: 'flutter Demo',
      theme: ThemeData(
        primarySwatch: Colors.blue,
      ),
      home: new Scaffold(
        appBar: new AppBar(
          title: new Text('welcome to flutter'),
        ),
        body: new Center(
          child: new ThreeArea(),
        ),
      ),
    );
  }
}

class ThreeArea extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return Container(
      child: Column(
        children: <Widget>[
          TopArea(),
          MidAreaParent(),
          BottomAreaParent(),
        ],
      ),
    );
  }
}

class TopArea extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return new TopAreaState();
  }
```

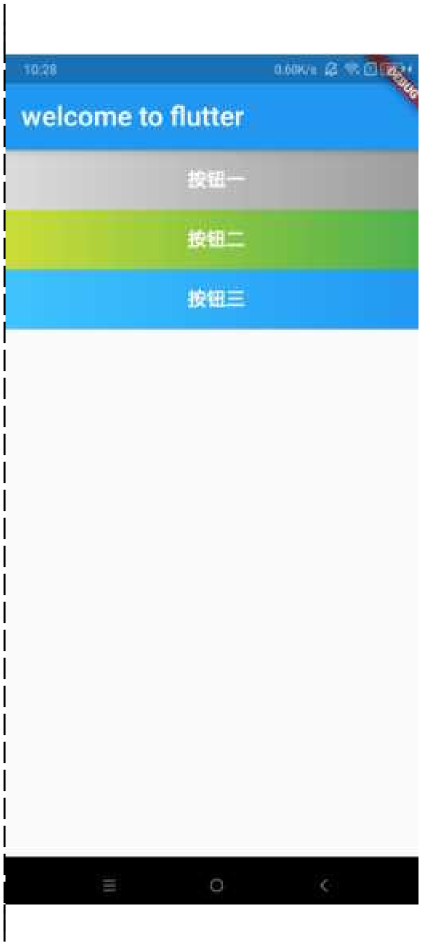
```
}

class TopAreaState extends State<TopArea> {
  var focused = false;

  void doClick() {
    setState(() {
      focused = !focused;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return new GestureDetector(
      onTap: doClick,
      child: new Container(
        child: Center(
          child: new Text(
            "click uzi me",
            style: new TextStyle(fontSize: 18.0, color: Colors.pink),
          ),
        ),
        width: double.infinity,
        height: 200.0,
        decoration: new BoxDecoration(
          color: focused ? Colors.red : Colors.grey,
        ),
      ),
    );
  }
}

class MidAreaParent extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return new MidAreaParentState();
  }
```

```
}

class MidAreaParentState extends State<MidAreaParent> {
  var focused = false;

  void handleClick(bool focused) {
    setState(() {
      this.focused = focused;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return new Container(
      child: new MidArea(
        focused: focused,
        focusChanged: handleClick,
      ),
    );
  }
}

class MidArea extends StatelessWidget {
  final focused;
  final ValueChanged<bool> focusChanged;

  MidArea({this.focused, this.focusChanged});

  void doClick() {
    focusChanged(!focused);
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return new GestureDetector(
      onTap: doClick,
      child: new Container(
        child: Center(
          child: new Text(
            "Click me",
            style: new TextStyle(fontSize: 18.0, color: Colors.pink),
          ),
        ),
        width: double.infinity,
        height: 200.0,
        decoration: new BoxDecoration(
          color: focused ? Colors.green : Colors.grey,
        ),
      ),
    );
  }
}

class BottomAreaParent extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return new BottomAreaParentState();
  }
}

class BottomAreaParentState extends State<BottomAreaParent> {
  var focused;

  void handleClick(bool focused) {
    setState(() {
      this.focused = focused;
      if (focused) {
        debugPrint("change to blue");
      } else {
        debugPrint("change to gray");
      }
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return new Container(
      child: new BottomArea(
        focused: this.focused,
        focusChanged: handleClick,
      ),
    );
  }
}

class BottomArea extends StatefulWidget {
  final bool focused;
  final ValueChanged<bool> focusChanged;

  BottomArea({this.focused, this.focusChanged});

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return new BottomAreaState();
  }
}

class BottomAreaState extends State<BottomArea> {
  var focused = false;

  void doClick() {
    setState(() {
      focused = !focused;
    });
    widget.focusChanged(focused);
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return new GestureDetector(
      onTap: doClick,
      child: new Container(
        child: Center(
          child: new Text(
            "click me",
            style: new TextStyle(fontSize: 18.0, color: Colors.pink),
          ),
        ),
        width: double.infinity,
        height: 200.0,
        decoration: new BoxDecoration(
          color: focused ? Colors.blue : Colors.grey,
        ),
      ),
    );
  }
}
```



自定义的文本按钮

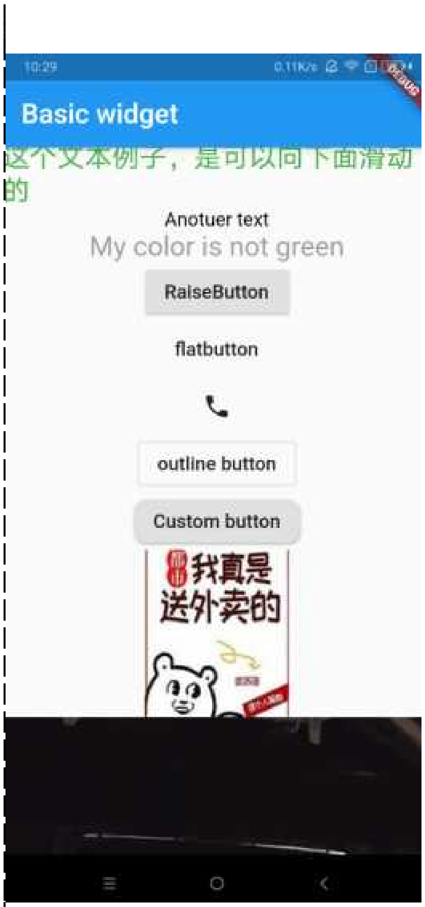
```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return new MaterialApp(
      title: 'hello world',
      home: new Scaffold(
        appBar: new AppBar(
          title: new Text('welcome to flutter'),
        ),
        body: new Center(
          child: new GradientButtonRoute(),
        ),
      ),
    );
  }
}

class GradientButtonRoute extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return Container(
      child: Column(
        children: <Widget>[
          GradientButton(
            colors: [Colors.black12, Colors.black38],
            height: 50.0,
            child: Text("按钮一"),
          ),
          GradientButton(
            colors: [Colors.lime, Colors.green],
            height: 50.0,
            child: Text("按钮二"),
          ),
          GradientButton(
            colors: [Colors.lightBlueAccent, Colors.blue],
            height: 50.0,
            child: Text("按钮三"),
          )
        ],
      ),
    );
  }
}

class GradientButton extends StatelessWidget {
  final List<Color> colors;
  final double width;
  final double height;
  final Widget child;
  final GestureTapCallback onTap;

  GradientButton(
      {this.colors, this.width, this.height, this.child, this.onTap});

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  ThemeData theme = Theme.of(context);

    List<Color> _colors =
        colors ?? [theme.primaryColorDark ?? theme.primaryColor];

    return DecoratedBox(
      decoration: BoxDecoration(
        gradient: LinearGradient(colors: _colors),
      ),
      child: Material(
        type: MaterialType.transparency,
        child: InkWell(
          splashColor: _colors.last,
          highlightColor: Colors.transparent,
          child: ConstrainedBox(
            constraints: BoxConstraints.tightFor(height: height, width: width),
            child: Center(
              child: Padding(
                padding: const EdgeInsets.all(8.0),
                child: DefaultTextStyle(
                  style: TextStyle(fontWeight: FontWeight.bold),
                  child: child,
                ),
              ),
            ),
          ),
        ),
      ),
    );
  }
}
```



app 各种控件，文本，按钮，复选框，图片

```
flutter:

  # The following line ensures that the Material Icons font is
  # included with your application, so that you can use the icons in
  # the material Icons class.
  uses-material-design: true
  assets:
    - assets/
```

```
import 'package:flutter/material.dart';
import 'package:flutter/gestures.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
// TODO: implement build
  return new MaterialApp(
      title: "Basic Widget",
      theme: new ThemeData(primaryColor: Colors.blue),
      home: new Scaffold(
        appBar: new AppBar(
          title: new Text("Basic widget"),
        ),
        body: new BasicWidgetList(),
      ),
    );
  }
}

class BasicWidgetList extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
// TODO: implement build
  return Container(
      child: ListView(
        children: <Widget>[
          new WidgetText(),
          new WidgetButton(),
          new WidgetImage(),
          new WidgetSwitchAndCheckbox(),
          new WidgetRadio()
        ],
      ),
    );
  }
}

//文本组件
class WidgetText extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
// TODO: implement build
  return Container(
        child: Column(children: <Widget>[
      new Text(
        "文本组件" * 10,
        textAlign: TextAlign.start,
        maxLines: 1,
        overflow: TextOverflow.ellipsis,
        textScaleFactor: 2,
        style: TextStyle(
            color: Colors.white,
            fontSize: 7.0,
            background: new Paint()..color = Colors.blue,
            decoration: TextDecoration.underline),
      ),
      Text.rich(TextSpan(children: [
        TextSpan(
          text: "Red text",
          style: TextStyle(color: Colors.red, fontSize: 25.0),
        ),
        TextSpan(
          text: "Blue text",
          style: TextStyle(color: Colors.blue, fontSize: 25.0),
          recognizer: new TapGestureRecognizer()
            ..onTap = () {
              debugPrint("blue text clicked");
            },
        ),
      ])),
      DefaultTextStyle(
        style: TextStyle(
          color: Colors.green,
          fontSize: 20.0,
        ),
        textAlign: TextAlign.start,
        child: Column(
          children: <Widget>[
            Text("这个文本例子，是可以向下面滑动的"),
            Text(
              "Anotuer text",
              style: TextStyle(inherit: false, color: Colors.black),
            ),
            Text(
              "My color is not green",
              style: TextStyle(color: Colors.grey),
            ),
          ],
        ),
      )
    ]));
  }
}

//按钮组件
class WidgetButton extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
// TODO: implement build
  return Container(
      child: new Center(
        child: Column(
          children: <Widget>[
            new RaisedButton(
              child: Text("RaiseButton"),
              onPressed: () => {debugPrint("RaisedButton clicked")}),
            new FlatButton(
              child: Text("flatbutton"),
              onPressed: () => {debugPrint("flatbutton clicked")}),
            new IconButton(
              icon: Icon(Icons.phone),
              onPressed: () => {debugPrint("iconbutton click")}),
            new OutlineButton(
              child: Text("outline button"),
              onPressed: () => {debugPrint("outline button click")}),
            new RaisedButton(
              shape: RoundedRectangleBorder(
                borderRadius: BorderRadius.circular(10.0)),
              highlightColor: Colors.green,
              child: Text("Custom button"),
              onPressed: () => {debugPrint("Custom button clicked")})
          ],
        ),
      ),
    );
  }
}

//图片组件
class WidgetImage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
// TODO: implement build
  return Container(
        child: new Column(children: <Widget>[
      new Image.asset('assets/image.png'),
      new Image.network(
          "http://img.soogif.com/IAR17MrUQMjXyKQruDWOI3ASHiWgAuTK.gif"),
      new FadeInImage.assetNetwork(
          placeholder: 'assets/image.png',
          image: "https://www.baidu.com/img/baidu_jgylogo3.gif"),
      new Icon(Icons.account_circle),
        new Icon(Icons.verified_user, color: Colors.blue),
        new Icon(Icons.android, size: 50.0)
      ]));
  }
}

//单选框和复选框
class WidgetSwitchAndCheckbox extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
// TODO: implement createState
  return new WidgetSwitchAndCheckboxState();
  }
}

class WidgetSwitchAndCheckboxState extends State<WidgetSwitchAndCheckbox> {
  var switchEnable = false;
  var checkboxSelected = false;

  @override
  Widget build(BuildContext context) {
// TODO: implement build
  return Column(children: <Widget>[
        new Switch(
          activeColor: Colors.green,
          value: switchEnable,
          onChanged: (value) {
            setState(() {
              switchEnable = value;
            });
          },
        ),
        new Checkbox(
            activeColor: Colors.black,
            value: checkboxSelected,
            onChanged: (value) {
              setState(() {
                checkboxSelected = value;
              });
          })
    ]);
  }
}

class WidgetRadio extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return new WidgetRadioState();
  }
}

class WidgetRadioState extends State<WidgetRadio> {
  var _groupValue;

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return new Row(
      mainAxisAlignment: MainAxisAlignment.center,
      children: <Widget>[
        new Radio(
            activeColor: Colors.red,
            value: "option 1",
            groupValue: _groupValue,
            onChanged: (value) {
              setState(() {
                _groupValue = value;
              });
            }),
        new Radio(
            activeColor: Colors.green,
            value: "option 2",
            groupValue: _groupValue,
            onChanged: (value) {
              setState(() {
                _groupValue = value;
              });
            }),
        new Radio(
            activeColor: Colors.blue,
            value: "option 3",
            groupValue: _groupValue,
            onChanged: (value){
              setState(() {
                _groupValue = value;
              });
            })
      ],
    );
  }
}
```



Basic widget

这个文本例子，是可以向下面滑动的

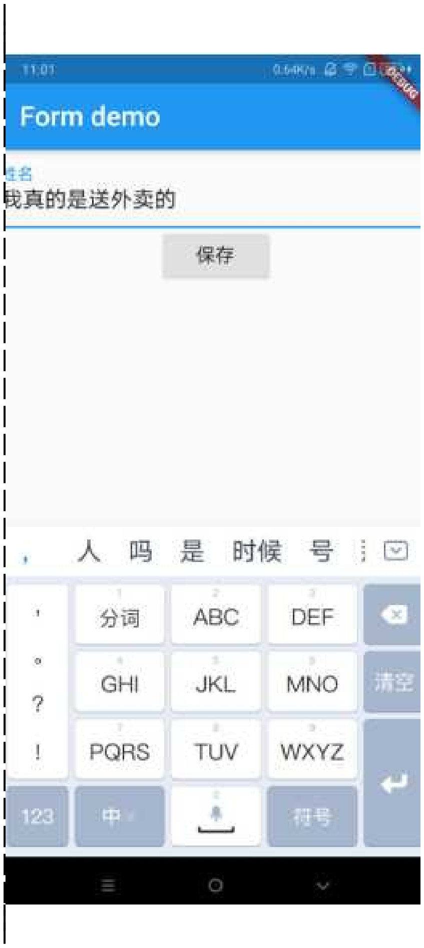
Anotuer text

My color is not green

Edittext 输入框

```
import 'package:flutter/material.dart';
```

```
void main() => runApp(new MyApp());

class MyApp extends StatefulWidget {
  @override
  MyAppState createState() => new MyAppState();
}

class MyAppState extends State<MyApp> {
  GlobalKey<FormState> formGlobalkey = new GlobalKey<FormState>();
  String username;

  void save() {
    var form = formGlobalkey.currentState;
    if (form.validate()) {
      form.save();
    } else {
      form.reset();
    }
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return new MaterialApp(
        title: "Form demo",
        home: new Scaffold(
            appBar: new AppBar(
              title: new Text("Form demo"),
            ),
            body: new Column(children: <Widget>[
              new Form(
                key: formGlobalkey,
                child: new TextFormField(
                  decoration: new InputDecoration(
                    labelText: "姓名",
                  ),
                  validator: (content) {
                    print(content);
                  },
         onSaved: (content) {
          username = content;
         },
        ),
       ),
       new RaisedButton(child: new Text("保存"), onPressed: save)
      ])));
 }
}
```



Form demo

姓名

我真的是送外卖的

保存

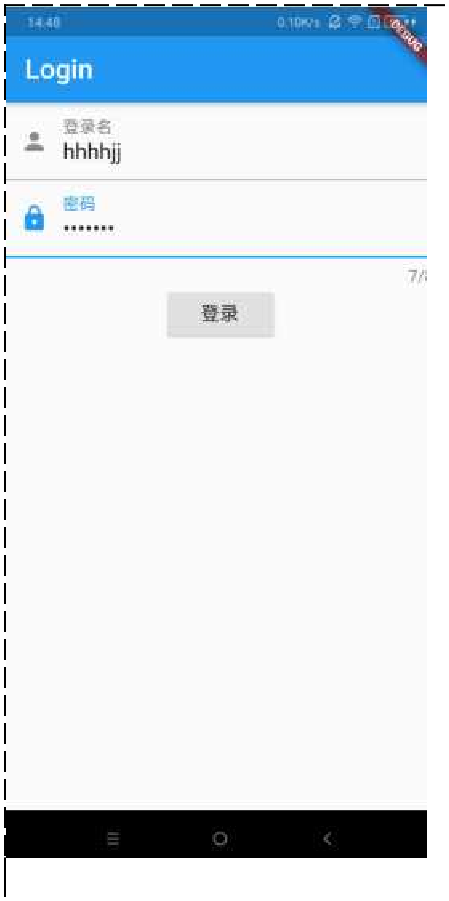
文本和图片 和 button，线性布局

```
import 'package:flutter/material.dart';
```

```dart
void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return new MaterialApp(
      title: "界面布局流程体验",
      home: new Scaffold(
          appBar: new AppBar(
            title: new Text("界面布局流程体验"),
          ),
          body: new Column(
            children: <Widget>[
              new Text("我是一个文本组件"),
              new RaisedButton(
                  onPressed: () => debugPrint("button click"),
                  child: new Text("我是一个按钮")),
              new Icon(Icons.android)
            ],
          )),
    );
  }
}
```

用户名和密码 输入框

```dart
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';

TextEditingController usernameController = TextEditingController();
TextEditingController passwordController = TextEditingController();

//焦点
FocusNode passwordFocusNode = FocusNode();

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: 'flutter demo',
      theme: ThemeData(
        primarySwatch: Colors.blue,
      ),
      home: Scaffold(
        appBar: AppBar(title: Text("Login")),
        body: LoginLayout(),
      ),
    );
  }
}

class LoginLayout extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement buildreturn
  return Container(
      child: Column(
        children: <Widget>[
          UserNameInputTextField(),
          PasswordInputTextField(),
          LoginButton()
        ],
      ),
    );
  }
}

class UserNameInputTextField extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    return UserNameInputTestFieldState();
  }
}

class UserNameInputTestFieldState extends State<UserNameInputTextField> {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return TextField(
        textInputAction: TextInputAction.next,
        onEditingComplete: () =>
            FocusScope.of(context).requestFocus(passwordFocusNode),
        onChanged: (content) => {debugPrint("UserName input:" + content)},
        autofocus: true,
        controller: usernameController,
        keyboardType: TextInputType.emailAddress,
        decoration: InputDecoration(
            prefixIcon: Icon(Icons.person),
            labelText: "登录名",
            hintText: "在此输入您的手机号或者邮箱号"));
  }
}

class PasswordInputTextField extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return PasswordInputTextFieldState();
  }
}

class PasswordInputTextFieldState extends State<PasswordInputTextField> {
  @override
  Widget build(BuildContext context) {
    return TextField(
        textInputAction: TextInputAction.done,
        onSubmitted: (content) => debugPrint("UserName:" +
            usernameController.text +
            "Password:" +
            passwordController.text),
        focusNode: passwordFocusNode,
        maxLength: 8,
        controller: passwordController,
        obscureText: true,
        maxLengthEnforced: false,
        decoration: InputDecoration(
            prefixIcon: Icon(Icons.lock),
            labelText: "密码",
            hintText: "在此输入登录密码"));
  }
}

class LoginButton extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return RaisedButton(
        child: Text("登录"),
        onPressed: () {
          debugPrint("Username:" +
              usernameController.text +
              '\n' +
              "Password:" +
              passwordController.text);
        });
  }
}
```

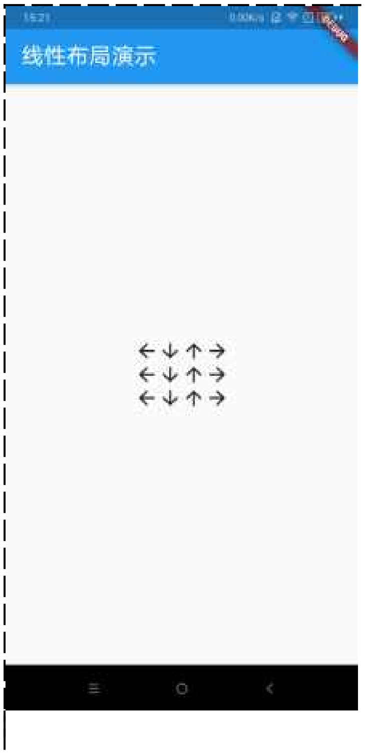


登录名
hhhhjj

密码
•••••••

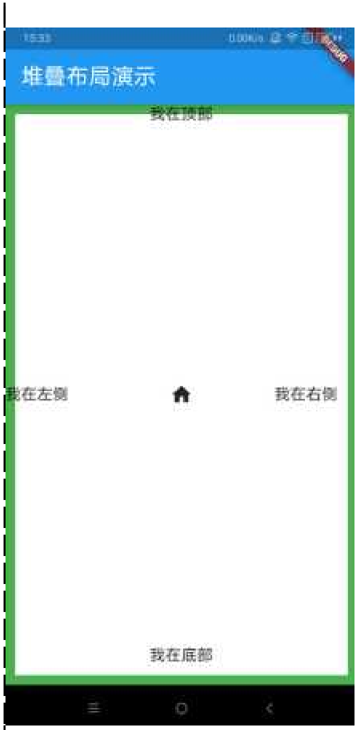
线性布局

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
        title: "线性布局演示",
        theme: ThemeData(
          primarySwatch: Colors.blue,
        ),
        home: new Scaffold(
          appBar: new AppBar(
            title: new Text("线性布局演示"),
          ),
          body: new Column(
            mainAxisAlignment: MainAxisAlignment.center,
            children: <Widget>[new PartRow(), new PartRow(), new PartRow()],
          ),
        ));
  }
}

class PartRow extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return new Row(
        mainAxisAlignment: MainAxisAlignment.center,
        children: <Widget>[
          new Icon(Icons.arrow_back),
          new Icon(Icons.arrow_downward),
          new Icon(Icons.arrow_upward),
          new Icon(Icons.arrow_forward),
        ]);
  }
}
```



堆叠布局

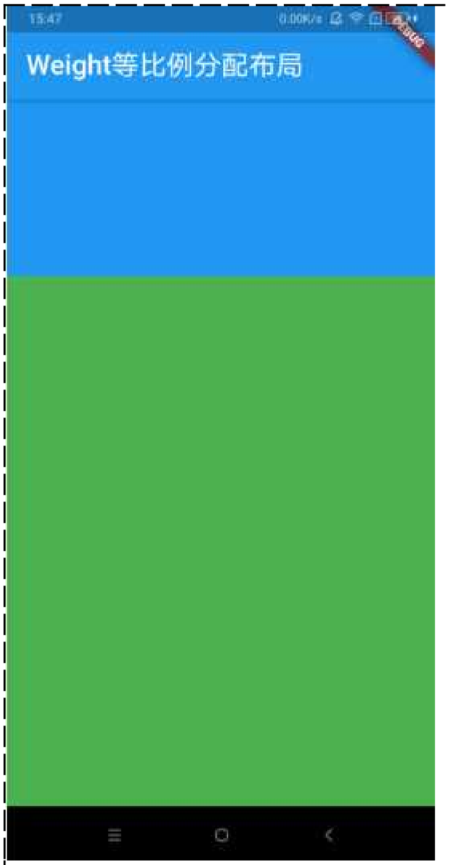
```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
        title: "堆叠布局演示",
        theme: ThemeData(
          primarySwatch: Colors.blue,
        ),
        home: Scaffold(
            appBar: AppBar(
              title: new Text("堆叠布局演示"),
            ),
            body: Stack(
              alignment: AlignmentDirectional.center,
              fit: StackFit.expand,
              children: <Widget>[
                Container(child: null, color: Colors.green),
                Positioned(
                    child: Container(child: null, color: Colors.white),
                    top: 10.0,
                    left: 10.0,
                    bottom: 10.0,
                    right: 10.0),
                Positioned(child: Icon(Icons.home)),
                Positioned(child: Text("我在顶部"), top: 0.0),
                Positioned(child: Text("我在左侧"), left: 0.0),
                Positioned(child: Text("我在底部"), bottom: 20.0),
                Positioned(child: Text("我在右侧"), right: 20.0)
              ],
            )));
  }
}
```



等比例分配 weight

```
import 'package:flutter/material.dart';
```

```
void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
        title: "Weight 等比例分配布局",
        theme: ThemeData(
          primarySwatch: Colors.blue,
        ),
        home: new Scaffold(
            appBar: new AppBar(
              title: new Text("Weight 等比例分配布局"),
            ),
            body: new Flex(
              direction: Axis.vertical,
              children: <Widget>[
                new Expanded(
                    flex: 1,
                    child: new Container(height: 50.0, color: Colors.blue)),
                new Expanded(
                    flex: 3,
                    child: new Container(height: 50.0, color: Colors.green))
              ],
            )));
  }
}
```



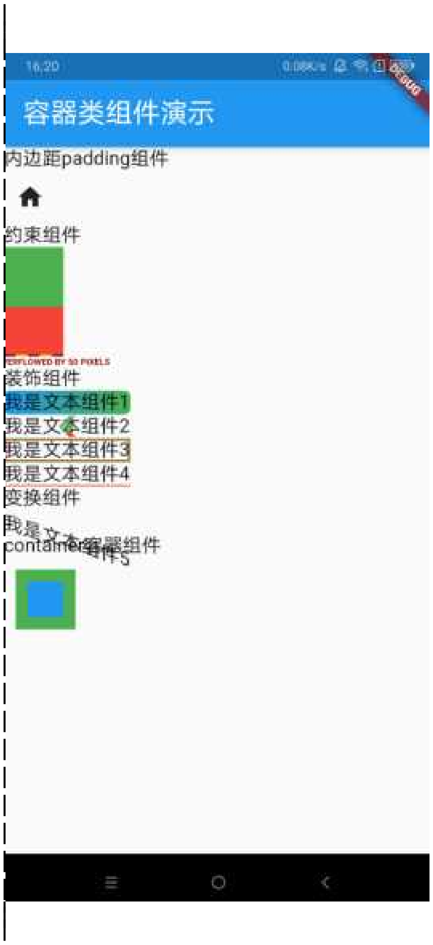
流式布局

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "",
      theme: ThemeData(
        primarySwatch: Colors.blue,
      ),
      home: new Scaffold(
        appBar: AppBar(
          title: new Text(""),
        ),
        body: new Wrap(
          direction: Axis.horizontal,
          alignment: WrapAlignment.start,
          children: <Widget>[
            new Container(
              height: 50.0,
              width: 40.0,
              color: Colors.green,
            ),
            new Container(
              height: 50.0,
              width: 50.0,
              color: Colors.lightBlueAccent,
            ),
            new Container(
              height: 50.0,
              width: 80.0,
              color: Colors.lime,
            ),
          ],
        ),
      ),
    );
  }
}
```

容器类组件展示

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "容器类组件演示",
      theme: ThemeData(
      primarySwatch: Colors.blue,
    ),
    home: Scaffold(
      appBar: AppBar(
        title: new Text("容器类组件演示"),
      ),
      body: new Column(
        crossAxisAlignment: CrossAxisAlignment.start,
        children: <Widget>[
          new Text("内边距 padding 组件"),
          Padding(
            padding: EdgeInsets.all(10.0),
            child: new Icon(Icons.home),
          ),
          new Text("约束组件"),
          new ConstrainedBox(
              constraints: BoxConstraints(minWidth: 50.0, maxHeight: 100.0),
              child: new Column(
                children: <Widget>[
                  Container(
                    color: Colors.green,
                    height: 50.0,
                    width: 50.0,
                  ),
                  Container(
                    color: Colors.red,
                    width: 50.0,
                    height: 50.0,
                  ),
                  Container(
                    color: Colors.blue,
                    width: 50.0,
                    height: 50.0,
                  ),
                ],
              )),
          new Text("装饰组件"),
          new DecoratedBox(
              position: DecorationPosition.background,
              decoration: BoxDecoration(
                    gradient:
                        LinearGradient(colors: [Colors.blue, Colors.green]),
                    borderRadius: BorderRadius.circular(5)),
                child: new Text("我是文本组件1")),
            new DecoratedBox(
                position: DecorationPosition.foreground,
                decoration: FlutterLogoDecoration(
                    lightColor: Colors.green, darkColor: Colors.red),
                child: new Text("我是文本组件2")),
            new DecoratedBox(
                position: DecorationPosition.background,
                decoration: ShapeDecoration(
                    shape: Border.all(color: Colors.red, width: 1.0) +
                        Border.all(color: Colors.green, width: 1.0)),
                child: new Text("我是文本组件3")),
            new DecoratedBox(
                position: DecorationPosition.background,
                decoration: UnderlineTabIndicator(
                    borderSide: BorderSide(color: Colors.red)),
                child: new Text("我是文本组件4")),
            new Text("变换组件"),
            new Transform(
                transform: new Matrix4.skewY(0.3), child: new Text("我是文本
组件5")),
            new Text("container 容器组件"),
            new Container(
              color: Colors.green,
              margin: EdgeInsets.all(10.0),
              padding: EdgeInsets.all(10.0),
              width: 50,
              height: 50,
              child: new Container(
                color: Colors.blue,
              ),
            )
          ],
        ),
      ),
    );
```

```
  }
}
```



16:20 0.08K/s

DEBUG

容器类组件演示

内边距padding组件

约束组件

OVERFLOWED BY 50 PIXELS

装饰组件

我是文本组件1

我是文本组件2

我是文本组件3

我是文本组件4

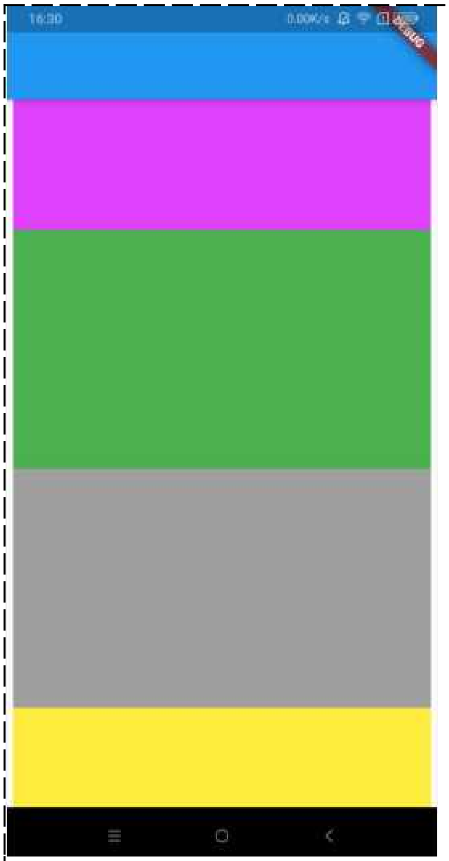
变换组件

我是文本组件5

container容器组件

滚动视图 scrollview

```
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
        title: "",
      theme: ThemeData(primarySwatch: Colors.blue),
      home: Scaffold(
        appBar: AppBar(
          title: new Text(""),
        ),
        body: new SingleChildScrollView(
          scrollDirection: Axis.vertical,
          reverse: false,
          padding: EdgeInsets.all(5.0),
          primary: true,
          physics: BouncingScrollPhysics(),
          child: Column(
            children: <Widget>[
              new Container(
                color: Colors.purpleAccent,
                height: 200.0,
              ),
              new Container(
                color: Colors.green,
                height: 200.0,
              ),
              new Container(
                color: Colors.grey,
                height: 200.0,
              ),
              new Container(
                color: Colors.yellow,
                height: 200.0,
              ),
            ],
          ),
        ),
      ),
    );
  }
}
```

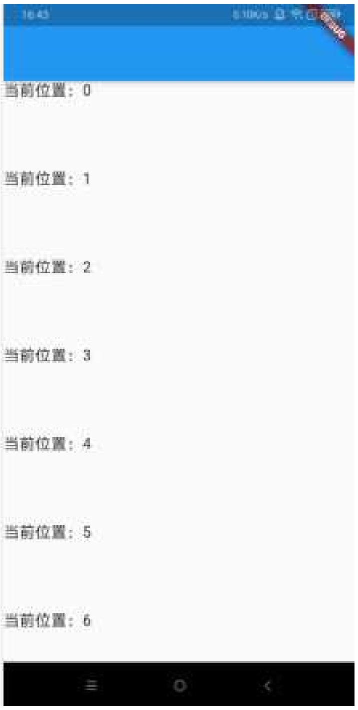


listview 线性布局，运行效果和上图一样

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
        title: "",
        theme: ThemeData(primarySwatch: Colors.blue),
        home: Scaffold(
          appBar: AppBar(
            title: new Text(""),
          ),
          body: ListView(
            scrollDirection: Axis.vertical,
            reverse: false,
            padding: EdgeInsets.all(5.0),
            primary: true,
            physics: ClampingScrollPhysics(),
            children: <Widget>[
              new Container(
                color: Colors.red,
                height: 200.0,
              ),
              new Container(
                color: Colors.yellow,
                height: 200.0,
              ),
              new Container(
                color: Colors.grey,
                height: 200.0,
              ),
            ],
          ),
        ),
    );
  }
}
```

简单的 listview

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.blue),
      home: Scaffold(
        appBar: AppBar(
          title: new Text(""),
        ),
        body: new ListView.builder(
          itemCount: 10,
          itemExtent: 90,
          itemBuilder: (BuildContext context, int index) {
            return new Text("当前位置：$index");
          },
        ),
      ),
    );
  }
}
```



当前位置：0

当前位置：1

当前位置：2

当前位置：3

当前位置：4

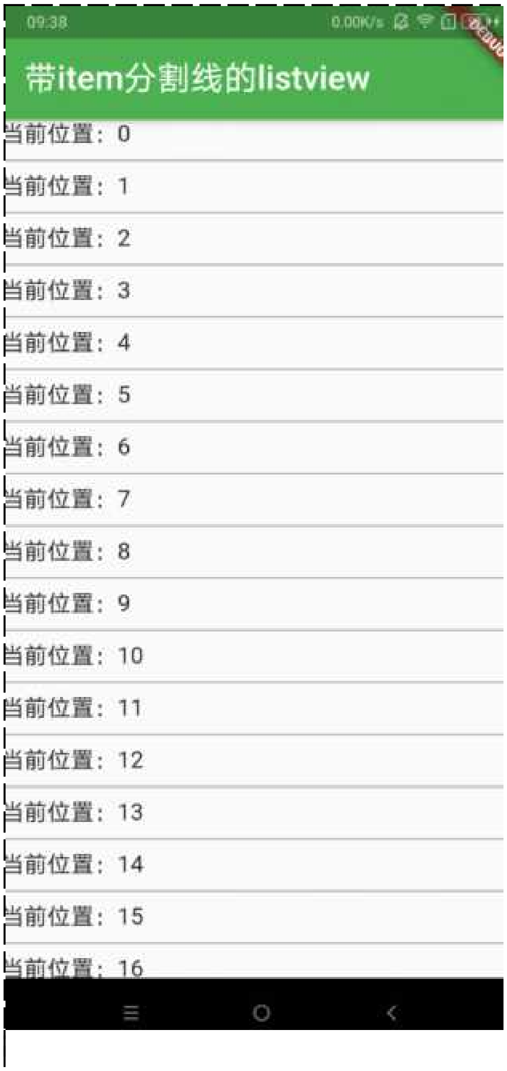
当前位置：5

当前位置：6

带 item 分割线的 listview

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());
```

```
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.red),
      home: Scaffold(
        appBar: AppBar(
          title: new Text(""),
        ),
        body: new ListView.separated(
          itemBuilder: (BuildContext context, int index) {
            return new Text("当前位置：$index");
          },
          separatorBuilder: (BuildContext context, int index) {
            return new Divider(color: Colors.black);
          },
          itemCount: 20,
        ),
      ),
    );
  }
}
```

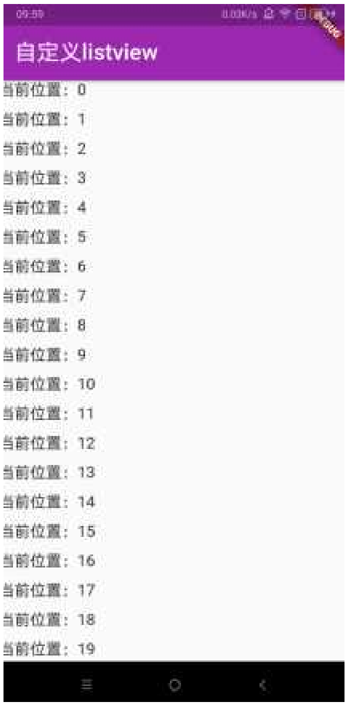


带item分割线的listview

当前位置：0
当前位置：1
当前位置：2
当前位置：3
当前位置：4
当前位置：5
当前位置：6
当前位置：7
当前位置：8
当前位置：9
当前位置：10
当前位置：11
当前位置：12
当前位置：13
当前位置：14
当前位置：15
当前位置：16

自定义 listview

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
        title: "自定义 listview",
        theme: ThemeData(primarySwatch: Colors.purple),
        home: Scaffold(
        appBar: AppBar(
          title: new Text("自定义 listview"),
        ),
        body: new ListView.custom(
          childrenDelegate:
              new CustomChildrenDelegate((BuildContext context, int index) {
            return new Text("当前位置：$index");
          }, childCount: 50),
          itemExtent: 30.0,
          cacheExtent: 0.0,
        ),
      ),
    );
  }
}

class CustomChildrenDelegate extends SliverChildBuilderDelegate {
  CustomChildrenDelegate(
    Widget Function(BuildContext, int) builder, {
    int childCount,
    bool addAutomaticKeepAlive = true,
  }) : super(
          builder,
          childCount: childCount,
          addAutomaticKeepAlives: addAutomaticKeepAlive,
        );

  @override
  void didFinishLayout(int firstIndex, int lastIndex) {
    // TODO: implement didFinishLayout
  super.didFinishLayout(firstIndex, lastIndex);
    debugPrint("Finish! start at $firstIndex,end at $lastIndex");
  }
}
```

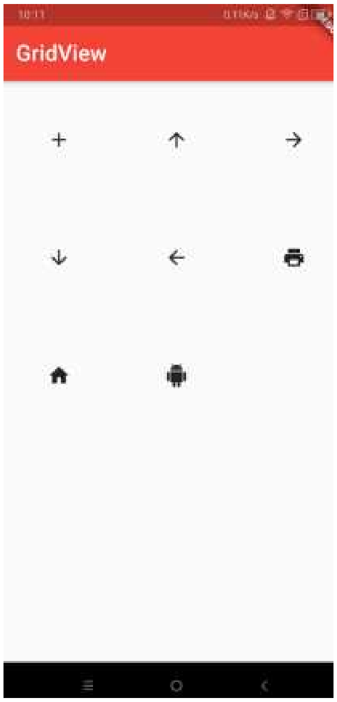


自定义listview

当前位置：0
当前位置：1
当前位置：2
当前位置：3
当前位置：4
当前位置：5
当前位置：6
当前位置：7
当前位置：8
当前位置：9
当前位置：10
当前位置：11
当前位置：12
当前位置：13
当前位置：14
当前位置：15
当前位置：16
当前位置：17
当前位置：18
当前位置：19

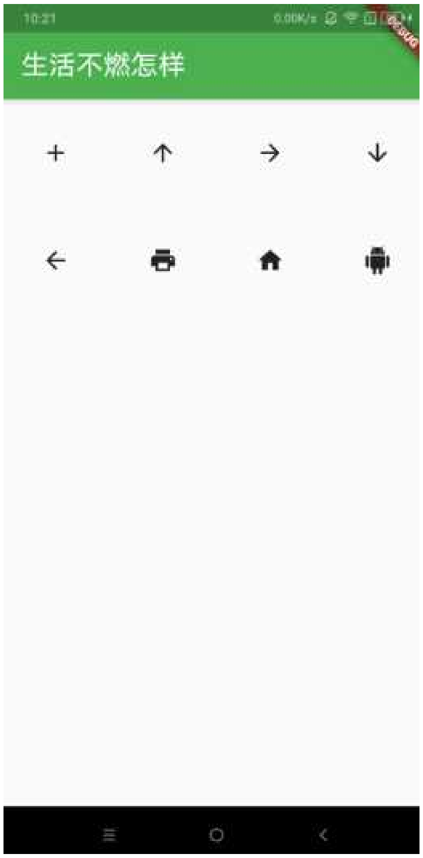
GridView

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
   return MaterialApp(
       title: "GridView",
       theme: ThemeData(primarySwatch: Colors.red),
       home: Scaffold(
         appBar: AppBar(
           title: new Text("GridView"),
         ),
         body: new GridView(
           gridDelegate:
               SliverGridDelegateWithFixedCrossAxisCount(crossAxisCount: 3),
           children: <Widget>[
             new Icon(Icons.add),
             new Icon(Icons.arrow_upward),
             new Icon(Icons.arrow_forward),
             new Icon(Icons.arrow_downward),
             new Icon(Icons.arrow_back),
             new Icon(Icons.print),
             new Icon(Icons.home),
             new Icon(Icons.android),
           ],
         ),
       ),
    );
  }
}
```



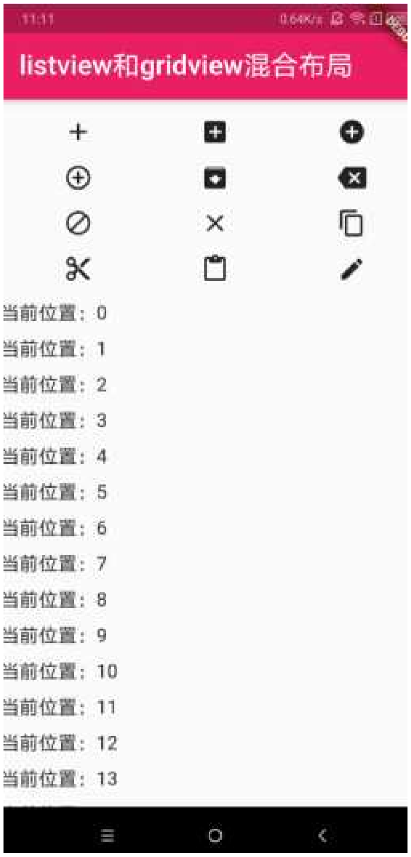
gridview

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "生活不燃怎样",
      theme: ThemeData(primarySwatch: Colors.green),
      home: Scaffold(
        appBar: AppBar(
          title: new Text("生活不燃怎样"),
        ),
        body: new GridView(
          gridDelegate: SliverGridDelegateWithMaxCrossAxisExtent(
              maxCrossAxisExtent: 100.0),
          children: <Widget>[
            new Icon(Icons.add),
            new Icon(Icons.arrow_upward),
            new Icon(Icons.arrow_forward),
            new Icon(Icons.arrow_downward),
            new Icon(Icons.arrow_back),
            new Icon(Icons.print),
            new Icon(Icons.home),
            new Icon(Icons.android),
          ],
        ),
      ),
    );
  }
}
```



listview 和 gridview 混合布局

```
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp  extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
        title: "",
        theme: ThemeData(primarySwatch: Colors.pink),
        home: Scaffold(
          appBar: AppBar(
            title: Text(""),
          ),
          body: CustomScrollView(
     slivers: <Widget>[
      SliverPadding(
       padding: const EdgeInsets.all(8.0),
       sliver: SliverGrid(
        gridDelegate: SliverGridDelegateWithFixedCrossAxisCount(
          crossAxisCount: 3, childAspectRatio: 3.0),
        delegate: SliverChildBuilderDelegate(
         (BuildContext context, int index) {
          return new Container(
           child: new Icon(IconData(0xe145 + index,
             fontFamily: 'MaterialIcons')),
          );
         },
         childCount: 12,
        ),
       ),
      ),
      SliverFixedExtentList(
        delegate: SliverChildBuilderDelegate(
          (BuildContext context, int index) {
         return new Text("当前位置：$index");
        }, childCount: 50),
        itemExtent: 30.0)
     ],
    ),
   ),
  );
 }
}
```



listview和gridview混合布局

当前位置：0

当前位置：1

当前位置：2

当前位置：3

当前位置：4

当前位置：5

当前位置：6

当前位置：7

当前位置：8

当前位置：9

当前位置：10

当前位置：11

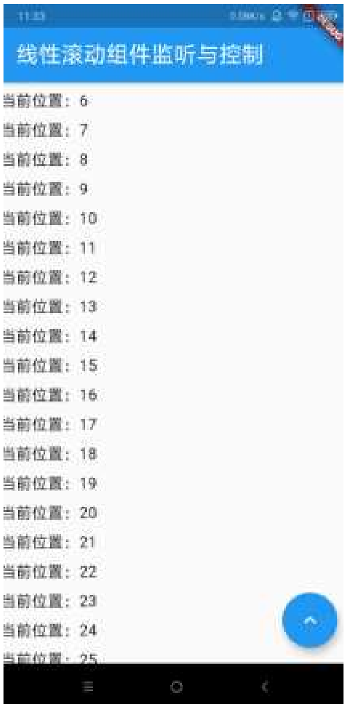
当前位置：12

当前位置：13

滚动视图回到顶部

```
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
   return MaterialApp(
      title: "线性滚动组件监听与控制",
      theme: ThemeData(primarySwatch: Colors.blue),
      home: new ListViewController(),
    );
  }
}
```

```
class ListViewController extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
   return new ListControllerState();
  }
}

class ListControllerState extends State<ListViewController> {
  ScrollController scrollController = new ScrollController();
  var isShowBackToTopBtn = false;

  //instate 方法 做监听
  @override
  void initState() {
    // TODO: implement initState
   super.initState();
    scrollController.addListener(() {
      debugPrint("yubkj: "+scrollController.offset.toString());
      if (scrollController.offset < 30 && isShowBackToTopBtn) {
        setState(() {
          isShowBackToTopBtn = !isShowBackToTopBtn;
        });
      } else if (scrollController.offset >= 30 && !isShowBackToTopBtn) {
        setState(() {
          isShowBackToTopBtn = !isShowBackToTopBtn;
        });
      }
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
   return new Scaffold(
      floatingActionButton: isShowBackToTopBtn
     ? new FloatingActionButton(
            onPressed: (() {
              scrollController.animateTo(0.0,
                    duration: Duration(milliseconds: 100),
                    curve: Curves.linear);
              }),
              child: Icon(Icons.keyboard_arrow_up),
            )
          : null,
      appBar: new AppBar(
        title: new Text("线性滚动组件监听与控制"),
      ),
      body: new ListView.builder(
          itemCount: 50,
          itemExtent: 30,
          controller: scrollController,
          itemBuilder: (BuildContext context,int index){
            return new Text("当前位置：$index");
          },),
    );
  }
}
```



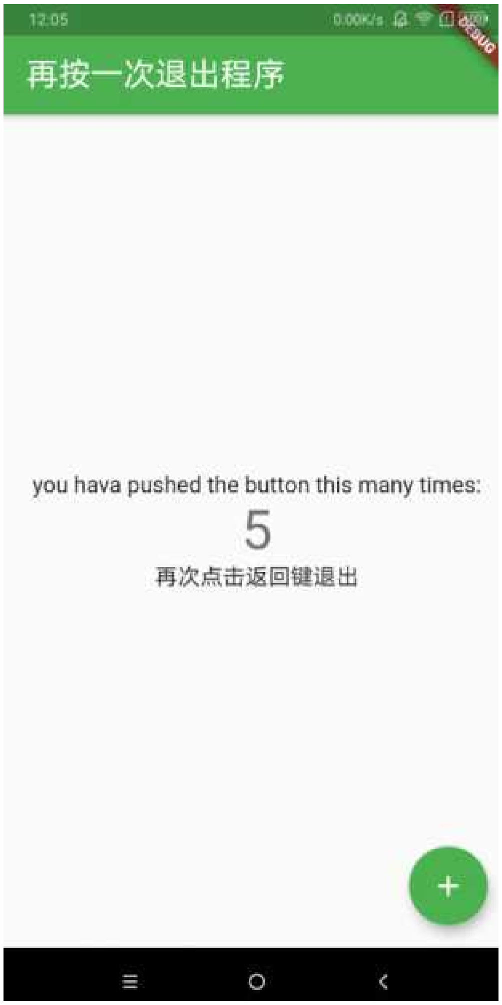
线性滚动组件监听与控制

当前位置：6
当前位置：7
当前位置：8
当前位置：9
当前位置：10
当前位置：11
当前位置：12
当前位置：13
当前位置：14
当前位置：15
当前位置：16
当前位置：17
当前位置：18
当前位置：19
当前位置：20
当前位置：21
当前位置：22
当前位置：23
当前位置：24
当前位置：25

再按一次退出程序

```
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "再按一次退出程序",
      theme: ThemeData(primarySwatch: Colors.green),
      home: new MyHomePage(),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _incrementCounter() {
    setState(() {
      _counter++;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return Scaffold(
      appBar: AppBar(
        title: new Text("再按一次退出程序"),
      ),
      body: Center(
        child: Column(
          mainAxisSize: MainAxisSize.max,
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text(
              'you hava pushed the button this many times:',
            ),
            Text(
              '$_counter',
              style: Theme.of(context).textTheme.display1,
            ),
            WillPopScopetestRoute()
          ],
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: _incrementCounter,
        tooltip: 'Increment',
        child: Icon(Icons.add),
      ),
    );
  }
}

class WillPopScopetestRoute extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return WillPopScopetestRouteState();
  }
```

```
}

class WillPopScopetestRouteState extends State<WillPopScopetestRoute> {
  var lastPressedTime;
  var needShow = false;

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return new WillPopScope(
      onWillPop: () {
        if (lastPressedTime == null ||
            DateTime.now().difference(lastPressedTime) > Duration(seconds: 1))
{
          lastPressedTime = DateTime.now();
          setState(() {
            needShow = true;
          });
          new Future.delayed(
              Duration(seconds: 1),
              () => setState(() {
                    needShow = false;
                  }));
          return Future.value(false);
        }
        return Future.value(true);
      },
      child: new Text(needShow ? "再次点击返回键退出" : ""),
    );
  }
}
```


12:05

0.00K/s

再按一次退出程序

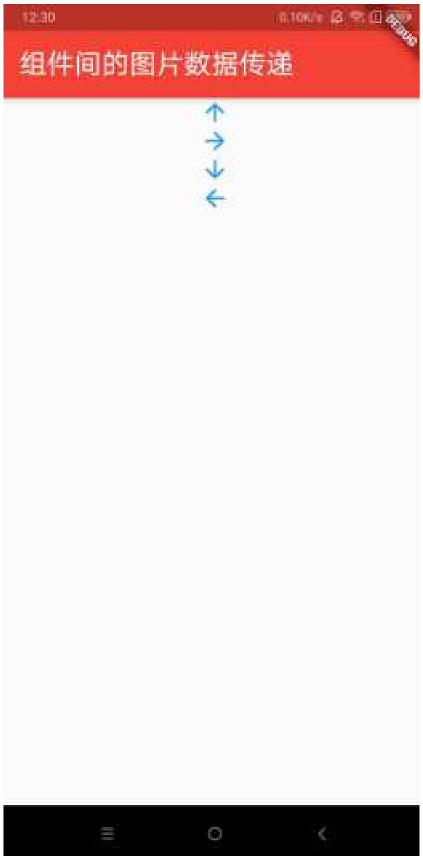
you hava pushed the button this many times:

5

再次点击返回键退出

组件之间的数据传递

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
        title: "组件间的图片数据传递",
        theme: ThemeData(primarySwatch: Colors.red),
        home: new Scaffold(
          appBar: AppBar(
            title: Text("组件间的图片数据传递"),
          ),
          body: new ShareDataWidget(
            color: Colors.blue,
            child: new Center(
              child: new Column(
                children: <Widget>[
                  new IconList(Icons.arrow_upward),
                  new IconList(Icons.arrow_forward),
                  new IconList(Icons.arrow_downward),
                  new IconList(Icons.arrow_back),
                ],
              ),
            ),
          ),
        ),
    );
  }
}

class IconList extends StatefulWidget {
  final IconData icon;

  IconList(this.icon);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new IconListState(icon);
    }
}

class IconListState extends State<IconList> {
  var icon;

  IconListState(this.icon);

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return new Icon(icon, color: ShareDataWidget.of(context).color);
    }

  @override
  void didChangeDependencies() {
    // TODO: implement didChangeDependencies
  super.didChangeDependencies();
  }
}

class ShareDataWidget extends InheritedWidget {
  final Color color;

  ShareDataWidget({this.color, Widget child}) : super(child: child);

  static ShareDataWidget of(BuildContext context) {
    return context.inheritFromWidgetOfExactType(ShareDataWidget);
  }

  @override
  bool updateShouldNotify(ShareDataWidget oldWidget) {
    // TODO: implement updateShouldNotify
  return oldWidget.color != color;
  }
}
```



事件监听，手势动作，抬起，放下，移动

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: Scaffold(
        appBar: AppBar(
          title: new Text(""),
        ),
        body: new Listener(
          child: new Container(
            width: double.infinity,
            height: double.infinity,
            color: Colors.green,
          ),
          onPointerDown: (event) => debugPrint("按下：$event"),
          onPointerMove: (event) => debugPrint("移动：$event"),
          onPointerUp: (event) => debugPrint("抬起：$event"),
        ),
      ),
    );
  }
}
```

事件监听，单击 双击 长按

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.lime),
      home: Scaffold(
        appBar: AppBar(
          title: new Text(""),
        ),
        body: new GestureDetector(
          child: new Container(
              width: double.infinity,
              height: double.infinity,
              color: Colors.green),
          onTap: () => debugPrint("手势单击"),
          onDoubleTap: () => debugPrint("手势双击"),
          onLongPress: () => debugPrint("手势长按"),
        ),
      ),
    );
  }
}
```

滑动手势

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.blue),
      home: Scaffold(
        appBar: AppBar(
          title: new Text(""),
        ),
        body: GestureDetector(
          child: Container(
            width: double.infinity,
            height: double.infinity,
            color: Colors.green,
          ),
          onPanDown: (DragDownDetails dragDownDetails) =>
              debugPrint("手势：滑动按下：${dragDownDetails.globalPosition}"),
          onPanUpdate: (DragUpdateDetails dragDownDetails) => debugPrint(
              "手势：滑动中，当前位置：${dragDownDetails.delta.dx}-${dragDownDetails.delta.dy}"),
          onPanEnd: (DragEndDetails dragDownDetails) => debugPrint(
              "手势：滑动结束，瞬时速度：${dragDownDetails.velocity.pixelsPerSecond}"),
        ),
      ),
    );
  }
}
```

手势缩放监听

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.teal),
      home: Scaffold(
        appBar: AppBar(
          title: new Text(""),
        ),
        body: new GestureDetector(
          child: new Container(
            width: double.infinity,
            height: double.infinity,
            color: Colors.green,
          ),
          onScaleStart: (details) => debugPrint("手势缩放开始：${details.toString()}"),
          onScaleUpdate: (details) => debugPrint("手势缩放中：${details.scale}"),
          onScaleEnd: (details) => debugPrint("手势缩放结束：${details.toString()}"),
        ),
      ),
    );
  }
}
```

通知

```
import 'dart:math';

import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: Scaffold(
        appBar: AppBar(
          title: new Text(""),
        ),
        body: new GestureDetector(
          child: new PlusNumWidget(),
        ),
      ),
    );
  }
}

class PlusNumWidget extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return PlusNumWidgetState();
  }
}

class PlusNumWidgetState extends State<PlusNumWidget> {
  int numA;
  int numB;
  int result;

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return NotificationListener<CustomNotification>(
      onNotification: (notification) {
        setState(() {
          numA = notification.numA;
          numB = notification.numB;
          result = numA + numB;
        });
      },
      child: Center(
        child: Column(
          children: <Widget>[
            new Text("$numA+$numB = $result"),
            new Builder(builder: (context) {
              return new RaisedButton(
                child: Text("计算"),
                onPressed: () {
                  CustomNotification(
                          new Random().nextInt(100), new Random().nextInt(100))
```

```
                      .dispatch(context);
                },
              );
            })
          ],
        ),
      ),
    );
  }
}

class CustomNotification extends Notification {
  int numA;
  int numB;

  CustomNotification(this.numA, this.numB);
}
```

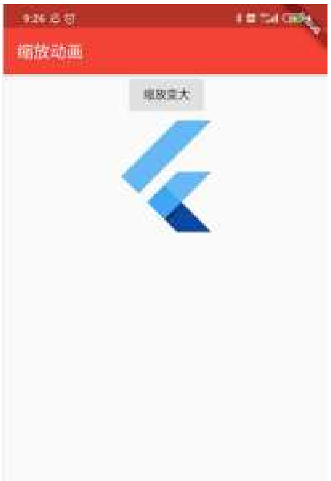
更换主题颜色-eventbus

```
import 'package:flutter/material.dart';
import 'package:event_bus/event_bus.dart';
import 'dart:math';

EventBus eventBus;
var themeColor;

final List<Color> themeColorList = [
  Colors.red,
  Colors.orange,
  Colors.yellow,
  Colors.green,
  Colors.cyan,
  Colors.blue,
  Colors.purple,
];

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return RainbowTheme();
  }
}

class RainbowTheme extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return RainbowThemeState();
  }
}

class RainbowThemeState extends State<RainbowTheme> {
  @override
  void initState() {
    // TODO: implement initState
  super.initState();
    eventBus = new EventBus();
    themeColor = themeColorList[0];
    eventBus
        .on<ChangeThemeEvent>()
        .listen((ChangeThemeEvent onData) => setState(() {
              themeColor = themeColorList[onData.themeIndex];
            }));
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "",
      theme: ThemeData(
        primarySwatch: themeColor,
      ),
      home: new Scaffold(
        appBar: AppBar(
          title: new Text("更换主题颜色"),
        ),
        body: new RaisedButton(
          child: new Text("更换主题颜色按钮"),
          onPressed: () =>
              eventBus.fire(new ChangeThemeEvent(new Random().nextInt(7))),
        ),
      ),
    );
  }
}

class ChangeThemeEvent {
  var themeIndex;

  ChangeThemeEvent(this.themeIndex);
}
```

缩放动画

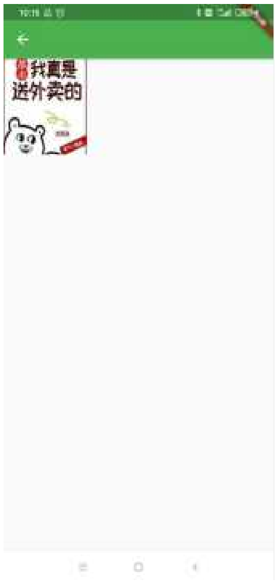
```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "缩放动画",
      theme: ThemeData(primarySwatch: Colors.red),
      home: Scaffold(
        appBar: AppBar(
          title: new Text("缩放动画"),
        ),
        body: new SmallToBigLogo(),
      ),
    );
  }
```

```
}

class SmallToBigLogo extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return new SmallToBigLogoState();
  }
}

class SmallToBigLogoState extends State<SmallToBigLogo>
    with SingleTickerProviderStateMixin {
  Animation<double> animation;
  AnimationController controller;
  AnimationStatus animationStatus;
  double animationValue;

  @override
  void initState() {
    // TODO: implement initState
  super.initState();
    controller =
        AnimationController(duration: const Duration(seconds: 1), vsync: this);
    animation = Tween<double>(begin: 0, end: 150).animate(controller)
      ..addListener(() {
        setState(() {
          animationValue = animation.value;
        });
      })
      ..addStatusListener((status) {
        setState(() {
          animationStatus = status;
        });
      });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return Container(
      width: double.infinity,
      height: double.infinity,
      child: Column(
        children: <Widget>[
          new RaisedButton(
            onPressed: () {
              controller.reset();
              controller.forward();
            },
            child: new Text("缩放变大"),
          ),
          Container(
            height: animation.value,
            width: animation.value,
            child: FlutterLogo(),
          )
        ],
      ),
    );
  }

  @override
  void dispose() {
    // TODO: implement dispose
  // 停止所有活动的动画
    super.dispose();
    controller.dispose();
  }
}
```



自定义图片缩放

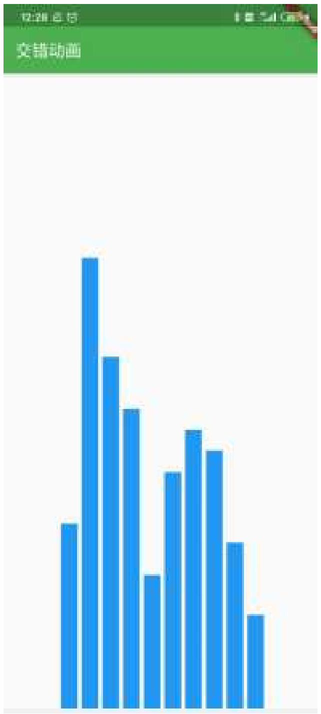
```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.green),
      home: new HeroAnimationRoute(),
    );
  }
}

class HeroAnimationRoute extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return Container(
      alignment: Alignment.topCenter,
      child: Scaffold(
        appBar: AppBar(
          title: new Text(""),
        ),
        body: InkWell(
          child: Hero(
            tag: "title",
            child: Image.asset(
              "assets/image.png",
              width: 80.0,
            ),
          ),
          onTap: () {
            Navigator.push(context, PageRouteBuilder(pageBuilder:
                (BuildContext context, Animation animation,
                    Animation secondarynimation) {
              return new FadeTransition(
                opacity: animation,
                child: Scaffold(
                  appBar: new AppBar(
                    title: new Text(""),
                  ),
                  body: HeroAnimationRouteB(),
                ),
              );
            }));
          },
        ),
      ),
    );
  }
}

class HeroAnimationRouteB extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return Hero(tag: "title", child: Image.asset("assets/image.png"));
  }
}
```



交错动画

```
import 'package:flutter/material.dart';
import 'dart:math';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
   return MaterialApp(
       title: "交错动画",
       theme: ThemeData(primarySwatch: Colors.green),
       home: Scaffold(
         appBar: AppBar(
           title: new Text("交错动画"),
         ),
         body: new StaggeredDemo(),
       ),
     );
  }
}
```

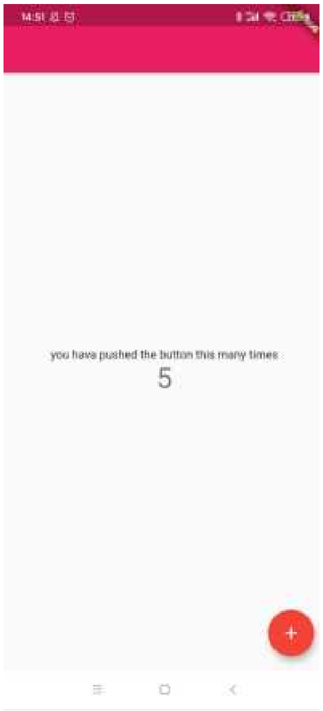
```
class StaggeredDemo extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return StaggeredDemoState();
  }
}

class StaggeredDemoState extends State<StaggeredDemo>
    with TickerProviderStateMixin {
  AnimationController _controller;

  @override
  void initState() {
    // TODO: implement initState
  super.initState();
    _controller = AnimationController(
          duration: const Duration(milliseconds: 500), vsync: this);
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  List<Widget> widgets = new List();
    for (var i = 0; i < 10; i++) {
      widgets.add(new StaggeredAnimation(
        controller: _controller,
      ));
      widgets.add(new Container(
        width: 5.0,
      ));
    }
    return GestureDetector(
      behavior: HitTestBehavior.opaque,
      onTap: () {
        _controller.reset();
        _controller.forward();
      },
      child: new Row(
        mainAxisAlignment: MainAxisAlignment.center,
        children: widgets,
      ),
    );
  }
}

class StaggeredAnimation extends StatelessWidget {
  final Animation<double> controller;
  Animation<double> height;
  Animation<Color> color;

  StaggeredAnimation({this.controller, Key key}) : super(key: key) {
    height = Tween<double>(
      begin: 0.0,
      end: new Random().nextInt(500) + 100 * 1.0,
    ).animate(
      CurvedAnimation(
        parent: controller,
        curve: Curves.ease,
      ),
    );
    color = ColorTween(begin: Colors.white, end: Colors.blue).animate(
      CurvedAnimation(
        parent: controller,
        curve: Interval(0.0, 0.8, curve: Curves.ease),
      ),
    );
  }

  Widget _buildAnimation(BuildContext context, Widget child) {
    return Container(
      alignment: Alignment.bottomCenter,
      child: Container(
        alignment: Alignment.bottomCenter,
        child: Container(
          color: color.value,
          width: 20.0,
          height: height.value,
        ),
      ),
    );
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return AnimatedBuilder(animation: controller, builder: _buildAnimation);
  }
}
```



不同风格样式的按钮标题栏

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());
```

```
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "",
      theme: ThemeData(
        primarySwatch: Colors.pink,
        accentColor: Colors.red,
        fontFamily: "TEST",
      ),
      home: new MyHomePage(),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _incrementCounter() {
    setState(() {
      _counter++;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return Scaffold(
      appBar: AppBar(
        title: new Text(""),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text('you hava pushed the button this many times'),
            Text(
              '$_counter',
              style: Theme.of(context).textTheme.display1,
            ),
          ],
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: _incrementCounter,
        tooltip: 'Increment',
        child: Icon(Icons.add),
      ),
    );
  }
}
```



you have pushed the button this many times

5

页面跳转和数据传递

main:

```
import 'package:flutter/material.dart';
import 'page_2.dart';
import 'page_3.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "页面跳转和数据传递",
      theme: ThemeData(primarySwatch: Colors.green),
      home: new MyHomePage(
        title: "页面跳转和数据传递",
      ),
      routes: {"page_2": (BuildContext context) => new Page2()},
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _incrementCounter() {
    setState(() {
      _counter++;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return Scaffold(
      appBar: AppBar(
        title: new Text("页面跳转和数据传递"),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text('you hava pushed the button this many times'),
            Text(
              '$_counter',
              style: Theme.of(context).textTheme.display1,
            ),
            RaisedButton(
              child: Text("跳转到页面二"),
              onPressed: () {
                Navigator.pushNamed(context, "page_2");
              },
            ),
            RaisedButton(
              child: Text("跳转到页面三"),
              onPressed: () {
                Navigator.push<int>(context,
                    new MaterialPageRoute(builder: (BuildContext context) {
                  return new Page3(_counter);
                })).then((int backData) {
                  setState(() {
                    if (backData != null) {
                      _counter = backData;
                    }
                  });
                });
              },
            )
          ],
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: _incrementCounter,
        tooltip: 'Increment',
        child: Icon(Icons.add),
      ),
    );
  }
}
```

page2：

```
import 'package:flutter/material.dart';

class Page2 extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "页面二",
      theme: ThemeData(primarySwatch: Colors.red),
      home: Scaffold(
        appBar: AppBar(
          title: new Text("页面二"),
        ),
        body: Center(
          child: RaisedButton(
            onPressed: () => Navigator.pop(context,  null),
            child: new Text("返回"),
          ),
        ),
      ),
    );
  }
}
```

page3:

```
import 'package:flutter/material.dart';

class Page3  extends StatelessWidget {
  var currentNum;

  Page3(this. currentNum);

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "页面三",
      theme: ThemeData(primarySwatch: Colors.orange),
      home: Scaffold(
        appBar: AppBar(
          title: new Text("页面三"),
        ),
        body: Center(
          child: Column(
            children: <Widget>[
              Text("当前计数器的值：$currentNum,返回后将重置"),
              RaisedButton(
                onPressed: () => Navigator.pop(context, 0),
                child: Text("返回"),
              )
            ],
          ),
        ),
      ),
    );
  }
}
```

文件存储和文件读取

```
import 'dart:io';
import 'dart:async';
import 'package:flutter/material.dart';
import 'package:path_provider/path_provider.dart';

void main() => runApp(new MaterialApp(
      title: "文件读写",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: new FileRWDemo(),
    ));

class FileRWDemo extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return FileRWDemoState();
  }
}

class FileRWDemoState extends State<FileRWDemo> {
  int _counter;
```

```
Future<File>  _getLocalFile() async {
  String dir = (await getApplicationDocumentsDirectory()).path;
  debugPrint("$dir/counter.dat");
  return new File("$dir/counter.dat");
}

Future<int> _readCounter() async {
  try {
    File file = await _getLocalFile();
    String contents = await file.readAsString();
    return int.parse(contents);
  } on FileSystemException {
    return 0;
  }
}

Future<Null> _incrementCounter() async {
  setState(() {
    _counter++;
  });
  await (await _getLocalFile()).writeAsString('$_counter');
}

@override
void initState() {
  // TODO: implement initState
super.initState();
  _readCounter().then((int value) {
    setState(() {
      _counter = value;
    });
  });
}

@override
Widget build(BuildContext context) {
  // TODO: implement build
return new Scaffold(
      appBar: AppBar(
        title: new Text("文件读写"),
      ),
      body: new Text("按钮点击次数：$_counter"),
      floatingActionButton: new FloatingActionButton(
        onPressed: _incrementCounter,
        child: new Icon(Icons.add),
        tooltip: "Increment",
      ),
    );
  }
}
```

网络请求

```
import 'dart:io';
import 'dart:convert';
import 'package:flutter/material.dart';
import 'WeatherResp.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "北京天气",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: new WeatherInfo(title: "北京天气",),
    );
  }
}

class WeatherInfo extends StatefulWidget {
  final String title;

  WeatherInfo({Key key, this.title}) : super(key: key);
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return new WeatherInfoState();
  }
}

class WeatherInfoState extends State<WeatherInfo> {
  bool isLoading = false;
  WeatherData weatherData;

  refresh() async {
    if (!isLoading) {
      isLoading = true;
      try {
        HttpClient httpClient = new HttpClient();
        HttpClientRequest request = await httpClient.getUrl(Uri.parse(
            "http://t.weather.sojson.com/api/weather/city/101010100"));
        HttpClientResponse response = await request.close();
        String responseContent = await response.transform(utf8.decoder).join
();
        setState(() {
          debugPrint(responseContent);
          this.weatherData = WeatherData.fromJson(json.decode(responseConten
t));
        });
        httpClient.close();
      } catch (e) {
        debugPrint("请求失败:$e");
      } finally {
        setState(() {
          isLoading = false;
        });
      }
    } else {
      debugPrint("正在刷新");
    }
  }
```

```
Column buildBaseInfo(weatherData) {
  List<Widget> widgets = new List();
  widgets.add(Text("获取时间：${weatherData.time}"));
  widgets.add(Text("省：${weatherData.cityInfo.parent}"));
  widgets.add(Text("市：${weatherData.cityInfo.city}"));
  widgets.add(Text("更新时间：${weatherData.cityInfo.updateTime}"));
  return Column(
    crossAxisAlignment: CrossAxisAlignment.start,
    children: widgets,
  );
}

Column buildCurrent(weatherData) {
  List<Widget> widgets = new List();
  widgets.add(Text("湿度：${weatherData.data.shidu}"));
  widgets.add(Text("PM2.5：${weatherData.data.pm25}"));
  widgets.add(Text("PM10：${weatherData.data.pm10}"));
  widgets.add(Text("空气质量：${weatherData.data.quality}"));
  widgets.add(Text("气温：${weatherData.data.wendu}"));
  widgets.add(Text("感冒指数：${weatherData.data.ganmao}"));
  return Column(
    crossAxisAlignment: CrossAxisAlignment.start,
    children: widgets,
  );
}

Column buildYesterday(weatherData) {
  List<Widget> widgets = new List();
  widgets.add(Text("昨日日出：${weatherData.data.yesterday.sunrise}"));
  widgets.add(Text("昨日日落：${weatherData.data.yesterday.sunset}"));
  widgets.add(Text("昨日最高温：${weatherData.data.yesterday.high}"));
  widgets.add(Text("昨日最低温：${weatherData.data.yesterday.low}"));
  widgets.add(Text("昨日风向：${weatherData.data.yesterday.fx}"));
  widgets.add(Text("昨日风力：${weatherData.data.yesterday.fl}"));
  widgets.add(Text("昨日天气：${weatherData.data.yesterday.type}"));
  widgets.add(Text("昨日提醒：${weatherData.data.yesterday.notice}"));
  return Column(
    crossAxisAlignment: CrossAxisAlignment.start,
    children: widgets,
    );
  }

  Column buildForecast(weatherData) {
    List<Widget> widgets = new List();
    for (var i = 0; i < weatherData.data.foreCast.foreCastItems.length; i++) {
      widgets
          .add(Text("日期：${weatherData.data.foreCast.foreCastItems[i].dat
e}"));
      widgets.add(
          Text("日出：${weatherData.data.foreCast.foreCastItems[i].sunrise}"));
      widgets
          .add(Text("日落：${weatherData.data.foreCast.foreCastItems[i].sunse
t}"));
      widgets
          .add(Text("最高温：${weatherData.data.foreCast.foreCastItems[i].hig
h}"));
      widgets
          .add(Text("最低温：${weatherData.data.foreCast.foreCastItems[i].lo
w}"));
      widgets.add(Text("风向：${weatherData.data.foreCast.foreCastItems[i].f
x}"));
      widgets.add(Text("风力：${weatherData.data.foreCast.foreCastItems[i].f
l}"));
      widgets
          .add(Text("天气：${weatherData.data.foreCast.foreCastItems[i].typ
e}"));
    }
    return Column(
      crossAxisAlignment: CrossAxisAlignment.start,
      children: widgets,
    );
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: ListView(
        children: <Widget>[
          Text(weatherData == null ? "":"【基本信息】", style: new TextStyle(color: Colors.red)),
          weatherData == null ? Text("") : buildBaseInfo(weatherData),
          Text(weatherData == null ? "":"【当前天气】", style: new TextStyle(color: Colors.red)),
          weatherData == null ? Text("") : buildCurrent(weatherData),
          Text(weatherData == null ? "":"【昨日天气】", style: new TextStyle(color: Colors.red)),
          weatherData == null ? Text("") : buildYesterday(weatherData),
          Text(weatherData == null ? "":"【未来预报】", style: new TextStyle(color: Colors.red)),
          weatherData == null ? Text("") : buildForecast(weatherData),
        ],
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: refresh,
        tooltip: "刷新天气",
        child: Icon(Icons.refresh),
      ),
    );
  }
}
```

SharedPreference 共享参数

```
import 'package:flutter/material.dart';
import 'package:shared_preferences/shared_preferences.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.red),
      home: new MyHomePage(title: "配置参数保存"),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({this.title, Key key}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
  return MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  Future<SharedPreferences> getSharedPreferences() async {
    return await SharedPreferences.getInstance();
  }

  @override
  void initState() {
    // TODO: implement initState
  super.initState();
    getSharedPreferences().then((SharedPreferences prefs) {
      int counter =
          prefs.getInt('counter') == null ? 0 : prefs.getInt('counter');
      setState(() {
        _counter = counter;
      });
    });
  }

  void _incrementCounter() async {
    SharedPreferences prefs = await SharedPreferences.getInstance();
    int counter = (prefs.getInt('counter') ?? 0) + 1;
    await prefs.setInt('counter', counter);
    setState(() {
      _counter++;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
  return Scaffold(
      appBar: AppBar(
        title: new Text(""),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text(
              'you have pushed the button this many times',
            ),
            Text(
              '$_counter',
              style: Theme.of(context).textTheme.display1,
            ),
          ],
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: _incrementCounter,
        tooltip: 'Increment',
        child: Icon(Icons.add),
      ),
    );
  }
}
```

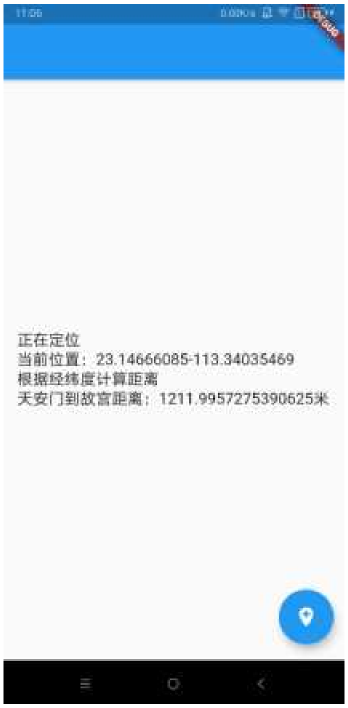
geolocator 获取经纬度，当前位置

添加引用：

```
geolocator: ^4.0.3


权限
<uses-permission android:name="android.permission.ACCESS_FINE_LOCATION" />
<uses-permission android:name="android.permission.ACCESS_COARSE_LOCATION" />
```

```

import 'package:geolocator/geolocator.dart';
import 'package:flutter/material.dart';

void main() => runApp(new MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return new MaterialApp(
      title: "数据库的使用",
      theme: new ThemeData(
        primarySwatch: Colors.blue,
      ),
      home: new MyHomePage(title: "Geolocator",),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  String locationInfo = "点击定位按钮开始定位";

  getLocation() async {
    setState(() {
      locationInfo = "正在定位\n";
    });
    Geolocator geolocator = new Geolocator();
    geolocator.forceAndroidLocationManager = true;
    Position position = await geolocator.getCurrentPosition();
    setState(() {
      locationInfo += "当前位置：${position.latitude}-${position.longit
ude}\n";
    });
    setState(() {
      locationInfo += "根据经纬度计算距离\n";
    });
    double _distanceInMeters = await Geolocator().distanceBetween(
        39.9077798469, 116.3912285961, 39.9177397478, 116.3970290499);
    setState(() {
      locationInfo += "天安门到故宫距离：$_distanceInMeters米";
    });
    debugPrint("当前位置：${position.latitude}-${position.longitude}");
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: new Text(""),
      ),
      body: Center(
        child: Text(locationInfo),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: getLocation,
        tooltip: "获取当前位置",
        child: Icon(Icons.add_location),
      ),
    );
  }
}
```

在高德坐标工具里面，显示会存在一点偏移，是坐标系转换导致的

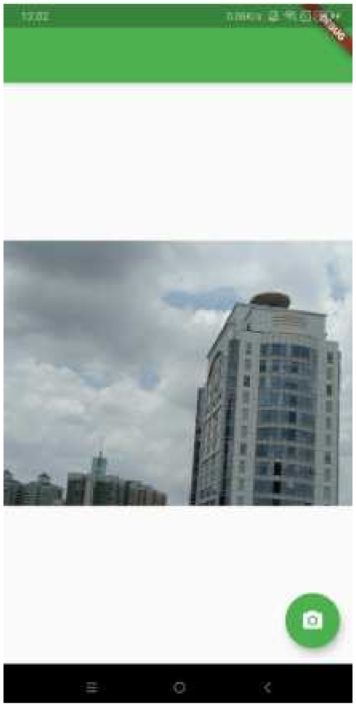


正在定位
当前位置：23.14666085-113.34035469
根据经纬度计算距离
天安门到故宫距离：1211.9957275390625米

拍照和图片展示

```
image_picker: ^0.6.0+4
```

```
import 'package:flutter/material.dart';
import 'package:image_picker/image_picker.dart';
import 'dart:io';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.green),
      home: new _MyHomePage(),
    );
  }
}

class _MyHomePage extends StatefulWidget {
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new _MyHomePageState();
  }
}

class _MyHomePageState extends State<_MyHomePage> {
  File _image;

  Future getImage() async {
    var image = await ImagePicker.pickImage(source: ImageSource.camer
a);
    setState(() {
      _image = image;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return new Scaffold(
      appBar: AppBar(
        title: new Text(""),
      ),
      body: new Center(
        child: _image == null ? new Text('没有可显示的照片') : new Image.file(_image),
      ),
      floatingActionButton: new FloatingActionButton(
        onPressed: getImage,
        tooltip: "",
        child: new Icon(Icons.photo_camera),
      ),
    );
  }
}
```

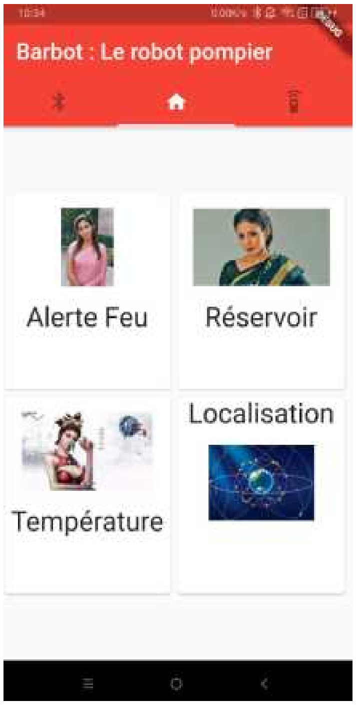


TabLayout

```
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';
import 'package:flutter/rendering.dart';
```

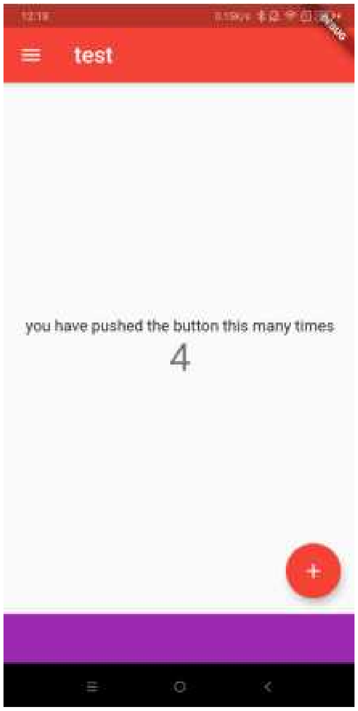
```
void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Demo',
      theme: ThemeData(
        primarySwatch: Colors.red,
        visualDensity: VisualDensity.adaptivePlatformDensity,
      ),
      home: MyHomePage(title: 'BARBOT : le robot pompier'),
    );
  }
}

class MyHomePage extends StatefulWidget {
  MyHomePage({Key key, this.title}) : super(key: key);

  final String title;

  @override
  _MyHomePageState createState() => _MyHomePageState();
}

class _MyHomePageState extends State<MyHomePage> {
  get child => null;

  @override
  void initState() {
    super.initState();
  }

  showAlertDialog(BuildContext context) {
    // set up the AlertDialog
    AlertDialog alert = AlertDialog(
        title: Text("Bluetooth"),
        content: Text("Connexion"),
        actions: [
          FlatButton(
            child: Text('Ok'),
            onPressed: () {
              Navigator.of(context).pop();
            },
          ),
        ]);

    // show the dialog
    showDialog(
      context: context,
      builder: (BuildContext context) {
        return alert;
      },
    );
  }

  String _currentAddress;

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: DefaultTabController(
        length: 3,
        child: Scaffold(
          appBar: AppBar(
            backgroundColor: Colors.red,
            bottom: TabBar(
              tabs: [
                Tab(icon: Icon(Icons.bluetooth)),
                Tab(icon: Icon(Icons.home)),
                Tab(icon: Icon(Icons.settings_remote)),
              ],
              unselectedLabelColor: Colors.black38,
              indicatorColor: Colors.white,
            ),
            title: Text('Barbot : Le robot pompier'),
          ),
          body: TabBarView(
            children: [
              Center(
                child: SizedBox(
                  width: 150.0,
                  height: 150.0,
                  child: FloatingActionButton(
                    onPressed: null,
                    child: Center(
                      child: Text(
                        "Connection Bluetooth",
                        textAlign: TextAlign.center,
                      ),
                    ),
                  ),
                ),
              ),
              Column(
                  mainAxisAlignment: MainAxisAlignment.center,
                  crossAxisAlignment: CrossAxisAlignment.center,
                  children: <Widget>[
                    Row(children: [
                      Card(
                        //color: Colors.red,
                        child: Container(
                          width: 170,
                          height: 200,
                          child: Column(
                              crossAxisAlignment: CrossAxisAlignment.center,
                              children: <Widget>[
                                Container(
                                    padding: new EdgeInsets.all(15.0),
                                    height: 110.0,
                                    child:
                                        Image.asset('assets/safe.png')),
                                Text("Alerte Feu",
                                    style: TextStyle(
                   fontSize: 24.0,
                  )),
               ]),
            ),
           ),
           Card(
            //color: Colors.red,
            child: Container(
             width: 170,
             height: 200,
             child: Column(
               crossAxisAlignment: CrossAxisAlignment.c
enter,
               children: <Widget>[
                Container(
                  padding: new EdgeInsets.all(15.0),
                  height: 110.0,
                  child: Image.asset('assets/eau.pn
g')),
                Text("Réservoir",
                  style: TextStyle(
                   fontSize: 24.0,
                  )),
               ]),
            ),
           ),
          ]),
          Row(children: [
           Card(
            //color: Colors.red,
            child: Container(
             width: 170,
             height: 200,
             child: Column(
               crossAxisAlignment: CrossAxisAlignment.c
enter,
               children: <Widget>[
                Container(
                  padding: new EdgeInsets.all(15.0),
                  height: 110.0,
                                    child:
                                        Image.asset('assets/temp.pn
g')),
                                Text("Température",
                                    style: TextStyle(
                                      fontSize: 24.0,
                                    )),
                              ]),
                        ),
                      ),
                      Card(
                        //color: Colors.red,
                        child: Container(
                          width: 170,
                          height: 200,
                          child: Column(
                              crossAxisAlignment: CrossAxisAlignment.c
enter,
                              children: <Widget>[
                                Text("Localisation",
                                    style: TextStyle(
                                      fontSize: 24.0,
                                    )),
                                FlatButton(
                                  child: Container(
                                      padding: new EdgeInsets.all(15.
0),
                                      height: 110.0,
                                      child:
                                          Image.asset('assets/gps.pn
g')),
                                  onPressed: null,
                                ),
                              ]),
                        ),
                      ),
                    ]),
                  ]),
              Column(
                mainAxisAlignment: MainAxisAlignment.spaceEvenly,
        children: <Widget>[
         Text(
          "CONTROLE LANCE",
          style: TextStyle(
           fontStyle: FontStyle.normal,
           fontWeight: FontWeight.bold,
           fontSize: 25,
          ),
         ),
         Container(
           color: Colors.lightBlue,
           child: Row(
            mainAxisAlignment: MainAxisAlignment.spaceEven
ly,

            children: <Widget>[
             Column(
              mainAxisAlignment: MainAxisAlignment.cente
r,

              children: <Widget>[
               FloatingActionButton(
                onPressed: null,
                child: Center(child: Icon(Icons.arrow_
back)),

                backgroundColor: Colors.red,
                focusColor: Colors.black26,
               )
              ],
             ),
             Column(
              mainAxisSize: MainAxisSize.max,
              mainAxisAlignment: MainAxisAlignment.cente
r,

              children: <Widget>[
               Padding(
                padding: const EdgeInsets.all(10.0),
                child: FloatingActionButton(
                 onPressed: null,
                 child:
                   Center(child: Icon(Icons.arrow_u
pward)),
                                  backgroundColor: Colors.blueGrey,
                                  focusColor: Colors.black26,
                                ),
                              ),
                              Padding(
                                padding: const EdgeInsets.all(10.0),
                                child: FloatingActionButton(
                                  onPressed: null,
                                  child:
                                      Center(child: Icon(Icons.arrow_d
ownward)),

                                  backgroundColor: Colors.blueGrey,
                                  focusColor: Colors.black26,
                                ),
                              ),
                            ],
                          ),
                          Column(
                            children: <Widget>[
                              FloatingActionButton(
                                onPressed: null,
                                child: Center(child: Icon(Icons.arrow_
forward)),

                                backgroundColor: Colors.red,
                                focusColor: Colors.black26,
                              )
                            ],
                          ),
                        ],
                      )),
                  Text(
                    "CONTROLE ROBOT",
                    style: TextStyle(
                      fontStyle: FontStyle.normal,
                      fontWeight: FontWeight.bold,
                      fontSize: 25,
                    ),
                  ),
                  Container(
                      color: Colors.grey,
                      child: Row(
                        mainAxisSize: MainAxisSize.max,
                        mainAxisAlignment: MainAxisAlignment.spaceEven
ly,

                        children: <Widget>[
                          Column(
                            mainAxisAlignment: MainAxisAlignment.cente
r,

                            children: <Widget>[
                              FloatingActionButton(
                                onPressed: null,
                                child: Center(child: Icon(Icons.arrow_
back)),

                                backgroundColor: Colors.blueGrey,
                                focusColor: Colors.black26,
                              )
                            ],
                          ),
                          Column(
                            mainAxisSize: MainAxisSize.max,
                            mainAxisAlignment: MainAxisAlignment.space
Evenly,

                            children: <Widget>[
                              Padding(
                                padding: const EdgeInsets.all(20.0),
                                child: FloatingActionButton(
                                  onPressed: null,
                                  child:
                                      Center(child: Icon(Icons.arrow_u
pward)),

                                  backgroundColor: Colors.red,
                                  focusColor: Colors.black26,
                                ),
                              ),
                              Padding(
                                padding: const EdgeInsets.all(10.0),
                                child: FloatingActionButton(
                                  onPressed: null,
                                  child:
                                      Center(child: Icon(Icons.arrow_d
ownward)),
                                  backgroundColor: Colors.red,
                                  focusColor: Colors.black26,
                                ),
                              ),
                            ],
                          ),
                          Column(
                            children: <Widget>[
                              FloatingActionButton(
                                onPressed: null,
                                child: Center(child: Icon(Icons.arrow_
forward)),

                                backgroundColor: Colors.blueGrey,
                                focusColor: Colors.black26,
                              )
                            ],
                          ),
                        ],
                      )),
                  Container(
                    child: Row(
                      mainAxisAlignment: MainAxisAlignment.spaceEvenly,
                      children: <Widget>[
                        FloatingActionButton(
                          onPressed: null,
                          child: Center(child: Text("EAU")),
                        ),
                        FloatingActionButton(
                          onPressed: null,
                          backgroundColor: Colors.red,
                          child: Center(
                            child: Icon(Icons.volume_up),
                          ),
                        )
                      ],
                    ),
                  )
                ],
              )
```

```
            ],
          ),
        ),
      ),
    );
  }
}
```



侧滑菜单栏

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.red),
      home: new MyHomePage(),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO:
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _incrementCounter() {
    setState(() {
      _counter++;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: new Text("test"),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text(
              'you have pushed the button this many times',
            ),
            Text(
              '$_counter',
              style: Theme.of(context).textTheme.display1,
            ),
          ],
        ),
      ),
      bottomNavigationBar: BottomAppBar(
        child: Container(
          height: 50,
        ),
        color: Colors.purple,
      ),
      drawer: Drawer(
        child: Container(
          color: Colors.lightBlue,
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: _incrementCounter,
        tooltip: 'Increment',
        child: Icon(Icons.add),
      ),
    );
  }
}
```



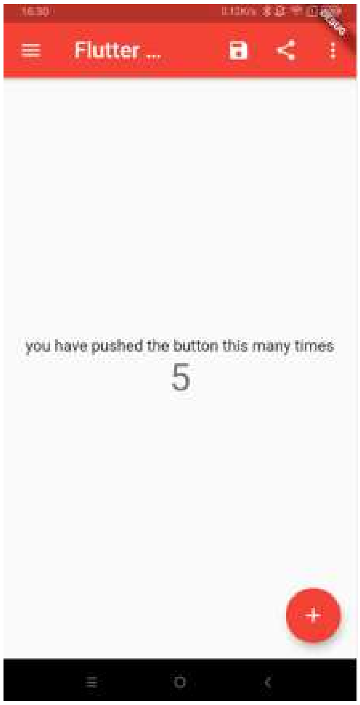
test

you have pushed the button this many times

4

菜单栏加侧滑

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.red),
      home: new MyHomePage(
        title: 'Flutter demo home page',
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;
  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _incrementCounter() {
    setState(() {
      _counter++;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        leading: Builder(builder: (BuildContext context) {
          return IconButton(
            icon: const Icon(Icons.menu),
            onPressed: () {
              Scaffold.of(context).openDrawer();
            },
          );
        }),
        actions: <Widget>[
          IconButton(
            icon: Icon(Icons.save),
            onPressed: () {
              debugPrint("save");
            },
          ),
          IconButton(
            icon: Icon(Icons.share),
            onPressed: () {
              debugPrint("share");
            },
          ),
          PopupMenuButton(
            itemBuilder: (BuildContext context) => <PopupMenuItem<Stri
ng>>[
              PopupMenuItem<String>(
                child: new Text("帮助"),
                value: "help",
              ),
              PopupMenuItem<String>(
                child: new Text("关于"),
                value: "about",
              ),
            ],
            onSelected: (String action) {
              switch (action) {
                case "help":
                  debugPrint("help");
                  break;
                case "about":
                  debugPrint("about");
                  break;
              }
            },
          )
        ],
        title: new Text(widget.title),
      ),
      drawer: Drawer(
        child: Container(
          color: Colors.lightBlue,
        ),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text('you have pushed the button this many times'),
            Text(
              '$_counter',
              style: Theme.of(context).textTheme.display1,
            ),
          ],
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: _incrementCounter,
        tooltip: 'Increment',
        child: Icon(Icons.add),
      ),
    );
  }
}
```



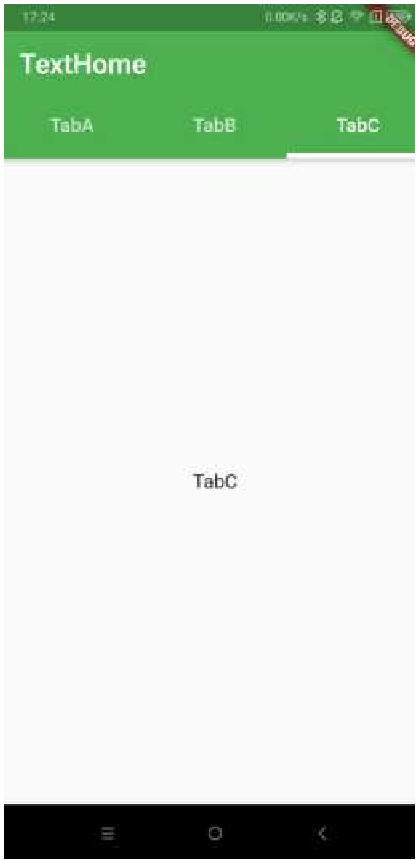
you have pushed the button this many times

5

Tab 标题栏

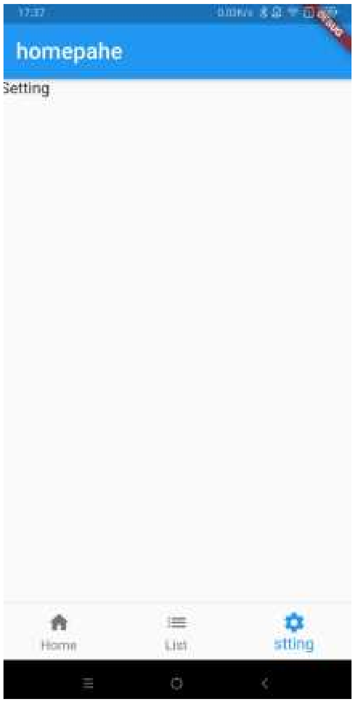
```
import 'package:flutter/material.dart';
```

```
void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.green),
      home: new MyHomePage(
        title: "TextHome",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage>
    with SingleTickerProviderStateMixin {
  TabController _controller;
  var _tabs = <Tab>[];

  @override
  void initState() {
    // TODO: implement initState
    super.initState();
    _controller = TabController(initialIndex: 0, length: 3, vsync: this);
    _tabs = <Tab>[
      Tab(
        text: "TabA",
      ),
      Tab(
        text: "TabB",
      ),
      Tab(
        text: "TabC",
      ),
    ];
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: new Text(widget.title),
        bottom: TabBar(
          tabs: _tabs,
          indicatorColor: Colors.white,
          indicatorWeight: 5,
          indicatorSize: TabBarIndicatorSize.tab,
          controller: _controller,
        ),
      ),
      body: TabBarView(
        controller: _controller,
        children: _tabs
            .map((Tab tab) => Container(child: Center(child: Text(tab.
text))))
            .toList(),
      ),
    );
  }

  @override
  void dispose() {
    // TODO: implement dispose
    super.dispose();
    _controller.dispose();
  }
}
```



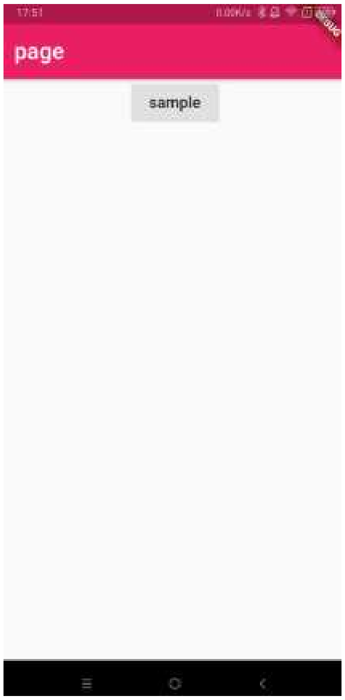
底部菜单栏

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
        title: "",
        theme: ThemeData(primarySwatch: Colors.blue),
        home: MyHomePage(
          title: "homepahe",
        ));
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  int _currentIndex = 0;
  List<Widget> _children;

  @override
  void initState() {
    // TODO: implement initState
    super.initState();
    _children = new List();
    _children.add(Text("Home"));
    _children.add(Text("List"));
    _children.add(Text("Setting"));
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: new Text(widget.title),
      ),
      body: _children[_currentIndex],
      bottomNavigationBar: BottomNavigationBar(
          currentIndex: _currentIndex,
          onTap: (int index) {
            setState(() {
              _currentIndex = index;
            });
          },
          items: [
            BottomNavigationBarItem(
              title: new Text("Home"),
              icon: new Icon(Icons.home),
            ),
            BottomNavigationBarItem(
              icon: new Icon(Icons.list),
              title: new Text("List"),
            ),
            BottomNavigationBarItem(
              icon: new Icon(Icons.settings),
              title: new Text("stting"),
            ),
          ]),
    );
  }
}
```



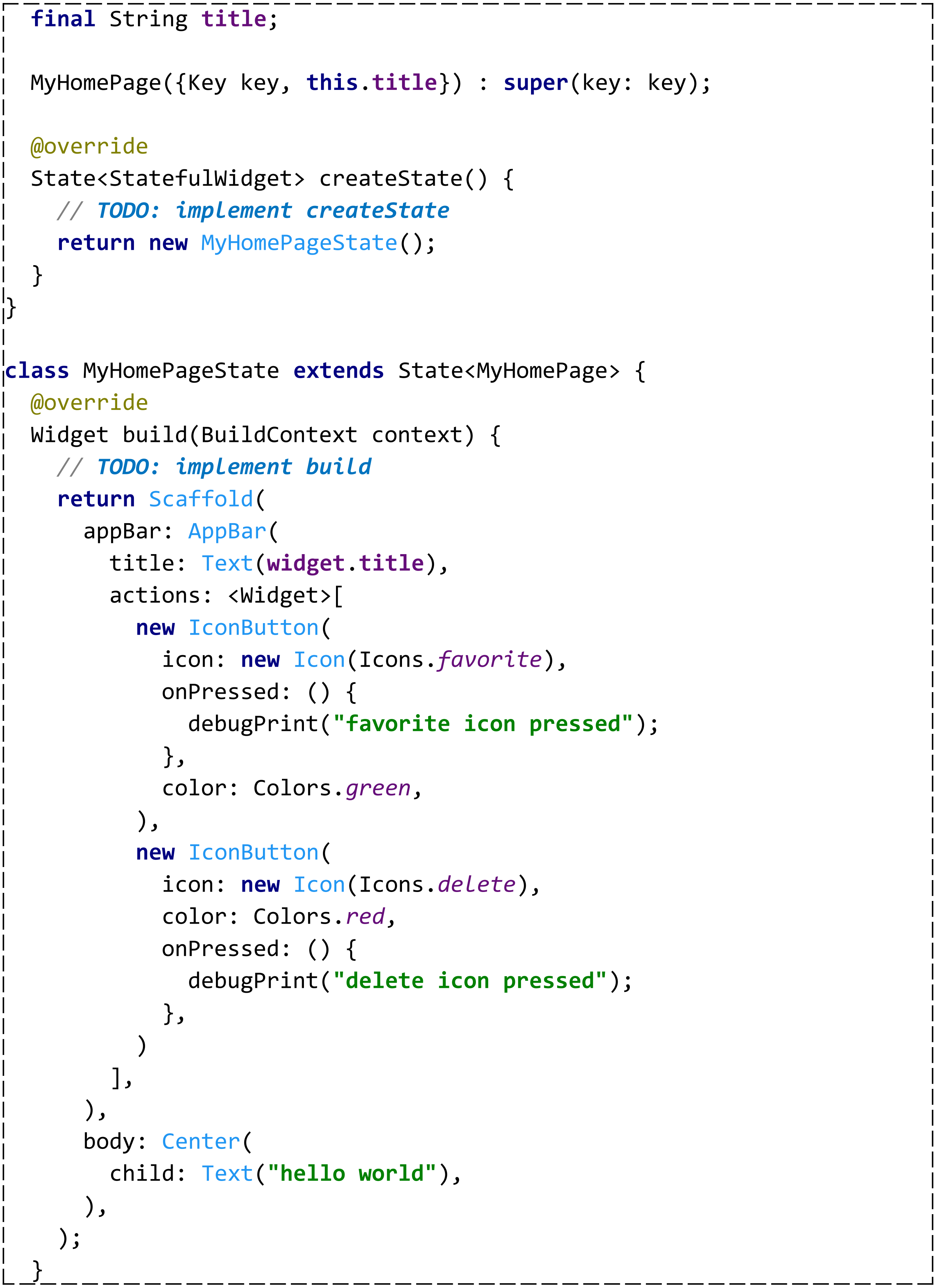
带点击事件的按钮

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: new MyHomePage(
        title: "page",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;
  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: Center(
        child: Column(
          children: <Widget>[
            RaisedButton(
              child: Text("sample"),
              onPressed: () {
                debugPrint("sample pressed");
              },
            )
          ],
        ),
      ),
    );
  }
}
```



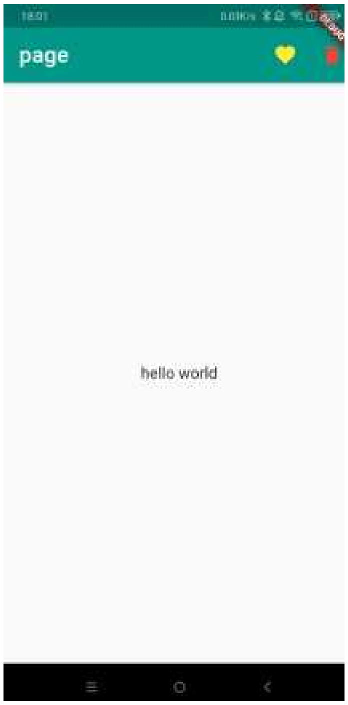
带点击事件的图片按钮

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: new MyHomePage(
        title: "page",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
```



```
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
        actions: <Widget>[
          new IconButton(
            icon: new Icon(Icons.favorite),
            onPressed: () {
              debugPrint("favorite icon pressed");
            },
            color: Colors.green,
          ),
          new IconButton(
            icon: new Icon(Icons.delete),
            color: Colors.red,
            onPressed: () {
              debugPrint("delete icon pressed");
            },
          )
        ],
      ),
      body: Center(
        child: Text("hello world"),
      ),
    );
  }
```

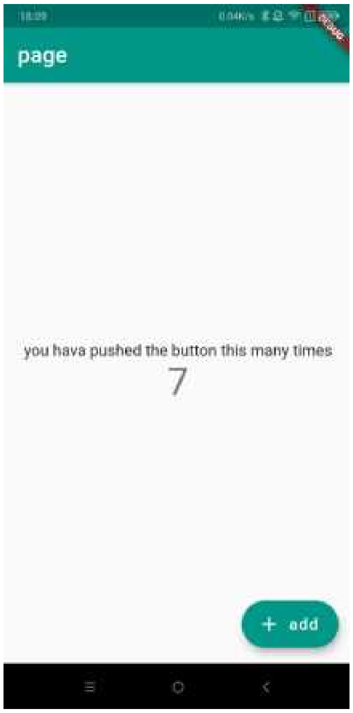
```
}
```



改进的递增按钮

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.teal),
      home: new MyHomePage(
        title: "page",
      ),
    );
  }
}
```

```
class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _incrementCounter() {
    setState(() {
      _counter++;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text(
              'you hava pushed the button this many times',
            ),
            Text(
              '$_counter',
              style: Theme.of(context).textTheme.display1,
            ),
          ],
        ),
      ),
      floatingActionButton: FloatingActionButton.extended(
        onPressed: _incrementCounter,
        tooltip: 'Interment',
        label: Text("add"),
        icon: Icon(Icons.add),
      ),
    );
  }
}
```

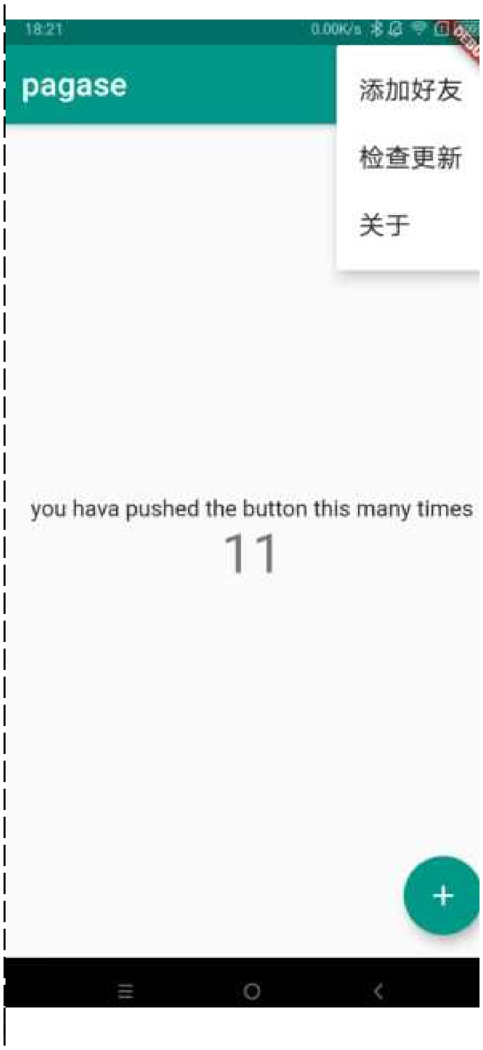


you hava pushed the button this many times

7

仿微信 popupWindow，带点击事件

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.teal),
      home: new MyHomePage(
        title: "pagase",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  int _counter = 0;

  void _incrementCounter() {
    setState(() {
      _counter++;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
        actions: <Widget>[
          PopupMenuButton(
            itemBuilder: (BuildContext context) => <PopupMenuItem<Stri
ng>>[
              PopupMenuItem<String>(
                child: Text("添加好友"),
                value: "fav",
              ),
              PopupMenuItem<String>(
                child: Text("检查更新"),
                value: "update",
              ),
              PopupMenuItem(
                child: Text("关于"),
                value: "about",
              ),
            ],
            onSelected: (String action) {
              switch (action) {
                case "fav":
                  debugPrint("fav");
                  break;
                case "update":
                  debugPrint("update");
                  break;
                case "about":
                  debugPrint("about");
                  break;
              }
            },
          )
        ],
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text('you hava pushed the button this many times'),
            Text(
              '$_counter',
              style: Theme.of(context).textTheme.display1,
            ),
          ],
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: _incrementCounter,
        tooltip: 'Increment',
        child: Icon(Icons.add),
      ),
    );
  }
}
```

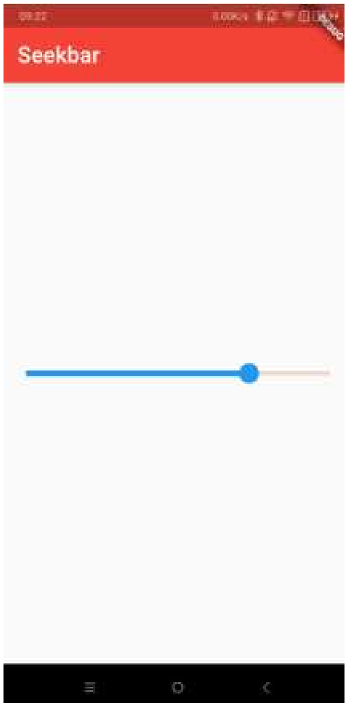


you hava pushed the button this many times

11

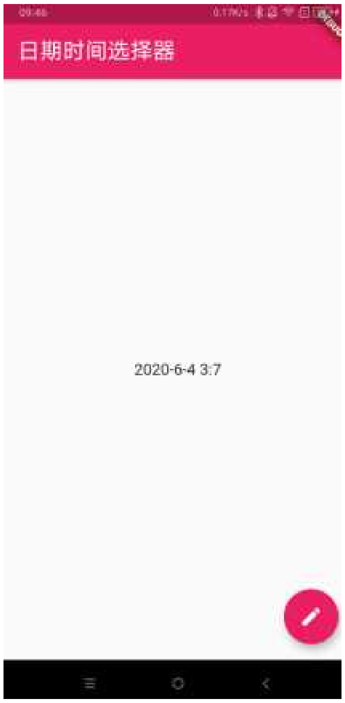
Seekbar 进度条

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "",
      theme: ThemeData(primarySwatch: Colors.red),
      home: new MyPageHome(
        title: "Seekbar",
      ),
    );
  }
}

class MyPageHome extends StatefulWidget {
  final String title;

  MyPageHome({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyPageHomeState();
  }
}

class MyPageHomeState extends State<MyPageHome> {
  double processValue = 0;

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: new Text(widget.title),
      ),
      body: Center(
        child: Slider(
          max: 100,
          min: 0,
          activeColor: Colors.blue,
          value: processValue,
          onChanged: (double value){
            setState(() {
              debugPrint("当前进度：$value");
              processValue = value;
            });
          },
        ),
      ),
    );
  }
}
```



时间和日期选择器

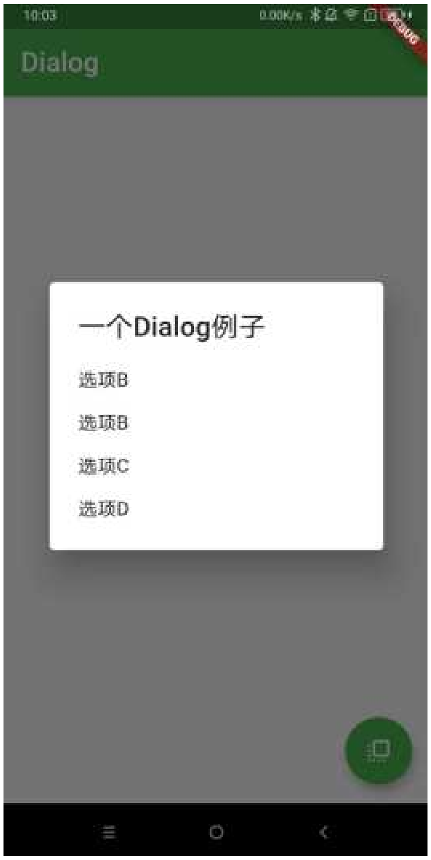
```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "日期时间选择器",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: new MyHomePage(
        title: "日期时间选择器",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  var dateTime;

  void chooseDateTime() {
    showDatePicker(
      context: context,
      initialDate: new DateTime.now(),
      firstDate: new DateTime.now().subtract(new Duration(days: 30)),
      lastDate: new DateTime.now().add(new Duration(days: 30)),
    ).then((DateTime date) {
      dateTime = "${date.year}-${date.month}-${date.day}";
      showTimePicker(
        context: context,
        initialTime: new TimeOfDay.now(),
      ).then((time) {
        dateTime = "$dateTime ${time.hour}:${time.minute}";
        setState(() {});
      }).catchError((errorMsg) {
        debugPrint(errorMsg.toString());
      });
    }).catchError((errorMsg) {
      debugPrint(errorMsg.toString());
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: Center(
        child: Text(dateTime == null ? "日期时间选择器" : dateTime),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: chooseDateTime,
        tooltip: 'Increment',
        child: Icon(Icons.edit),
      ),
    );
  }
}
```



2020-6-4 3:7

Dialog 弹窗

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "Dialog",
      theme: ThemeData(primarySwatch: Colors.green),
      home: new MyHomePage(
        title: "Dialog",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;
  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  void showSimpleDialog() {
    showDialog(
        context: context,
        builder: (BuildContext context) {
          return SimpleDialog(
            title: Text("一个Dialog例子"),
            children: <Widget>[
              SimpleDialogOption(
                child: Text("选项B"),
                onPressed: () {
                  debugPrint("点击了选项A");
                },
              ),
              SimpleDialogOption(
                child: Text("选项B"),
                onPressed: () {
                  debugPrint("点击了选项B");
                },
              ),
              SimpleDialogOption(
                child: Text("选项C"),
                onPressed: () {
                  debugPrint("点击了选项C");
                },
              ),
              SimpleDialogOption(
                child: Text("选项D"),
                onPressed: () {
                  debugPrint("点击了选项D");
                },
              ),
            ],
          );
        });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[],
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: showSimpleDialog,
        tooltip: 'SimplaDoialog',
        child: Icon(Icons.flip_to_front),
      ),
    );
  }
}
```

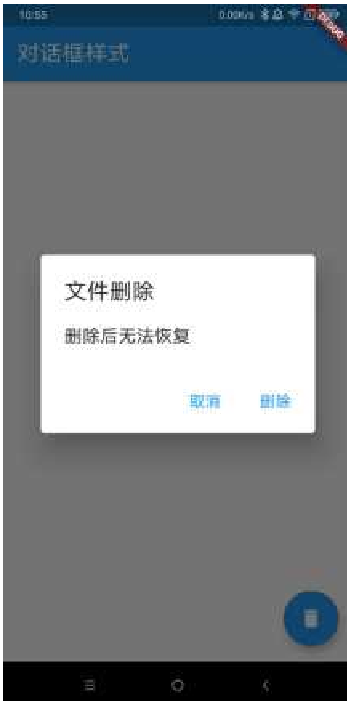


对话框 自定义

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "对话框样式",
      theme: ThemeData(primarySwatch: Colors.blue),
      home: new MyHomePage(
        title: "对话框样式",
      ),
    );
  }
```

```
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  void showAlertDialog() {
    showDialog(
        context: context,
        builder: (BuildContext context) {
          return AlertDialog(
            title: Text("文件删除"),
            content: Text("删除后无法恢复"),
            actions: <Widget>[
              FlatButton(
                onPressed: () {
                  debugPrint("取消");
                },
                child: Text("取消"),
              ),
              FlatButton(
                onPressed: () {
                  debugPrint("删除");
                },
                child: Text("删除"),
              )
            ],
          );
        });
  }
```

```
 @override
 Widget build(BuildContext context) {
   // TODO: implement build
   return Scaffold(
     appBar: AppBar(
       title: Text(widget.title),
     ),
     body: Center(
       child: Column(
         mainAxisAlignment: MainAxisAlignment.center,
         children: <Widget>[],
       ),
     ),
     floatingActionButton: FloatingActionButton(
       onPressed: showAlertDialog,
       tooltip: 'AlertDialog',
       child: Icon(Icons.delete),
     ),
   );
 }
}
```



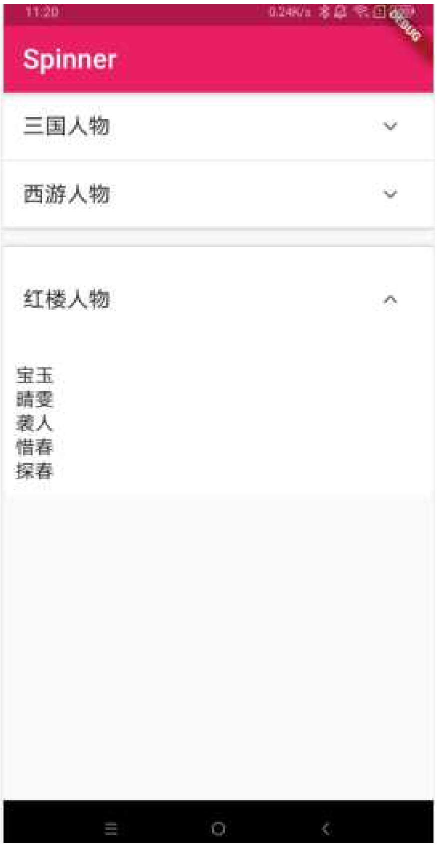
对话框样式

文件删除

删除后无法恢复

Spinner 下拉框

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "Spinner",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: new MyHomePage(
        title: "Spinner",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  var currentIndex = -1;
  List<int> mList;

  @override
  void initState() {
    // TODO: implement initState
    super.initState();
    mList = new List();
    for (int i = 0; i < 3; i++) {
      mList.add(i);
    }
  }



  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: SingleChildScrollView(
        child: Container(
          child: ExpansionPanelList(
            expansionCallback: (index, isExpanded) {
              setState(() {
                currentIndex = (currentIndex != index) ? index : -1;
              });
            },
            children: mList.map((i) {
              switch (i){
                case 0:
                  return new ExpansionPanel(
                    headerBuilder: (context, isExpanded) {
                      return new ListTile(
                        title: new Text("三国人物"),
                      );
                    },
                    body: new Padding(
                      padding: EdgeInsets.all(10.0),
                      child: ListBody(
                        children: <Widget>[
                          new Text("张飞"),
                          new Text("刘备"),
                          new Text("赵云"),
                          new Text("吕布"),
                        ],
                      ),
                    ),
                    isExpanded: currentIndex == i,
                  );
                  break;
                case 1:
                  return new ExpansionPanel(
                    headerBuilder: (context, isExpanded) {
                      return new ListTile(
                        title: new Text("西游人物"),
                      );
                    },
                    body: new Padding(
                      padding: EdgeInsets.all(10.0),
                      child: ListBody(
                        children: <Widget>[
                          new Text("八戒"),
                          new Text("悟空"),
                          new Text("唐僧"),
                        ],
                      ),
                    ),
                    isExpanded: currentIndex == i,
                  );
                  break;
                case 2:
                  return new ExpansionPanel(
                    headerBuilder: (context, isExpanded) {
                      return new ListTile(
                        title: new Text("红楼人物"),
                      );
                    },
                    body: new Padding(
                      padding: EdgeInsets.all(10.0),
                      child: ListBody(
                        children: <Widget>[
                          new Text("宝玉"),
                          new Text("晴雯"),
                          new Text("袭人"),
                          new Text("惜春"),
                          new Text("探春"),
                        ],
                      ),
                    ),
                    isExpanded: currentIndex == i,
                  );
                  break;
              }
            }).toList(),
          ),
        ),
      ),
    );
  }
}
```



Spinner

三国人物

西游人物

红楼人物

宝玉
晴雯
袭人
惜春
探春

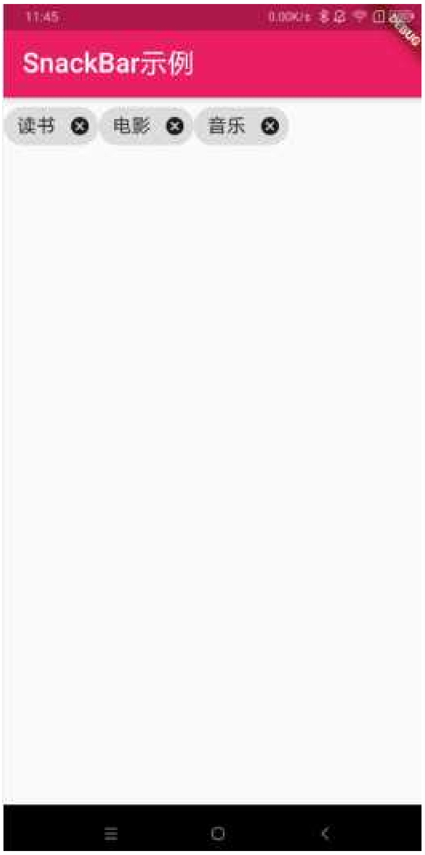
一个看不出效果的效果，没啥意义，仅作纪念

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "SnackBar示例",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: new MyHomePage(
        title: "SnackBar示例",
      ),
    );
  }
```

```
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  GlobalKey<ScaffoldState> _scaffoldKey = new GlobalKey();

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      key: _scaffoldKey,
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[],
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: () {
          _scaffoldKey.currentState.showSnackBar(
            SnackBar(
              content: Text("SnackBar示例"),
            ),
          );
        },
        tooltip: 'Increment',
        child: Icon(Icons.message),
      ),
    );
  }
}
```

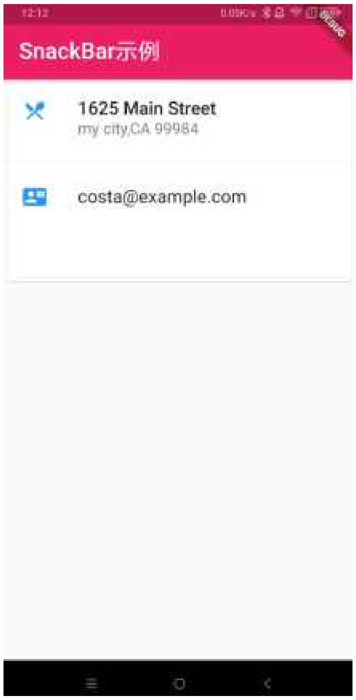
删除的文本按钮

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "SnackBar示例",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: new MyHomePage(
        title: "SnackBar示例",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  int _counter = 0;
  void _incrementCounter() {
    setState(() {
      _counter++;
    });
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: Row(
        children: <Widget>[
          Chip(
            label: Text("读书"),
            onDeleted: () {
              debugPrint("删除读书");
            },
          ),
          Chip(
            label: Text("电影"),
            onDeleted: (){
              debugPrint("删除电影");
            },
          ),
          Chip(
            label: Text("音乐"),
            onDeleted: (){
              debugPrint("删除音乐");
            },
          ),
        ],
      ),
    );
  }
}
```



卡片布局

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "SnackBar 示例",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: new MyHomePage(
        title: "SnackBar 示例",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      body: SizedBox(
        height: 210.0,
        child: Card(
          child: Column(
            children: [
              ListTile(
                title: Text(
                  '1625 Main Street',
                  style: TextStyle(fontWeight: FontWeight.w500),
                ),
                subtitle: Text('my city,CA 99984'),
                leading: Icon(
                  Icons.restaurant_menu,
                  color: Colors.blue[500],
                ),
              ),
              Divider(),
              ListTile(
                title: Text('costa@example.com'),
                leading: Icon(Icons.contact_mail,color: Colors.blue[500],),
              ),
            ],
          ),
        ),
      ),
    );
  }
}
```



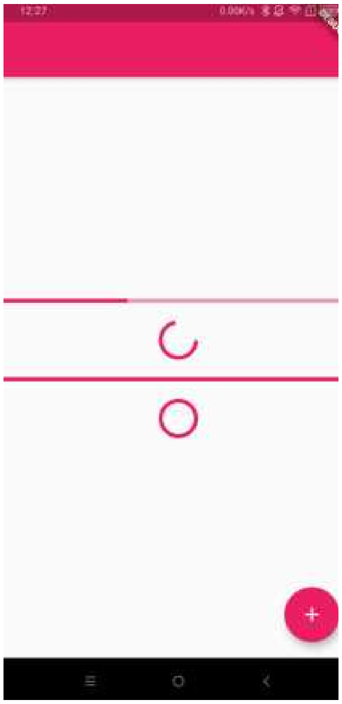
SnackBar示例

1625 Main Street
my city,CA 99984

costa@example.com

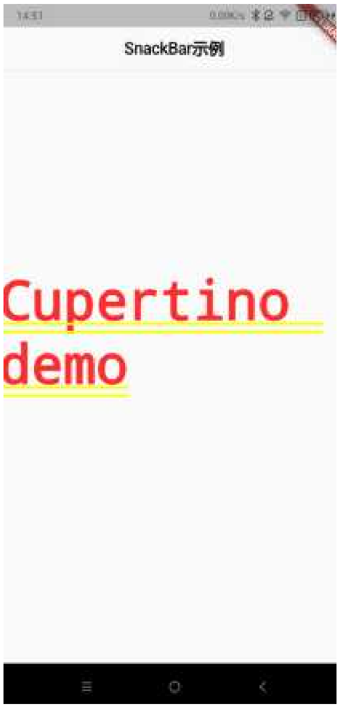
Progress 进度条

```
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "SnackBar 示例",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: new MyHomePage(
        title: "SnackBar 示例",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  var progressValue = 0.0;

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return Scaffold(
      appBar: AppBar(
        title: Text(""),
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            LinearProgressIndicator(),
            Container(
              height: 20,
            ),
            CircularProgressIndicator(),
            Container(
              height: 20,
            ),
            LinearProgressIndicator(
              value: progressValue,
            ),
            Container(
              height: 20,
            ),
            CircularProgressIndicator(
              value: progressValue,
            ),
          ],
        ),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: () {
          progressValue += 0.1;
          setState(() {});
        },
        child: Icon(Icons.add),
      ),
    );
  }
}
```



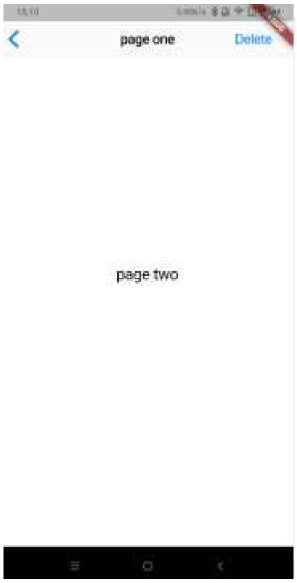
顶部栏居中

```
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return MaterialApp(
      title: "SnackBar示例",
      theme: ThemeData(primarySwatch: Colors.pink),
      home: new MyHomePage(
        title: "SnackBar示例",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoPageScaffold(
      navigationBar: CupertinoNavigationBar(
        middle: Text(widget.title),
      ),
      child: Center(
        child: Text("Cupertino demo"),
      ),
    );
  }
}
```



两个页面之间的跳转

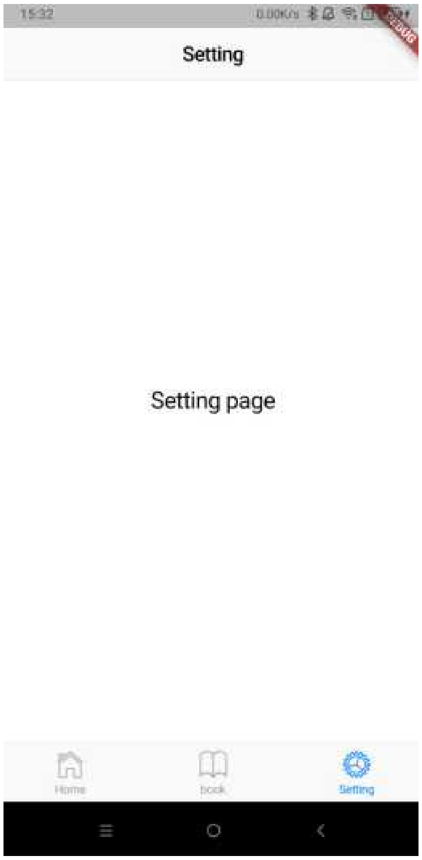
```
import 'package:flutter/cupertino.dart';
import 'package:flutter/material.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoApp(
      title: "page one",
      home: PageOne(
        title: "page1",
      ),
    );
  }
}

class PageOne extends StatefulWidget {
  final String title;

  PageOne({Key key, this.title}) : super(key: key);
  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new PageOneState();
  }
}

class PageOneState extends State<PageOne> {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoPageScaffold(
        navigationBar: CupertinoNavigationBar(
          middle: Text("page one"),
        ),
        child: Center(
          child: Column(
            mainAxisAlignment: MainAxisAlignment.center,
            children: <Widget>[
              Text("page one"),
              CupertinoButton(
                child: Text("jump to page two"),
                onPressed: () {
                  debugPrint("jump to page two");
                  Navigator.push(
                    context,
                    new CupertinoPageRoute(builder: (context) => new P
ageTwo()),
                  );
                },
              )
            ],
          ),
        ));
  }
}

class PageTwo extends StatefulWidget {
  final String title;

  PageTwo({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new PageTwoState();
  }
}

class PageTwoState extends State<PageTwo> {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoPageScaffold(
      navigationBar: CupertinoNavigationBar(
        middle: Text("page one"),
        trailing: CupertinoButton(
          padding: EdgeInsets.all(10.0),
          child: Text("Delete"),
          onPressed: () {
            debugPrint("delete");
          },
        ),
      ),
      child: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: <Widget>[
            Text("page two"),
          ],
        ),
      ),
    );
  }
}
```



底部栏 fragment

```
import 'package:flutter/cupertino.dart';

List<String> title;

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    title = new List();
    title.add("Home");
    title.add("book");
    title.add("Setting");
    return CupertinoApp(
      title: 'flutter demo',
      home: new MyHomePage(
        title: "flutter demo",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  @override
```

```
void initState() {
  // TODO: implement initState
  super.initState();
}

@override
Widget build(BuildContext context) {
  // TODO: implement build
  return CupertinoTabScaffold(
    tabBuilder: (BuildContext context, int index) {
      return CupertinoTabView(
        builder: (BuildContext context) {
          return CupertinoPageScaffold(
            navigationBar: CupertinoNavigationBar(
              middle: Text(title[index]),
            ),
            child: Center(
              child: Text("${title[index]} page"),
            ),
          );
        },
      );
    },
    tabBar: CupertinoTabBar(
        onTap: (int index) {
          debugPrint("点击第$index个页面");
        },
        items: <BottomNavigationBarItem>[
          BottomNavigationBarItem(
            icon: Icon(CupertinoIcons.home),
            title: Text(title[0]),
          ),
          BottomNavigationBarItem(
            icon: Icon(CupertinoIcons.book),
            title: Text(title[1]),
          ),
          BottomNavigationBarItem(
            icon: Icon(CupertinoIcons.settings),
            title: Text(title[2]),
          )
          ]),
    );
  }
}
```

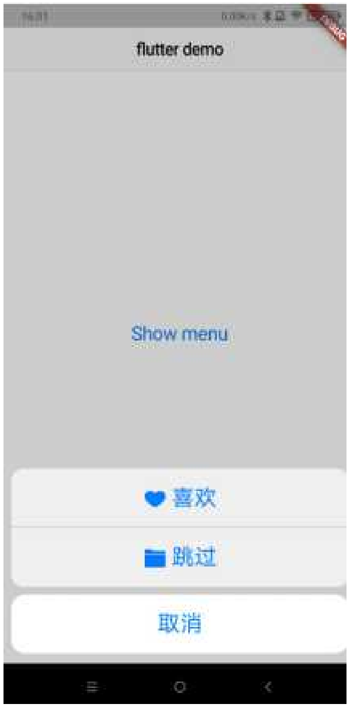


Setting

Setting page

PopupWindow 弹窗

```
import 'package:flutter/cupertino.dart';

List<String> title;

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    title = new List();
    title.add("Home");
    title.add("book");
    title.add("Setting");
    return CupertinoApp(
      title: 'flutter demo',
      home: new MyHomePage(
        title: "flutter demo",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  CupertinoActionSheet buildCupertinoActionSheet(BuildContext context)
{
    return CupertinoActionSheet(
      cancelButton: CupertinoActionSheetAction(
        onPressed: () {
          debugPrint("取消");
          Navigator.pop(context);
        },
        child: Text("取消"),
      ),
      actions: <Widget>[
        CupertinoActionSheetAction(
          onPressed: () {
            debugPrint("喜欢");
            Navigator.pop(context);
          },
          child: Row(
            mainAxisAlignment: MainAxisAlignment.center,
            children: <Widget>[
              Icon(CupertinoIcons.heart_solid),
              Container(
                width: 5.0,
              ),
              Text("喜欢")
            ],
          ),
        ),
        CupertinoActionSheetAction(
          onPressed: () {
            debugPrint("跳过");
            Navigator.pop(context);
          },
          child: Row(
            mainAxisAlignment: MainAxisAlignment.center,
            children: <Widget>[
              Icon(CupertinoIcons.folder_solid),
              Container(
                width: 5.0,
              ),
              Text("跳过")
            ],
          ),
        )
      ],
    );
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoPageScaffold(
        navigationBar: CupertinoNavigationBar(
          middle: Text(widget.title),
        ),
        child: Center(
          child: CupertinoButton(
            child: Text("Show menu"),
            onPressed: () {
              showCupertinoModalPopup(
                context: context,
                builder: (context) {
                  return buildCupertinoActionSheet(context);
                },
              );
            },
          ),
        ));
  }
}
```



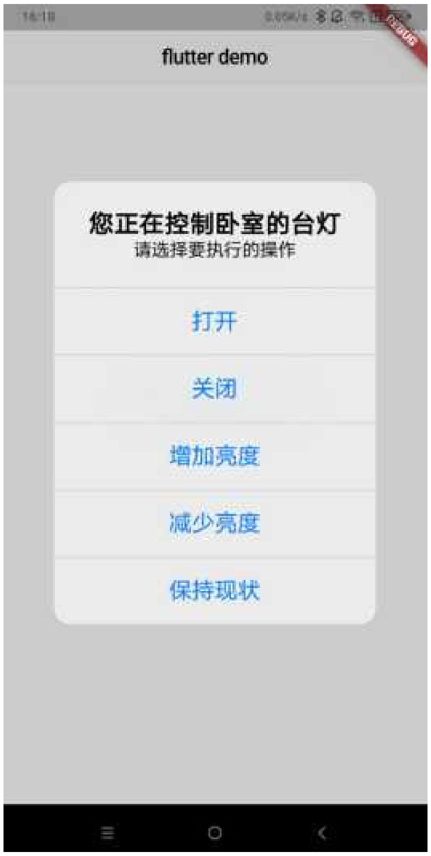
正在加载 dialog

```
import 'package:flutter/cupertino.dart';
```

```
List<String> title;

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    title = new List();
    title.add("Home");
    title.add("book");
    title.add("Setting");
    return CupertinoApp(
      title: 'flutter demo',
      home: new MyHomePage(
        title: "flutter demo",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoPageScaffold(
      child: Center(
        child: CupertinoActivityIndicator(),
      ),
      navigationBar: CupertinoNavigationBar(
        middle: Text(widget.title),
      ),
    );
  }
}
```

仿苹果 dialog 样式

```
import 'package:flutter/cupertino.dart';

List<String> title;

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    title = new List();
    title.add("Home");
    title.add("book");
    title.add("Setting");
    return CupertinoApp(
      title: 'flutter demo',
      home: new MyHomePage(
        title: "flutter demo",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  void showAlertDialog(BuildContext context) {
    showCupertinoDialog(
      context: context,
      builder: (context) {
        return CupertinoAlertDialog(
          title: Text("您正在控制卧室的台灯"),
          content: Text("请选择要执行的操作"),
          actions: <Widget>[
            CupertinoButton(
              child: Text("打开"),
              onPressed: () {
                debugPrint("台灯打开");
                Navigator.pop(context);
              },
            ),
            CupertinoButton(
              child: Text("关闭"),
              onPressed: () {
                debugPrint("台灯关闭");
                Navigator.pop(context);
              },
            ),
            CupertinoButton(
              child: Text("增加亮度"),
              onPressed: () {
                debugPrint("增加亮度");
                Navigator.pop(context);
              },
            ),
            CupertinoButton(
              child: Text("减少亮度"),
              onPressed: () {
                debugPrint("减少亮度");
                Navigator.pop(context);
              },
            ),
            CupertinoButton(
              child: Text("保持现状"),
              onPressed: () {
                debugPrint("保持台灯");
                Navigator.pop(context);
              },
            ),
          ],
        );
      },
    );
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoPageScaffold(
      navigationBar: CupertinoNavigationBar(
        middle: Text(widget.title),
      ),
      child: Center(
        child: CupertinoButton(
          child: Text("show alert dialog"),
          onPressed: (){
            showAlertDialog(context);
          },
        ),
      ),
    );
  }
}
```



您正在控制卧室的台灯

请选择要执行的操作

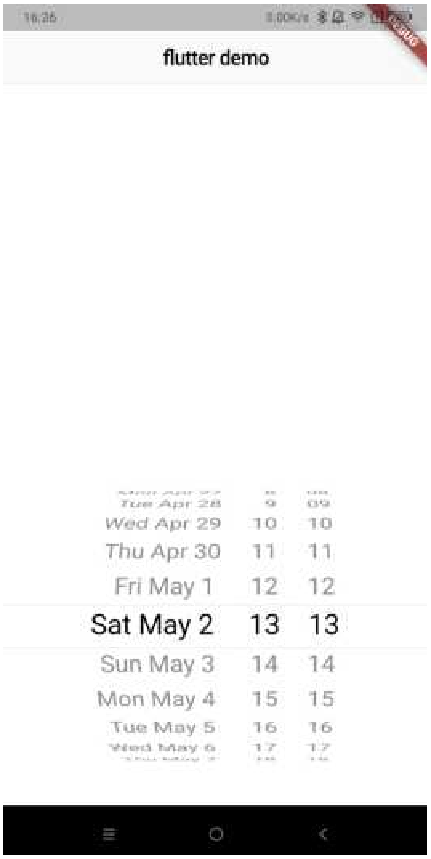
ios 风格样式按钮

```
import 'package:flutter/cupertino.dart';


void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoApp(
      title: 'flutter demo',
      home: new MyHomePage(
        title: "flutter demo",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoPageScaffold(
      navigationBar: CupertinoNavigationBar(
        middle: Text(widget.title),
      ),
      child: Center(
        child: CupertinoButton(
          child: Text("cupertionButton"),
          color: CupertinoColors.activeBlue,
          onPressed: () {
            debugPrint("点击了 CupertinoButton");
          },
        ),
      ),
    );
  }
}
```

仿 ios 时间日期选择器

```
import 'package:flutter/cupertino.dart';

void main() => runApp(MyApp());
```

```
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoApp(
      title: 'flutter demo',
      home: new MyHomePage(
        title: "flutter demo",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoPageScaffold(
      navigationBar: CupertinoNavigationBar(
        middle: Text(widget.title),
      ),
      child: Container(
        alignment: Alignment.bottomCenter,
        child: Container(
          height: 300.0,
          child: CupertinoDatePicker(
            onDateTimeChanged: (dateTime) {
              debugPrint(
                  "onDateTimeChange:${dateTime.year}-${dateTime.month}-${dateTime.day}-${dateTime.hour}-${dateTime.minute}");
            },
            initialDateTime: DateTime.now(),
            use24hFormat: true,
          ),
        ),
      ),
    );
  }
}
```

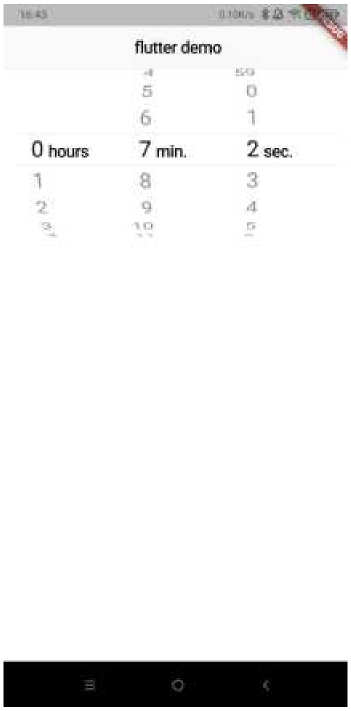


```
Tue Apr 28   9  09
Wed Apr 29  10  10
Thu Apr 30  11  11
Fri May 1   12  12
Sat May 2   13  13
Sun May 3   14  14
Mon May 4   15  15
Tue May 5   16  16
Wed May 6   17  17
```

秒表选择器

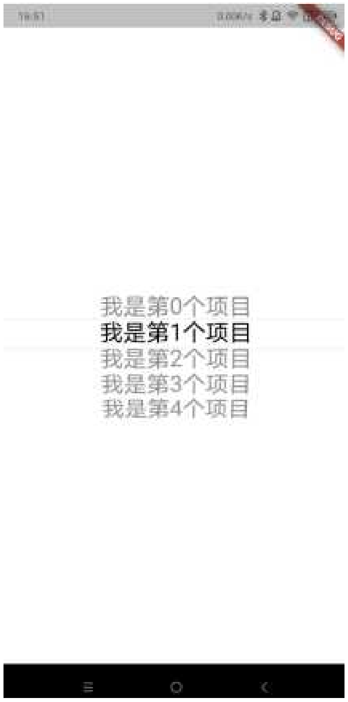
```
import 'package:flutter/cupertino.dart';

void main() => runApp(MyApp());
```

```
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoApp(
      title: 'flutter demo',
      home: new MyHomePage(
        title: "flutter demo",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoPageScaffold(
      navigationBar: CupertinoNavigationBar(
        middle: Text(widget.title),
      ),
      child: Container(
        alignment: Alignment.topCenter,
        child: Container(
          height: 300.0,
          child: CupertinoTimerPicker(
            onTimerDurationChanged: (duration) {
              debugPrint("onTimerDurationChanged:${duration.inSeconds}s");
            },
            mode: CupertinoTimerPickerMode.hms,
            initialTimerDuration: Duration(minutes: 5),
          ),
        ),
      ),
    );
  }
}
```



picker选择器

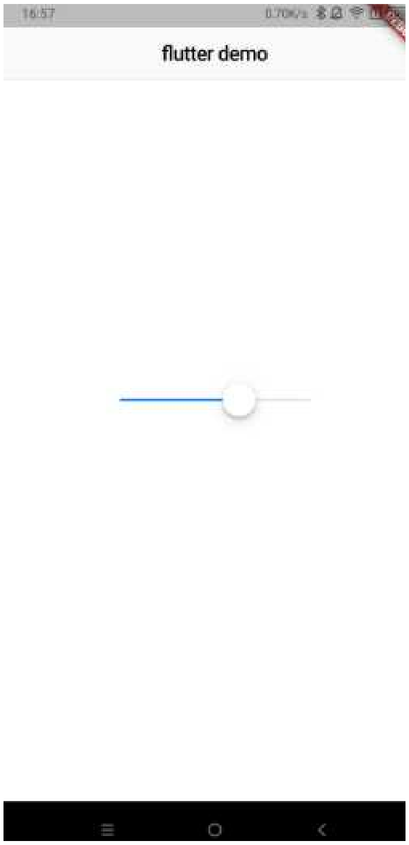
```
import 'package:flutter/cupertino.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoApp(
      title: 'flutter demo',
      home: new MyHomePage(
        title: "flutter demo",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  CupertinoPicker buildCupertinoPicker(BuildContext context) {
    return CupertinoPicker(
      itemExtent: 30,
      looping: false,
      backgroundColor: CupertinoColors.white,
      onSelectedItemChanged: (index) {
        debugPrint("current select $index");
      },
      children: List<Widget>.generate(5, (index) {
        return Center(
          child: Text("我是第$index个项目"),
        );
      }),
    );
  }

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoPageScaffold(
      navigationBar: CupertinoNavigationBar(
        middle: Text(widget.title),
      ),
      child: Center(
        child: CupertinoButton(
          child: Text("show cupertinoPicker"),
          onPressed: () {
            showCupertinoModalPopup(
              context: context,
              builder: (context) {
                return buildCupertinoPicker(context);
              },
            );
          },
        ),
      ),
    );
  }
}
```



我是第0个项目
我是第1个项目
我是第2个项目
我是第3个项目
我是第4个项目

ios 进度条

```
import 'package:flutter/cupertino.dart';

void main() => runApp(MyApp());

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoApp(
      title: 'flutter demo',
      home: new MyHomePage(
        title: "flutter demo",
      ),
    );
  }
}

class MyHomePage extends StatefulWidget {
  final String title;

  MyHomePage({Key key, this.title}) : super(key: key);

  @override
  State<StatefulWidget> createState() {
    // TODO: implement createState
    return new MyHomePageState();
  }
}

class MyHomePageState extends State<MyHomePage> {
  double processValue = 0;

  @override
  Widget build(BuildContext context) {
    // TODO: implement build
    return CupertinoPageScaffold(
        navigationBar: CupertinoNavigationBar(
          middle: Text(widget.title),
        ),
        child: Center(
          child: CupertinoSlider(
            max: 100,
            min: 0,
            activeColor: CupertinoColors.activeBlue,
            value: processValue,
            onChanged: (double value){
              setState(() {
                debugPrint("当前进度:$value");
                processValue = value;
              });
            },
          ),
        ));
  }
}
```



仿新闻类 APP：

1. 导入包：

```
cupertino_icons: ^0.1.3
url_launcher: ^5.0.3
```

2. main.dart

```
import 'package:flutter/material.dart';
import 'dart:convert';
import 'dart:io';

import 'news_channel.dart';
import 'news_json_resp.dart';

import 'news_list.dart';

List<ChannelList> _channelList;
NewsData _newsData;
String defaultUrl = "http://v.juhe.cn/toutiao/index?";
String key = "key=4cd58305bd70f1a1e33bab4b692a0e90";
String type = "type=";

String url;

ChannelList currentChannel;

void main() {
  runApp(MyApp());
}

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    _channelList = new List();
    _channelList.add(new ChannelList("头条", "头条"));
    _channelList.add(new ChannelList("社会", "社会"));
    _channelList.add(new ChannelList("国内", "国内"));
    _channelList.add(new ChannelList("国际", "国际"));
    _channelList.add(new ChannelList("娱乐", "娱乐"));
    _channelList.add(new ChannelList("体育", "体育"));
    _channelList.add(new ChannelList("军事", "军事"));
    _channelList.add(new ChannelList("科技", "科技"));
    _channelList.add(new ChannelList("财经", "财经"));
    _channelList.add(new ChannelList("时尚", "时尚"));
    currentChannel = _channelList[0];

    return MaterialApp(
      title: "头条新闻",
      theme: ThemeData(
        primarySwatch: Colors.blue,
      ),
      home: NewsList(title: "头条新闻"),
    );
  }
}

class NewsList extends StatefulWidget {
  NewsList({Key key, this.title}) : super(key: key);

  final String title;

  @override
  _NewsListState createState() => _NewsListState();
}

class _NewsListState extends State<NewsList>
    with SingleTickerProviderStateMixin {
  bool isLoading = false;
  List<Widget> listItems;

  // 构建侧边栏头部
 Widget buildDrawerHeader() {
    return Container(
        child: Text("频道列表",
            style: TextStyle(color: Colors.white, fontSize: 30),
           textAlign: TextAlign.end),
       height: 100,
       color: Colors.blue,
       padding: EdgeInsets.all(5),
       alignment: Alignment.bottomRight);
 }

 // 构建侧边栏元素
List<Widget> buildDrawerItems(List<ChannelList> _channelList) {
   List<Widget> widgets = new List();
   widgets.add(buildDrawerHeader());
   for (int i = 0; i < _channelList.length; i++) {
     widgets.add(Container(
         child: InkWell(
             child: Text(_channelList[i].name,
                 style: TextStyle(color: Colors.blue, fontSize: 25),
                 textAlign: TextAlign.center),
             onTap: () {
               currentChannel = _channelList[i];
               refresh();
             }),
         padding: EdgeInsets.all(10)));
   }
   return widgets;
 }

 // 刷新数据
refresh() async {
   url = "$defaultUrl$type${currentChannel.type}&$key";
   if (!isLoading) {
     isLoading = true;
     try {
       HttpClient httpClient = new HttpClient();
       HttpClientRequest request = await httpClient.getUrl(Uri.parse
(url));
       HttpClientResponse response = await request.close();
       String responseContent = await response.transform(utf8.decode
r).join();
       _newsData = NewsData.fromJson(json.decode(responseContent));
       listItems = ListBuilder.genWidgetsFromJson(_newsData);
```

```
        setState(() {});
        httpClient.close();
      } catch (e) {
        debugPrint("请求失败：$e");
      } finally {
        setState(() {
          isLoading = false;
        });
      }
    } else {
      debugPrint("正在刷新");
    }
  }

  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text(widget.title),
      ),
      drawer: Drawer(
          child: ListView(
              padding: EdgeInsets.zero,
              children: buildDrawerItems(_channelList))),
      body: Center(
        child: listItems != null
            ? ListView(
          children: listItems,
        )
            : Text("请点击刷新按钮"),
      ),
      floatingActionButton: FloatingActionButton(
        onPressed: refresh,
        tooltip: "刷新",
        child: Icon(Icons.refresh),
      ),
    );
  }
}
```

3. news_channel.dart

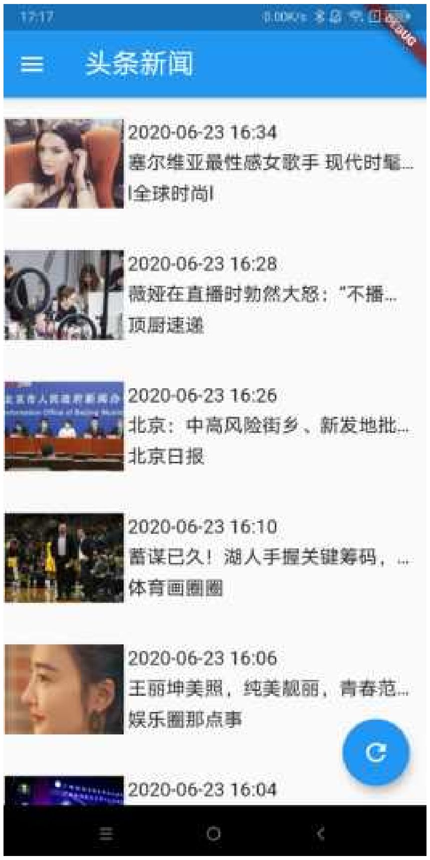
```
class ChannelList{
  String name;
  String type;

  ChannelList(this.name, this.type);
}
```

4. news_json_resp.dart

```
class NewsData {
  String reason;
  Result result;
  int error_code;

  NewsData(this.reason, this.result, this.error_code);

  NewsData.fromJson(Map<String, dynamic> jsonStr) {
    this.reason = jsonStr['reason'];
    this.error_code = jsonStr['error_code'];
    this.result = Result.fromJson(jsonStr['result']);
  }
}

class Result {
  String stat;
  Data data;

  Result(this.stat, this.data);

  Result.fromJson(Map<String, dynamic> jsonStr) {
    this.stat = jsonStr['stat'];
    this.data = Data.fromJson(jsonStr['data']);
  }
}

class Data {
  List<DataItem> dataItems;

  Data.fromJson(List items) {
    dataItems = new List();
    for (var i = 0; i < items.length; i++) {
      DataItem dataItem = new DataItem(
          items[i]['uniquekey'],
          items[i]['title'],
          items[i]['date'],
          items[i]['category'],
          items[i]['author_name'],
          items[i]['url'],
          items[i]['thumbnail_pic_s'],
          items[i]['thumbnail_pic_s02'],
          items[i]['thumbnail_pic_s03']);
      dataItems.add(dataItem);
    }
  }
}

class DataItem {
  String uniquekey;
  String title;
  String date;
  String category;
  String author_name;
  String url;
  String thumbnail_pic_s;
  String thumbnail_pic_s02;
  String thumbnail_pic_s03;

  DataItem(
      this.uniquekey,
      this.title,
      this.date,
      this.category,
      this.author_name,
      this.url,
      this.thumbnail_pic_s,
      this.thumbnail_pic_s02,
      this.thumbnail_pic_s03);
}
```

5. news_list. dart

```
import 'package:flutter/material.dart';
import 'news_json_resp.dart';

import 'package:url_launcher/url_launcher.dart';

class ListBuilder {
  static List<Widget> genWidgetsFromJson(NewsData newsData) {
    List<Widget> returnData = new List();
    List<DataItem> dataItems = newsData.result.data.dataItems;
    for (var i = 0; i < dataItems.length; i++) {
      returnData.add(ListItem.genSingleItem(dataItems[i]));
    }
    return returnData;
  }
}

class ListItem {
  static Widget genSingleItem(DataItem dataItem) {
    String uniquekey = dataItem.uniquekey;
    String title = dataItem.title;
    String date = dataItem.date;
    String category = dataItem.category;
    String author_name = dataItem.author_name;
    String url = dataItem.url;
    String thumbnail_pic_s = dataItem.thumbnail_pic_s;
    String thumbnail_pic_s02 = dataItem.thumbnail_pic_s02;
    String thumbnail_pic_s03 = dataItem.thumbnail_pic_s03;
    return Container(
        padding: EdgeInsets.all(5.0),
        child: InkWell(
            onTap: () {
              openDetail(url);
            },
            child: Row(
              children: <Widget>[
                Image(
                    alignment: Alignment.centerLeft,
                    width: 100,
                    height: 100,
                    image: new NetworkImage(thumbnail_pic_s)),
                Expanded(
                    child: Column(
                      mainAxisAlignment: MainAxisAlignment.start,
                      children: <Widget>[
                        Container(
                            padding: EdgeInsets.all(3.0),
                            child: Text(date),
                            alignment: Alignment.topLeft),
                        Container(
                          padding: EdgeInsets.all(3.0),
                          child: Text(title,
                              softWrap: false, overflow: TextOverflow.
ellipsis),
                          alignment: Alignment.centerLeft,
                        ),
                        Container(
                            padding: EdgeInsets.all(3.0),
                            child: Text(author_name),
                            alignment: Alignment.bottomLeft)
                      ],
                    ))
              ],
            )));
  }

  static void openDetail(String url) async {
    if (await canLaunch(url)) {
      await launch(url);
    } else {
      throw 'Could not launch $url';
    }
  }
}
```



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2020-06-23 16:04