

```
//1-table in flutter

import 'package:flutter/material.dart';

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

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

class HomePage extends StatelessWidget{
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      backgroundColor: Colors.blue[100], //background color
of scaffold
      appBar: AppBar(
        title:Text("Flutter Table"), //title of app
        backgroundColor: Colors.redAccent, //background
color of app bar
      ),
      body: Container(
        padding: EdgeInsets.all(15),
        child:Table(
          border: TableBorder.all(width:1,
color:Colors.black45), //table border
          children: [
```

```

        TableRow(
            children: [
                TableCell(child: Text("S/N")),
                TableCell(child: Text("Name")),
                TableCell(child: Text("Address")),
                TableCell(child: Text("Nation"))
            ]
        ),

        TableRow(
            children: [
                TableCell(child: Text("1.")),
                TableCell(child: Text("Krishna Karki")),
                TableCell(child: Text("Nepal,
Kathmandu")),
                TableCell(child: Text("Nepal"))
            ]
        ),
        TableRow(
            children: [
                TableCell(child: Text("2.")),
                TableCell(child: Text("John Wick")),
                TableCell(child: Text("New York, USA")),
                TableCell(child: Text("USA"))
            ]
        ),

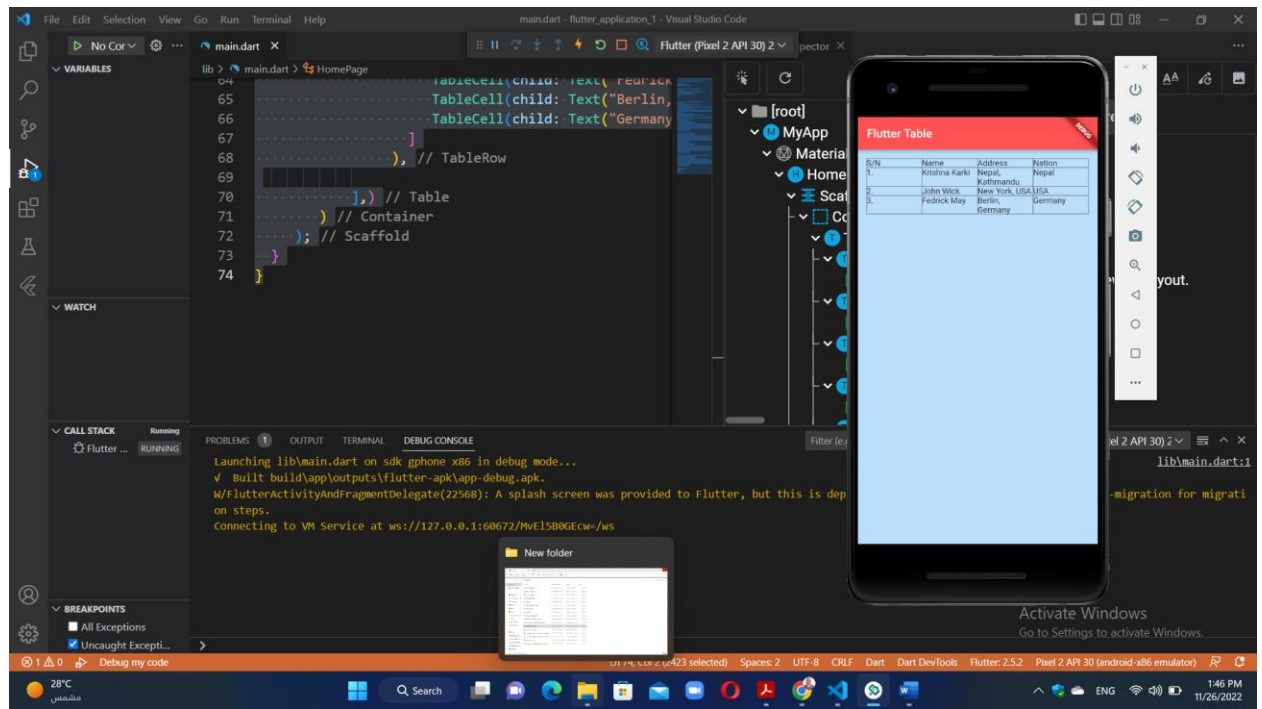
        // ignore: prefer_const_constructors
        TableRow(
            children: [
                TableCell(child: Text("3.")),
                TableCell(child: Text("Fedrick May")),
                TableCell(child: Text("Berlin,
Germany")),
                TableCell(child: Text("Germany"))
            ]
        )

```

```

),
],)
)
);
}
}

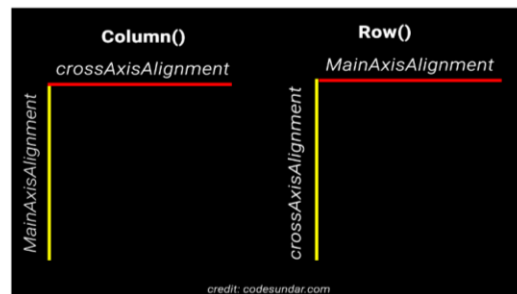
```



تطبيق شامل لاغلب الوجدات التي تم التعامل معها بالإضافة لبعض الوجدات الحديثة -2

#### Row & Column comparison

Column	Row
MultiChild Widget	MultiChild Widget
Align all Children Widgets in a <b>vertical</b> direction	Align all children Widgets in a <b>horizontal</b> direction



**MainAxisAlignment.spaceBetween:** First & Last widget no space & space between inner widgets

**MainAxisAlignment.spaceAround:** All widgets wrapped with some space around.

**MainAxisAlignment.spaceEvenly:** All widgets wrapped with equal space

```
// ignore_for_file: prefer_const_literals_to_create_immutables,  
prefer_const_constructors, duplicate_ignore,  
use_key_in_widget_constructors, sized_box_for_whitespace,  
avoid_unnecessary_containers  
  
import 'package:flutter/material.dart';  
  
void main() {  
  runApp(MyApp());  
}  
  
class MyApp extends StatelessWidget{  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      home: HomePage(),  
    );  
  }  
}  
  
class HomePage extends StatelessWidget{  
  @override  
  Widget build(BuildContext context) {  
    return Scaffold(  
      backgroundColor: Colors.blue[100], //background color  
of scaffold  
      appBar: AppBar(  
        title:Text("Flutter Table"), //title of app
```

```

        backgroundColor: Colors.redAccent, //background
color of app bar
    ),
    body: SafeArea(
        child: Column(
            mainAxisAlignment: MainAxisAlignment.start,
            children: [
                Container(
                    padding: EdgeInsets.fromLTRB(10, 100, 30,
50),
                    child: Table(
                        border: TableBorder.all(width: 5,
color: Colors.yellow), //table border
                        children: [
                            TableRow(
                                children: [
                                    TableCell(child: Text("S/N")),
                                    TableCell(child: Text("Name")),
                                    TableCell(child: Text("Address")),
                                    TableCell(child: Text("Nation"))
                                ]
                            ),
                            TableRow(
                                children: [
                                    TableCell(child: Text("1.")),
                                    TableCell(child: Text("Krishna
Karki")),
                                    TableCell(child: Text("Nepal,
Kathmandu")),
                                    TableCell(child: Text("Nepal"))
                                ]
                            ),
                            TableRow(
                                children: [

```

```

        TableCell(child: Text("2.")),
        TableCell(child: Text("John
Wick")),
        TableCell(child: Text("New York,
USA")),
        TableCell(child: Text("USA"))
    ]
),

// ignore: prefer_const_constructors
TableRow(
    children: [
        TableCell(child: Text("3.")),
        TableCell(child: Text("Fedrick
May")),
        TableCell(child: Text("Berlin,
Germany")),
        TableCell(child: Text("Germany"))
    ]
),
TableRow(
    children: [
        TableCell(child: Text("4.")),
        TableCell(child: Text("Ali
Mohammed")),
        TableCell(child: Text("Basrah,
Iraq")),
        TableCell(child: Text("Iraq"))
    ]
),
    ],)
),

Container(
    height: 20,

```

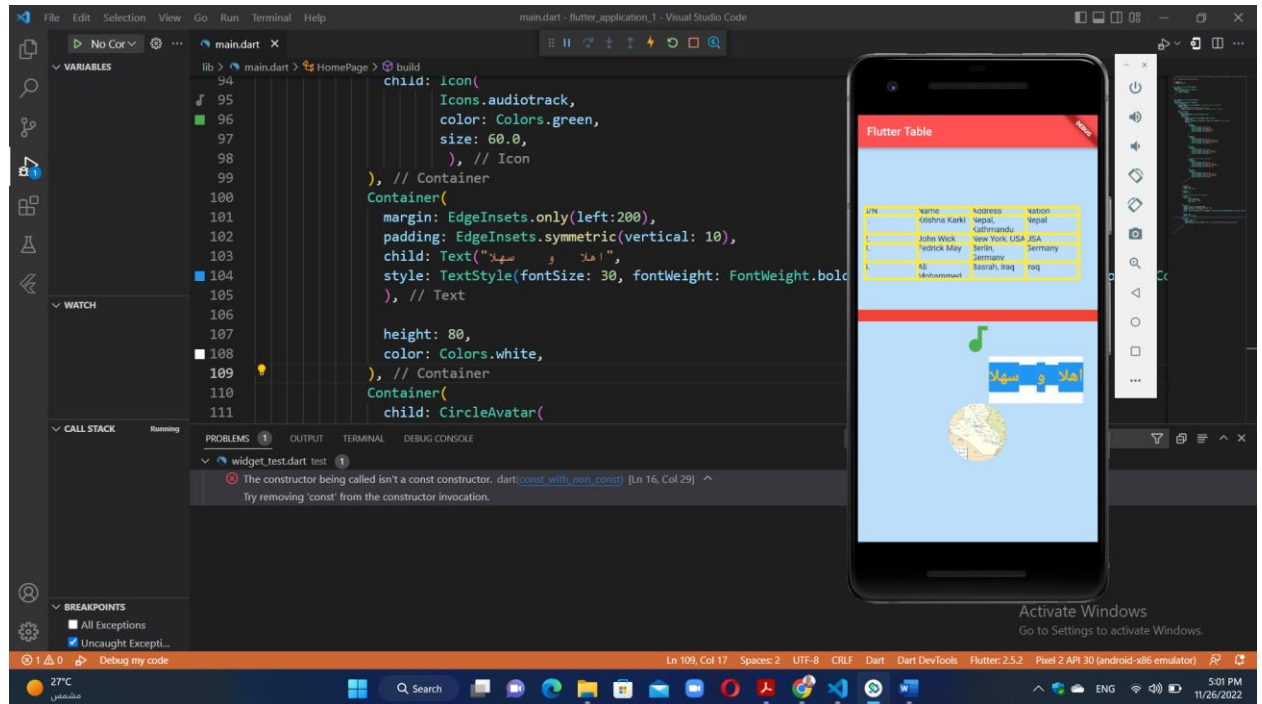
```

        color: Colors.red,
      ),
      SizedBox(
        width: 50,
      ),
      // ignore: avoid_unnecessary_containers
      Container(
        child: Icon(
          Icons.audiotrack,
          color: Colors.green,
          size: 60.0,
        ),
      ),
      Container(
        margin: EdgeInsets.only(left:200),
        padding: EdgeInsets.symmetric(vertical: 10),
        child: Text("اهلا و سهلا",
          style: TextStyle(fontSize: 30, fontWeight:
FontWeight.bold, backgroundColor:Colors.blue, color:
Colors.amber ),
        ),

        height: 80,
        color: Colors.white,
      ),
      Container(
        child: CircleAvatar(
          radius: 50,
          backgroundImage:
NetworkImage("https://www.nationsonline.org/maps/Iraq_map.jpg")
,
        ),
      ),
    ],
  ),
)

```

```
);  
}  
}
```



### 3- ListTile in flutter

```
import 'package:flutter/material.dart';  
  
void main() {  
  runApp(MyApp());  
}  
  
class MyApp extends StatelessWidget {  
  @override  
  Widget build(BuildContext context) {  
    return MaterialApp(  
      home: HomePage(),  
    );  
  }  
}
```



```
class HomePage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    var item;
    return Scaffold(
      backgroundColor: Colors.green[100], //background color of
scaffold
      appBar: AppBar(
        title: Text("Flutter Table"), //title of app
        backgroundColor: Colors.redAccent, //background color
of app bar
      ),
      body: SafeArea(
        child: Column(
          children: [
            Container(
              child: ListTile(
                leading: Icon(
                  Icons.h_mobiledata,
                  color: Colors.green,
                  size: 60.0,
                ),
                title: Text(
                  "computer application",
                  style: TextStyle(
                    fontSize: 30,
                    fontWeight: FontWeight.bold,
                    color: Colors.amber),
                ),
                trailing: CircleAvatar(child: Icon(
                  Icons.dangerous,
                  color: Colors.green,
                  size: 30.0,
                ),
              ),
            ),
          ],
        ),
      ),
    );
  }
}
```

```
        subtitle: const Text('subtitle1'),
        selected: false,
        onTap: () {
          setState(
            () {
              var txt = 'List Tile pressed';
            }
          );
        },
      ),
    ),
  Container(
    child: ListTile(
      leading: Icon(
        Icons.star_border,
        color: Colors.yellow,
        size: 60.0,
      ),
      title: Text(
        "computer development",
        style: TextStyle(
          fontSize: 30,
          fontWeight: FontWeight.bold,
          color: Colors.amber),
      ),
      trailing: const Icon(Icons.cabin_outlined),
      subtitle: const Text('subtitle2'),
      selected: true,
      onTap: () {
        setState(
          () {
            var txt = 'List Tile pressed';
          }
        );
      },
    ),
  ),
```

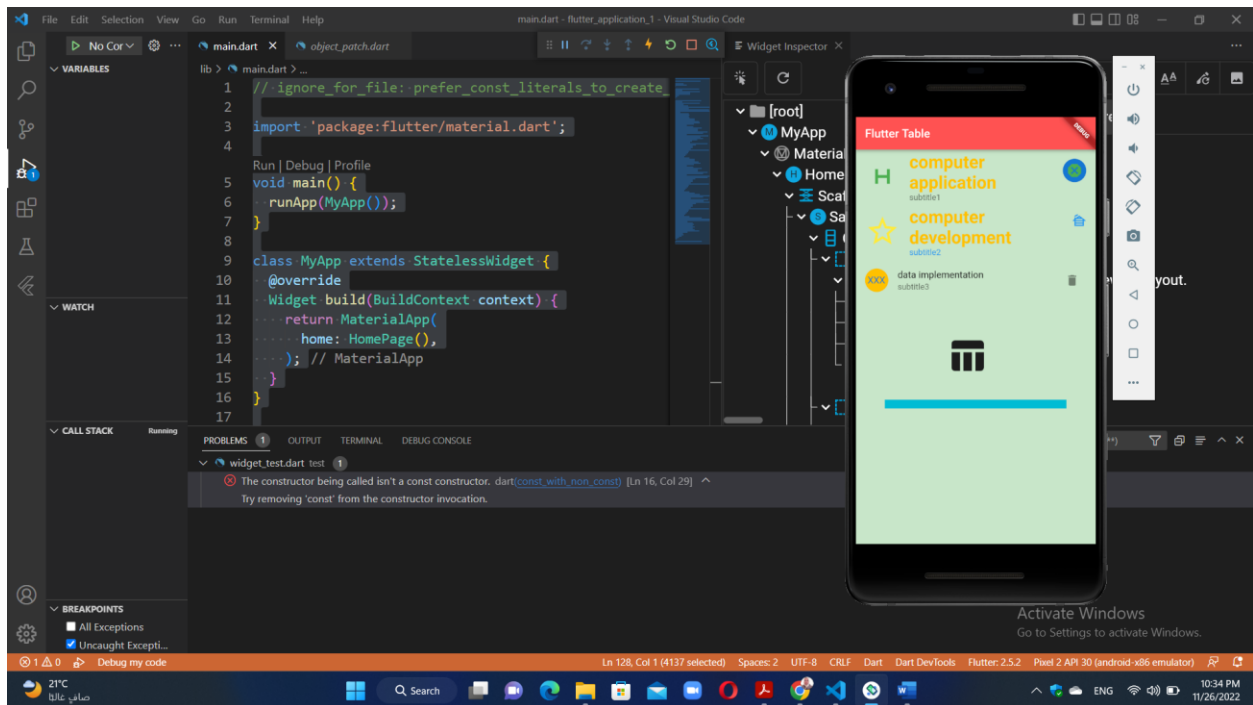
```

    ),
    Container(
      child: ListTile(
        leading: CircleAvatar(
          backgroundColor: Colors.amber,
          child: Text('XXX'),
        ),
        title: Text('data implementation'),
        subtitle: Text('subtitle3'),
        trailing: IconButton( icon: const
Icon(Icons.delete),onPressed: () {},),
        selected: false,
        onTap: () {
          setState(
            () {
              var txt = 'List Tile pressed';
            }
          );
        },
      ),
    ),
    Container(
      margin: EdgeInsets.all(20),
      padding: EdgeInsets.fromLTRB(20, 30, 50, 10),
      child: IconButton( icon: const
Icon(Icons.table_chart),onPressed: () {}, iconSize: 70,),
    ),
    Container(
      child: Divider(
        height: 20,
        thickness: 15,
        indent: 50,
        endIndent: 50,
        color: Colors.cyan,),
    ),
  ],

```

```
),
),
);
}

void setState(Null Function() param0) {}
}
```



4-

## Flutter Buttons

Buttons are the graphical control element that **provides a user to trigger an event** such as taking actions, making choices, searching things, and many more. They can be placed anywhere in our UI like dialogs, forms, cards, toolbars, etc.

Buttons are the Flutter widgets, which is a part of the material design library. Flutter provides several types of buttons that have different shapes, styles, and features.

## Features of Buttons

The standard features of a button in Flutter are given below:

1. We can easily apply themes on buttons, shapes, color, animation, and behavior.
2. We can also theme icons and text inside the button.
3. Buttons can be composed of different child widgets for different characteristics.

## Types of Flutter Buttons

Following are the different types of button available in [Flutter](#):

- Flat Button
- Raised Button
- Floating Button
- Drop Down Button
- Icon Button
- Inkwell Button
- PopupMenu Button
- Outline Button

Let us discuss each button in detail.

### 1. Flat Button

It is a **text label button** that does not have much decoration and displayed **without any elevation**. The flat button has two required properties that are: **child and onPressed()**. It is mostly used in toolbars, dialogs, or inline with other content. By default, the flat button has no color, and its text is black. But, we can use color to the button and text using **color and textColor** attributes, respectively.

### 2. Raised Button

It is a button, which is based on the material widget and has a **rectangular body**. It is similar to a flat button, but it **has an elevation** that will increase when the button is pressed. It adds dimension to the UI along Z-axis. It has several properties like text color, shape, padding, button color, the color of a button when disabled, animation time, elevation, etc.

This button has **two callback functions**.

**onPressed():** It is triggered when the button is pressed.

**onLongPress():** It is triggered when the button is long pressed.

It is to note that this button is in a **disabled state** if `onPressed()` and `onLongPressed()` callbacks are not specified.

### 3. Floating Action Button

A FAB button is a **circular icon button** that triggers the primary action in our application. It is the most used button in today's applications. We can use this button for adding, refreshing, or sharing the content. Flutter suggests using at most one FAB button per screen. There are two types of Floating Action Button:

**FloatingActionButton:** It creates a simple circular floating button with a child widget inside it. It must have a child parameter to display a widget.

**FloatingActionButton.extended:** It creates a wide floating button along with an icon and a label inside it. Instead of a child, it uses labels and icon parameters.

### 4. DropDown Button

A drop-down button is used to create a nice overlay on the screen that allows the user to select any item from multiple options. Flutter allows a simple way to implement a drop-down box or drop-down button. This button shows the currently selected item and an arrow that opens a menu to select an item from multiple options.

Flutter provides a **DropdownButton widget** to implement a drop-down list. We can place it anywhere in our app.

### 5. Icon Button

An IconButton is a **picture printed** on the Material widget. It is a useful widget that gives the Flutter UI a material design feel. We can also customize the look and feel of this button. In simple terms, it is an icon that reacts when the user will touch it.

### 6. Inkwell Button

InkWell button is a material design concept, which is used for **touch response**. This widget comes under the Material widget where the ink reactions are actually painted.

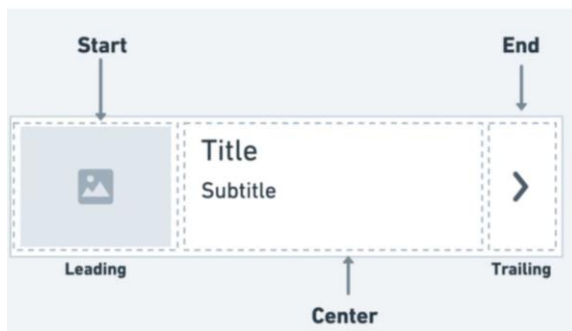
It creates the app UI interactive by adding gesture feedback. It is mainly used for adding **splash ripple effect**.

## 7. PopupMenu Button

It is a button that **displays the menu** when it is pressed and then calls the **onSelected** method the menu is dismissed. It is because the item from the multiple options is selected. This button contains a text and an image. It will mainly use with **Settings** menu to list all options. It helps in making a great user experience.

## 8. Outline Button

It is similar to the flat button, but it contains a thin grey rounded rectangle border. Its outline border is defined by the shape attribute.



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

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

class Choice {
  const Choice({required this.name, required this.icon});
  final String name;
  final IconData icon;
}

class MyApp extends StatelessWidget {
  _MyAppState createState() => _MyAppState();
}
```

```

@override
Widget build(BuildContext context) {
  return MaterialApp(
    home: HomePage(),
  );
}
}

class HomePage extends StatelessWidget {
  var floatingActionButton;
  // Initial Selected Value
  String dropdownvalue = 'Item 1';

  // List of items in our dropdown menu
  var items = [
    'Item 1',
    'Item 2',
    'Item 3',
    'Item 4',
    'Item 5',
  ];

  int volume = 0;

  void _select(Choice choice) {
    setState(() {
      var _selectedOption = choice;
    });
  }

  @override
  Widget build(BuildContext context) {
    var item;
    return Scaffold(

```



```
        backgroundColor: Colors.green[100], //background color
of scaffold
      appBar: AppBar(
        title: Text("Flutter Table"), //title of app
        backgroundColor: Colors.redAccent, //background color
of app bar
      ),
      body: Center(
        child: Column(
          children: <Widget>[
            Container(
              margin: EdgeInsets.all(25),
              child: FlatButton(
                child: Text(
                  'FlatB1',
                  style: TextStyle(fontSize: 20.0),
                ),
                onPressed: () {},
              ),
            ),
            Container(
              margin: EdgeInsets.all(25),
              child: FlatButton(
                child: Text(
                  'FlatB2',
                  style: TextStyle(fontSize: 20.0),
                ),
                color: Colors.blueAccent,
                textColor: Colors.white,
                onPressed: () {},
              ),
            ),
            Container(
              child: Center(
                child: Column(
```



```

dropdownColor: Colors.yellowAccent,
// Down Arrow Icon
icon: const Icon(Icons.keyboard_arrow_down),

// Array list of items
items: items.map((String items) {
  return DropdownMenuItem(
    value: items,
    child: Text(items),
  );
}).toList(),
// After selecting the desired option, it will
// change button value to selected value
onChanged: (String? newValue) {
  setState(() {
    dropdownvalue = newValue!;
  });
},
),
IconButton(
  icon: Icon(Icons.volume_up),
  iconSize: 50,
  color: Colors.brown,
  tooltip: 'Increase volume by 5',
  onPressed: () {}),
InkWell(
  splashColor: Colors.green,
  highlightColor: Colors.blue,
  child: Icon(Icons.ring_volume, size: 50),
  onTap: () {},
),
PopupMenuButton<Choice>(
  onSelected: _select,
  itemBuilder: (BuildContext context) {
    return choices.skip(0).map((Choice choice) {
      return PopupMenuItem<Choice>(

```

```

        value: choice,
        child: Text(choice.name),
      );
    }).toList();
  },
),
OutlineButton(
  child: Text("Outline Button", style:
TextStyle(fontSize: 20.0),),
  highlightedBorderColor: Colors.red,
  shape: RoundedRectangleBorder(
    borderRadius: BorderRadius.circular(35)),
  onPressed: () {},
),
],
),
),
);
}
}

void setState(Null Function() param0) {}

const List<Choice> choices = <Choice>[
  Choice(name: 'Wi-Fi', icon: Icons.wifi),
  Choice(name: 'Bluetooth', icon: Icons.bluetooth),
  Choice(name: 'Battery', icon: Icons.battery_alert),
  Choice(name: 'Storage', icon: Icons.storage),
];

class _MyAppState {
  Choice _selectedOption = choices[0];
}

```

