Mobile Application

Flutter Layouts

Part-4

List

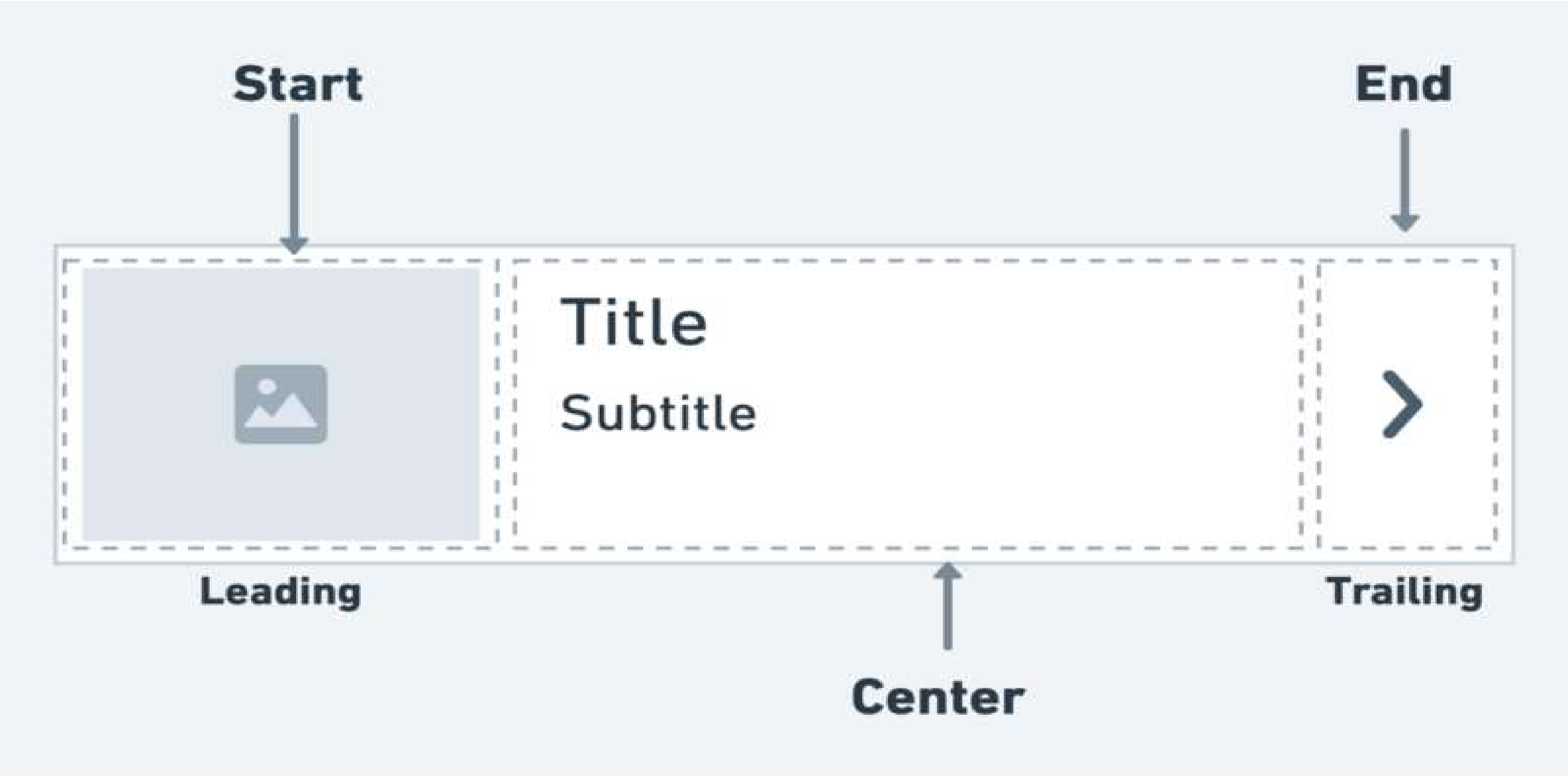
- List Tile
- List View
- List View Builder

What is ListTile?

- The ListTile widget in Flutter is a UI element that displays related information.

- A typical ListTile is divided into three sections; **Start**, **Center**, and **End**. The Start section contains the leading widget; the Center section includes the title and subtitle, and the End section contains the trailing widget.

ListTile



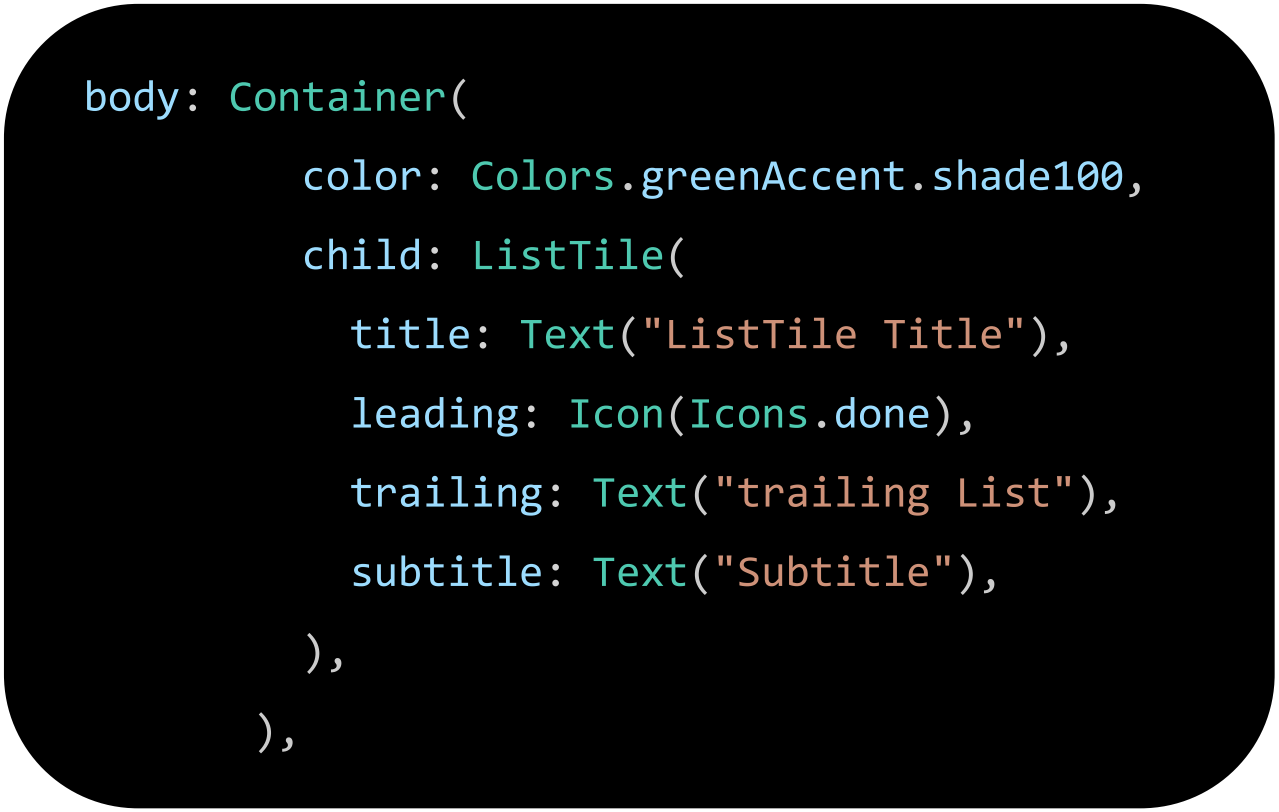
ListTile

- It is mainly used to populate the scrollable views such as ListView, Column, and Row. For example, you can use the ListTile to show a list of to-do items, emails, navigation options, and more. You can also receive the click event by tapping the ListTile.

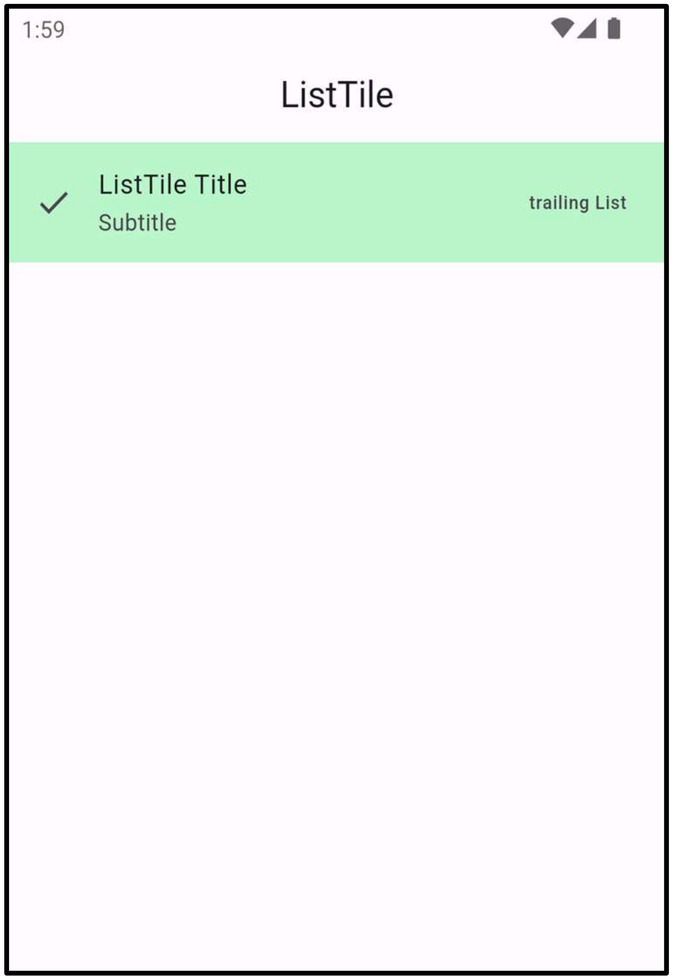
ListTile Properties

- **title**: title to be given to ListTile widget.
- **trailing**: trailing widget of the ListTile.
- **titleColor**: This property defines the background color of the ListTile when it is not selected, by taking in Color class as the object
- **subtitle**: additional content displayed below the title.
- **onTap**: function to be called when the list tile is pressed.
- **leading**: leading widget of the ListTile.
- **enable**: This property controls whether the ListTile will be interactive or not by taking in a boolean as the object.
- **shape**: the shape of the title’s InkWell.

Example



```
body: Container(
         color: Colors.greenAccent.shade100,
         child: ListTile(
           title: Text("ListTile Title"),
           leading: Icon(Icons.done),
           trailing: Text("trailing List"),
           subtitle: Text("Subtitle"),
         ),
       ),
```



1:59

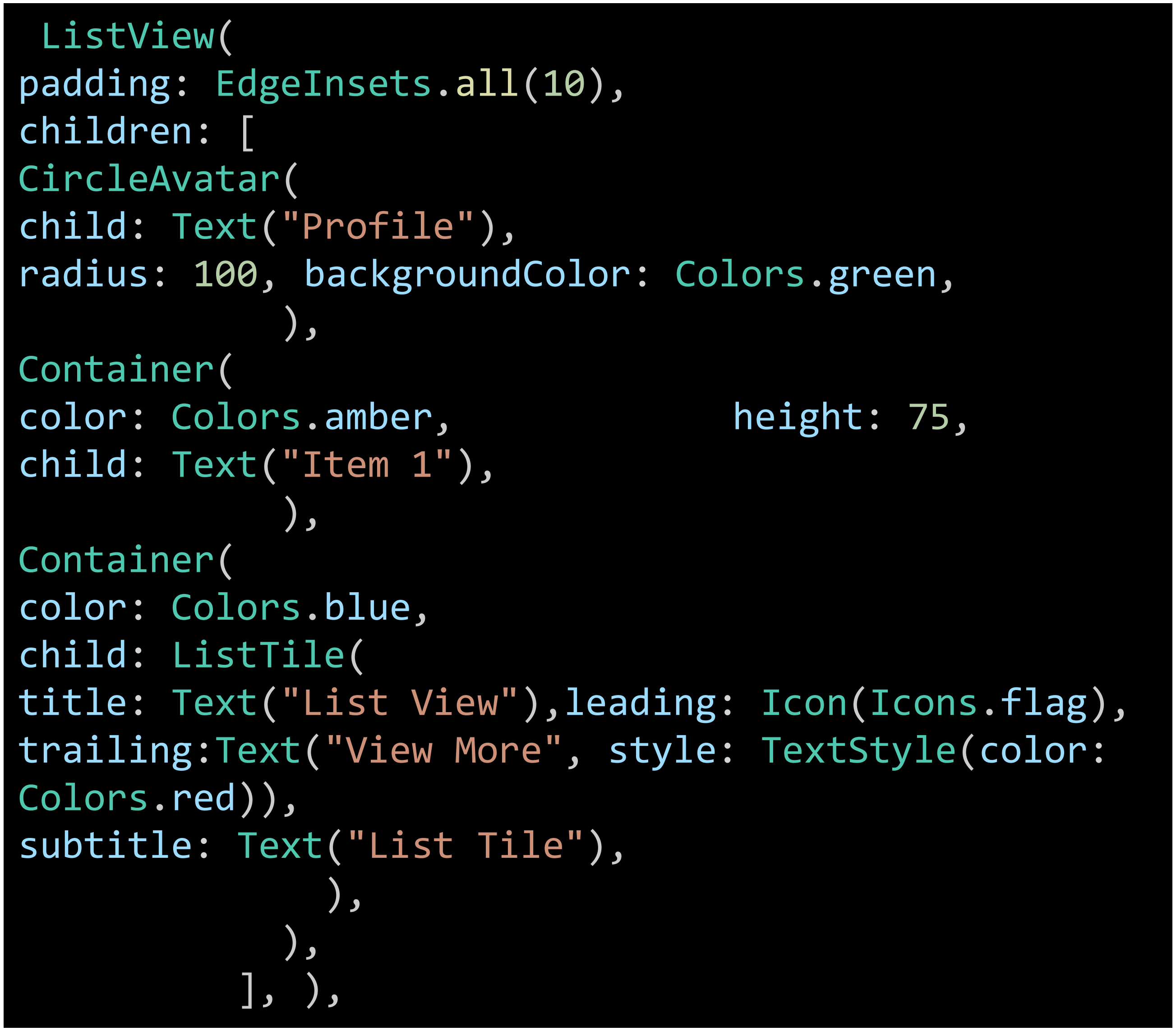
ListTile

✓ ListTile Title
Subtitle

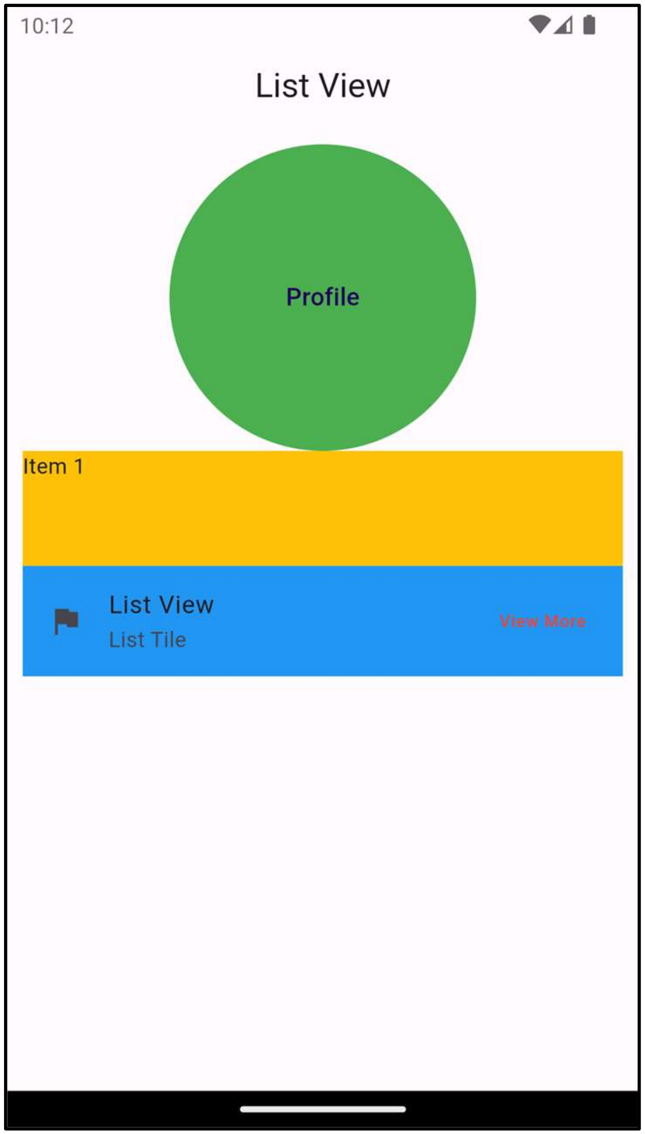
trailing List

ListView

- In Flutter, ListView is a **scrollable** list of widgets arranged linearly. It displays its children one after another in the scroll direction i.e, vertical or horizontal.
- It is one of the most common tools for building dynamic interfaces that house a large number of components or widgets.



```
 ListView(
padding: EdgeInsets.all(10),
children: [
CircleAvatar(
child: Text("Profile"),
radius: 100, backgroundColor: Colors.green,
            ),
Container(
color: Colors.amber,            height: 75,
child: Text("Item 1"),
            ),
Container(
color: Colors.blue,
child: ListTile(
title: Text("List View"),leading: Icon(Icons.flag),
trailing:Text("View More", style: TextStyle(color:
Colors.red)),
subtitle: Text("List Tile"),
              ),
            ),
          ], ),
```

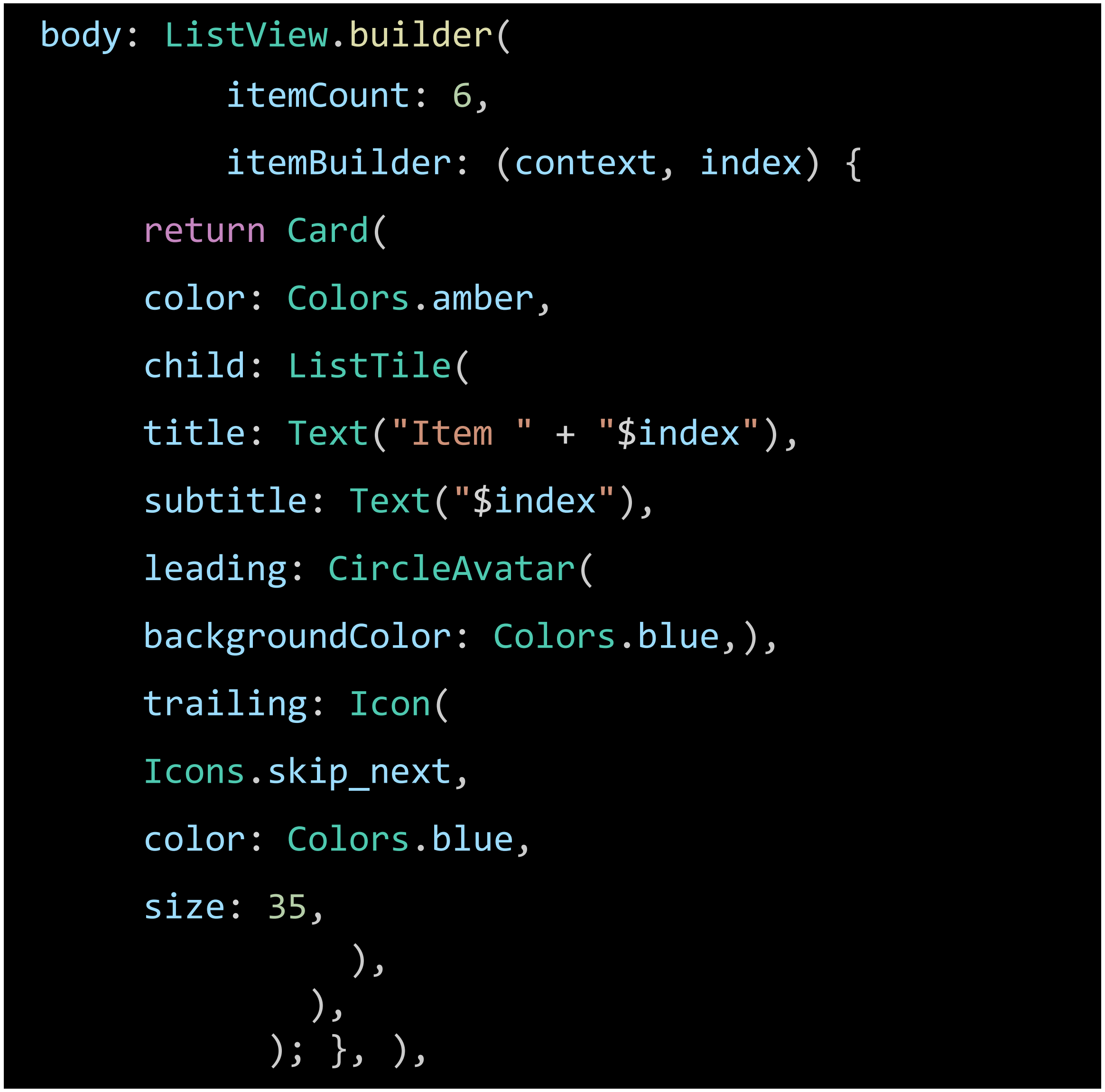


ListView.builder

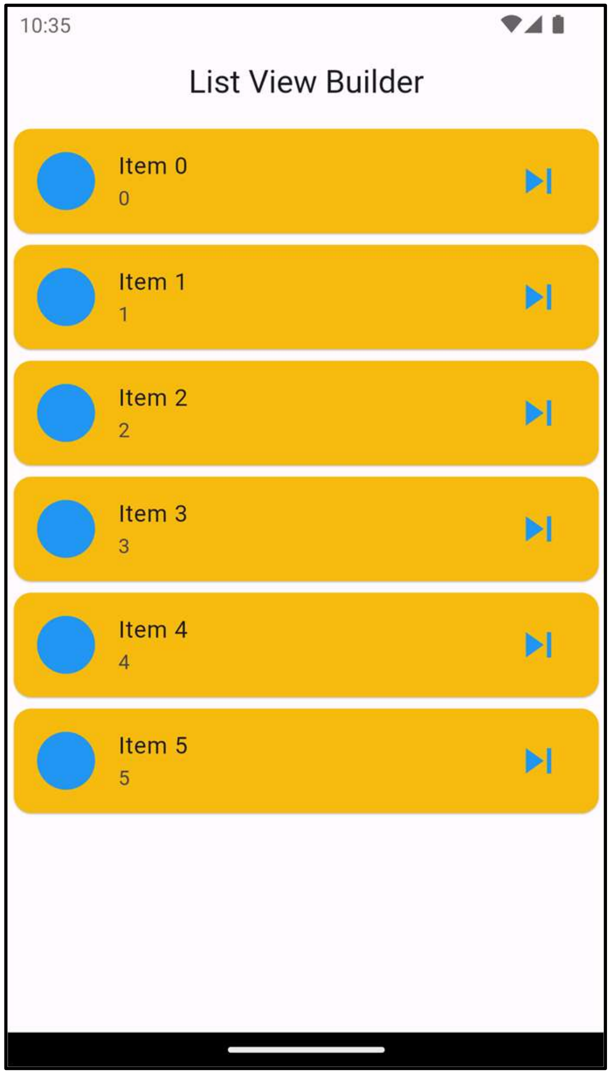
- ListView.builder is a powerful Flutter widget used for efficiently creating scrollable lists or grids of items. It's particularly useful when dealing with a large number of items because it creates items on-demand as the user scrolls, reducing memory usage and improving performance. Here's an explanation of its main components:

ListView.builder

- **itemCount**: This property defines the number of items in the list. It specifies how many times the itemBuilder function will be called.
- **itemBuilder**: This callback function is called for each item in the list. It takes two arguments: BuildContext and int index. You're responsible for returning the widget for the item at the given index.
- **scrollDirection**: Specifies the direction in which the list should scroll. It can be either Axis.vertical (default) for a vertical list or Axis.horizontal for a horizontal list.
- **shrinkWrap**: This property takes in a boolean value as the object to decide whether the size of the scrollable area will be determined by the contents inside the ListView.



```
body: ListView.builder(
         itemCount: 6,
         itemBuilder: (context, index) {
     return Card(
     color: Colors.amber,
     child: ListTile(
     title: Text("Item " + "$index"),
     subtitle: Text("$index"),
     leading: CircleAvatar(
     backgroundColor: Colors.blue,),
     trailing: Icon(
     Icons.skip_next,
     color: Colors.blue,
     size: 35,
               ),
             ),
           ); }, ),
```



List View Builder

Item 0
0

Item 1
1

Item 2
2

Item 3
3

Item 4
4

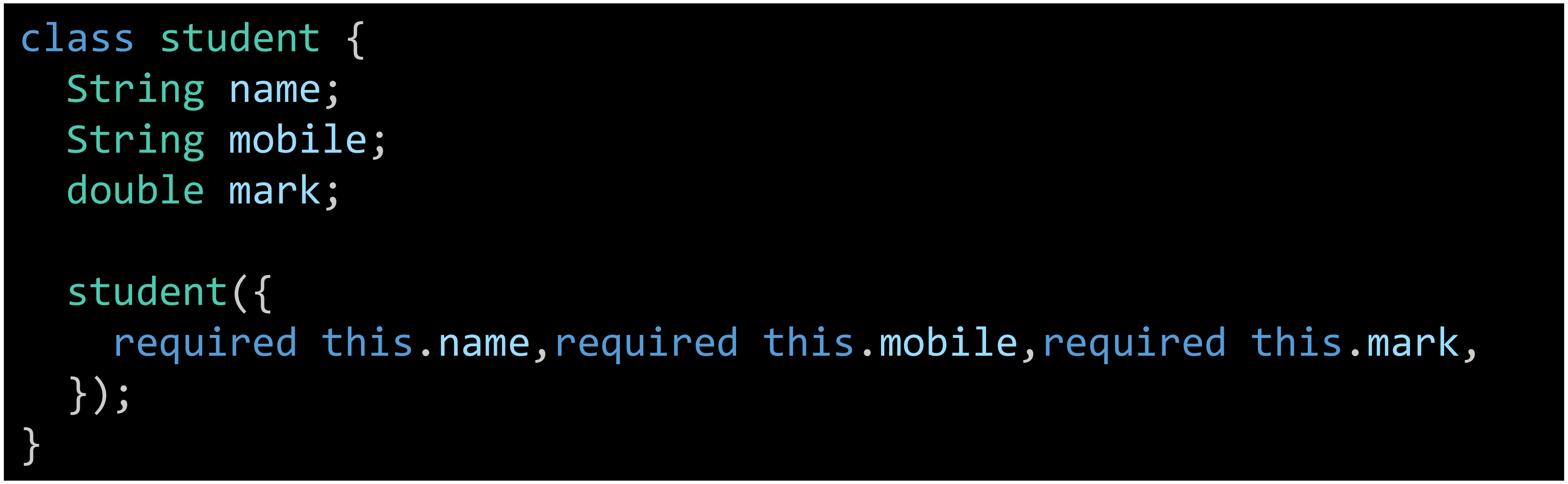
Item 5
5

Example

- I will display the list of Student with its name , mobile and mark with an Icon that will be the first alphabet of the student name.

Step 1: Create Custom Data Class

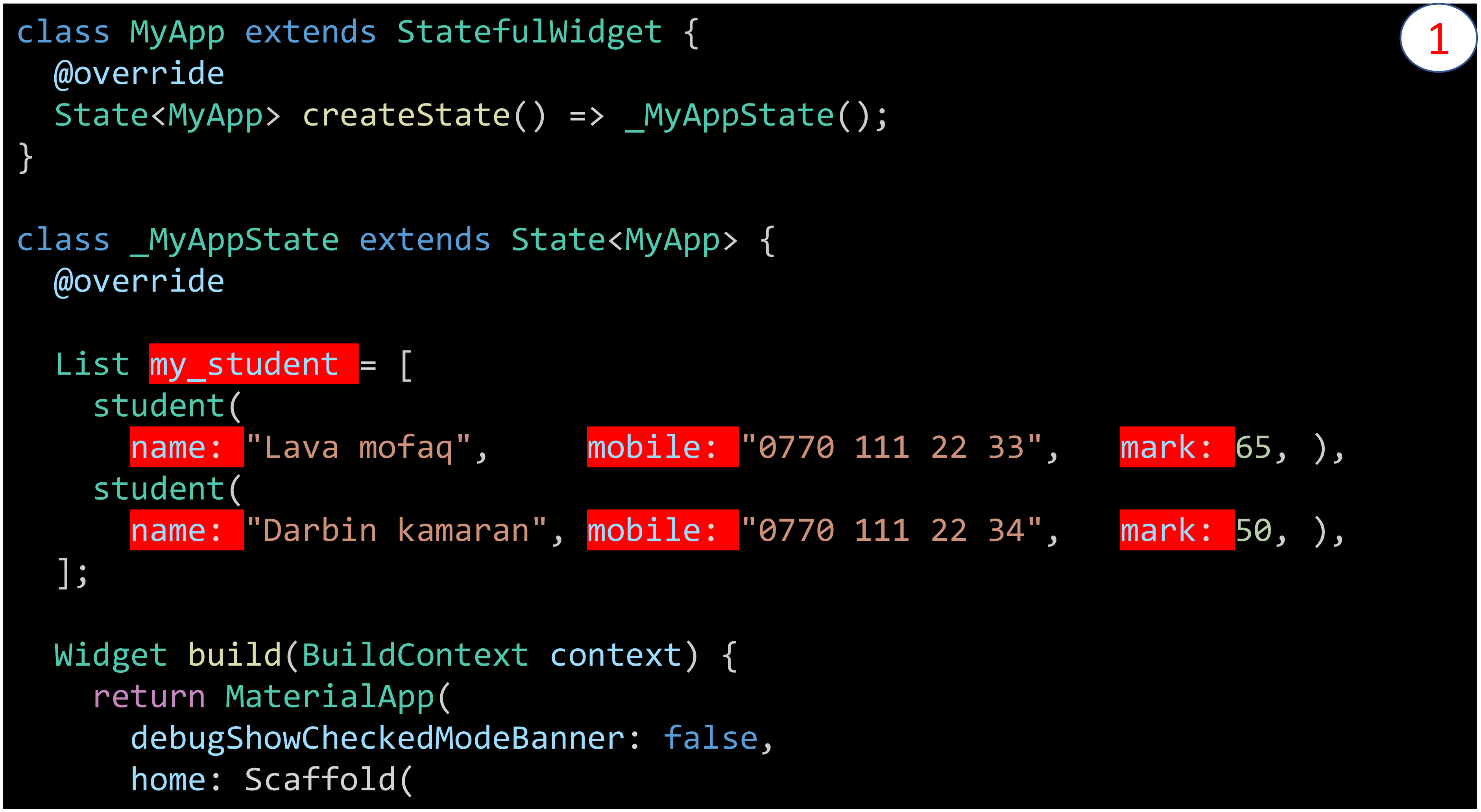
- In this step, I will create a Student class that has names, mobile and mark of the stocks. It is created only to map the items of the object with the ListView Builder.



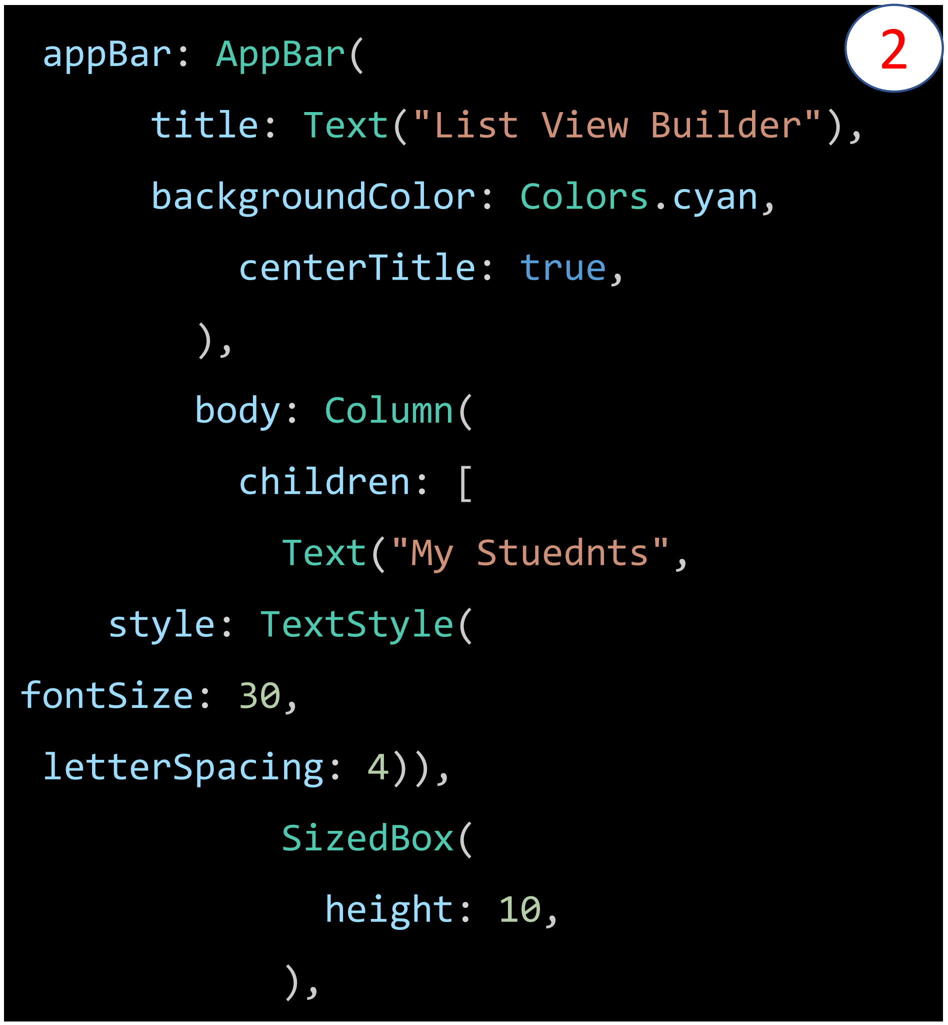
```
class student {
  String name;
  String mobile;
  double mark;

  student({
    required this.name,required this.mobile,required this.mark,
  });
}
```

Step 2: Create a Stateful Widget

- The next step is to create a Stateful Widget that will contain all the dummy data items mapped with the above class. All the logic or the implementation part is done inside the build() method.

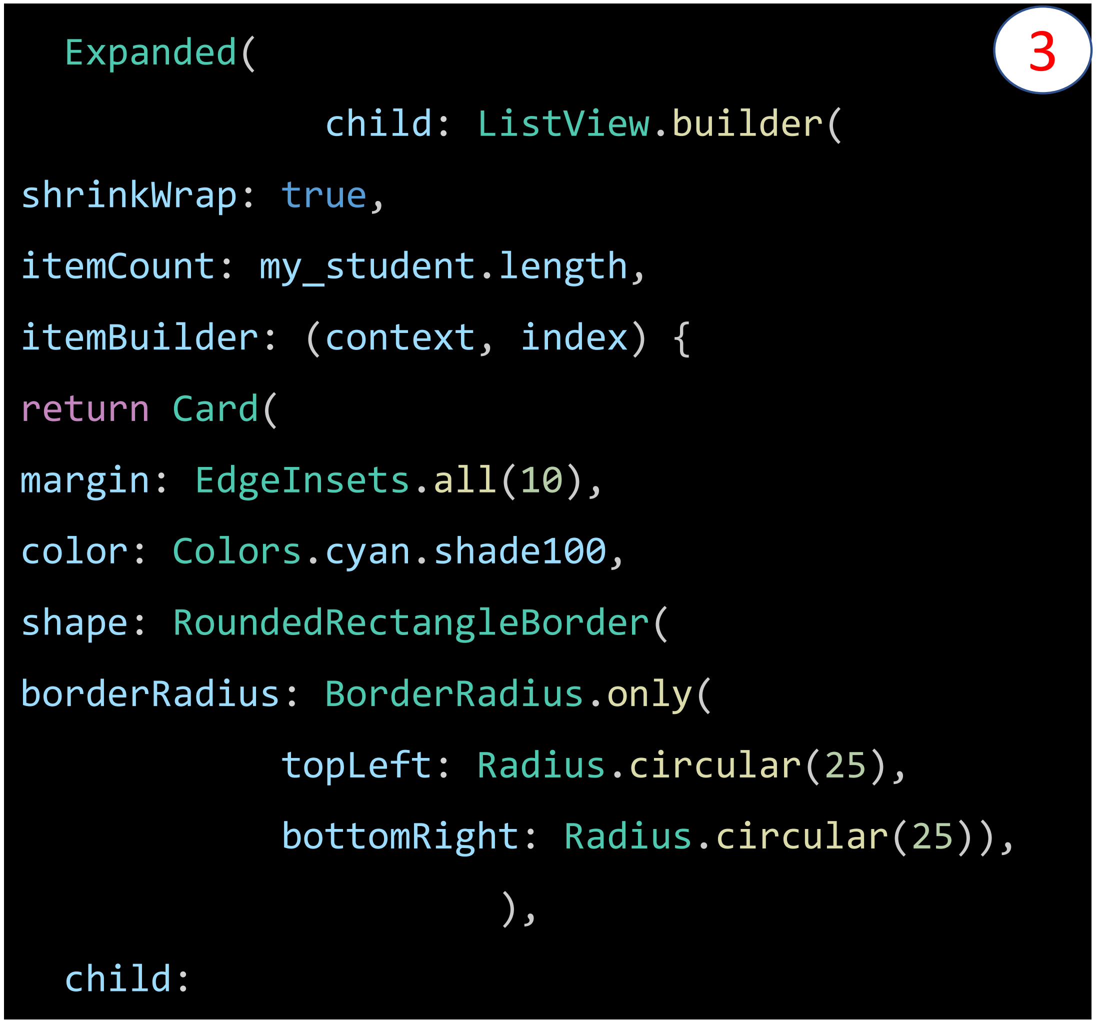


```
class MyApp extends StatefulWidget {
  @override
  State<MyApp> createState() => _MyAppState();
}

class _MyAppState extends State<MyApp> {
  @override

  List my_student = [
    student(
      name: "Lava mofaq",     mobile: "0770 111 22 33",    mark: 65, ),
    student(
      name: "Darbin kamaran", mobile: "0770 111 22 34",    mark: 50, ),
  ];

  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      home: Scaffold(
```



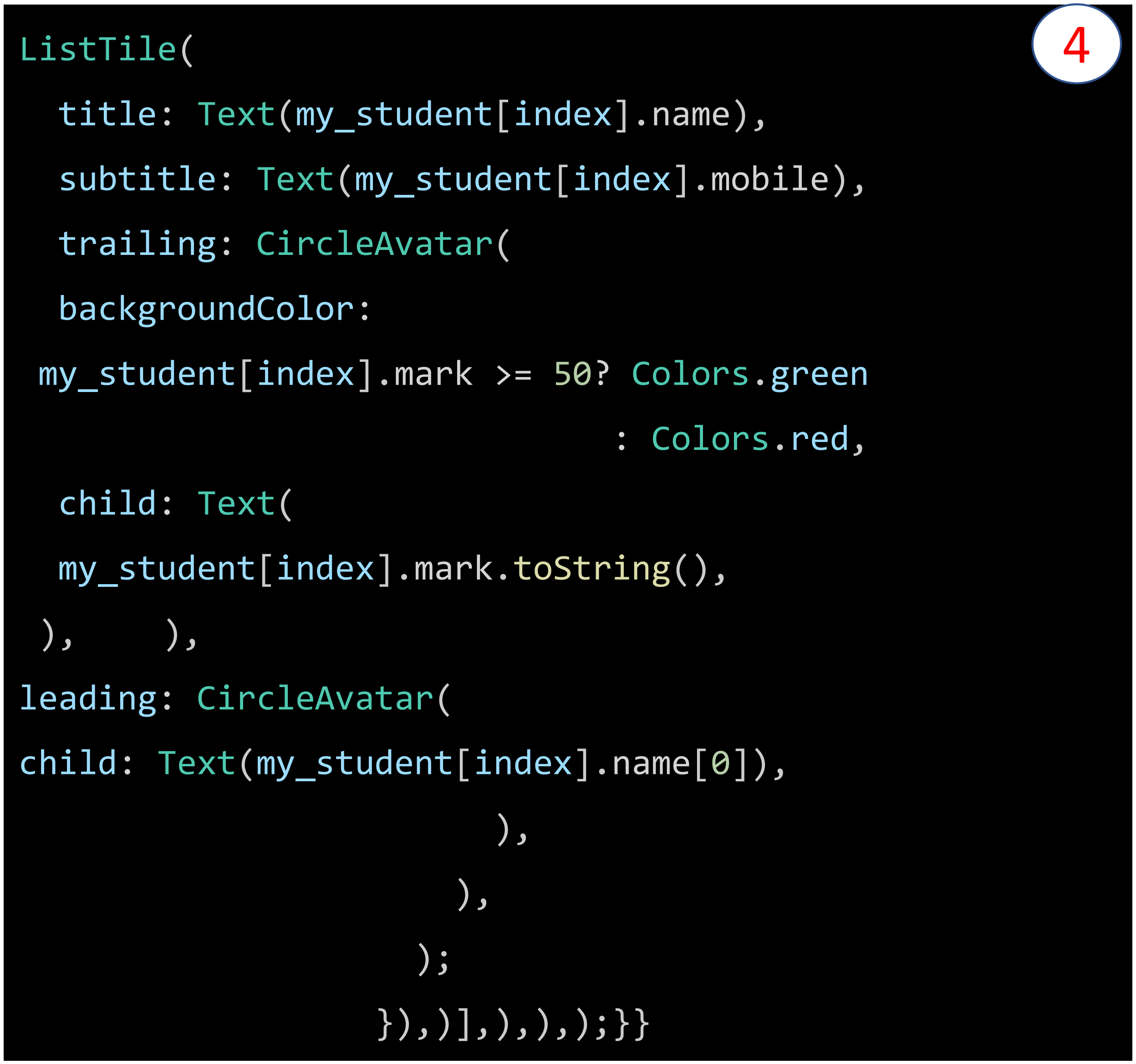
2

```
 appBar: AppBar(
      title: Text("List View Builder"),
      backgroundColor: Colors.cyan,
          centerTitle: true,
        ),
        body: Column(
          children: [
            Text("My Stuednts",
    style: TextStyle(
fontSize: 30,
 letterSpacing: 4)),
            SizedBox(
              height: 10,
            ),
```



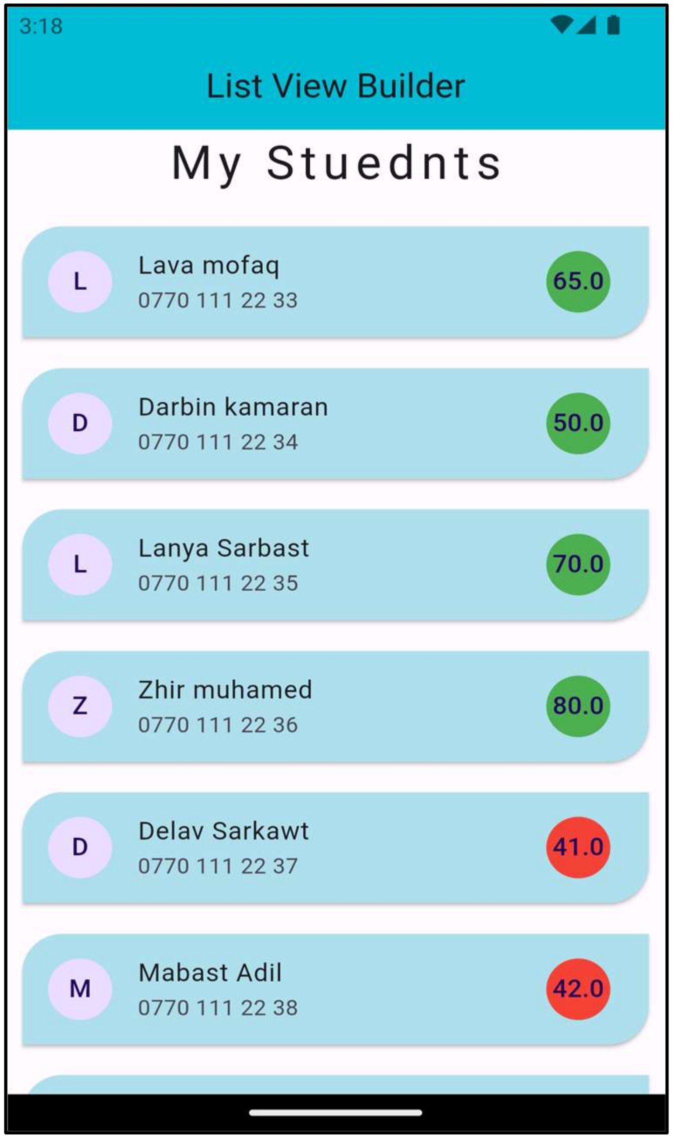
3

```
  Expanded(
              child: ListView.builder(
shrinkWrap: true,
itemCount: my_student.length,
itemBuilder: (context, index) {
return Card(
margin: EdgeInsets.all(10),
color: Colors.cyan.shade100,
shape: RoundedRectangleBorder(
borderRadius: BorderRadius.only(
            topLeft: Radius.circular(25),
            bottomRight: Radius.circular(25)),
                      ),
  child:
```



4

```
ListTile(
  title: Text(my_student[index].name),
  subtitle: Text(my_student[index].mobile),
  trailing: CircleAvatar(
  backgroundColor:
 my_student[index].mark >= 50? Colors.green
                              : Colors.red,
  child: Text(
  my_student[index].mark.toString(),
 ),     ),
leading: CircleAvatar(
child: Text(my_student[index].name[0]),
                        ),
                      ),
                    );
                  }),)],),),),);}}
```



List View Builder

My Stuednts

L Lava mofaq
0770 111 22 33
65.0

D Darbin kamaran
0770 111 22 34
50.0

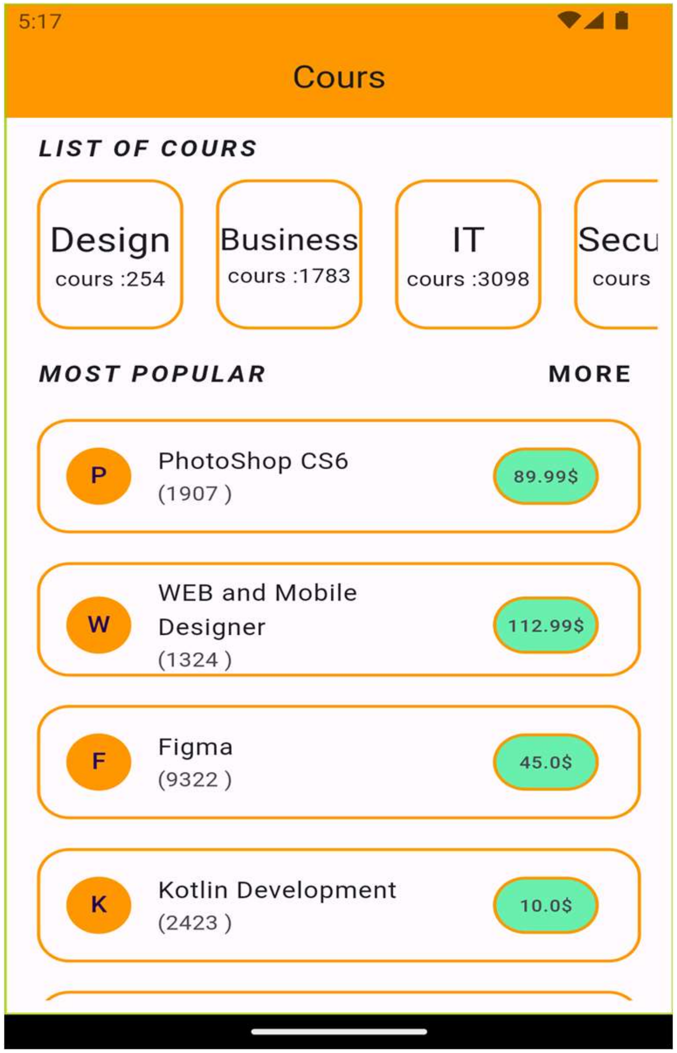
L Lanya Sarbast
0770 111 22 35
70.0

Z Zhir muhamed
0770 111 22 36
80.0

D Delav Sarkawt
0770 111 22 37
41.0

M Mabast Adil
0770 111 22 38
42.0

Try this


5:17
Cours
LIST OF COURS
Design
cours :254
Business
cours :1783
IT
cours :3098
Secu
cours
MOST POPULAR
MORE
P
PhotoShop CS6
(1907)
89.99$
W
WEB and Mobile Designer
(1324)
112.99$
F
Figma
(9322)
45.0$
K
Kotlin Development
(2423)
10.0$