

## Experiment No : 04

**Aim : To design a layout of Flutter App using layout widgets.**

**Theory:**

**Grid View :**

A grid view is a graphical control element used to show items in the tabular form. In this section, we are going to learn how to render items in a grid view in the Flutter application.

GridView is a widget in Flutter that displays the items in a 2-D array (two-dimensional rows and columns). As the name suggests, it will be used when we want to show items in a Grid. We can select the desired item from the grid list by tapping on them. This widget can contain text, images, icons, etc. to display in a grid layout depending on the user requirement. It is also referred to as a scrollable 2-D array of widgets. Since it is scrollable, we can specify the direction only in which it scrolls.

**ListView :**

Lists are the most popular elements of every web or mobile application. They are made up of multiple rows of items, which include text, buttons, toggles, icons, thumbnails, and many more. We can use it for displaying various information such as menus, tabs, or to break the monotony of pure text files.

Flutter includes a ListView widget for working with Lists, which is the fundamental concept of displaying data in the mobile apps. The ListView is a perfect standard for displaying lists that contains only a few items. ListView also includes ListTile widget, which gives more properties for the visual structure to a list of data.

**Code :**

```
import 'dart:ui';  
  
import 'package:flutter/material.dart';  
  
void main() {  
  runApp(const MyApp());  
}  
  
class MyApp extends StatelessWidget {
```

```

const MyApp({super.key});

// This widget is the root of your application.
@override
Widget build(BuildContext context) {
  return MaterialApp(
    debugShowCheckedModeBanner: false,
    title: 'Exp4',
    theme: ThemeData(

      primarySwatch: Colors.deepOrange,
    ),
    home: const MyHomePage(title: 'About Us'),
  );
}

class MyHomePage extends StatefulWidget {
  const MyHomePage({super.key, required this.title});

  final String title;

  @override
  State<MyHomePage> createState() => _MyHomePageState();
}

class _MyHomePageState extends State<MyHomePage> {

  @override
  Widget build(BuildContext context) {

    return Scaffold(
      appBar: AppBar(

        title: Text(widget.title),
      ),
      body: Column(
        mainAxisAlignment: MainAxisAlignment.spaceEvenly,
        children: [
          Row(
            children: [
              Container(
                margin: EdgeInsets.all(5),
                padding: EdgeInsets.all(5),
                decoration: BoxDecoration(
                  borderRadius: BorderRadius.circular(40),
                  color: Colors.deepOrangeAccent
                ),
                child: Image.asset('assets/img/img.png', height: 150, width: 150),
              ),
              Container(
                margin: EdgeInsets.all(5),
                padding: EdgeInsets.all(5),
                child: Image.asset('assets/img/img.png', height: 150, width: 150),
                decoration: BoxDecoration(
                  borderRadius: BorderRadius.circular(40),
                  color: Colors.deepOrangeAccent
                ),
              ),
            ],
          ),
        ],
      ),
    );
  }
}

```

```

        ),
      ],
    ),
    Container(
      margin: EdgeInsets.all(20),
      padding: EdgeInsets.all(12),
      decoration: BoxDecoration(
        borderRadius: BorderRadius.circular(8),
        color: Colors.deepOrangeAccent
      ),
      child: Text('GridView is a widget in Flutter that displays the items in a 2-D
array (two-dimensional rows and columns) ', style: TextStyle(fontSize:
20, fontStyle: FontStyle.italic)),
    ),
    Container(
      margin: EdgeInsets.all(20),
      padding: EdgeInsets.all(12),
      decoration: BoxDecoration(
        borderRadius: BorderRadius.circular(8),
        color: Colors.deepOrangeAccent
      ),
      child: Text('GridView is a widget in Flutter that displays the items
in a 2-D array (two-dimensional rows and columns) ', style: TextStyle(fontSize:
20, fontStyle: FontStyle.italic)),
    ),
  ),
  Row(
    children: [
      ElevatedButton.icon(onPressed: () {
        showDialog(
          context: context,
          builder: (ctx) => AlertDialog(
            title: const Text("You have clicked phone button" ),
          ),
        );
      },
      icon: Icon(Icons.phone),
      label: Text('Phone')),
      SizedBox(width: 20, height: 100,),
      ElevatedButton.icon(onPressed: () {
        showDialog(
          context: context,
          builder: (ctx) => AlertDialog(
            title: const Text("You have clicked phone button"),
          ),
        );
      },
      icon: Icon(Icons.message),
      label: Text('Message')),
      SizedBox(width: 20,),
      ElevatedButton.icon(onPressed: () {
        showDialog(
          context: context,
          builder: (ctx) => AlertDialog(

```

```

        title: const Text("You have clicked phone button"),
      ),
    ),
  },
  icon: Icon(Icons.arrow_back_ios),
  label: Text(''),
  SizedBox(width: 20,),
]

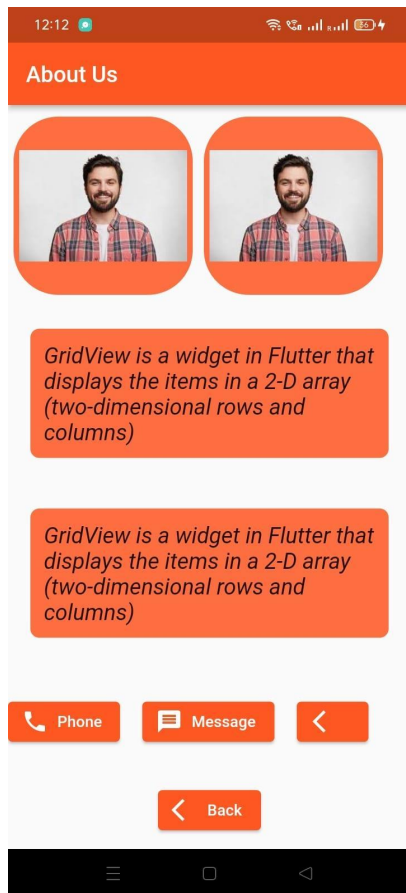
),
  ElevatedButton.icon(onPressed: (){
    showDialog(
      context: context,
      builder: (ctx) => AlertDialog(
        title: const Text("You have clicked phone button"),
      ),

    );
  },
  icon: Icon(Icons.arrow_back_ios),
  label: Text('Back')),
  SizedBox(width: 20,),

]
// This trailing comma makes auto-formatting nicer for build methods.
)
);
}
}
}

```

**Output :**



## Conclusion :

Therefore we have successfully designed a layout of Flutter App using layout widgets.