LAB FILE

INTRODUCTION TO ANDROID APPLICATION DE-VELOPMENT LAB

CSE - 523

Submitted To:
Dr. Madhavi Dhingra
Associate Professor
ASET, AUMP

Submitted By:
Ashish Singh
A60205222046

AMITY SCHOOL OF ENGINEERING AND TECHNOLOGY
AMITY UNIVERSITY MADHYA PRADESH

INDEX

S.No.	Program/Objective	Page No.	Remark/Sign
1.	Display Hello World	3	
2.	Display the AppBar Code	4	
3.	Display Stateless and Stateful Widget	5-7	
4.	Display Container Widget	8	
5.	Remove debug banner	9	
6.	Set theme to dark	10	
7.	Display an image	11	
8.	Display screens using Navigation	12-13	
9.	Display scrollview	14-15	
10.	Display Radiobutton	16-18	
11.	Display icon	19-20	
12.	Display different types of button	21-23	
13.	Display List of items using menu	24-26	
14.	Display Login Screen	27-30	

15.	Display Animation	31-32	

Q1. Write a program to display Hello World in flutter App.

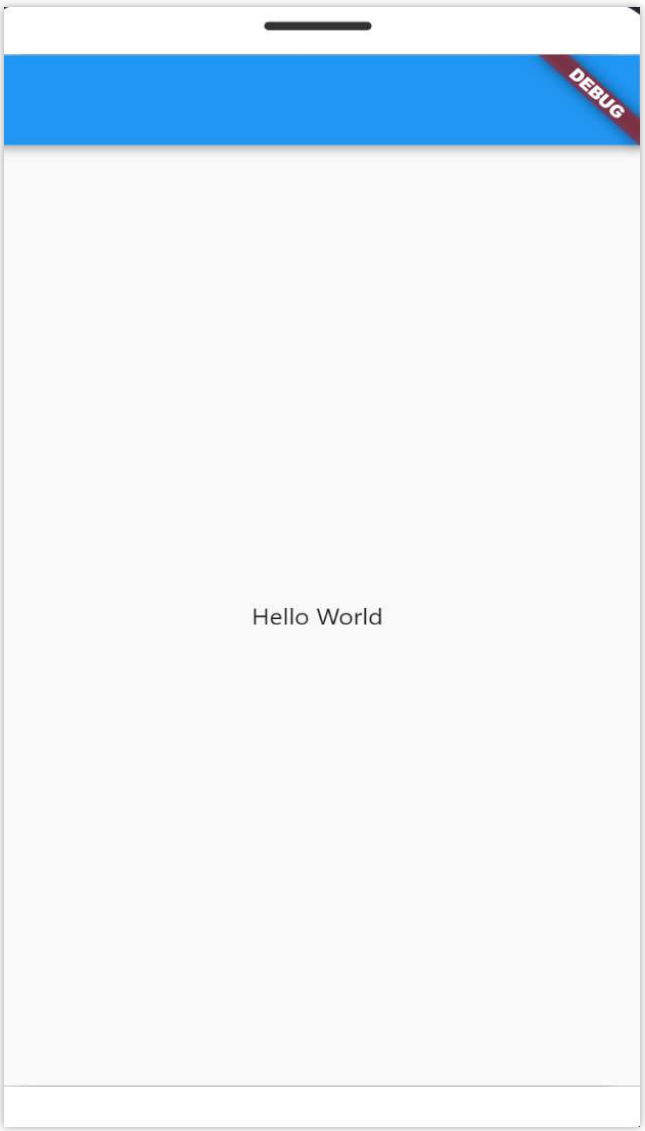
Code:

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

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

class MyApp extends StatelessWidget {
  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(),
        body: Center(
          child: Text('Hello World'),
        ),
      ),
    );
  }
}
```

OUTPUT:



Q2. Write a program to display the AppBar code in flutter App.

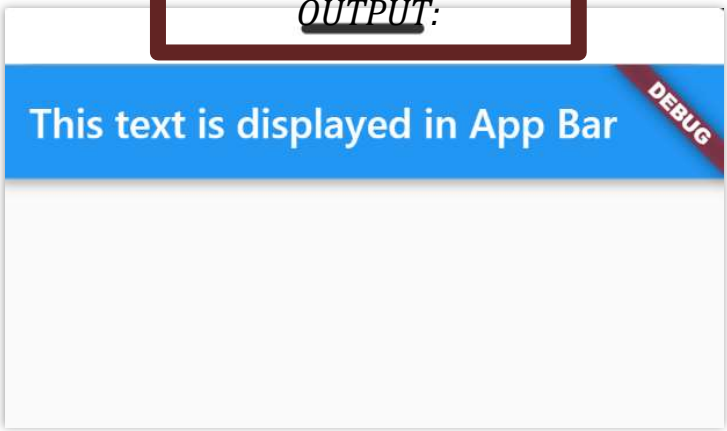
Code:

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

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

class MyApp extends StatelessWidget {
  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(title: Text('This text is displayed in App Bar')),
      ),
    );
  }
}
```

OUTPUT:



Q3. Write a program to display Stateless and Stateful widget in flutter App.

Code: Stateless Widget

```
import 'package:flutter/material.dart';
void main() {
  runApp(MyApp());
}
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(
          title: Text('THIS IS APP BAR'),
        ),
        body: Center(
            child: Text('THIS IS THE BODY'),
        ),
      ),
    );
  }}
```

OUTPUT:

Stateful Widget

```
import 'package:flutter/material.dart';
void main() {
runApp(MyApp());}
class MyApp extends StatelessWidget {
@override
Widget build(BuildContext context) {
        return MaterialApp(
        title: 'FAB',
        home: MyHomePage(),
        debugShowCheckedModeBanner: false,
        );}}
class MyHomePage extends StatefulWidget {
@override
_MyHomePageState createState() => _MyHomePageState();
}
class _MyHomePageState extends State<MyHomePage> {
int i=0;
@override
Widget build(BuildContext context) {
        return Scaffold(
```

OUTPUT:

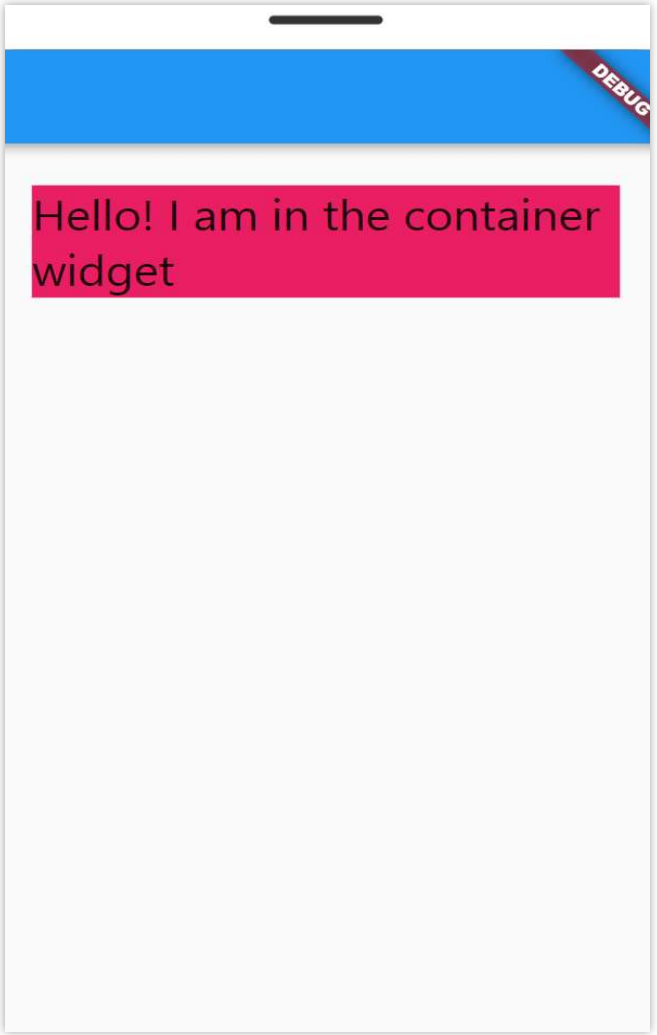
```
 backgroundColor: Colors.white,
 appBar: AppBar(
        title: Text("FloatingActionButton",),
        backgroundColor: Colors.green,),
body: Center(child: Column(
 mainAxisAlignment: MainAxisAlignment.center,
 children: <Widget>[
      Text("Floating action button pressed this many times"),
 Text("$i",textScaleFactor: 3,)
        ],),),
      floatingActionButton: FloatingActionButton(
 child: Icon(Icons.add),
 backgroundColor: Colors.black,
 onPressed: () {
 setState(() {
 i++;
 });
   }, ), );
}}
```

Q4. Write a program to display Container Widget in flutter App.

Code:

```
import 'package:flutter/material.dart';
void main() => runApp(MyApp());
class MyApp extends StatelessWidget {
  // This widget is the root of your application.
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar(),
        body: Container(
          color: Colors.pink,
          margin: EdgeInsets.all(25)
child: Text("Hello! I am in the container widget",
              style: TextStyle(fontSize: 25)),
        ),
      ),
    );
  }}
```

OUTPUT:

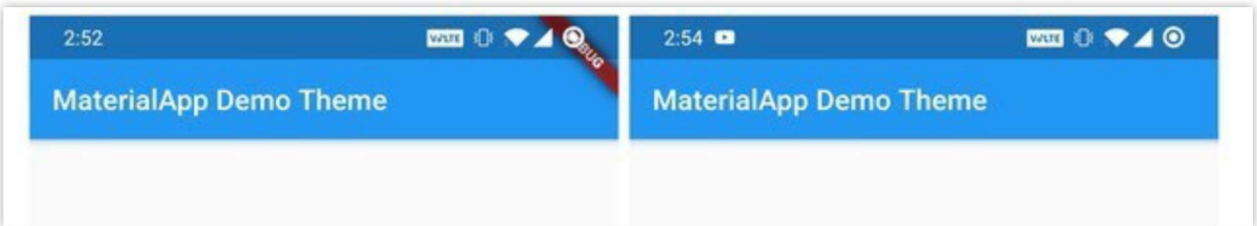


Q5. Write a program to remove the debug in flutter App.

Code:

```
import 'package:flutter/material.dart';
void main() => runApp(MyApp());
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
home: Scaffold(
        appBar: AppBar( title: Text(' MaterialApp Demo Theme '),),),
    );
  }
}
```

OUTPUT:

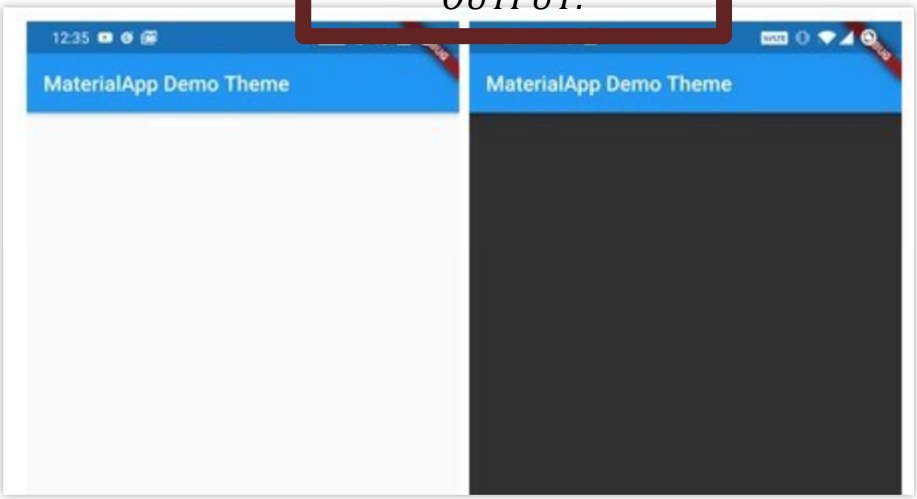


Q6. Write a program to set theme to dark in flutter App.

Code:

```
import 'package:flutter/material.dart';
void main() => runApp(MyApp());
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      theme: ThemeData(brightness: Brightness.dark),
home: Scaffold(
        appBar: AppBar( title: Text(' MaterialApp Demo Theme '),),),
    );
  }
}
```

OUTPUT:

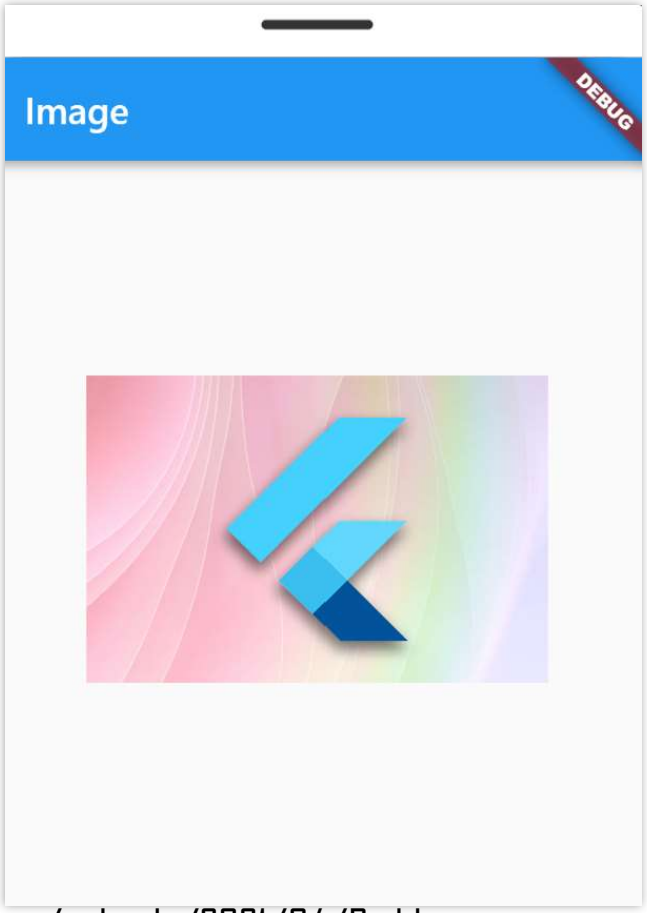


Q7. Write a program to display Image in flutter App.

Code:

```
import 'package:flutter/material.dart';
void main() => runApp(MyApp());
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
        appBar: AppBar( title: Text(' Image '),),
        body: Center( child: Column(
            children: <Widget>[
              Image.network(
                  'https://blog.logrocket.com/wp-content/uploads/2021/04/Building-Flutter-desktop-app-tutorial-examples.png',
                  height: 400,
                  width: 250),
            ],),
        ),),);
  }}
```

OUTPUT:

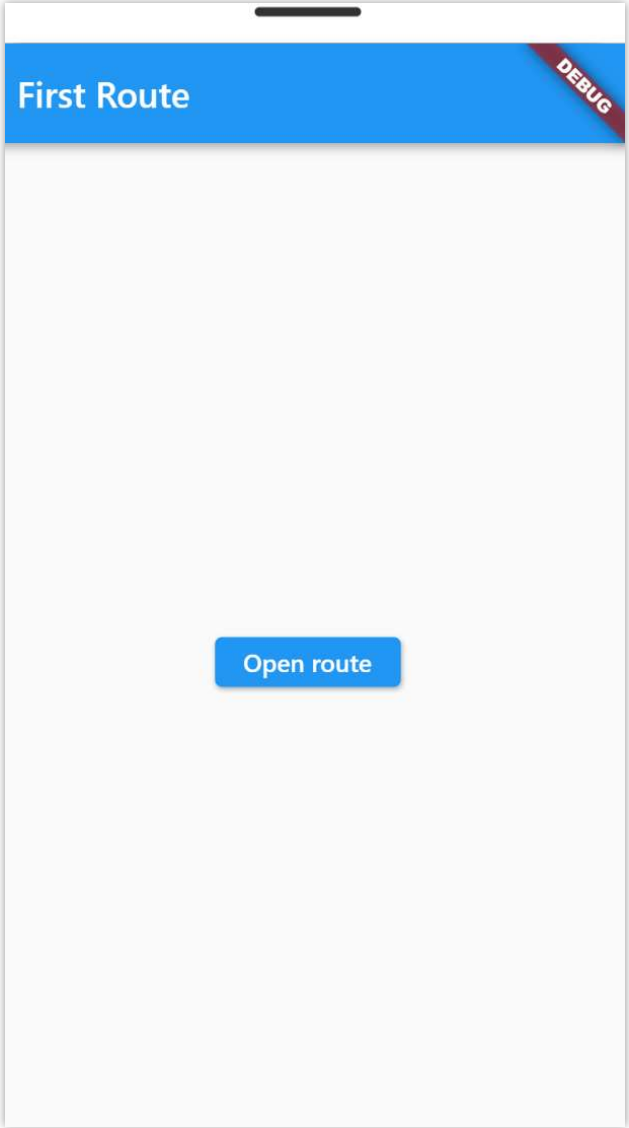


Q8. Write a program to display screens using Navigation in flutter App.

Code:

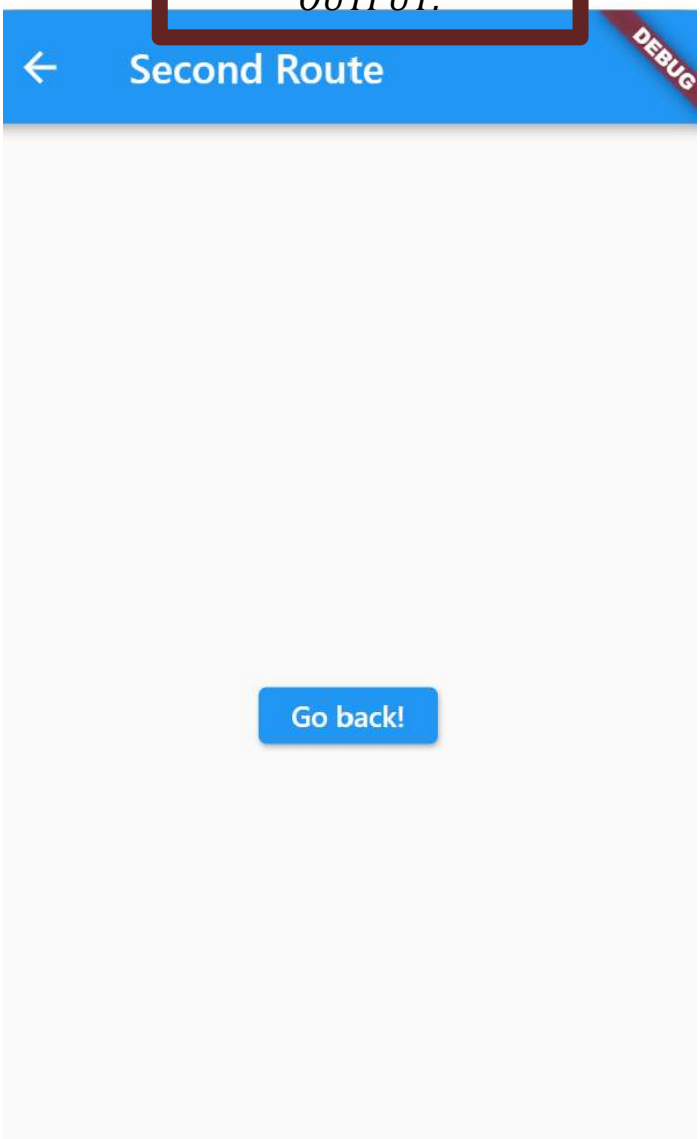
```
import 'package:flutter/material.dart';
void main() {
  runApp(MaterialApp(
    title: 'Navigation Basics',
    home: FirstRoute(),
  ));
}
class FirstRoute extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('First Route'),
      ),
      body: Center(
        child: ElevatedButton(
          child: Text('Open route'),
          onPressed: () {
            Navigator.push(
```

OUTPUT:



```
            context,
            MaterialPageRoute(builder: (context) => SecondRoute()),
          );
        }, ),
    ), );
 }}
class SecondRoute extends StatelessWidget {
 @override
 Widget build(BuildContext context) {
  return Scaffold(
   appBar: AppBar(
    title: Text('Second Route'),
   ),
   body: Center(
    child: ElevatedButton(
     onPressed: () { Navigator.pop(context); },
     child: Text('Go back!'),
    ),),
  );}}
```

OUTPUT:



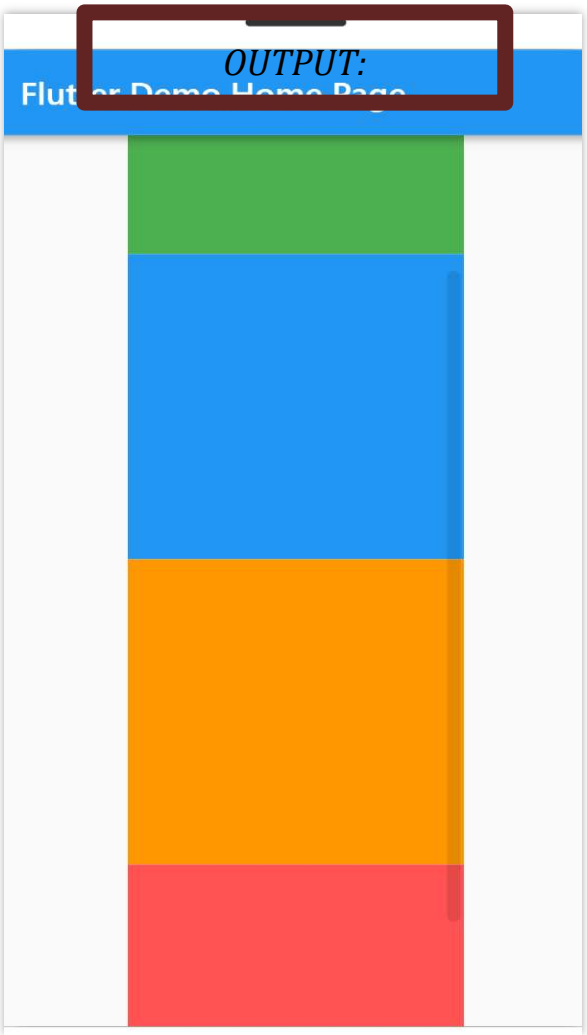
Q9 Write a program to display Scrollview in flutter App.

Code:

```
import 'package:flutter/material.dart';
void main() => runApp(MyApp());
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Demo',
      debugShowCheckedModeBanner: false,
      theme: ThemeData(
        primarySwatch: Colors.blue,),
      home: MyHomePage(),
    );}}
class MyHomePage extends StatefulWidget {
  @override
  _MyHomePageState createState() => _MyHomePageState();
}
class _MyHomePageState extends State<MyHomePage> {
  Widget cont(Color color) {
 return Container(
```

```
    height: 200,
    width: 200,
    color: color,
  );}
@override
Widget build(BuildContext context) {
  return Scaffold(
appBar: AppBar(  title: Text("Flutter Demo Home Page"),),
    body: Center(
      child: SingleChildScrollView(
        child: Column(
    mainAxisAlignment: MainAxisAlignment.center,
      children: <Widget>[
            cont(Colors.green),
            cont(Colors.blue),
            cont(Colors.orange),
            cont(Colors.redAccent) ],
        ),),),
  );}}
```

OUTPUT:



Q10. Write a program to display Radiobutton in flutter App.

Code:

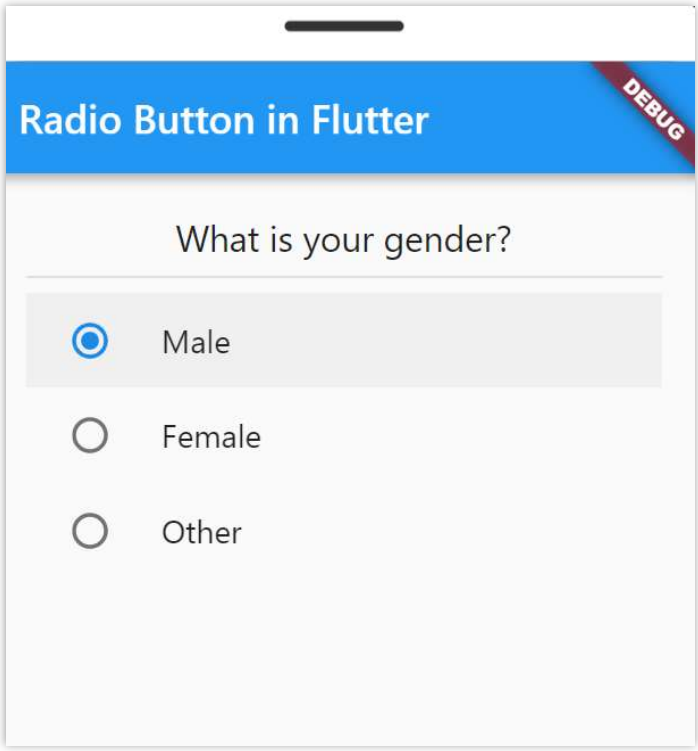
```
import 'package:flutter/material.dart';
void main() { runApp(MyApp());}
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(home: Home());
  }}
class Home extends StatefulWidget {
  @override
  State<Home> createState() => _HomeState();
}
class _HomeState extends State<Home> {
  String? gender; //no radio button will be selected
  //String gender = "male";
//if you want to set default value
  @override
  Widget build(BuildContext context) {

 return Scaffold(
```

```
appBar: AppBar(title: Text("Radio Button in Flutter")),
body: Container(
  padding: EdgeInsets.all(20),
  child: Column(
    children: [
      Text(
        "What is your gender?",
        style: TextStyle(fontSize: 18),
      ),
      Divider(),
      RadioListTile(
        title: Text("Male"),
        value: "male",
        groupValue: gender,
        onChanged: (value) {
          setState(() {
            gender = value.toString();
          });
        },),
      RadioListTile(
        title: Text("Female"),
```

OUTPUT:

```
        value: "female",
        groupValue: gender,
        onChanged: (value) {
          setState(() {
            gender = value.toString();
          });
        },),
      RadioListTile(
        title: Text("Other"),
        value: "other",
        groupValue: gender,
        onChanged: (value) {
          setState(() {
            gender = value.toString();
          });
        },),
    ],),),
);}}
```



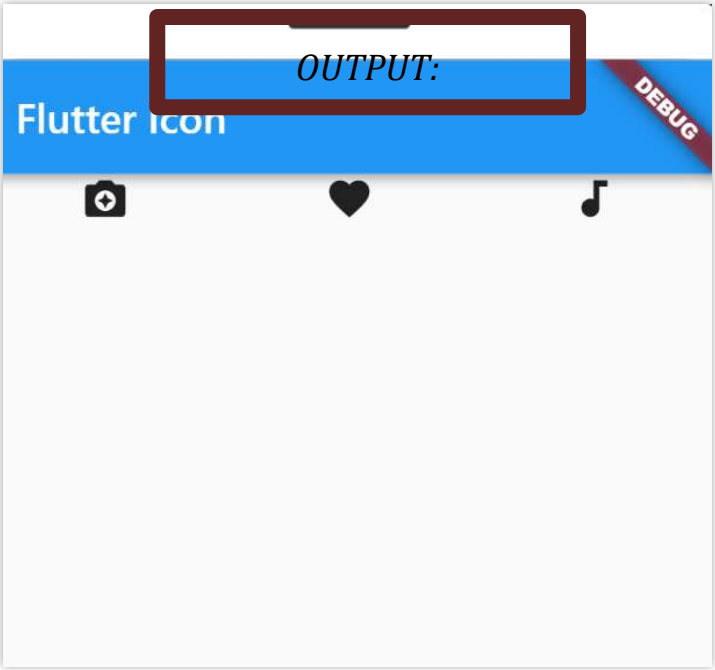
Q11. Write a program to display Icon in flutter App.

Code:

```
import 'package:flutter/material.dart';
void main() => runApp(MyApp());
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(home: MyIconPage()
);
  }}
class MyIconPage extends StatefulWidget {
  @override
  _MyIconPageState createState() => _MyIconPageState();
}
class _MyIconPageState extends State<MyIconPage> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Flutter Icon'),
),
```

```
    body: Row(
        mainAxisAlignment: MainAxisAlignment.spaceAround,
        children: <Widget>[
          Icon(Icons.camera_enhance),
          Icon(Icons.favorite),
          Icon(Icons.audiotrack),
        ]),
    );
}}
```

OUTPUT:



Q12. Write a program to display different types of button(Flatbutton, Raisedbutton, FloatingActionButton(FAB)) in flutter App.

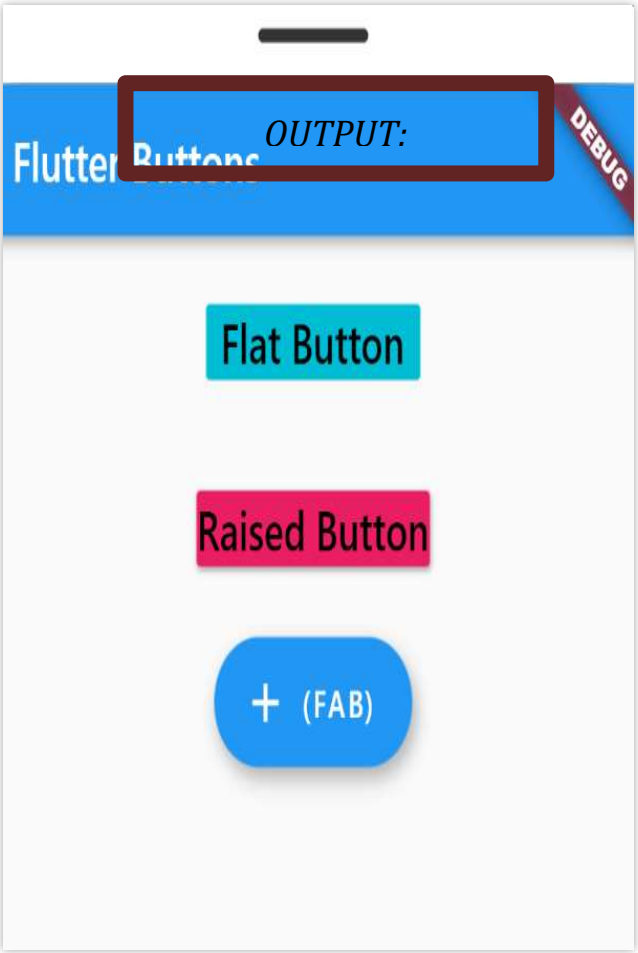
Code:

```
import 'package:flutter/material.dart';
void main() {  runApp(MyApp());}
class MyApp extends StatefulWidget {
  @override
  _MyAppState createState() => _MyAppState();
}
class _MyAppState extends State<MyApp> {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: Scaffold(
          appBar: AppBar(
            title: Text('Flutter Buttons'),
          ),
          body: Center(
              child: Column(children: <Widget>[
            Container(
              margin: EdgeInsets.all(25),
```

```
  child: FlatButton(
    child: Text(
      'Flat Button',
      style: TextStyle(fontSize: 20.0),
    ),
    color: Colors.cyan,
    textColor: Colors.black,
    onPressed: () {},
  ),
),
Divider(),
Container(
  child: RaisedButton(
    child: Text(
      'Raised Button',
      style: TextStyle(fontSize: 20),
    ),
    onPressed: () {},
    color: Colors.pink,
    textColor: Colors.black,
    padding: EdgeInsets.all(8.0),
```

```
          ),
        ),
        Divider(),
        Container(
          margin: EdgeInsets.all(10),
          child: FloatingActionButton.extended(
            onPressed: () {},
            icon: Icon(Icons.add),
            label: Text('(FAB)'))),
        Container(),
      ])),
  );
}}
```

OUTPUT:



Q13. Write a program to display List of items using menu in flutter App.

Code:

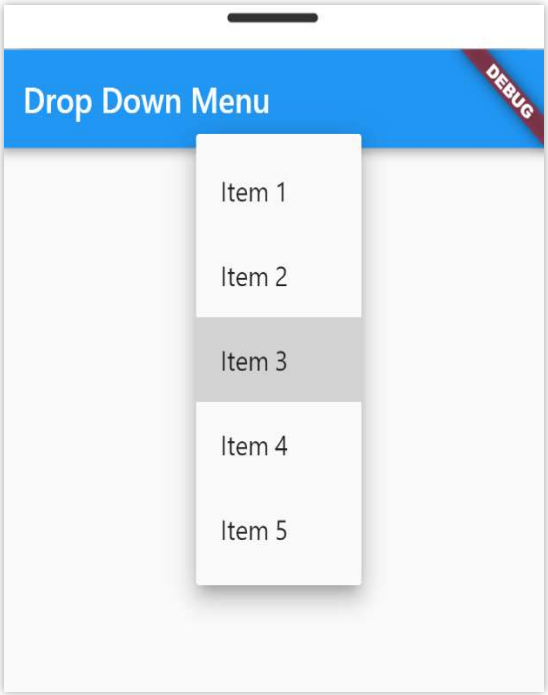
```
import 'package:flutter/material.dart';
void main() { runApp(MyApp());}
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: MyHomePage(),
    );}}
class MyHomePage extends StatefulWidget {
  @override
  _MyHomePageState createState() => _MyHomePageState();
}
class _MyHomePageState extends State<MyHomePage> {
  // Initial Selected Value
  String dropdownvalue = 'Item 1';
  // List of items in our dropdown menu
  var items = [
    'Item 1',
    'Item 2',
```

OUTPUT:

```
  'Item 3',
  'Item 4',
  'Item 5',
];
@override
Widget build(BuildContext context) {
  return Scaffold(
    appBar: AppBar(
      title: Text("Drop Down Menu"),
    ),
    body: Center(
      child: Column(
        children: [
          DropdownButton(
            // Initial Value
            value: dropdownvalue,

            // Down Arrow Icon
            icon: 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!;
        });
      },
    ),
  ],
),),
);}}
```



Q14. Write a program to display Login Screen in flutter App.

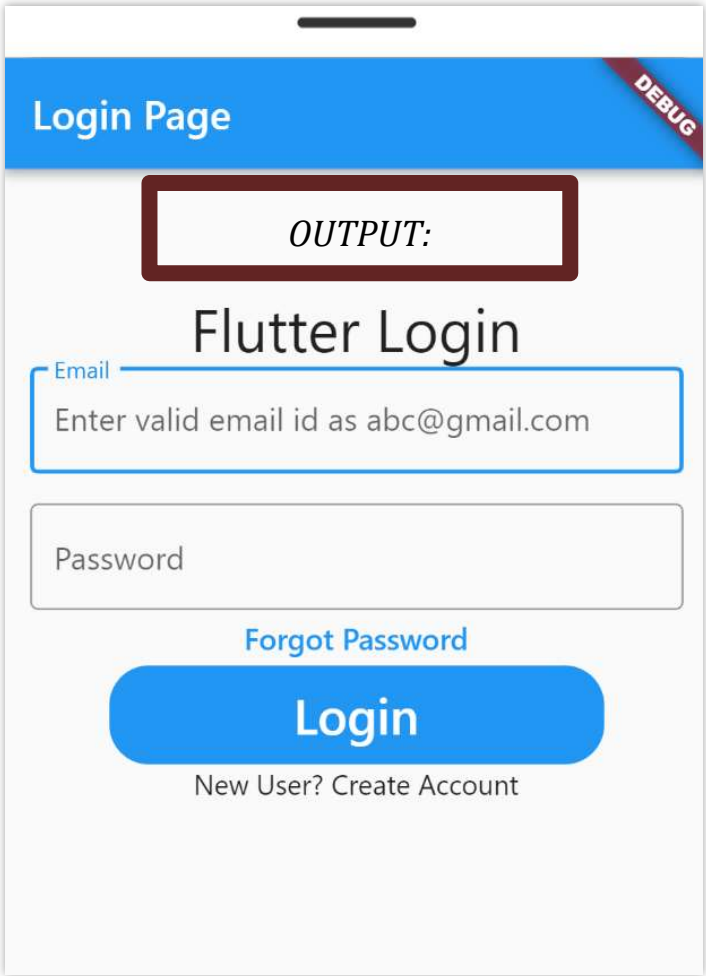
Code:

```
import 'package:flutter/material.dart';
void main() {runApp(MyApp());}
class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      home: LoginDemo(),
    );}}
class LoginDemo extends StatefulWidget {
  @override
  _LoginDemoState createState() => _LoginDemoState();
}
class _LoginDemoState extends State<LoginDemo> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text("Login Page"),
      ),
```

```
body: Center(
  child: Column(
    children: <Widget>[
      Padding(
        padding: EdgeInsets.only(top: 60.0),
        child: Container(
          child: Text(
            'Flutter Login',
            style: TextStyle(fontSize: 30),
          ),
        ),),
      Padding(
        padding: EdgeInsets.symmetric(horizontal: 15),
        child: TextField(
          decoration: InputDecoration(
              border: OutlineInputBorder(),
              labelText: 'Email',
              hintText: 'Enter valid email id as abc@gmail.com'),
        ), ),
      Padding(
        padding:
```

```
      EdgeInsets.only(left: 15.0, right: 15.0, top: 15, bottom: 0),
  //padding: EdgeInsets.symmetric(horizontal: 15),
  child: TextField(
    obscureText: true,
    decoration: InputDecoration(
        border: OutlineInputBorder(),
        labelText: 'Password',
        hintText: 'Enter secure password'),
  ),  ),
FlatButton(
  onPressed: () {//TODO FORGOT PASSWORD SCREEN GOES HERE  },
  child: Text(
    'Forgot Password',
    style: TextStyle(color: Colors.blue, fontSize: 15),
  ),  ),
Container(
  height: 50,
  width: 250,
  decoration: BoxDecoration(
      color: Colors.blue, borderRadius: BorderRadius.circular(20)),
  child: FlatButton(
```

```
            onPressed: () {},
            child: Text( 'Login',
              style: TextStyle(color: Colors.white, fontSize: 25),
            ),
          ),
        ),
        Text('New User? Create Account')
      ],
    ),
  ),
 );
 }
}
```

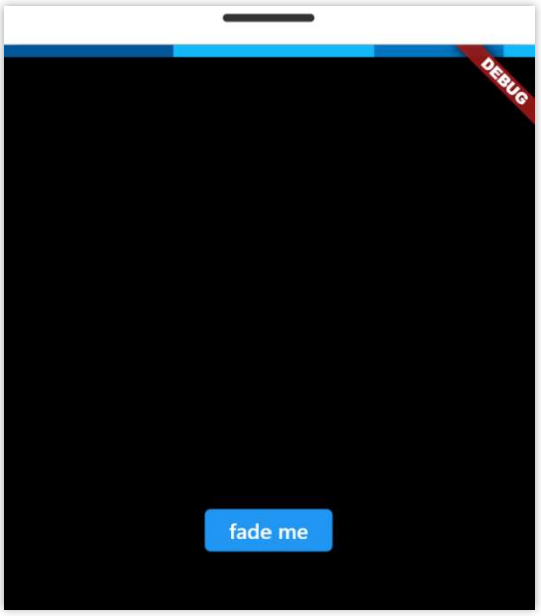


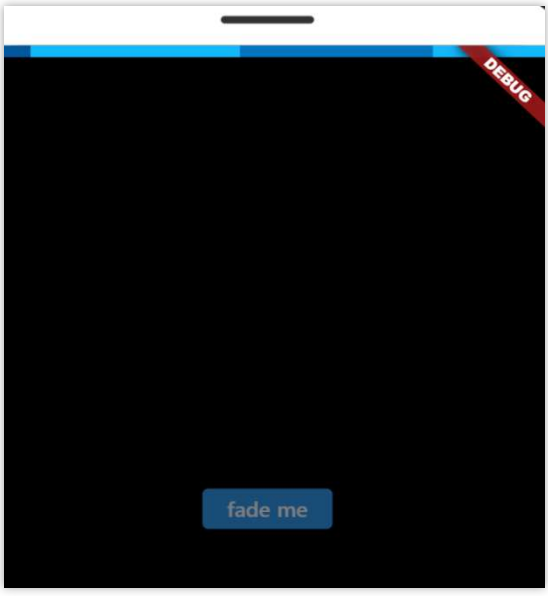
Q15. Write a program to display Animation in flutter App.

Code:

```
import 'package:flutter/material.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 Animation',
      home: ButtonFade(),
    );}}
class ButtonFade extends StatefulWidget {
  @override
  createState() => ButtonFadeState();
}
class ButtonFadeState extends State<ButtonFade> {
  double opacityLevel = 1.0;
  @override
  Widget build(BuildContext context) {
    return Column(
```

OUTPUT:





```
      mainAxisAlignment: MainAxisAlignment.center,
      children: [
        AnimatedOpacity(
          opacity: opacityLevel,
          duration: Duration(seconds: 10),
          child: ElevatedButton(
            child: Text('fade me'),
            onPressed: () {
    setState(() => opacityLevel = opacityLevel == 0 ? 1.0 : 0.0);
            },
          ),
        ),
      ],
    );
  }
}
```