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Class:- D15B Roll No:- 41

Experiment No :- 2

AIM:-To design Flutter UI by including common widgets.

THEORY :-

1.Container:

Purpose: The Container widget is a versatile box model that allows you to create a box with customizable properties.
Usage: It's commonly used for layout and styling purposes, providing options for setting the background color, padding, margin, alignment, and more.
Example: You might use a Container to create a section of your UI with a specific background color and padding to maintain separation.

2.Text:

Purpose: The Text widget is used to display a piece of text with various styling options.
Usage: You can customize the font size, weight, color, and other text-related properties. It's fundamental for displaying textual information in your app.
Example: You might use a Text widget to display a welcome message or any dynamic textual content.

3.Card:

Purpose: The Card widget is part of the material design and is used to group related information together in a visually appealing way.
Usage: It often wraps other widgets and provides a consistent look for grouped elements. Commonly used in lists or as standalone elements in a UI.
Example: You might use a Card to display detailed information about a specific item in your app.

4.ListTile:

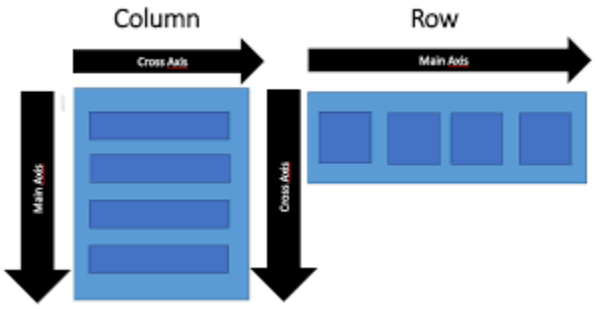
Purpose: ListTile is a convenient widget for displaying a single fixed-height row in a list.
Usage: It usually contains text and an optional icon, making it easy to represent a piece of information in a list format. It also supports tap interactions.
Example: You might use a ListTile to represent an item in a settings list, with an icon indicating the type of setting and text describing it.

5.Buttons:

Purpose: Flutter provides different button widgets like ElevatedButton, TextButton, and OutlinedButton for various styles of buttons.
Usage: Buttons are essential for user interactions. They can trigger actions, navigate between screens, or submit forms. They are customizable in terms of appearance and behavior.
Example: You might use an ElevatedButton to submit a form, a TextButton for a simple action, and an OutlinedButton for a less prominent action.

6.Row & Column:

Purpose: Row and Column are layout widgets used for arranging child widgets horizontally (Row) or vertically (Column).
Usage: They help structure the UI by organizing elements side by side or one below the other. Children of Rows and Columns can have different sizes and proportions.
Example: You might use a Row to place an icon and text next to each other horizontally or a Column to stack multiple widgets vertically, creating a list-like structure.



7.Scaffold:

Purpose: The Scaffold widget is a basic structural element in a Flutter app. It provides a visual structure and defines the basic material design visual layout structure of the app.
Usage: It typically contains the major visual elements of the app, such as the AppBar, Body, Drawer, BottomNavigationBar, and more. It acts as a canvas for the entire screen.
Example: A Scaffold might be used to structure the main screen of an app, with an AppBar at the top, a main content Body, and potentially a BottomNavigationBar for navigation.

8.AppBar:

Purpose: The AppBar is a specialized widget used for displaying a material design app bar at the top of the screen.
Usage: It often contains elements like a title, leading and trailing widgets, and actions. The AppBar provides a consistent navigation and branding area for the app.

Example: You might use an AppBar to display the title of the current screen, along with buttons for navigation, actions, or settings. It's a fundamental part of the app's navigation and user experience.

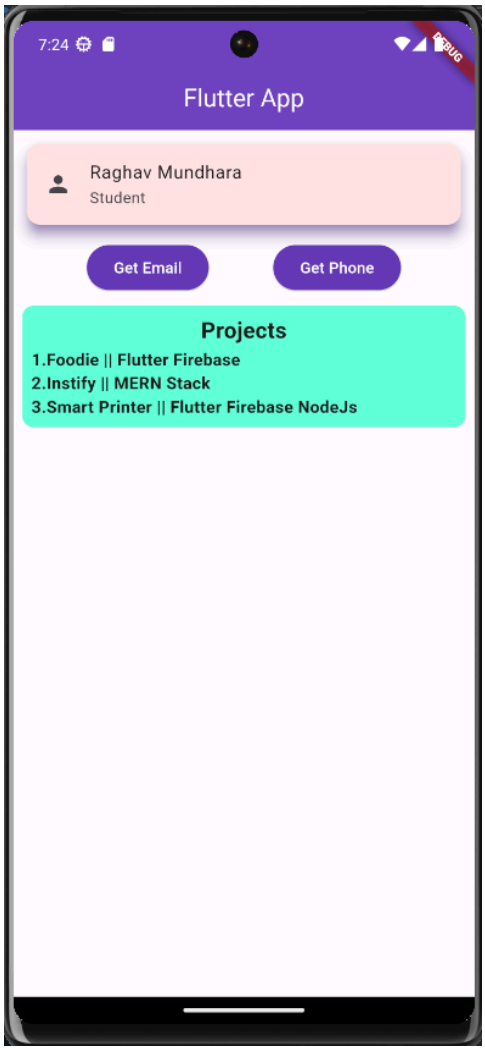
CODE & OUTPUT :-

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

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

class MyApp extends StatelessWidget {
  const MyApp({super.key});
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Demo',
      theme: ThemeData(
        colorScheme: ColorScheme.fromSeed(seedColor: Colors.deepPurple),
        useMaterial3: true,
      ),
      home: const MyHomePage(),
    );
  }
}

class MyHomePage extends StatefulWidget {
  const MyHomePage({super.key});

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

class _MyHomePageState extends State<MyHomePage> {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: const Text('Flutter App',
          style: TextStyle(
```

```
      color: Colors.white,
    ),
  ),
  backgroundColor: Theme.of(context).colorScheme.primary,
  centerTitle: true,
),
body:  Padding(
  padding: const EdgeInsets.all(8.0),
  child: Center(
    child: Column(
      children: [
        const Card(
          shadowColor: Colors.deepPurple,
          elevation: 10,
          surfaceTintColor: Colors.deepOrange,
          child: Column(
            children: [
              ListTile(
                leading: Icon(Icons.person),
                title: Text('Raghav Mundhara'),
                subtitle: Text('Student'),
              ),
            ],
          )
        ),
        const SizedBox(
          height: 10,
        ),
        Row(
          mainAxisAlignment: MainAxisAlignment.spaceEvenly,
          children: [
            ElevatedButton(
              style: ElevatedButton.styleFrom(
                backgroundColor: Colors.deepPurple,
                foregroundColor: Colors.white,
              ),
              onPressed: () {
                ScaffoldMessenger.of(context).showSnackBar(
                  const SnackBar(
                    shape: StadiumBorder(),
                    padding: EdgeInsets.all(16),
                    content: Text('Email: 2021.raghav.mundhara@ves.ac.in')
                  ),
                );
```

```
      },
      child: const Text('Get Email'),
    ),
    ElevatedButton(
      style: ElevatedButton.styleFrom(
        backgroundColor: Colors.deepPurple,
        foregroundColor: Colors.white,
      ),
      onPressed: () {
        ScaffoldMessenger.of(context).showSnackBar(
          const SnackBar(
            shape: StadiumBorder(),
            padding: EdgeInsets.all(16),
            content: Text('Phone Number: 1234567890')
          ),
        );
      },
      child: const Text('Get Phone'),
    ),
  ],
),
const SizedBox(
  height: 10,
),
Container(
  decoration: BoxDecoration(
    color: Colors.tealAccent,
    borderRadius: BorderRadius.circular(10),
  ),
  child: const Padding(
    padding: EdgeInsets.all(8.0),
    child: Column(
      crossAxisAlignment: CrossAxisAlignment.start,
      children: [
        Align(
          alignment: Alignment.center,
          child: Text('Projects',
            style: TextStyle(
              fontSize: 20,
              fontWeight: FontWeight.bold,
            ),
          ),
        ),
        Text('1.Foodie || Flutter Firebase',
```

```
                  style: TextStyle(
                    fontSize: 15,
                    fontWeight: FontWeight.bold,
                  ),
                ),
                Text('2.Instify || MERN Stack',
                  style: TextStyle(
                    fontSize: 15,
                    fontWeight: FontWeight.bold,
                  )
                ),
                Text('3.Smart Printer || Flutter Firebase NodeJs',
                  style: TextStyle(
                    fontSize: 15,
                    fontWeight: FontWeight.bold,
                  )
                ),
              ],
            ),
          ),
        )
      ]
    ),
  ),
),
);
}
}
```


7:24
DEBUG
Flutter App
Raghav Mundhara
Student
Get Email
Get Phone
Projects
1.Foodie || Flutter Firebase
2.Instify || MERN Stack
3.Smart Printer || Flutter Firebase NodeJs


7:26
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Email: 2021.raghav.mundhara@ves.ac.in

CONCLUSION:-In this experiment , we have successfully built and simple application using basic widgets like Container , Row , Column , SizedBox , Text , ElevatedButton , Card , Divider & ListTile & used their properties.