

MPL EXPERIMENT 2

NAME-Bhagyesh Patil

CLASS-D15A

ROLL NO-35

AIM: To design Flutter UI by including common widgets

1,Introduction

Flutter is an open-source UI framework by Google that enables developers to build cross-platform applications with a single codebase. The UI in Flutter is built using widgets, which are the fundamental building blocks of the application. Widgets in Flutter can be classified into various categories, such as structural widgets, layout widgets, interactive widgets, and styling widgets. These widgets help in designing complex UI components efficiently and responsively.

2.Types of widgets

1. StatefulWidget

These widgets have mutable state that can change during the lifetime of the widget. The `SplashScreen` class is a `StatefulWidget` because its state (like the transition to the next screen) changes over time.

- **SplashScreen:** The main widget of the splash screen that transitions to the main screen after a delay.

2. Scaffold

A structural widget that provides the basic structure for the screen, including the app bar, body, and other elements.

- **Scaffold:** The root structure of the screen with a background color and a child widget.

3. Center

A layout widget that centers its child widget within itself.

- **Center:** Centers the child (the image in this case) within the available space.

4. Image

A widget used to display an image.

- **Image.asset:** Displays an image from the assets directory. This is used to show the splash screen image.

5. Navigator

A navigation widget that manages a stack of pages and provides methods to navigate between them.

- **Navigator.pushReplacement:** Used to navigate to the `MainScreen` after a delay, replacing the current splash screen.

3. Interactive Widget

- **ElevatedButton:** A button that raises when pressed, used for primary actions.
- **TextButton:** A flat button that displays text and responds to taps.
- **IconButton:** A button that displays an icon and triggers actions on tap.
- **GestureDetector:** A widget that detects gestures like taps, long presses, and swipes.
- **TextField:** A widget for accepting user text input, often used in forms.
- **Switch:** A toggle widget that switches between two states, like on/off.
- **Slider:** A widget for selecting a value from a range by dragging a thumb.
- **Checkbox:** A widget for selecting or deselecting an option with a checkmark.
- **Radio:** A button group where users can select a single option from multiple choices.
- **InkWell:** A material design widget that adds a ripple effect when tapped.
- **Draggable:** A widget that allows users to drag and move elements around the screen.
- **Form:** A container widget for managing and validating form fields.
- **CupertinoSwitch:** An iOS-style switch widget for toggling values.
- **ListView:** A scrollable list of items, often with interactive elements.
- **DropDownButton:** A widget that displays a dropdown list for selecting an option.

4. Styling & Display Widgets

These widgets help in styling and displaying content.

- **Text:** Displays text content.
- **Image:** Displays an image from assets or a URL.
- **Icon:** Displays an icon from Material or custom icons.
- **Card:** A box with elevation and rounded corners for content display.
- **Chip:** A small, compact element that represents information.

5. Scrolling & List Widgets

These widgets handle large lists and scrolling content.

- **ListView:** Displays a scrollable list of items.
- **GridView:** Displays items in a grid format.
- **SingleChildScrollView:** Makes a child widget scrollable.
- **PageView:** Creates swipeable pages.

❖ Code:-

Homepage.dart

```
import 'package:carousel_slider/carousel_slider.dart';

import 'package:flutter/material.dart';

import 'package:rapido_app_clone/screen/search_screen.dart';

import 'package:rapido_app_clone/utils/custom_text_style.dart';

import 'package:rapido_app_clone/widgets/myExploreCard.dart';

import 'package:rapido_app_clone/widgets/my_save_more_card.dart';

class HomeScreen extends StatefulWidget {

  const HomeScreen({super.key});

  @override

  State<HomeScreen> createState() => _HomeScreenState();

}

class _HomeScreenState extends State<HomeScreen> {

  /// here we create list image to shoe auto image slider

  List<Widget> bannerImage = [

    Container(

      height: 50,
```

```
width: double.infinity,

decoration: BoxDecoration(

  borderRadius: BorderRadius.circular(10),

  border: Border.all(width: 1, color: Colors.blue),

  image: const DecorationImage(

    image: AssetImage(

      "assets/image/rapido banner 2.png",

    ),

    fit: BoxFit.cover)),

),

Container(

  height: 50,

  width: double.infinity,

  decoration: BoxDecoration(

    borderRadius: BorderRadius.circular(10),

    border: Border.all(width: 1, color: Colors.blue),

    image: const DecorationImage(

      image: AssetImage(

        "assets/image/rapido banner 3.png",

      ),

      fit: BoxFit.cover)),

),

Container(

  height: 50,

  width: double.infinity,

  decoration: BoxDecoration(

    borderRadius: BorderRadius.circular(10),

    border: Border.all(width: 1, color: Colors.blue),
```

```

        image: const DecorationImage(

          image: AssetImage(

            "assets/image/rapido poster 1.png",

          ),

          fit: BoxFit.cover)),

      ),

    ];

    List<Map<String, dynamic>> data = [

      {"image": "assets/image/parcel.png", "title": "Parcel"},

      {"image": "assets/image/auto.png", "title": "Auto"},

      {"image": "assets/image/cab economy.png", "title": "Cab Economy"},

      {"image": "assets/image/motorbike.png", "title": "Bike"},

      {"image": "assets/image/lite bike.png", "title": "Lite Bike"},

      {"image": "assets/image/cab premium.png", "title": "Cab Premium"}

    ];

    @override

    Widget build(BuildContext context) {

      return Scaffold(

        appBar: AppBar(

          backgroundColor: Colors.white,

          title: InkWell(

            /// when click on search box open search screen

            onTap: () {

              Navigator.push(context,

                MaterialPageRoute(builder: (context) => SearchScreen()));

            },

            child: Container(

              height: 40,

```

```
width: 280,

decoration: BoxDecoration(

  borderRadius: BorderRadius.circular(20),

  color: Colors.black12.withOpacity(0.05)),

child: Padding(

  padding: const EdgeInsets.symmetric(horizontal: 10.0),

  child: Row(

    children: [

      const Icon(Icons.search_rounded),

      const SizedBox(

        width: 10,

      ),

      Hero(

        tag: "anim",

        child: Text(

          "Where are you going?",

          style: myTextStyle20(fontWeight: FontWeight.bold),

        ),

      ),

    ],

  ),

)),

),

),

backgroundColor: Colors.white,

body: SingleChildScrollView(

  child: Column(

    crossAxisAlignment: CrossAxisAlignment.start,
```

```
children: [

  Padding(

    padding: const EdgeInsets.symmetric(horizontal: 10.0),

    child: Row(

      mainAxisAlignment: MainAxisAlignment.spaceBetween,

      children: [

        Text(

          "Explore",

          style: myTextStyle18(fontWeight: FontWeight.bold),

        ),

        /// View All Button , click on onPress bottom Sheet

        TextButton(

          onPressed: () {

            showModalBottomSheet(

              showDragHandle: true,

              context: context,

              builder: (context) {

                return Container(

                  height: 300,

                  width: double.infinity,

                  child: Column(

                    crossAxisAlignment: CrossAxisAlignment.start,

                    children: [

                      Padding(

                        padding: const EdgeInsets.symmetric(

                          horizontal: 10.0),

                        child: Text(
```

```
"All Services ",
style: myTextStyle22(
  fontWeight: FontWeight.bold),
),
),
const SizedBox(
  height: 10,
),
Expanded(
  child: GridView.builder(
    itemCount: data.length,
    gridDelegate:
      const SliverGridDelegateWithFixedCrossAxisCount(
        crossAxisCount: 4),
    itemBuilder: (context, index) {
      /// here we call my explore card
      return InkWell(
        onTap: () {
          Navigator.pop(context);
        },
        child: MyExploreCard(
          imagePath: data[index]['image'],
          title: data[index]['title'],
        ),
      );
    },
  ),
)
```



```
        ],
      ),
    );
  },
);
},
child: Text(
  "View All",
  style: myTextStyle15(
    textColor: Colors.blueAccent,
    fontWeight: FontWeight.bold),
  ))
],
),
),

/// Here we show Rapido servie
/// Create custom Card ExploreCard
/// Here we call
Padding(
  padding: const EdgeInsets.symmetric(horizontal: 10.0),
  child: Row(
    mainAxisAlignment: MainAxisAlignment.spaceBetween,
    children: [
      MyExploreCard(
        imagePath: "assets/image/parcel.png",
        title: "Parcel",
      ),
```

```
MyExploreCard(  
  imagePath: "assets/image/auto.png",  
  title: "Auto",  
),  
MyExploreCard(  
  imagePath: "assets/image/cab economy.png",  
  title: "Cab Economy",  
),  
MyExploreCard(  
  imagePath: "assets/image/motorbike.png",  
  title: "Bike",  
),  
],  
),  
),  
const SizedBox(  
  height: 20,  
),  
  
/// here we show auto image slider for banner showing  
  
Padding(  
  padding: const EdgeInsets.all(8.0),  
  child: CarouselSlider(  
    items: bannerImage,  
    options: CarouselOptions(  
      height: 100,  
      aspectRatio: 16 / 3,
```

```
        viewportFraction: 1,

        initialPage: 0,

        enableInfiniteScroll: true,

        reverse: true,

        autoPlay: true,

        autoPlayInterval: const Duration(seconds: 3),

        autoPlayAnimationDuration:

            const Duration(milliseconds: 900),

        autoPlayCurve: Curves.fastOutSlowIn,

        enlargeCenterPage: true,

        enlargeFactor: 0.3,

        scrollDirection: Axis.horizontal,

    )),

),

const SizedBox(

    height: 20,

),

/// SAVE MORE WITH RAPIDO

Padding(

    padding: const EdgeInsets.only(left: 10.0),

    child: Text(

        "Save More With Rapido",

        style: myTextStyle20(textColor: Colors.black87),

    ),

),

const SizedBox(
```

```
height: 10,

),

SingleChildScrollView(

  scrollDirection: Axis.horizontal,

  child: Padding(

    padding: const EdgeInsets.symmetric(horizontal: 10.0),

    child: Row(

      children: [

        /// Airport

        MySaveMoreCard(

          title: "Airport",

          imagePath: "assets/image/AirPort-icon.png"),

        const SizedBox(

          width: 15,

        ),

        /// Railway Station

        MySaveMoreCard(

          title: "Railway station",

          imagePath: "assets/image/railway.png"),

        const SizedBox(

          width: 15,

        ),

        /// Bus stand

        MySaveMoreCard(

          title: "Bus Stand",

          imagePath: "assets/image/bus-removebg-preview.png"),
```

```

    ],
  ),
),
),

/// here we show single poster

Padding(
  padding: const EdgeInsets.all(10.0),
  child: Container(
    height: 150,
    decoration: BoxDecoration(
      borderRadius: BorderRadius.circular(15),
      image: const DecorationImage(
        image: AssetImage(
          "assets/image/rapid poster 2.png",
        ),
        fit: BoxFit.cover)),
    ),
  ),
const SizedBox(
  height: 20,
),

/// last background poster show

Stack(children: [
  Image.asset(
    "assets/image/childrens-pattern-600nw-367289369-removebg-preview.png",
    color: Colors.black38,
```

),

Positioned(

left: 0,

top: 200,

child: Container(

color: Colors.white70.withOpacity(0.9),

child: Padding(

padding: const EdgeInsets.symmetric(horizontal: 10.0),

child: Column(

mainAxisAlignment: MainAxisAlignment.start,

crossAxisAlignment: CrossAxisAlignment.start,

children: [

Text(

"#goRapido",

style: myTextStyle40(

fontWeight: FontWeight.bold,

textColor: Colors.black54),

),

Row(

mainAxisAlignment: MainAxisAlignment.start,

children: [

Image.asset(

"assets/icon/india.png",

height: 20,

width: 20,

),

const SizedBox(

width: 5,

```
),  
  
Text(  
  
  "Made For India",  
  
  style: myTextStyle18(),  
  
)  
  
],  
  
),  
  
Row(  
  
  mainAxisAlignment: MainAxisAlignment.start,  
  
  children: [  
  
    Image.asset(  
  
      "assets/icon/love (1).png",  
  
      height: 20,  
  
      width: 20,  
  
    ),  
  
    const SizedBox(  
  
      width: 5,  
  
    ),  
  
    Text(  
  
      "Crafted in Bengaluru",  
  
      style: myTextStyle18(),  
  
    )  
  
  ],  
  
),  
  
],  
  
),  
  
),  
  
))
```

```

    ),
  ],
),
  drawer: Drawer(
    width: double.infinity,
    backgroundColor: Colors.white,
    child: ListView(
      children: [
        DrawerHeader(
          child: Column(
            children: [
              Row(
                children: [
                  IconButton(
                    onPressed: () {
                      Navigator.pop(context);
                    },
                    icon: const Icon(Icons.arrow_back_rounded)),
                  Text(
                    "Menu",
                    style: myTextStyle18(fontWeight: FontWeight.bold),
                  )
                ],
              ),
            ],
          ),
        Container(
          height: 80,
          decoration: BoxDecoration(
            boxShadow: const [

```



```
BoxShadow(  
  color: Colors.black,  
  blurRadius: 1,  
  spreadRadius: 1),  
],  
borderRadius: BorderRadius.circular(10),  
color: Colors.white,  
border: Border.all(width: 1, color: Colors.black26)),  
child: Column(  
  children: [  
    ListTile(  
      leading: Image.asset(  
        "assets/icon/user (2).png",  
        height: 40,  
      ),  
      title: Text(  
        "App Creator",  
        style: myTextStyle15(fontWeight: FontWeight.bold),  
      ),  
      subtitle: Text(  
        "1234567890",  
        style: myTextStyle15(),  
      ),  
      trailing: const Icon(Icons.navigate_next_rounded),  
    )  
  ],  
),  
)
```

```
],  
  
)),  
  
ListTile(  
  
  title: Text(  
  
    "Help",  
  
    style: myTextStyle18(fontWeight: FontWeight.bold),  
  
  ),  
  
  leading: Image.asset(  
  
    "assets/icon/handshake.png",  
  
    height: 30,  
  
  ),  
  
  trailing: const Icon(Icons.navigate_next_outlined),  
  
),  
  
const Divider(),
```

```
ListTile(  
  
  title: Text(  
  
    "Parcel - Send Items",  
  
    style: myTextStyle18(fontWeight: FontWeight.bold),  
  
  ),  
  
  leading: Image.asset(  
  
    "assets/icon/trolley (1).png",  
  
    height: 30,  
  
  ),  
  
  trailing: const Icon(Icons.navigate_next_outlined),  
  
),  
  
const Divider(),
```

```
ListTile(  
  title: Text(  
    "Payment",  
    style: myTextStyle18(fontWeight: FontWeight.bold),  
  ),  
  leading: Image.asset(  
    "assets/icon/credit-card.png",  
    height: 30,  
  ),  
  trailing: const Icon(Icons.navigate_next_outlined),  
,  
  const Divider(),
```

```
ListTile(  
  title: Text(  
    "My Rides",  
    style: myTextStyle18(fontWeight: FontWeight.bold),  
  ),  
  leading: Image.asset(  
    "assets/icon/refresh.png",  
    height: 30,  
  ),  
  trailing: const Icon(Icons.navigate_next_outlined),  
,  
  const Divider(),
```

```
ListTile(  
  title: Text(  
    "Safety",
```

```
        style: myTextStyle18(fontWeight: FontWeight.bold),
      ),
      leading: Image.asset(
        "assets/icon/verified.png",
        height: 30,
      ),
      trailing: const Icon(Icons.navigate_next_outlined),
    ),
    const Divider(),
```

```
ListTile(
  title: Text(
    "Refer and Earn",
    style: myTextStyle18(fontWeight: FontWeight.bold),
  ),
  subtitle: Text(
    "Get 50",
    style: myTextStyle15(),
  ),
  leading: Image.asset(
    "assets/icon/cost.png",
    height: 30,
  ),
  trailing: const Icon(Icons.navigate_next_outlined),
),
const Divider(),
```

```
ListTile(
```

```
title: Text(  
    "My Reward",  
    style: myTextStyle18(fontWeight: FontWeight.bold),  
),  
leading: Image.asset(  
    "assets/icon/medal.png",  
    height: 30,  
),  
trailing: const Icon(Icons.navigate_next_outlined),  
),  
const Divider(),
```

```
ListTile(  
    title: Text(  
        "Power Pass",  
        style: myTextStyle18(fontWeight: FontWeight.bold),  
    ),  
    leading: Image.asset(  
        "assets/icon/id-card.png",  
        height: 30,  
    ),  
    trailing: const Icon(Icons.navigate_next_outlined),  
),  
const Divider(),
```

```
ListTile(  
    title: Text(  
        "Rapido Coin",  
        style: myTextStyle18(fontWeight: FontWeight.bold),
```

```
),  
  
leading: Image.asset(  
  
  "assets/icon/dollar.png",  
  
  height: 30,  
  
),  
  
trailing: const Icon(Icons.navigate_next_outlined),  
  
),  
  
const Divider(),  
  
ListTile(  
  
  title: Text(  
  
    "Notifications",  
  
    style: myTextStyle18(fontWeight: FontWeight.bold),  
  
  ),  
  
  leading: Image.asset(  
  
    "assets/icon/notification.png",  
  
    height: 30,  
  
  ),  
  
  trailing: const Icon(Icons.navigate_next_outlined),  
  
),  
  
const Divider(),  
  
ListTile(  
  
  title: Text(  
  
    "Claims",  
  
    style: myTextStyle18(fontWeight: FontWeight.bold),  
  
  ),  
  
  leading: Image.asset(  
  
    "assets/icon/security.png",  
  
    height: 30,
```

```
),  
  
trailing: const Icon(Icons.navigate_next_outlined),  
  
),  
  
const Divider(),
```

```
ListTile(  
  
  title: Text(  
  
    "Setting",  
  
    style: myTextStyle18(fontWeight: FontWeight.bold),  
  
  ),  
  
  leading: Image.asset(  
  
    "assets/icon/setting.png",  
  
    height: 30,  
  
  ),  
  
  trailing: const Icon(Icons.navigate_next_outlined),  
  
),  
  
const Divider(),
```

```
Padding(  
  
  padding: const EdgeInsets.all(8.0),  
  
  child: Container(  
  
    height: 100,  
  
    decoration: BoxDecoration(  
  
      color: const Color(0x66ffcc75),  
  
      borderRadius: BorderRadius.circular(16)),  
  
    child: Row(  
  
      mainAxisAlignment: MainAxisAlignment.spaceBetween,  
  
      children: [
```

```
Padding(
  padding: const EdgeInsets.only(left: 8.0),
  child: Column(
    mainAxisAlignment: MainAxisAlignment.center,
    crossAxisAlignment: CrossAxisAlignment.start,
    children: [
      Text(
        "Earn money with Rapido",
        style: myTextStyle15(fontWeight: FontWeight.bold),
      ),
      Text(
        "Become a Captain!",
        style: myTextStyle15(),
      ),
    ],
  ),
),

  image: AssetImage("assets/image/Rapido_boy.png"),
  fit: BoxFit.cover)),
),
),
),
)
```


❖ Output :-

