Experiment-2

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Aim:
To design Flutter UI by including common widgets.

Theory:
Flutter follows a widget-based approach where everything in the UI is a widget. Widgets can be classified into two main types:

- **Stateless Widgets:** Do not change their state once built (e.g., Text, Container).
- **Stateful Widgets:** Can update dynamically based on user interaction (e.g., TextField, Checkbox).

Commonly Used Widgets in Flutter

(a) Scaffold Widget

The `Scaffold` widget provides the basic structure for a Flutter app, including an `AppBar`, `Drawer`, `FloatingActionButton`, and `BottomNavigationBar`. It is a fundamental widget used to create a standard screen layout in Flutter.

(b) Container Widget

A `Container` is a box model widget that can hold other widgets. It is commonly used for adding padding, margins, borders, and background decorations.

(c) Row and Column Widgets

- **Row:** Arranges widgets horizontally.
- **Column:** Arranges widgets vertically.
  These two widgets are fundamental for designing layouts in Flutter.

(d) ListView Widget

The `ListView` widget is used for displaying a scrollable list of items. It is useful for showing large amounts of data dynamically.

(e) Stack Widget

The `Stack` widget is used to place widgets on top of each other. This is useful for creating overlapping UI elements such as banners, profile images, or layered designs.

(f) ElevatedButton Widget

The `ElevatedButton` widget is used for clickable buttons with a raised effect. It is a commonly used button in Flutter applications.

(g) TextField Widget

The `TextField` widget is used to take user input, such as entering a name, email, or password. It is commonly used in forms and authentication screens.

Home Page

This home page is designed using Flutter and consists of various widgets to create an

engaging UI for a movie app called **FilmyFun**.

Widgets Used:

1. **Scaffold Widget** – Provides the basic structure of the app.
2. **Container Widget** – Used for layout styling and decorations.
3. **Row & Column Widgets** – Organize UI elements horizontally and vertically.
4. **Text Widget** – Displays textual content.
5. **Image.asset Widget** – Loads images from local assets.
6. **CarouselSlider Widget** – Implements an image slider for featured movie posters.
7. **ListView Widget** – Displays a scrollable list of trending movies.
8. **Stack Widget** – Used for overlaying text and effects on movie images.

UI Features:

1. Header Section:

- Displays a welcome message: *"Hello, Manorath"*.
- Includes a wave emoji icon and a user profile picture.

2. App Title:

- The app name is displayed in a stylish way:
    - "Filmy" (White text)
    - "Fun" (Golden yellow text)

3. Carousel Image Slider:

- Showcases featured movie posters in a **carousel slider**.

- Users can swipe through movie images.

4. Trending Movies Section:

- Displays popular movies in a horizontal scrollable **ListView**.
- Each movie has:
    - A movie poster.
    - A title (e.g., *Infinity Wars*).
    - A genre (e.g., *Action, Adventure*).
    - A semi-transparent overlay for better readability.

Color Scheme:

- **Background:** Black for a cinematic feel.
- **Text Colors:** White and golden yellow for contrast.
- **Overlay Effects:** Black with transparency for better readability.

home.dart
Code:

```
import
'package:carousel_slider/carousel_slider.dar
t';

import 'package:flutter/material.dart';

class home extends StatefulWidget {

const home({super.key});

@override

State<home> createState() =>
_homeState();

}

class _homeState extends State<home> {
```

```dart
final List<String>imageUrls = [

"images/infinity.jpg",

"images/salman.jpg",

"images/shahrukhmovies.png",

];

@override

Widget build(BuildContext context) {

return Scaffold(

backgroundColor: Colors.black,

body: Container(

margin: EdgeInsets.only(top: 40.0,left:
20.0),

child: Column(

crossAxisAlignment:
CrossAxisAlignment.start,

children: [

Row(children: [

Image.asset("images/wave.png", height: 40,
width: 40, fit: BoxFit.cover,),

SizedBox(width: 10.0,),

Text("Hello, Manorath",

style: TextStyle(

color: Colors.white,

fontSize: 22.0,

fontWeight: FontWeight.bold),

),

Spacer(),

Padding(

padding: const EdgeInsets.only(right: 20.0),

child: ClipRRect(

borderRadius: BorderRadius.circular(60),

child: Image.asset(

"images/Screenshot (55).png",

height: 60,

width: 60,

fit: BoxFit.cover,),

),

)

],

),

SizedBox(height: 10.0),

Text("Welcome To",

style: TextStyle(

color: Color.fromARGB(186, 255, 255, 255),

fontSize: 19.0,

fontWeight: FontWeight.bold),),

Row(children: [

Text("Filmy",

style: TextStyle(

color: Colors.white,
```

```dart
fontSize: 36.0,

fontWeight: FontWeight.bold),),

Text("Fun",

style: TextStyle(

color: Color(0xffedb41d),

fontSize: 36.0,

fontWeight: FontWeight.bold),)

],

),

SizedBox(height: 20.0,),

Center(child:

CarouselSlider(

items: imageUrls.map((url) {

return Builder(builder: (context) {

return Container(

width: MediaQuery.of(context).size.width, // Fixed incorrect comma

child: ClipRRect(

borderRadius: BorderRadius.circular(10),

child: Image.asset(url, fit: BoxFit.cover),

),

);

});

}).toList(), options: CarouselOptions(

height: 250,

autoPlay: false,

enlargeCenterPage: true,

aspectRatio: 16/9,

viewportFraction: 1.0

),// Fixed missing .toList()

)

),

SizedBox(height: 25.0,),

Text("Top Trending Movies",

style: TextStyle(

color: Colors.white,

fontSize: 24.0,

fontWeight: FontWeight.bold),),

SizedBox(height: 20.0,),

Container(

height: 250,

child: ListView(

scrollDirection: Axis.horizontal,

children: [

Container(

decoration: BoxDecoration(border: Border.all(color: Colors.white),borderRadius: BorderRadius.circular(20)),

child: Stack(

children: [
```

```
ClipRRect(

borderRadius: BorderRadius.circular(20),

child: Image.asset("images/infinity.jpg",

height: 220,

width: 180,

fit: BoxFit.cover,

),

),

Container(

padding: EdgeInsets.only(left: 10.0),

margin: EdgeInsets.only(top: 180),

height: 220,

width: 180,

decoration:

BoxDecoration(color:

Colors.black45,

borderRadius:

BorderRadius.only(

bottomRight: Radius.circular(20),

bottomLeft: Radius.circular(20))),

child: Column(

crossAxisAlignment:
CrossAxisAlignment.start,

children: [

Text("Infinity Wars", style: TextStyle(color:
Colors.white, fontSize: 25.0, fontWeight:
FontWeight.bold),),

Text("Action, Adventure", style:
TextStyle(color: Color.fromARGB(173, 255,
255, 255), fontSize: 16.0, fontWeight:
FontWeight.bold),),

],

),

),

],

),

),

SizedBox(width: 20.0),

Container(

decoration: BoxDecoration(border:
Border.all(color:
Colors.white),borderRadius:
BorderRadius.circular(20)),

child: Stack(

children: [

ClipRRect(

borderRadius: BorderRadius.circular(20),

child: Image.asset("images/pushpa.jpg",

height: 220,

width: 180,

fit: BoxFit.cover,

),
```

```dart
        ),
        Container(
          padding: EdgeInsets.only(left: 10.0),
          margin: EdgeInsets.only(top: 180),
          height: 220,
          width: 180,
          decoration:
          BoxDecoration(color:
          Colors.black45,
          borderRadius:
          BorderRadius.only(
          bottomRight: Radius.circular(20),
          bottomLeft: Radius.circular(20))),
          child: Column(
          crossAxisAlignment:
          CrossAxisAlignment.start,
          children: [
          Text("Pushpa 2", style: TextStyle(color:
          Colors.white, fontSize: 25.0, fontWeight:
          FontWeight.bold),),
          Text("Action, Thriller,", style: TextStyle(color:
          Color.fromARGB(173, 255, 255, 255),
          fontSize: 16.0, fontWeight:
          FontWeight.bold),),
          ],
          ),
        ),
      ],
    ),
  ),
  SizedBox(width: 20.0),
  Container(
    decoration: BoxDecoration(border:
    Border.all(color:
    Colors.white),borderRadius:
    BorderRadius.circular(20)),
    child: Stack(
    children: [
    ClipRRect(
    borderRadius: BorderRadius.circular(20),
    child: Image.asset("images/salman.jpg",
    height: 220,
    width: 180,
    fit: BoxFit.cover,
    ),
    ),
    Container(
      padding: EdgeInsets.only(left: 10.0),
      margin: EdgeInsets.only(top: 180),
      height: 220,
      width: 180,
      decoration:
      BoxDecoration(color:
```

```
Colors.black45,

borderRadius:

BorderRadius.only(

bottomRight: Radius.circular(20),

bottomLeft: Radius.circular(20))),

child: Column(

crossAxisAlignment:
CrossAxisAlignment.start,

children: [

Text("Pushpa 2", style: TextStyle(color:
Colors.white, fontSize: 25.0, fontWeight:
FontWeight.bold),),

Text("Action, Thriller,", style: TextStyle(color:
Color.fromARGB(173, 255, 255, 255),
fontSize: 16.0, fontWeight:
FontWeight.bold),),

],

),

),

],

),

)

],

),

)

]),

));
```

```
}

}
```