Experiment 2

Aim: To design Flutter UI by including common widgets.

Theory:
Flutter uses a widget-based architecture where everything in the UI is a widget — from layout structures to buttons and text. Commonly used widgets include:

- Text: Displays a string of text.
- Container: A box model widget used for layout and styling.
- Row and Column: For horizontal and vertical alignment of child widgets.
- Scaffold: Provides a basic visual layout structure (app bar, body, etc.).
- AppBar: Top navigation bar.
- ElevatedButton, TextButton, IconButton: Various interactive button widgets.
- Image: Displays images from assets or the network.

Code:

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

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

class FoodDeliveryApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Food Delivery UI',
      debugShowCheckedModeBanner: false,
      theme: ThemeData.dark(),
```

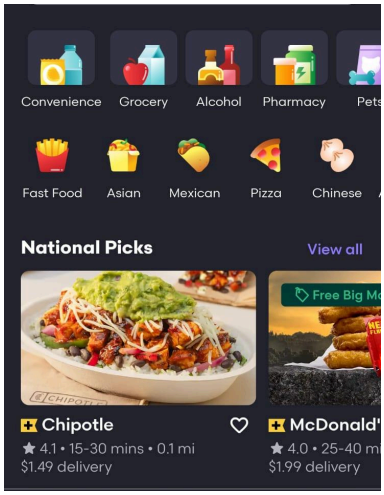
```
      home: HomePage(),
    );
  }
}

class HomePage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: Text('Food Delivery'),
        actions: [
          Icon(Icons.shopping_cart),
          SizedBox(width: 16),
        ],
      ),
      body: ListView(
        padding: EdgeInsets.all(16),
        children: [
          TextField(
            decoration: InputDecoration(
              hintText: 'Search for food...',
              prefixIcon: Icon(Icons.search),
              border: OutlineInputBorder(
                borderRadius: BorderRadius.circular(12),
              ),
              filled: true,
              fillColor: Colors.grey[800],
            ),
          ),
          SizedBox(height: 20),
```

```
        Text('Categories', style: Theme.of(context).textTheme.headline6),
        SizedBox(height: 10),
        GridView.count(
          shrinkWrap: true,
          physics: NeverScrollableScrollPhysics(),
          crossAxisCount: 4,
          childAspectRatio: 1,
          mainAxisSpacing: 10,
          crossAxisSpacing: 10,
          children: List.generate(8, (index) {
            return Column(
              children: [
                CircleAvatar(
                  backgroundColor: Colors.orangeAccent,
                  child: Icon(Icons.fastfood, color: Colors.white),
                ),
                SizedBox(height: 4),
                Text('Food', style: TextStyle(fontSize: 12)),
              ],
            );
          }),
        ),
        SizedBox(height: 20),
        Text('Popular Restaurants', style:
Theme.of(context).textTheme.headline6),
        SizedBox(height: 10),
        Container(
          height: 180,
          child: ListView.builder(
            scrollDirection: Axis.horizontal,
            itemCount: 5,
```

```
            itemBuilder: (context, index) => Card(
              color: Colors.grey[850],
              child: Container(
                width: 150,
                padding: EdgeInsets.all(8),
                child: Column(
                  crossAxisAlignment: CrossAxisAlignment.start,
                  children: [
                    Container(height: 80, color: Colors.grey),
                    SizedBox(height: 8),
                    Text('Restaurant ${index + 1}', style: TextStyle(fontWeight:
FontWeight.bold)),
                    Text('⭐ 4.${index + 1} · 20-30 min'),
                  ],
                ),
              ),
            ),
          ),
        ),
      ],
    ),
    bottomNavigationBar: BottomNavigationBar(
      backgroundColor: Colors.black,
      selectedItemColor: Colors.orange,
      unselectedItemColor: Colors.white,
      items: [
        BottomNavigationBarItem(icon: Icon(Icons.home), label: 'Home'),
        BottomNavigationBarItem(icon: Icon(Icons.local_offer), label: 'Offers'),
        BottomNavigationBarItem(icon: Icon(Icons.receipt), label: 'Orders'),
        BottomNavigationBarItem(icon: Icon(Icons.person), label: 'Account'),
      ],
```

```
        ),
      );
    }
  }
```

Output:



Conclusion: The experiment demonstrated the use of common Flutter widgets to design a basic user interface. By composing widgets like Text, Container, Row, Column, and ElevatedButton, a functional and visually structured UI was created. This experiment highlights the flexibility and modularity of Flutter's widget-based system, forming the foundation for building more complex UIs.