MAD & PWA Lab Journal

Experiment No.	02
Experiment Title.	To design Flutter UI by including common widgets
Roll No.	50
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Class	D15A
Subject	MAD & PWA Lab
Lab Outcome	LO1: Understand cross platform mobile application development using Flutter framework
Grade:	

Common Widgets:

- **Scaffold:** Provides a basic screen structure with AppBar, Body,BottomNavigationBar.
- **AppBar:** Displays the page title and action buttons.
- **BottomNavigationBar:** Adds a navigation bar at the bottom.
- **SingleChildScrollView:** Allows scrolling when content overflows the screen.
- **Column:** Arranges widgets vertically.
- **Row:** Arranges widgets horizontally.
- **Center :**Centers content on the screen.
- **Padding :**Adds space around widgets.
- **SizedBox :**Adds empty space between widgets.
- **Container :**Used for styling elements (e.g., cards, backgrounds).
- **Form :**Wraps input fields to enable validation.
- **GlobalKey<FormState> :**Manages form state for validation.
- **TextFormField :**Input fields for email and password.
- **InputDecoration :**Adds styling like icons, labels, and borders inside TextFormField.
- **ElevatedButton :**For the Log in button.
- **TextButton :**For Forgot Password and Sign Up links.
- **GestureDetector :**Used to make tappable areas**.**
- **Text :** Displays plain text (e.g., "Questions", "The questions has not asked yet!").
- **Icon :** Displays icons (e.g., Icons.email, Icons.lock, Icons.home).
- **Image.asset :**Displays the Stack Overflow logo from assets.
- **SvgPicture.asset :**Displays an SVG image (useful for logos).
- **BoxDecoration :**Used inside Container for background color, border radius, and shadows.
- **BoxShadow :**Adds shadows to create a floating card effect.
- **Divider :**Adds a horizontal line to separate sections.
- **Navigator.push() :**Navigates from LoginPage to HomePage.
- **MaterialPageRoute :**Defines the transition animation when navigating to a new page.
- **StatefulWidget (if needed):** Used when the UI needs to update dynamically.
- **StatelessWidget:** Used for static pages like login and home screens.

Code:

```dart
import
'package:flutter/material.dart';
class HomePage extends
StatelessWidget {
  @override
  Widget build(BuildContext
context) {
    return Scaffold(
    backgroundColor:
Colors.purple.shade50,
    appBar: AppBar(
    backgroundColor:
Colors.white,
    elevation: 1,
    title: const Text(
        "Questions",
        style:
TextStyle(color: Colors.black,
fontSize: 18, fontWeight:
FontWeight.bold),
    ),
    actions: [
        TextButton(
        onPressed: () {
        // Navigate to the Ask
Question page
        },
        child: const Text(
        "Ask Question",
        style:
TextStyle(color: Colors.purple,
fontWeight: FontWeight.bold),
        ),
        ),
        const SizedBox(width:
10),
    ],
    ),
    body: Center(
    child: Container(
        padding: const
EdgeInsets.all(20),
        margin: const
EdgeInsets.symmetric(horizontal:
24),
        decoration:
BoxDecoration(
        color: Colors.white,
        borderRadius:
BorderRadius.circular(12),
        boxShadow: [
        BoxShadow(
            color:
Colors.black12,
            blurRadius: 10,
            spreadRadius: 2,
        ),
        ],
        ),
        child: const Text(
        "The questions has not
asked yet!",
        style:
TextStyle(fontSize: 16,
fontWeight: FontWeight.bold),
        ),
    ),
    ),
    bottomNavigationBar:
BottomNavigationBar(
    backgroundColor:
Colors.white,
    selectedItemColor:
Colors.orange,
    unselectedItemColor:
Colors.grey,
    showUnselectedLabels: true,
    items: const [
    BottomNavigationBarItem(
        icon:
Icon(Icons.home),
        label: "Home",
        ),
    BottomNavigationBarItem(
        icon:
Icon(Icons.person),
        label: "Profile",
        ),
```

```
                                  ],
BottomNavigationBarItem(          ),
        icon:                     );
Icon(Icons.settings), // Added    }
Settings Icon                     }
        label: "Settings",
        ),
```

Output: