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Batch B

MAD PWA LAB 2

AIM:
To design Flutter UI by including common widgets.

THEORY:
Some common widgets used in Flutter are as follows:
MaterialApp:
Represents the overall structure of a Flutter application, providing settings for the app.

Container:
A box model allowing customization of size, padding, margin, and decoration for its child widget.

Column and Row:
Column: Arranges children vertically.
Row: Arranges children horizontally.

Text:
Displays text with specific styles using the TextStyle class.

Image:
Displays images from various sources, including network URLs or local assets.

ListView:
Displays a scrolling list of widgets, allowing users to scroll through content.

GestureDetector:
Captures user gestures like taps, double taps, and swipes, enabling interactive behavior.

Stack:
Overlaps widgets, allowing them to be positioned on top of each other.

AppBar:
Represents the app bar at the top of the screen, typically containing the app's title and actions.

TextField:
Allows users to input text, providing a UI for text entry.

SYNTAX:
Syntaxes for some of common widgets are as follows:
1.Text
Text(
"Text Content",
style:TextStyle(
//style properties
)
)

2.Container
Container(
//style like
Width: 100,
Height: 100,
child://child widget to which container contains
)

3.TextButton
TextButton(
Event: action,
child: Text('Button placeholder'),
)

WIDGET AND PROPERTIES:
The widgets used in the following code are MaterialApp, Scaffold, Padding, Column, TextField, SizedBox, TextButton, Icon, Text, EdgeInsets.

- Scaffold is used to define the basic visual structure of the screen.
- SizedBox creates a box of a specified height.
- EdgeInsets provide padding between content and the box.

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

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

class MyApp extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
```

```dart
    return MaterialApp(
      theme: ThemeData.dark(),
      home: LoginPage(),
    );
  }
}

class LoginPage extends StatelessWidget {
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      body: Padding(
        padding: const EdgeInsets.all(20.0),
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            Image.asset(
              'assets/Xicon.png', // Replace with your logo image path
              height: 100,
              width: 100,
            ),
            SizedBox(height: 20),
            TextField(
              decoration: InputDecoration(
                labelText: 'Username',
                prefixIcon: Icon(Icons.person),
              ),
            ),
            SizedBox(height: 10),
            TextField(
              decoration: InputDecoration(
                labelText: 'Password',
                prefixIcon: Icon(Icons.lock),
              ),
              obscureText: true,
            ),
            SizedBox(height: 20),
            TextButton(
              onPressed: () {
              },
              child: Text('Sign In'),
            ),
            SizedBox(height: 10),
            Row(
```

```dart
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            Text('Don\'t have an account?'),
            SizedBox(width: 5),
            TextButton(
              onPressed: () {
                // Navigate to the sign-up page (not implemented in this example)
              },
              child: Text('Sign Up'),
            ),
          ],
        ),
        SizedBox(height: 10),
        Text('Or sign in with'),
        SizedBox(height: 10),
        Row(
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            SizedBox(width: 10),
            IconButton(
              icon: FaIcon(FontAwesomeIcons.facebook),
              onPressed: () {
              },
            ),
          ],
        ),
      ],
    ),
  ),
);
  }
}
```
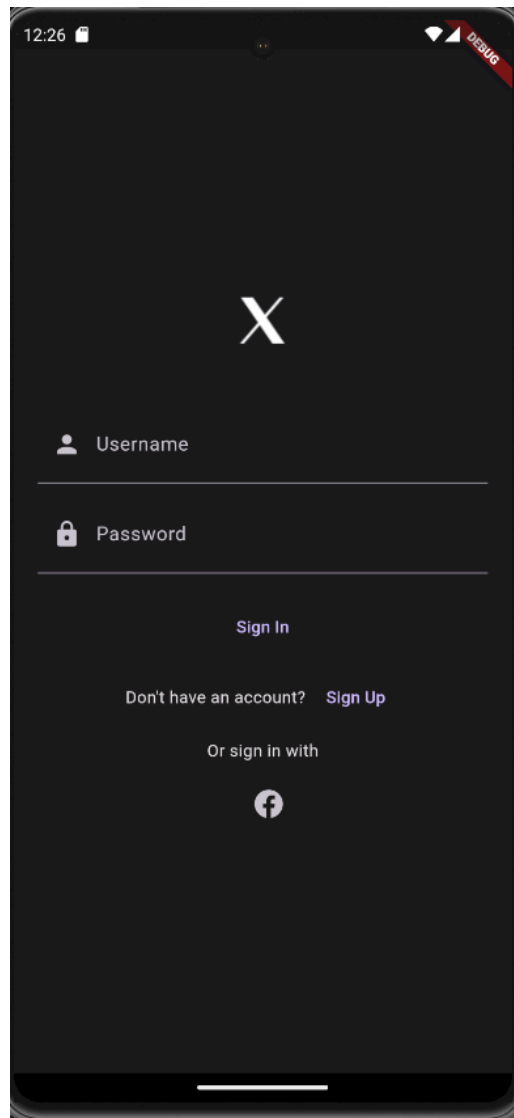
OUTPUT:

CONCLUSION:
Learned about basic widgets used in flutter.
Learned about syntaxes for the same.