MAD Lab 3

Aim: To include icons, images, and fonts in a Flutter app

Theory:

Flutter allows developers to enhance the user interface by incorporating icons, images, and custom fonts seamlessly.

- Icons can be added using Flutter's built-in Icons class, which provides a collection of Material Design icons. These icons can be customized in terms of size, color, and other styling properties.
- For custom icons, developers can use vector graphics formats like SVG or icon fonts such as FontAwesome, by integrating third-party packages like flutter_svg or font_awesome_flutter.
- Images in Flutter can be included from assets, network sources, or the device's file system.
  - To add asset images, developers need to place the image files in the assets directory and declare them in the pubspec.yaml file under the flutter section.
  - Images can then be displayed using the Image.asset widget.
  - Similarly, network images (URLs) can be loaded using the Image.network() widget, making it convenient for dynamic content.

Conclusion:

Flutter provides a seamless way to integrate icons, images, and custom fonts, allowing developers to create visually appealing and dynamic applications. By utilizing built-in and custom icons, asset and network images, and custom fonts, developers can enhance the user experience and maintain a consistent design. Proper asset management and pubspec.yaml configuration ensure smooth implementation, making Flutter a powerful framework for UI-rich applications.

Code:

```dart
import 'package:flutter/material.dart';
void main() {
  runApp(const MyApp());
}
class MyApp extends StatelessWidget {
  const MyApp({Key? key}) : super(key: key);
@override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false,
      title: 'Flutter Demo',
      theme: ThemeData(
        primarySwatch: Colors.blue,
        fontFamily: 'CustomFont', // Applying custom font
      ),
      home: const MyHomePage(),
    );
  }
}
class MyHomePage extends StatelessWidget {
  const MyHomePage({Key? key}) : super(key: key);
  @override
  Widget build(BuildContext context) {
    return Scaffold(
      appBar: AppBar(
        title: const Text('Flutter UI Demo'),
        actions: const [
          Icon(Icons.settings), // Built-in icon
        ],
      ),
      body: Center(
        child: Column(
          mainAxisAlignment: MainAxisAlignment.center,
          children: [
            // Custom Font Text
            const Text(
              'Hello, ALL!',
              style: TextStyle(
                fontSize: 24,
                fontWeight: FontWeight.bold,
                fontFamily: 'CustomFont',
              ),
```

```dart
      ),
      const SizedBox(height: 20),
      // Icon Example
      const Icon(
        Icons.add_circle,
        size: 50,
        color: Colors.blue,
      ),
      const SizedBox(height: 20),
  // Image Example (Using a placeholder direct link)
      Image.network(
        'https://upload.wikimedia.org/wikipedia/commons/a/a9/Example.jpg', // Placeholder
direct image URL
        width: 200,
        errorBuilder: (context, error, stackTrace) {
          return const Text(
            'Image failed to load',
            style: TextStyle(color: Colors.red),
          );
        },
      ),
      const SizedBox(height: 20),
      // Button Example
      ElevatedButton(
        onPressed: () {
          // Perform an action
        },
        child: const Text('Click Me'),
      ),
    ],
   ),
  ),
 );
 }
}
```

Output