Name: Himanshu Menghani EXPT:03 Roll No.37

EXPERIMENT 03

Aim:- To add advanced Flutter UI by including widgets like Image, Fonts, Icons.

Theory:-

Flutter provides robust mechanisms for working with images, fonts, and icons in your app's user interface. Here's a summary of their functionalities and considerations:

Images:

- **Loading and Displaying:** Use the Image widget to load and display images from various sources like assets, network URLs, or files. Adjust properties like fit, alignment, and opacity for customization.
- **Asset Management:** Store images within your app's assets directory (usually under assets/images/). Flutter automatically handles different screen resolutions and densities.
- **Network Images:** Use the Image.network constructor to directly load images from URLs. Ensure proper internet connectivity and consider caching mechanisms for efficiency.
- **Caching and Performance:** Flutter automatically caches downloaded images. For complex scenarios, explore advanced caching libraries like cached_network_image.

Fonts:

- **Using System Fonts:** Access system fonts available on the device using the Text widget's fontFamily property.
- **Custom Fonts:** Include custom fonts in your app's pubspec.yaml file and integrate them using the GoogleFonts package or by loading font files manually.
- **Font Styling:** Control font properties like size, weight, color, and more using the TextStyle class within the Text widget.
- **Text Layouts and Effects:** Flutter offers rich text editing and layout features. Explore properties like textAlign, overflow, and textSpan for advanced text formatting and effects.

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Icons:

- **Material Icons:** Flutter provides built-in access to a vast collection of Material Design icons through the Icons class. Use them with the Icon widget for simple icon display.
- **Custom Icons:** You can create custom vector icons or use icon fonts. Popular packages like flutter_icons and font_awesome_flutter provide diverse icon sets.
- **Icon Styling:** Modify icons' colors, sizes, and other properties directly through the Icon widget's parameters
- **Animations and Interactions:** Integrate icon animations and interactions using gestures, animations, and state management techniques.

Code:

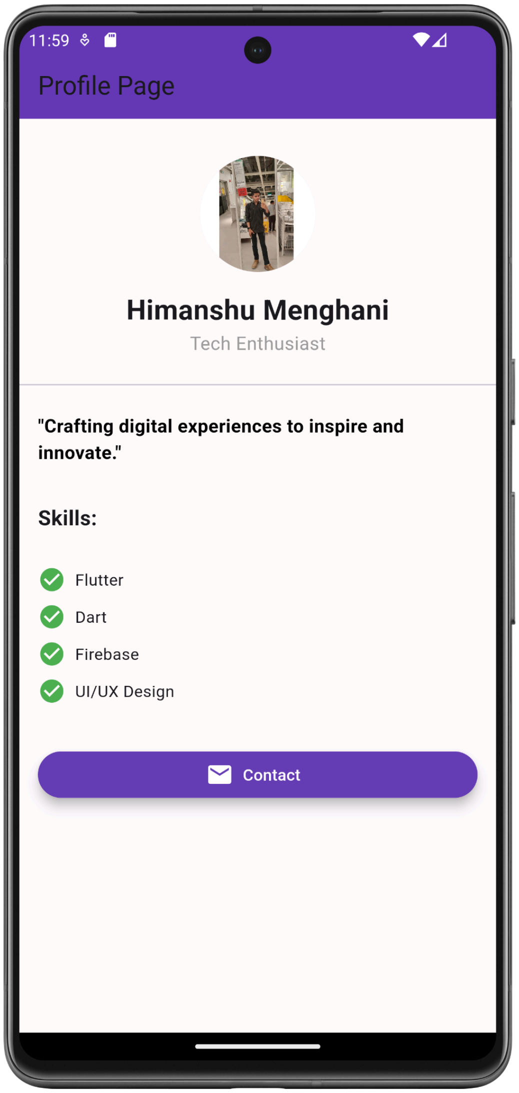
```
import 'package:flutter/material.dart';

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

class MyApp extends StatelessWidget {
 @override
 Widget build(BuildContext context) {
  return MaterialApp(
   debugShowCheckedModeBanner: false,
   home: Scaffold(
    appBar: AppBar(
     title: const Text('Profile Page'),
     backgroundColor: Colors.deepPurple,
    ),
    body: buildProfilePage(),
   ),
  );
 }

 Widget buildProfilePage() {
  return ListView(
   children: [
    Container(
     padding: const EdgeInsets.all(16.0),
     child: Column(
      crossAxisAlignment: CrossAxisAlignment.center,
      children: [
       SizedBox(height: 16.0),
       CircleAvatar(
         radius: 50.0,
         backgroundImage: AssetImage('assets/images/himanshu.jpg'),
       ),
       SizedBox(height: 16.0),
       Text(
         'Himanshu Menghani',
         style: TextStyle(
           fontFamily: 'Rubik',
           fontSize: 24.0,
           fontWeight: FontWeight.bold,
         ),
       ),
       Text(
         'Tech Enthusiast',
         style: TextStyle(
           fontSize: 16.0,
           color: Colors.grey,
         ),
       ),
      ],
     ),
    ),
    Divider(),
    Container(
     padding: const EdgeInsets.all(16.0),
     child: const Text(
      '''Crafting digital experiences to inspire and innovate.''',
      style: TextStyle(
       fontWeight: FontWeight.bold,
       fontSize: 16.0,
       color: Colors.black,
      ),
     ),
    ),
    Container(
     padding: const EdgeInsets.all(16.0),
     child: const Text(
      'Skills:', // Update section title
      style: TextStyle(
       fontSize: 18.0,
       fontWeight: FontWeight.bold,
      ),
     ),
         ),
         SizedBox(height: 8.0),
         buildSkillRow('Flutter'), // Add your skills here
         buildSkillRow('Dart'),
         buildSkillRow('Firebase'),
         buildSkillRow('MongoDB'),
         // Add more skills as needed
         SizedBox(height: 16.0),
         Container(
           padding: const EdgeInsets.all(16.0),
           child: ElevatedButton.icon(
             onPressed: () {
               // Add your action here
             },
             icon: Icon(
               Icons.email,
               color: Colors.white,
             ),
             label: Text(
               'Contact',
               style: TextStyle(
                 color: Colors.white,
               ),
             ),
             style: ButtonStyle(
               backgroundColor: MaterialStateProperty.all(Colors.deepPurple),
               elevation: MaterialStateProperty.all(8.0),
             ),
           ),
         ),
       ],
      );
     }

     Widget buildSkillRow(String skill) {
      return Padding(
       padding: const EdgeInsets.symmetric(horizontal: 16.0, vertical: 4.0),
       child: Row(
         children: [
           Icon(
             Icons.check_circle,
             color: Colors.green,
           ),
           SizedBox(width: 8.0),
           Text(skill),
         ],
       ),
      );
     }
   }
```



Profile Page

Himanshu Menghani

Tech Enthusiast

"Crafting digital experiences to inspire and innovate."

Skills:

- ✓ Flutter
- ✓ Dart
- ✓ Firebase
- ✓ UI/UX Design

Conclusion: We have successfully added advanced Flutter UI by including widgets like Image, Fonts, Icons.