



Experiment	1
Aim	To install Flutter and its dependency. Create an app of your profile including educational qualification, hobby, Technical language known, social media handles etc.
Objective	1. To install flutter. 2. To create basic app for your own profile using UI components of flutter.
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Class	FYMCA
Batch	D
Date of Submission	27-01-2025
Technology used	Visual Studio Code
Task	Part1: Installation of Flutter and its Dependencies Part 2: Create an app of your profile using your creative design.
Code with proper label	// Importing necessary Flutter libraries import 'package:flutter/cupertino.dart'; import 'package:flutter/material.dart'; import 'package:flutter/services.dart'; // Entry point of the application void main() { // Setting the system UI overlay style SystemChrome.setSystemUIOverlayStyle(const SystemUiOverlayStyle(statusBarColor: Colors.transparent, statusBarIconBrightness: Brightness.dark,)); }



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```
runApp(const MyApp()); // Running the app with the MyApp widget as
the root
}

// Root widget of the application
class MyApp extends StatelessWidget {
  const MyApp({super.key});

  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      debugShowCheckedModeBanner: false, // Disabling debug banner
      title: 'Flutter Demo',
      theme: ThemeData(
        primarySwatch: Colors.deepOrange,
      ),
      home: const ProfileScreen(), // Setting ProfileScreen as the home
      widget
    );
  }
}

// Profile screen widget displaying user information
class ProfileScreen extends StatelessWidget {
  const ProfileScreen({Key? key}) : super(key: key);

  @override
  Widget build(BuildContext context) {
```



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```
return Scaffold(  
  body: Padding(  
    padding: const EdgeInsets.all(20),  
    child: Column(  
      children: [  
        const SizedBox(height: 40),  
        CircleAvatar(  
          radius: 70,  
          backgroundImage: AssetImage('assets/images/photo_2024.jpg'),  
        ),  
        const SizedBox(height: 20),  
        // Displaying profile details  
        itemProfile('Name', 'Abhijit Khambekar', CupertinoIcons.person),  
        const SizedBox(height: 10),  
        itemProfile('Phone', '9011593056', CupertinoIcons.phone),  
        const SizedBox(height: 10),  
        itemProfile('Address', 'abc address, xyz city',  
CupertinoIcons.location),  
        const SizedBox(height: 10),  
        itemProfile('Email', 'abhijit.khambekar24@spit.ac.in',  
CupertinoIcons.mail),  
        const SizedBox(height: 20),  
      ],  
    ),  
  );  
}
```



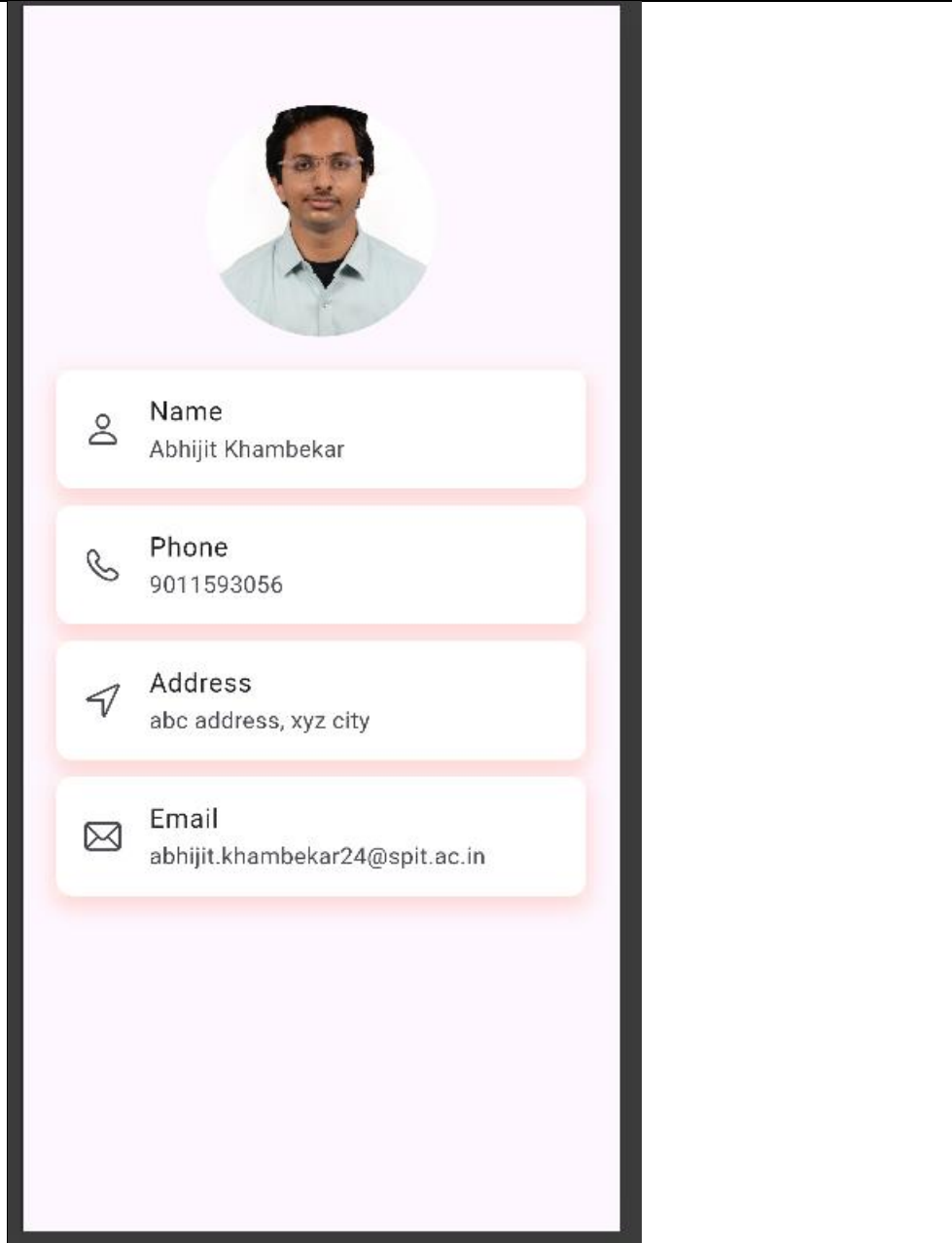
```
// Helper method to create a profile item
Widget itemProfile(String title, String subtitle, IconData iconData) {
  return Container(
    decoration: BoxDecoration(
      color: Colors.white,
      borderRadius: BorderRadius.circular(10),
      boxShadow: [
        BoxShadow(
          offset: Offset(0, 5), // Shadow offset
          color: Colors.deepOrange.withOpacity(.2), // Shadow color with
opacity
          spreadRadius: 2, // How far the shadow spreads
          blurRadius: 10, // Blur radius for the shadow
        )
      ],
    ),
    child: ListTile(
      title: Text(title),
      subtitle: Text(subtitle),
      leading: Icon(iconData),
      tileColor: Colors.white,
    ),
  );
}
```



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Screenshots



**Question and
Answers**

Answer the following Questions:

1. What is flutter? features and benefits of flutter?

Solu: Flutter is an open-source UI software development kit by Google for building natively compiled applications for mobile, web, and desktop from a single codebase. **Features** include a rich widget library, hot reload, and cross-platform compatibility. **Benefits** include fast development, expressive UI, and reduced development costs.



2. What is dart? why should we use dart as the programming language?

Solu: Dart is a programming language optimized for UI development, designed by Google, and used in Flutter. It is fast, supports just-in-time (JIT) for development and ahead-of-time (AOT) compilation for production, and offers features like a clean syntax, type safety, and asynchronous programming for smooth performance.

3. How is the basic program of dart written?

Solu: A basic Dart program starts with the main() function, which is the entry point. For example:

```
void main() { print('Hello, World!'); }
```

4. What do you mean by widgets?

Solu: Widgets are the basic building blocks of a Flutter application, representing the UI components like text, buttons, images, or layouts. They are immutable and describe how the application should look and interact.

5. What do you mean by stateless widgets?

Solu: Stateless widgets are immutable widgets that do not change their state during the app's lifetime. They are used when the UI remains constant, such as displaying static text or icons.

6. What is stateful widgets?

Solu: Stateful widgets are dynamic widgets that maintain mutable state and can rebuild the UI when the state changes. They are used for interactive elements, such as forms, buttons, or animations.

7. what is the structure of files in flutter?

Solu: A typical Flutter project includes:

- **lib/**: Contains Dart code, including main.dart.
- **assets/**: Stores images, fonts, or other resources.
- **pubspec.yaml**: Manages dependencies and configurations.
- **android/** and **ios/**: Native platform code.



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	<ul style="list-style-type: none">• build/: Compiled files. <p>8. Steps for installation of flutter. Give step by step installation. What dependent files are required.</p> <p>Solu:</p> <ol style="list-style-type: none">1. Download Flutter SDK from the official site and extract it.2. Add Flutter to your system PATH.3. Install Android Studio or Visual Studio Code for development.4. Set up Android SDK and device emulators.5. Run flutter doctor to verify the installation.6. Dependencies: Flutter SDK, Dart SDK, Android SDK, Xcode (for iOS). <p>9. Command to start flutter application</p> <p>Solu: flutter create app_name</p> <p>10. Command to run flutter application</p> <p>Solu: flutter run</p> <p>11. Command to sync files with emulator.</p> <p>Solu: 'r' or 'R'</p> <p>12. Command to check the issues in flutter application.</p> <p>Solu: flutter doctor</p>
Conclusion	Learned and Understood the basics of Flutter and created a Basic UI Profile page.