MPL Experiment 1

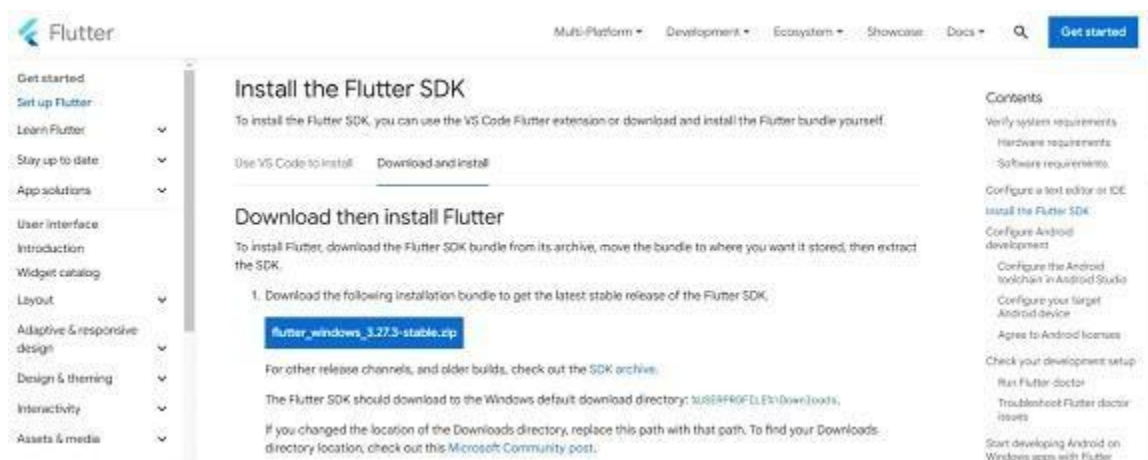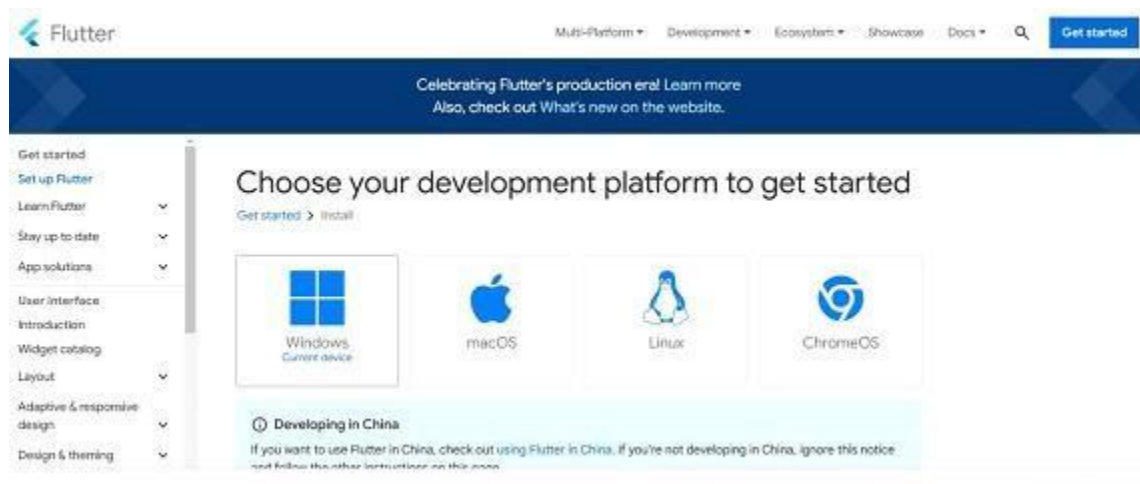**Name:** Soham Satpute   **Class:** D15A   **Roll no:**51

Aim: Installation and Configuration of Flutter Environment.

Step 1: Install Flutter
- Download Flutter SDK from the official Flutter website (https://flutter.dev/).
- Download the Flutter SDK for your operating system (Windows, macOS, or Linux).

- Extract the downloaded zip file to a preferred location on your computer (e.g., C:\src\flutter for Windows).
- Add Flutter to the PATH
- Locate the flutter\bin directory in the extracted Flutter folder.

● Add this directory to your system's PATH environment variable.
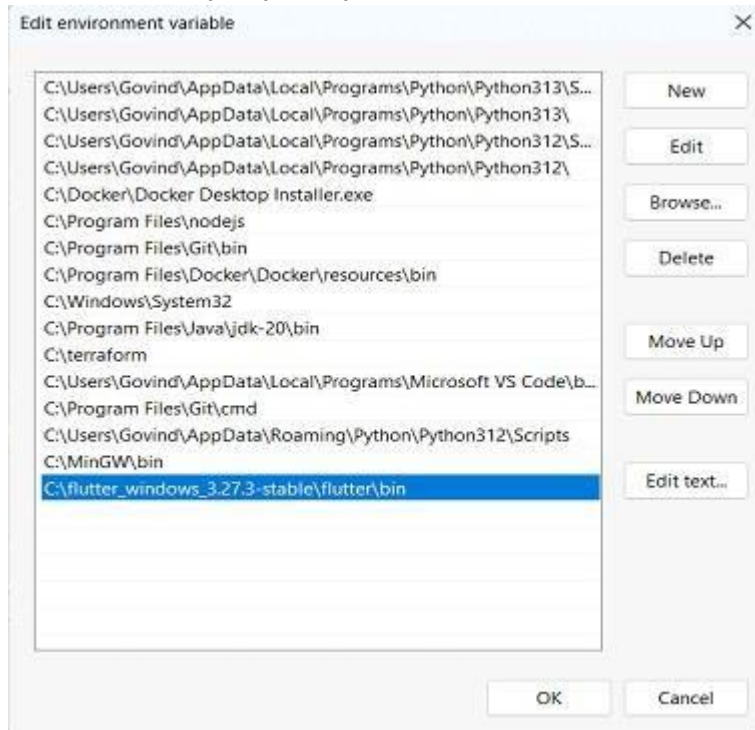
Verify the Installation
  ● Open a terminal or command prompt.
  ● Run the command: **flutter** and **flutter doctor**.

Step 2: Install Android Studio
- Download Android Studio
- Go to the Android Studio website. (https://developer.android.com/studio)
- Download the installer for your operating system ((Windows, macOS, or Linux)).

Android Studio Setup

Choose Components
Choose which features of Android Studio you want to install.

Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.

Select components to install:
- Android Studio
- ☑ Android Virtual Device

Description
Position your mouse over a component to see its description.

Space required: 3.7GB

< Back   Next >   Cancel

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  Run the installer and follow the setup wizard.
  Choose the standard installation option.

- Install Android SDK Tools ● Open Android Studio.
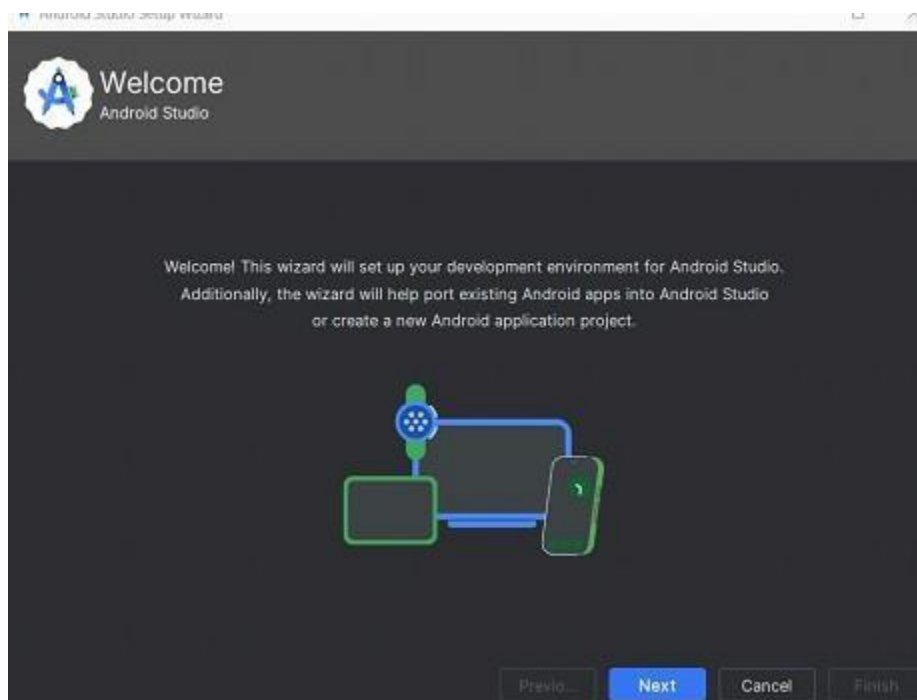
- Go to Settings/Preferences > Appearance & Behavior > System Settings > Android SDK.

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    Select the latest Android API level.
    Ensure "Android SDK Platform" and "Android Virtual Device (AVD)" are selected.
- Click "Apply" and wait for the components to install.
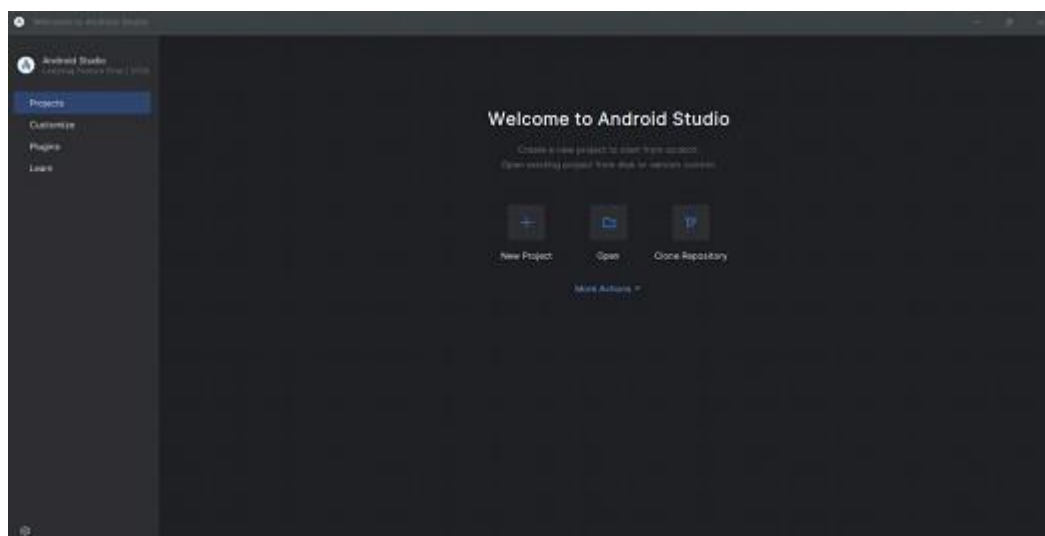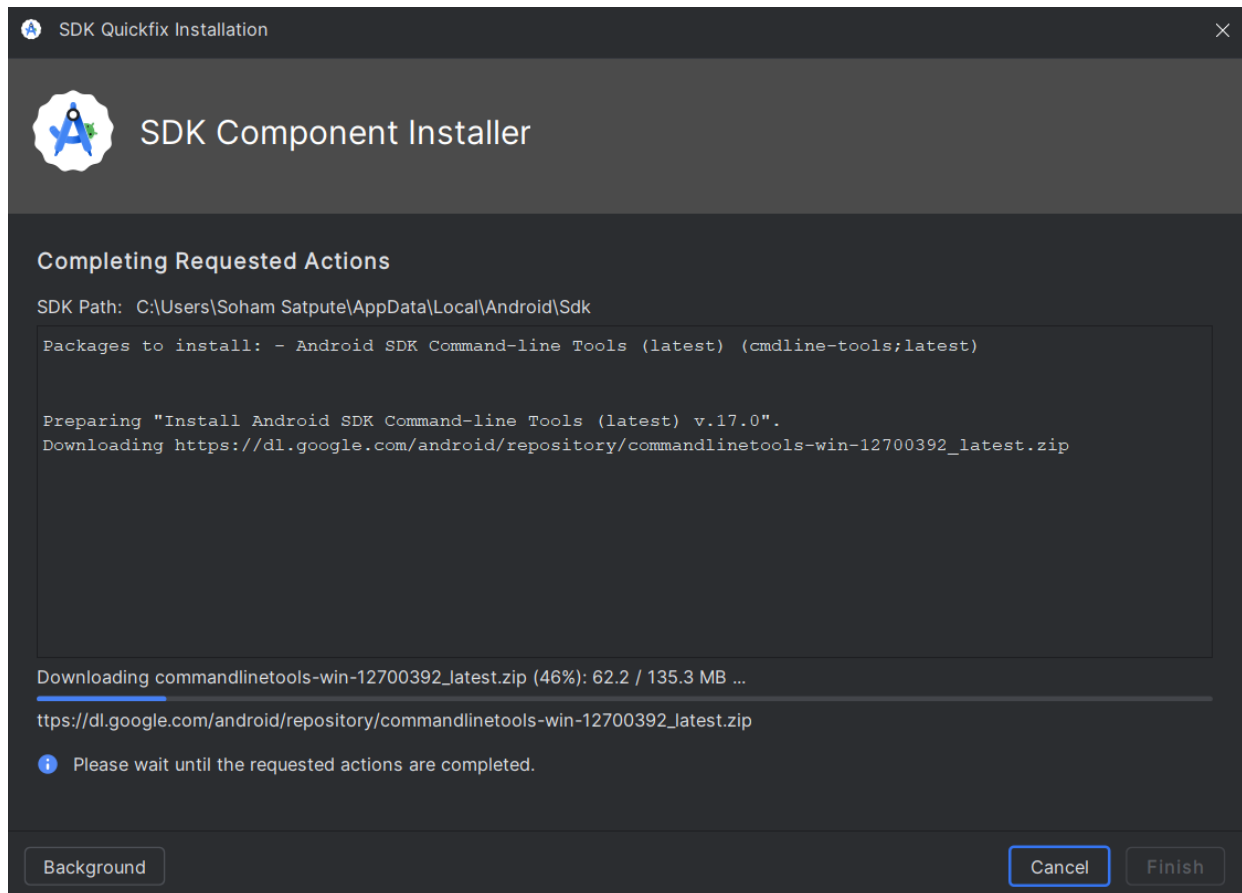
Step 3: Connect Flutter with Android Studio
- Install Flutter and Dart Plugins

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- Open Android Studio. Go to File > Settings (Windows/Linux) > Plugins. Search for "Flutter" and click "Install." Dart will be installed automatically. Restart Android Studio.
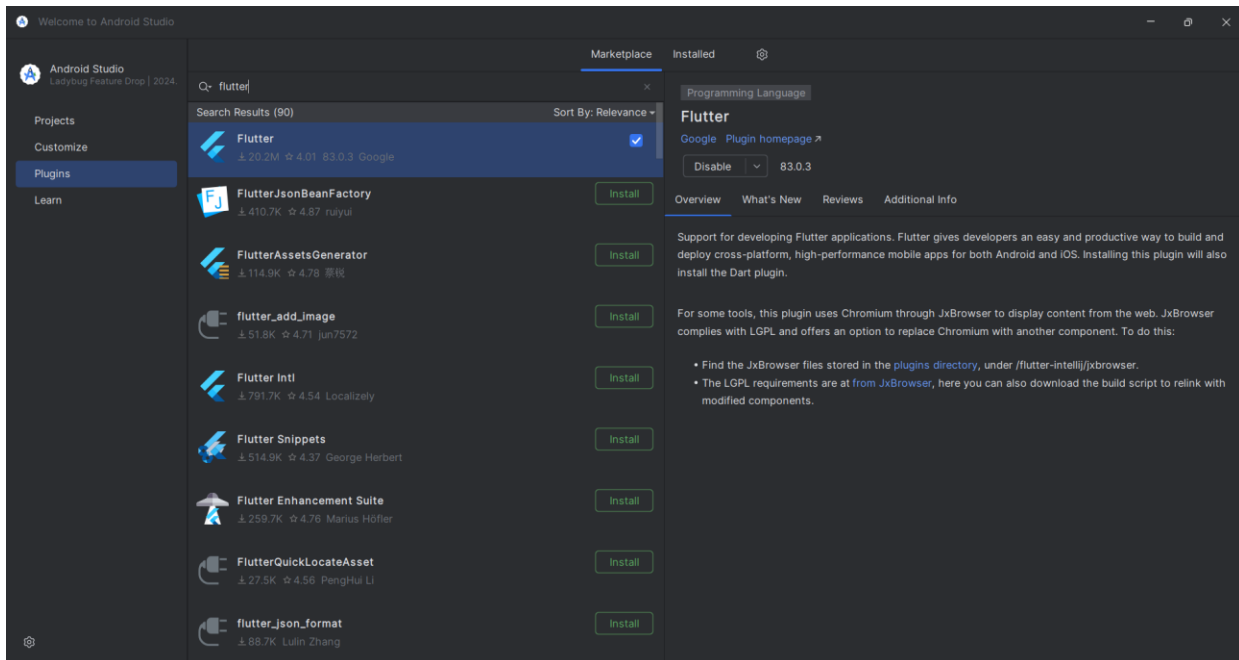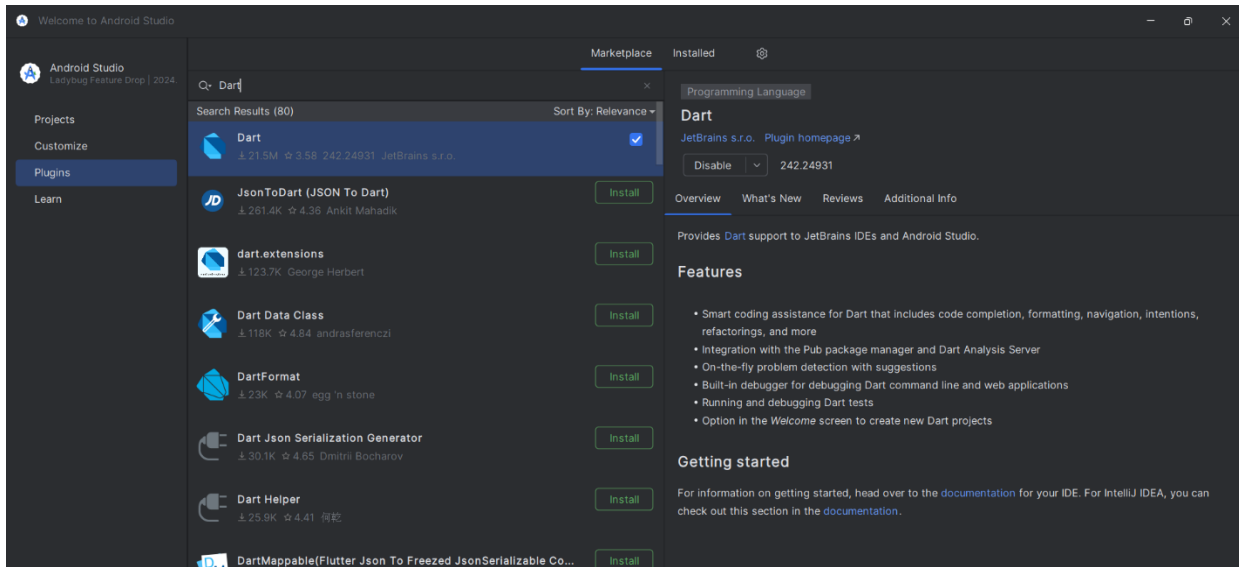
Step 4: Create a New Flutter Project
- Click on New Flutter Project.
- Enter project details and select the Flutter SDK path.
- Click "Finish" to create the project.
- Connect the USB to the device and run the flutter application.
  NOTE: In your mobile device, make sure the USB debugging is turned on.

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Virtual Device Configuration

Select Hardware

Choose a device definition

Category	Name	Play Store	Size	Resolution	Density
Phone	Pixel 9 Pro Fold	▷	8.0"	2076x2152	390dpi
Tablet	Pixel 9 Pro	▷	6.3"	1280x2856	xxhdpi
Wear OS	Pixel 9	▷	6.24"	1080x2424	420dpi
Desktop	Pixel 8a	▷	6.1"	1080x2400	420dpi
TV	Pixel 8 Pro	▷	6.7"	1344x2992	xxhdpi
Automotive	Pixel 8	▷	6.17"	1080x2400	420dpi
Legacy	Pixel Fold	▷	7.58"	1840x2208	420dpi

Pixel 9

1080px

Size: large
Ratio: long
Density: 420dpi

6.24" 2424px

New Hardware Profile   Import Hardware Profiles   Clone Device...

Previous   Next   Cancel   Finish

Code:

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

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

class MyApp extends StatelessWidget {
  const MyApp({super.key});
  @override
  Widget build(BuildContext context) {
    return MaterialApp(
      title: 'Flutter Professional UI',
      theme: ThemeData(
        colorScheme: ColorScheme.fromSeed(seedColor: Colors.deepPurple),
        textTheme: const TextTheme(
          headlineMedium: TextStyle(fontWeight: FontWeight.bold, color: Colors.deepPurple, fontSize: 24),
          bodyLarge: TextStyle(color: Colors.black87, fontSize: 18),
        ), // TextTheme
        useMaterial3: true,
      ), // ThemeData
      home: const MyHomePage(title: 'Hi Soham'),
    ); // MaterialApp
  }
}

class MyHomePage extends StatefulWidget {
  const MyHomePage({super.key, required this.title});

  final String title;

  @override
  State<MyHomePage> createState() => _MyHomePageState();
```
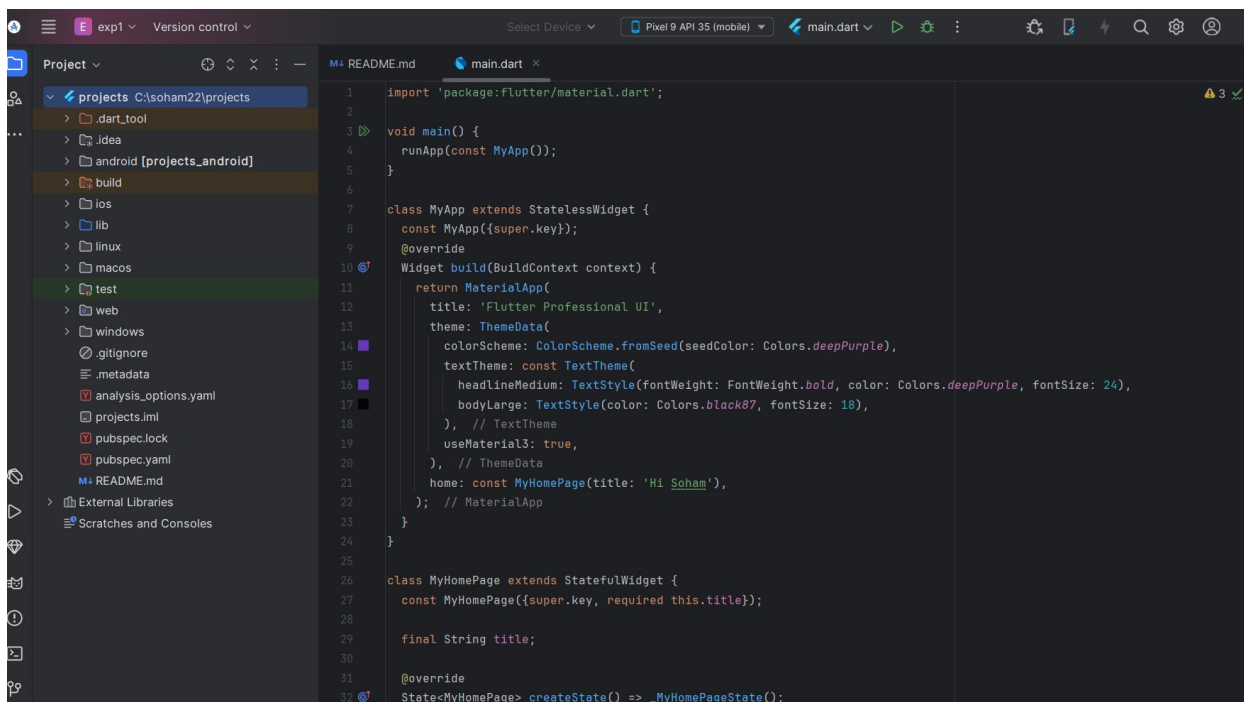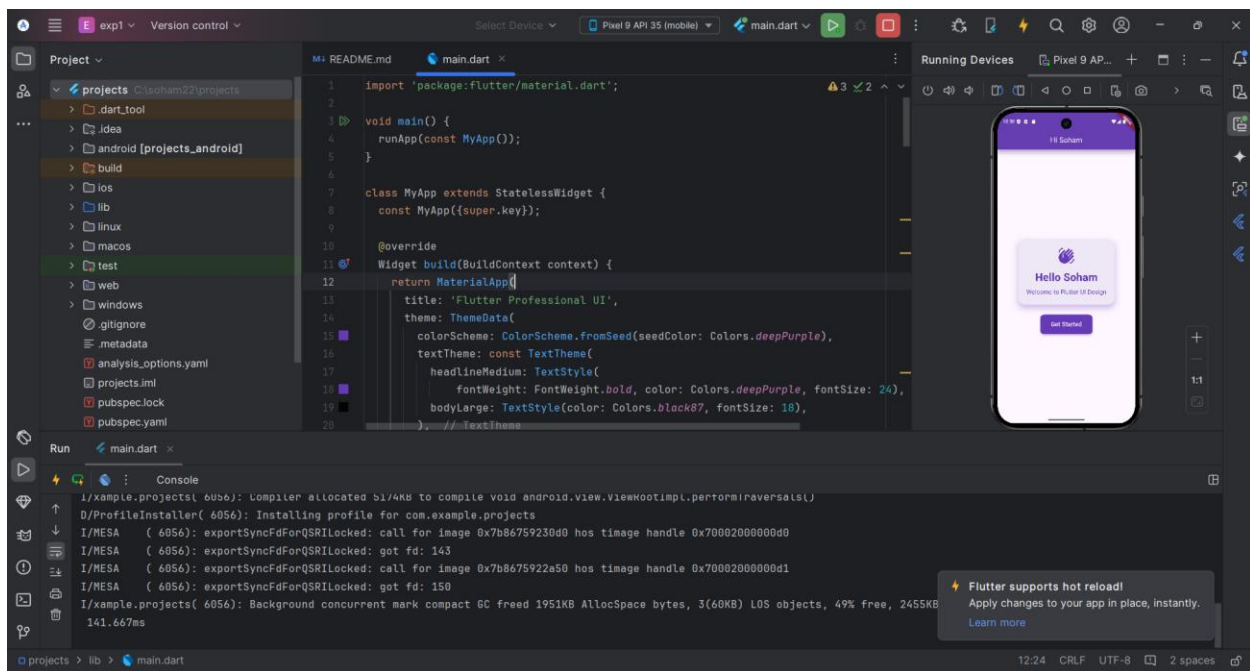
Hi Soham

Hello Soham

Welcome to Flutter UI Design

Get Started

Conclusion: Hello message , is successfully run on the flutter app.