

## MPL Experiment 1

**Name:** Soham Satpute

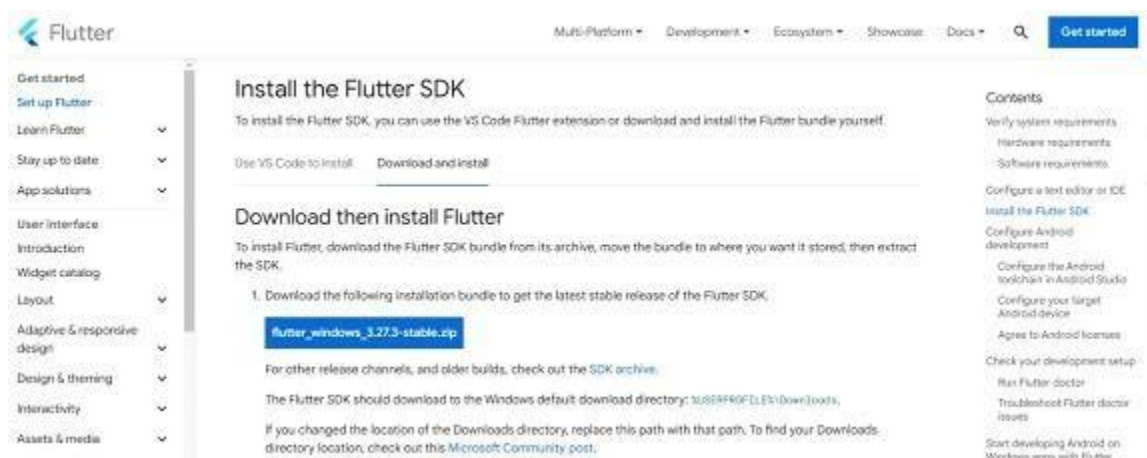
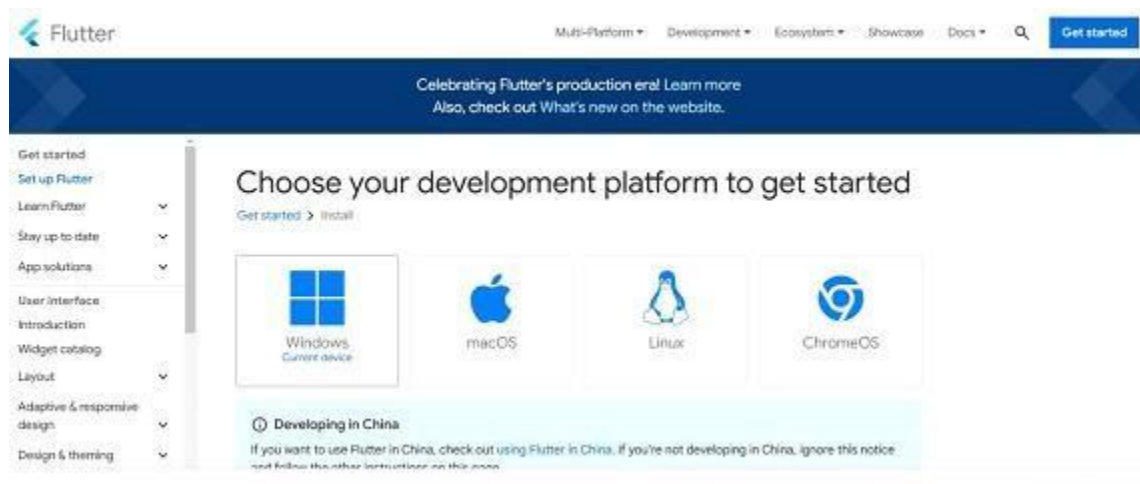
**Class:** D15A

**Roll no:**51

**Aim:** Installation and Configuration of Flutter Environment.

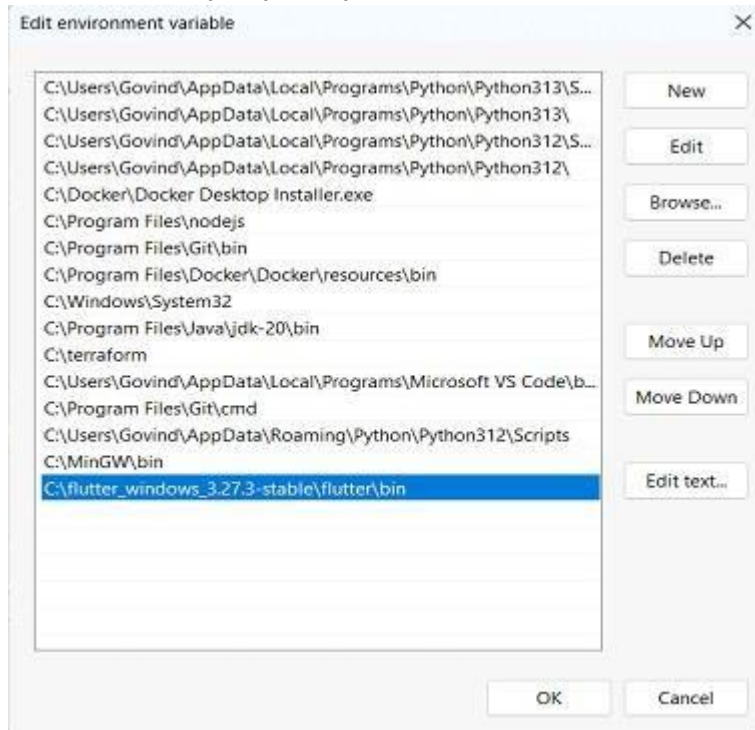
### **Step 1:** Install Flutter

- 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**.

```
PS C:\Users\Soham Satpute> flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 3.27.3, on Microsoft Windows [Version
    10.0.26100.2894], locale en-IN)
[✓] Windows Version (Installed version of Windows is version 10 or higher)
[✓] Android toolchain - develop for Android devices (Android SDK version 35.0.1)
[✓] Chrome - develop for the web
[X] Visual Studio - develop Windows apps
    X Visual Studio not installed; this is necessary to develop Windows apps.
      Download at https://visualstudio.microsoft.com/downloads/.
      Please install the "Desktop development with C++" workload, including all
        of its default components
[✓] Android Studio (version 2024.2)
[✓] IntelliJ IDEA Ultimate Edition (version 2024.3)
[✓] VS Code (version 1.96.4)
[✓] Connected device (3 available)
[✓] Network resources

! Doctor found issues in 1 category.
PS C:\Users\Soham Satpute> |
```

```
Command Prompt - flutter  X  +  v

Welcome to Flutter! - https://flutter.dev

The Flutter tool uses Google Analytics to anonymously report feature usage
statistics and basic crash reports. This data is used to help improve
Flutter tools over time.

Flutter tool analytics are not sent on the very first run. To disable
reporting, type 'flutter config --no-analytics'. To display the current
setting, type 'flutter config'. If you opt out of analytics, an opt-out
event will be sent, and then no further information will be sent by the
Flutter tool.

By downloading the Flutter SDK, you agree to the Google Terms of Service.
The Google Privacy Policy describes how data is handled in this service.

Moreover, Flutter includes the Dart SDK, which may send usage metrics and
crash reports to Google.

Read about data we send with crash reports:
https://flutter.dev/to/crash-reporting

See Google's privacy policy:
https://policies.google.com/privacy

To disable animations in this tool, use
'flutter config --no-cli-animations'.

The Flutter CLI developer tool uses Google Analytics to report usage and diagnostic
data along with package dependencies, and crash reporting to send basic crash
reports. This data is used to help improve the Dart platform, Flutter framework,
and related tools.

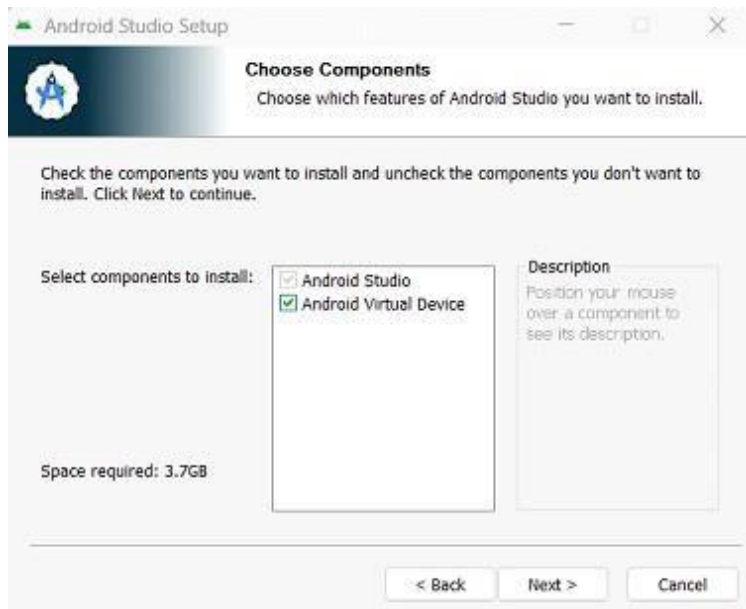
Telemetry is not sent on the very first run. To disable reporting of telemetry,
run this terminal command:

  flutter --disable-analytics

If you opt out of telemetry, an opt-out event will be sent, and then no further
```

## 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)).



- Run the installer and follow the setup wizard.
- Choose the standard

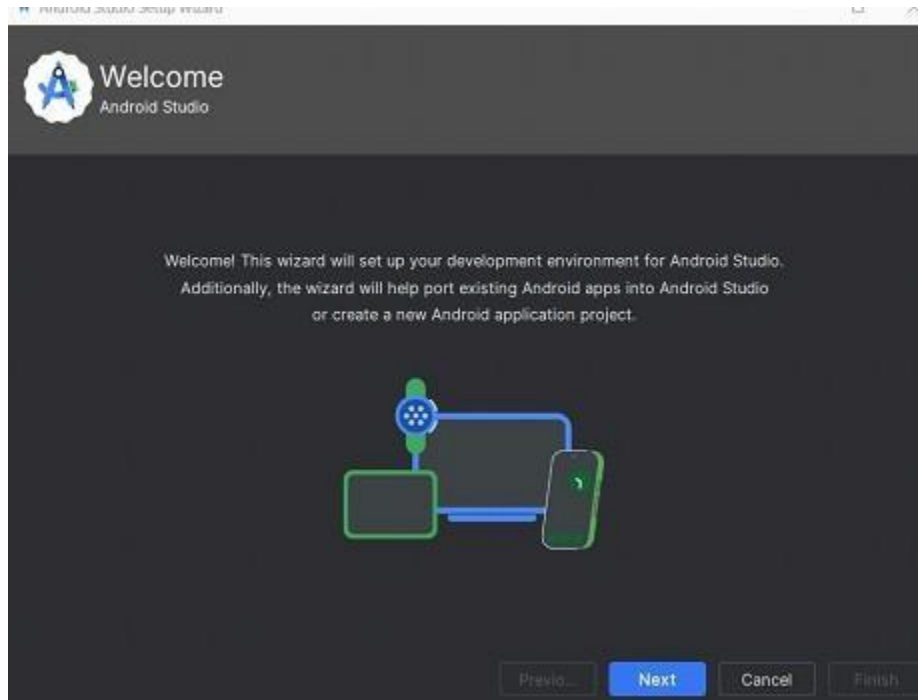


installation

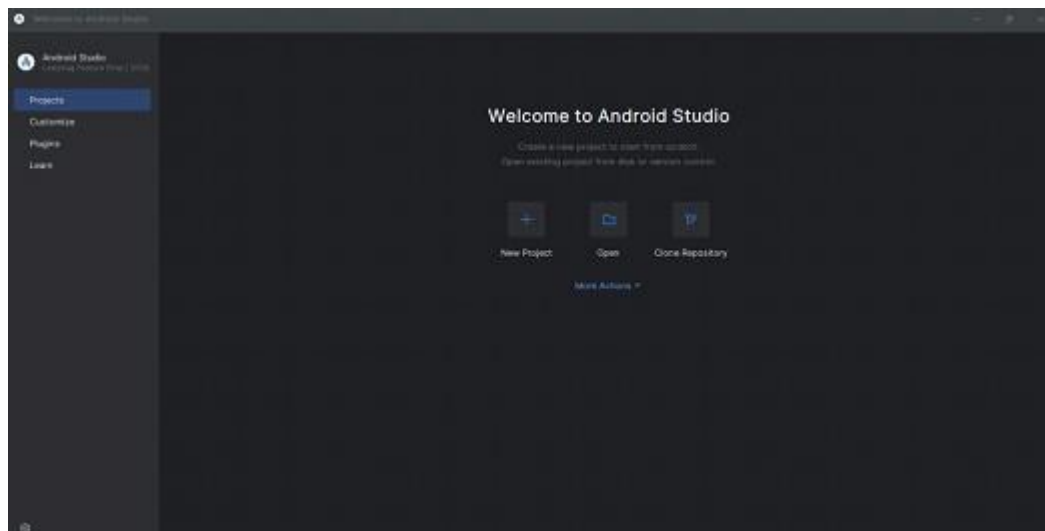
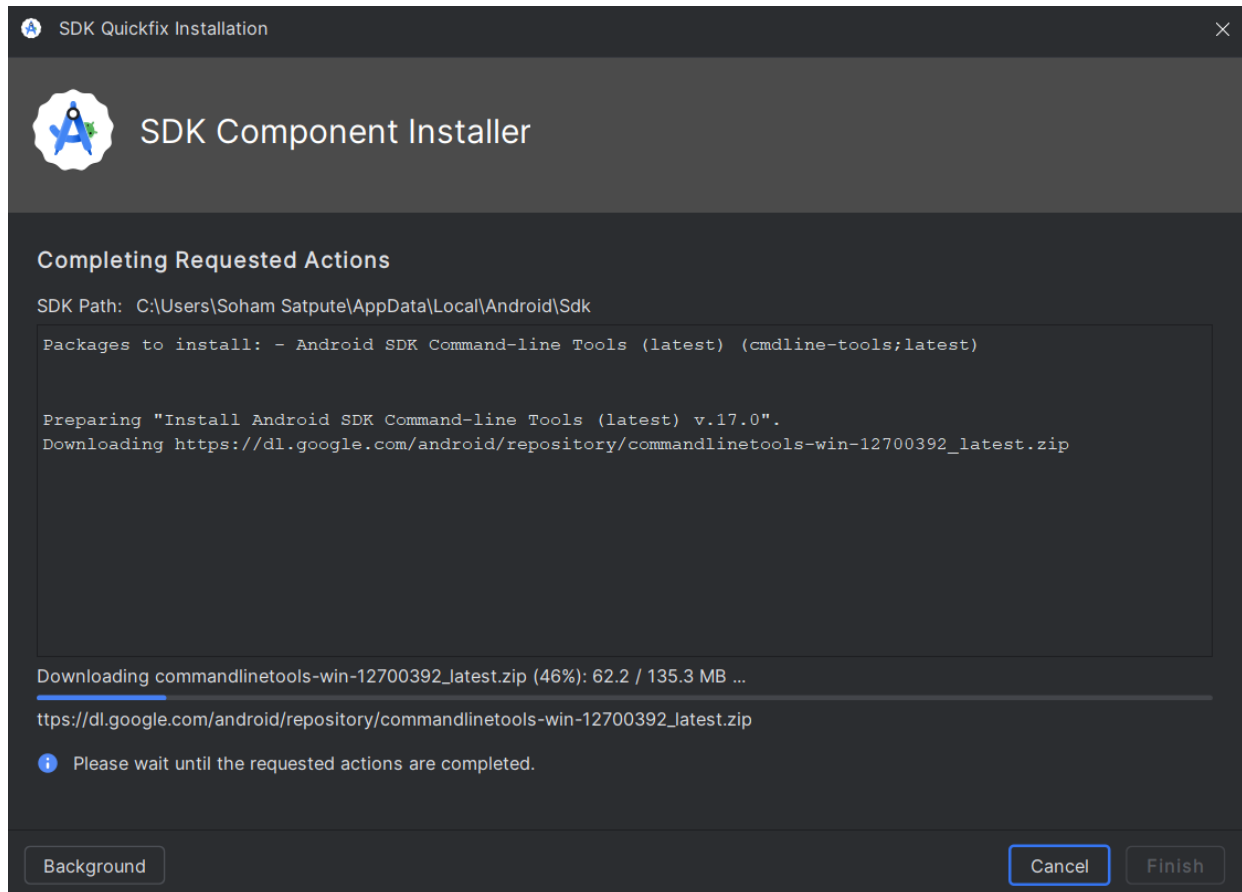
option.

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- Install Android SDK Tools • Open Android Studio.



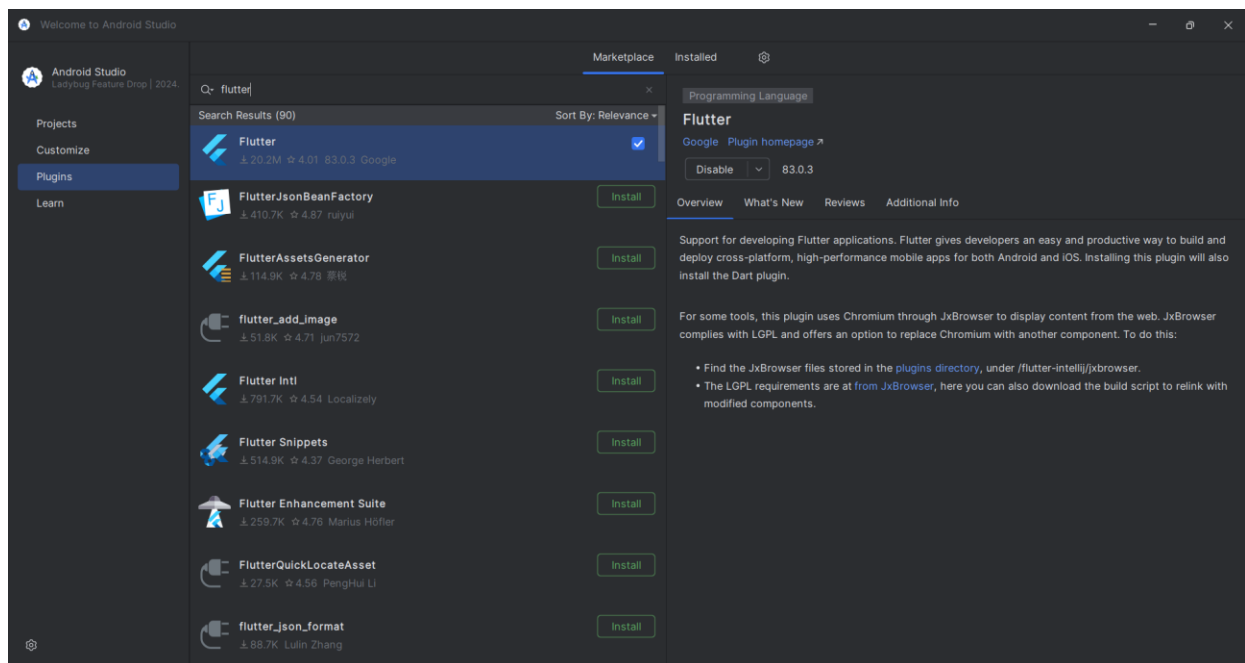
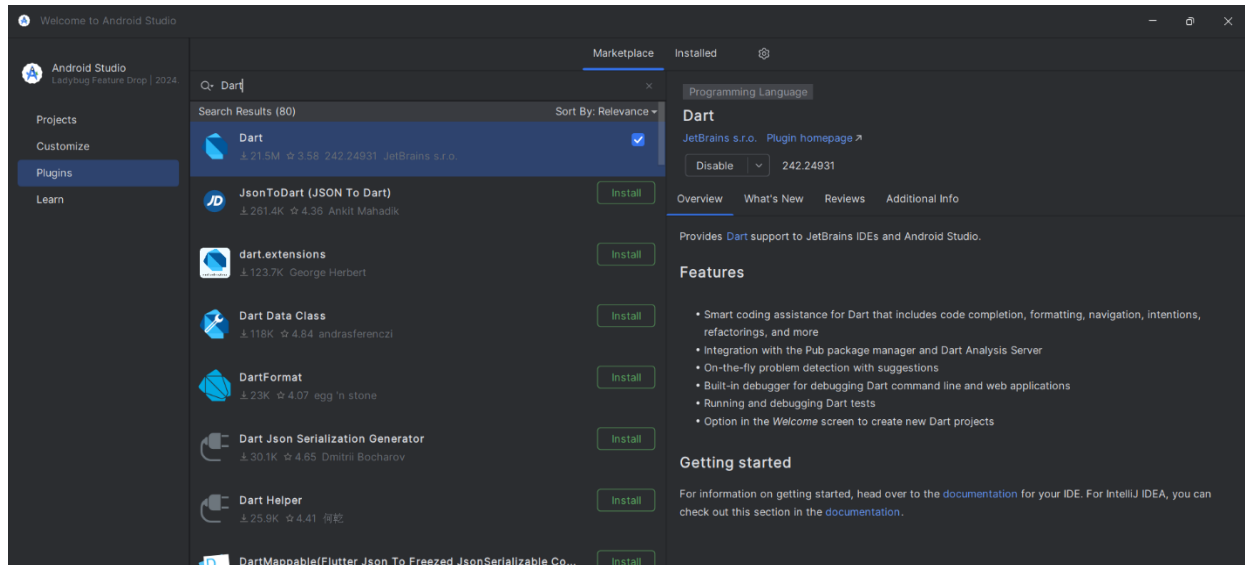
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- Go to Settings/Preferences > Appearance & Behavior > System Settings > Android SDK.  
Select the latest Android API level.  
Ensure "Android SDK Platform" and "Android Virtual Device (AVD)" are selected.
- Click "Apply" and wait for the components to install.



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### Step 3: Connect Flutter with Android Studio

- Install Flutter and Dart Plugins
- Open Android Studio. Go to File > Settings (Windows/Linux) > Plugins. Search for "Flutter" and click "Install." Dart will be installed automatically. Restart Android Studio.

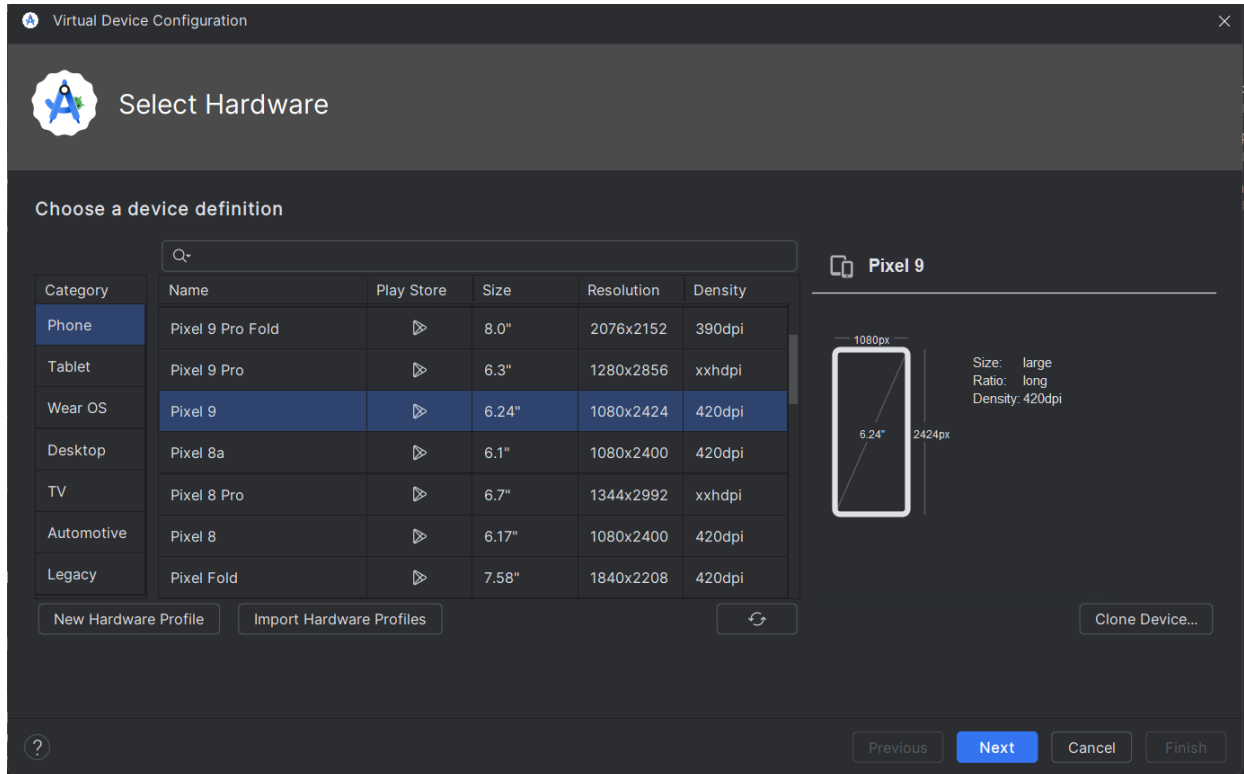


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#### Step 4: Create a New Flutter Project

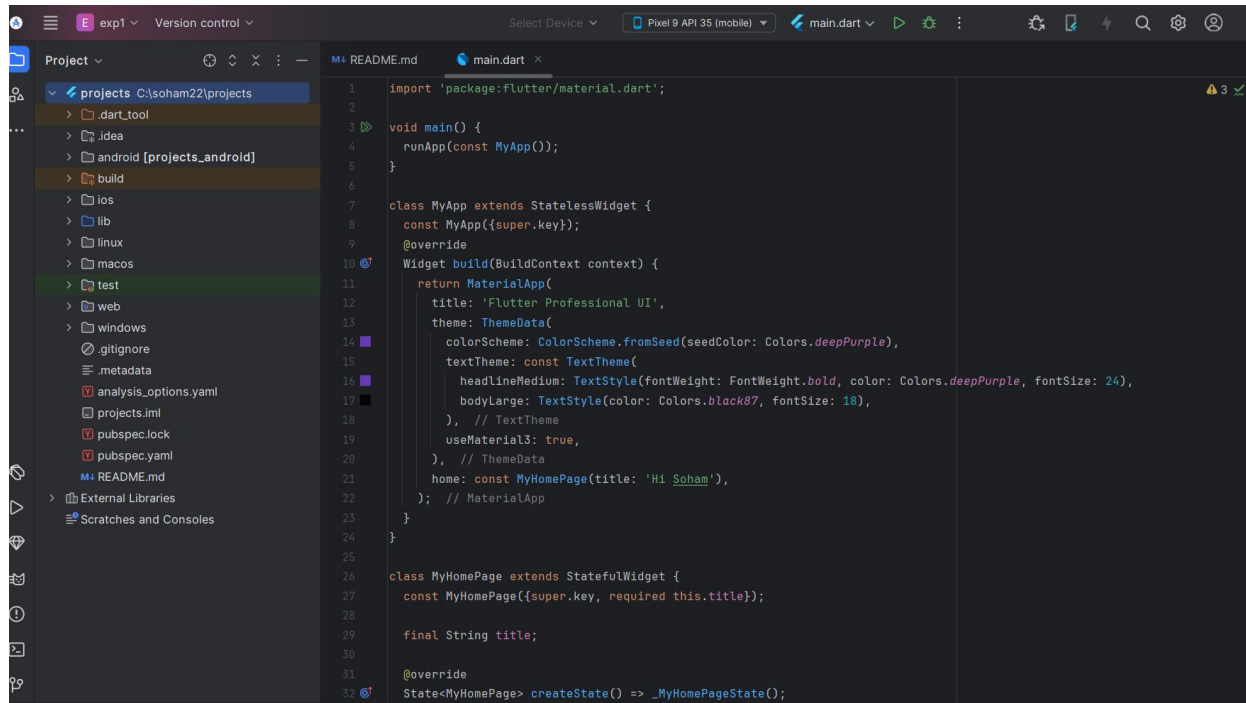
- Click on New Flutter Project.
- Enter project details and select the Flutter SDK path.
- Click "Finish" to create the project.
- Connect the USB to the device and run the flutter application.

**NOTE:** In your mobile device, make sure the USB debugging is turned on.





Code:



The screenshot shows an IDE interface with a project explorer on the left and a code editor on the right. The project explorer displays a directory structure for a Flutter project, including folders like .dart\_tool, .idea, android, build, ios, lib, linux, macos, test, web, and windows, along with files like .gitignore, .metadata, analysis\_options.yaml, projects.iml, pubspec.lock, pubspec.yaml, README.md, and External Libraries. The code editor displays the main.dart file, which contains the following Dart code:

```
1 import 'package:flutter/material.dart';
2
3 void main() {
4   runApp(const MyApp());
5 }
6
7 class MyApp extends StatelessWidget {
8   const MyApp({super.key});
9   @override
10  Widget build(BuildContext context) {
11    return MaterialApp(
12      title: 'Flutter Professional UI',
13      theme: ThemeData(
14        colorScheme: ColorScheme.fromSeed(seedColor: Colors.deepPurple),
15        textTheme: const TextTheme(
16          headlineMedium: TextStyle(fontWeight: FontWeight.bold, color: Colors.deepPurple, fontSize: 24),
17          bodyLarge: TextStyle(color: Colors.black87, fontSize: 18),
18        ), // TextTheme
19        useMaterial3: true,
20      ), // ThemeData
21      home: const MyHomePage(title: 'Hi Soham'),
22    ); // MaterialApp
23  }
24 }
25
26 class MyHomePage extends StatefulWidget {
27   const MyHomePage({super.key, required this.title});
28
29   final String title;
30
31   @override
32   State<MyHomePage> createState() => _MyHomePageState();
```

12:42



14.7 KB/s VoLTE 4G+ 49% **DEBUG**

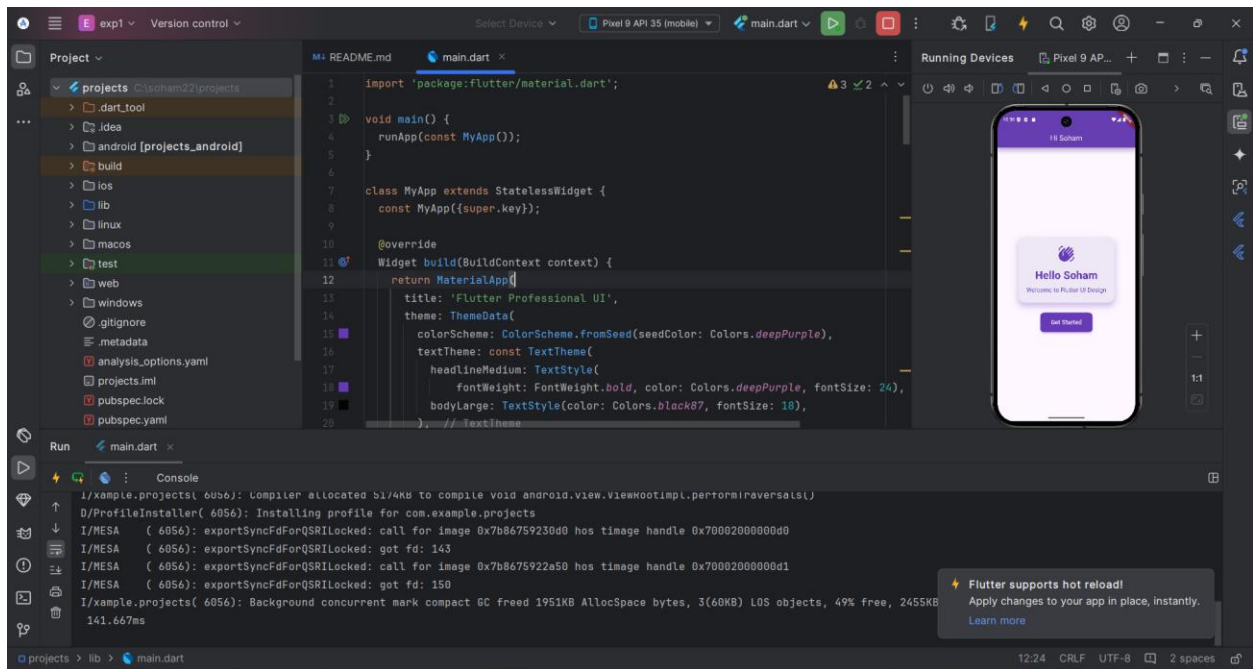
Hi Soham



**Hello Soham**

Welcome to Flutter UI Design

Get Started



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