

EXPERIMENT NO: - 01

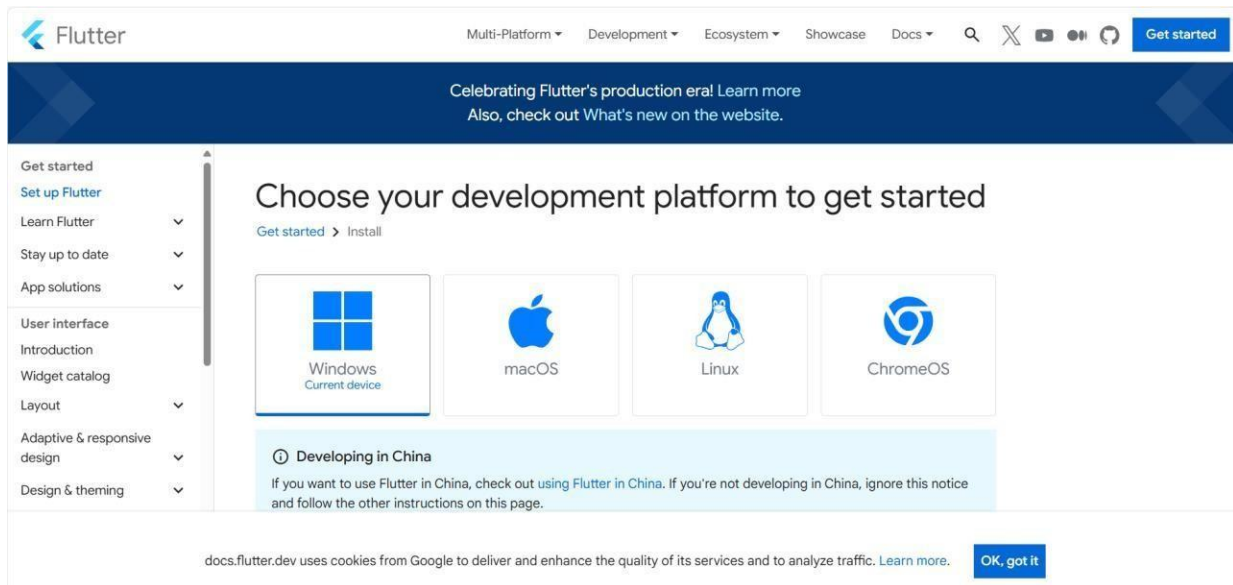
Name:- Niraj Kothawade

Class:- D15A

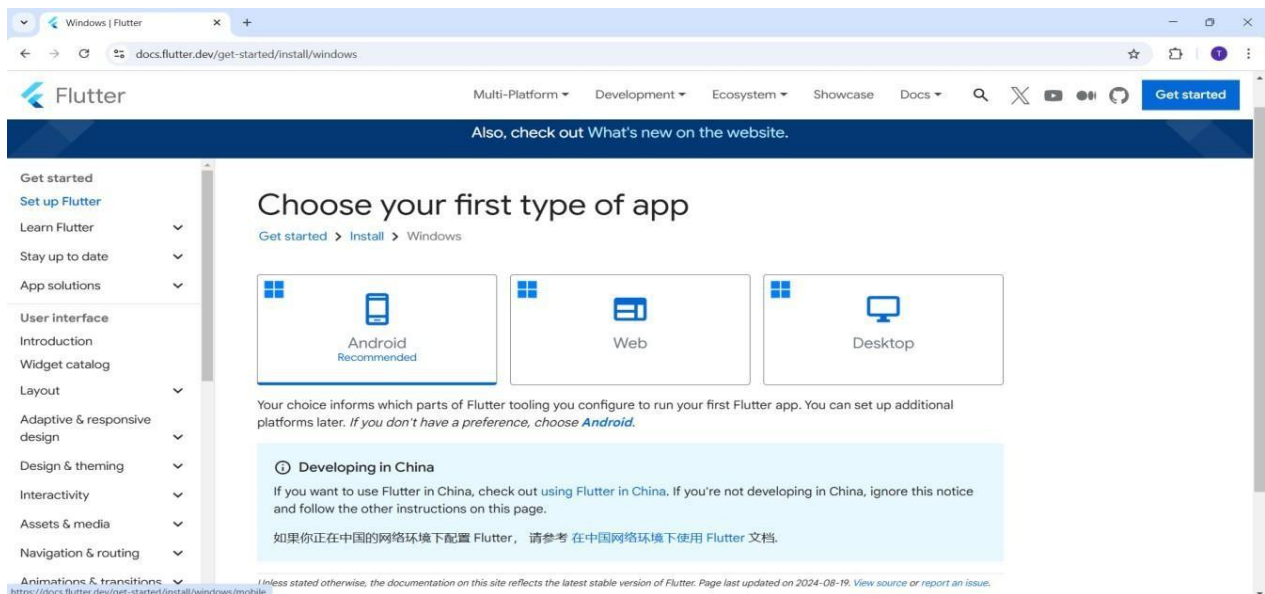
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AIM: - Installation and Configuration of Flutter Environment.

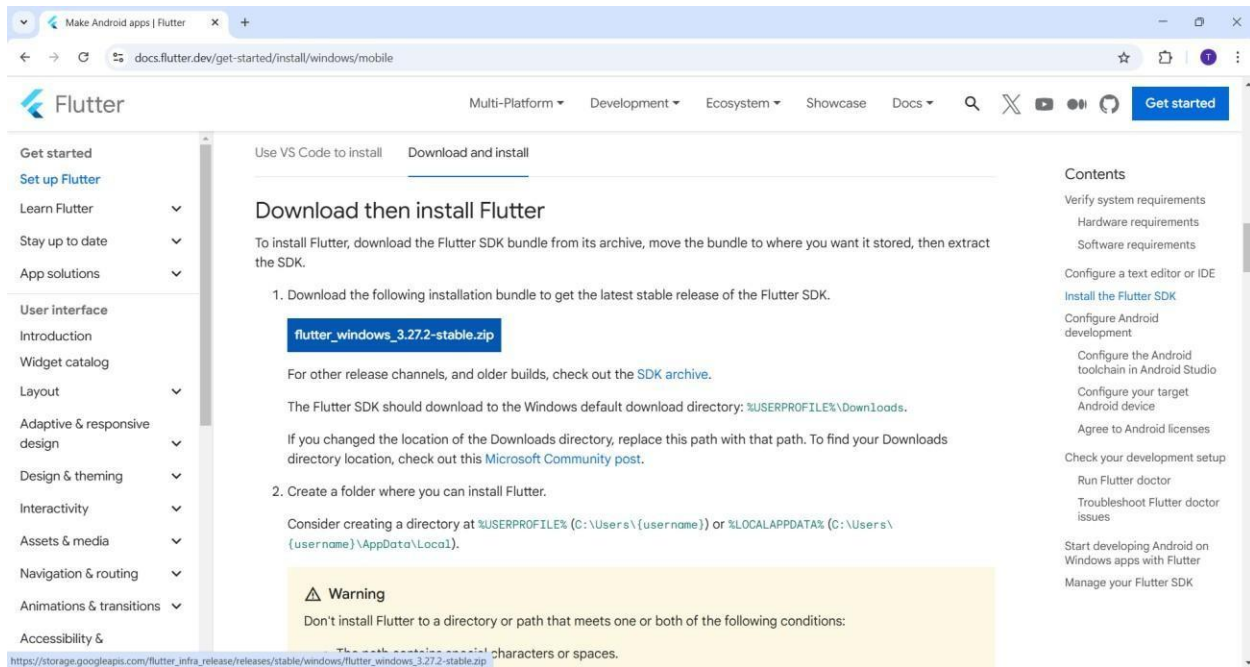
Step 1: Go to the official Flutter website: <https://docs.flutter.dev/get-started/install>



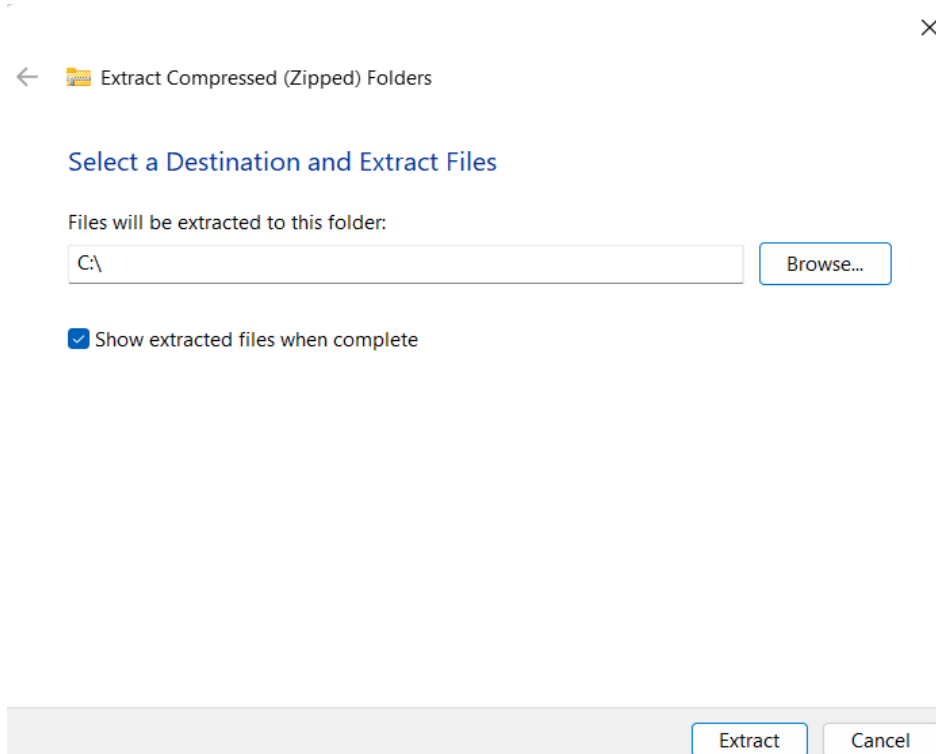
Step 2: To download the latest Flutter SDK, click on the Windows icon > Android



Step 3: For Windows, download the stable release (a .zip file).



Step 4: Extract the ZIP file to a folder (e.g., C:\flutter).

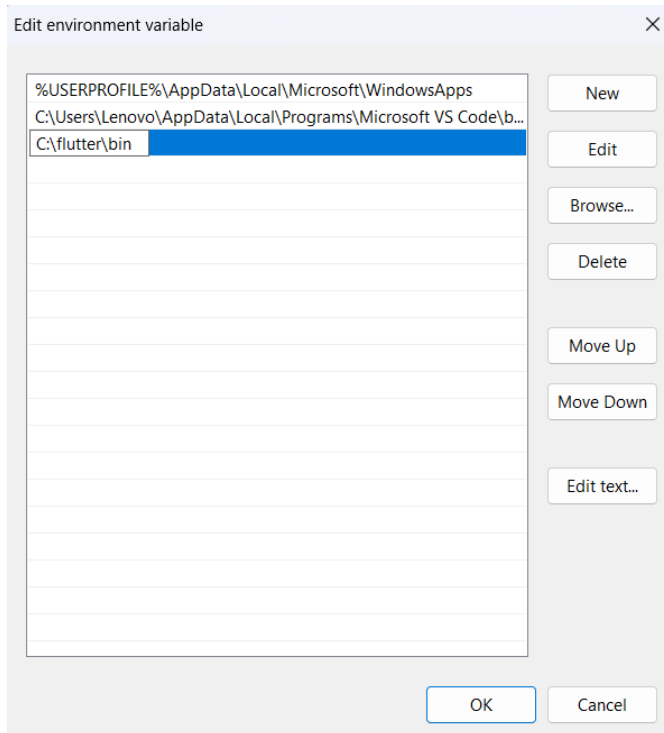


Step 5 :- Add Flutter to System PATH

Right-click on the Start Menu > System > Advanced system settings > Environment Variables.

Under System Variables, find Path and click Edit.

Add the full path to the flutter/bin directory (e.g., C:\flutter\bin).



Step 6 :- Now, run the \$ flutter command in command prompt.

```
Command Prompt - flutter
Microsoft Windows [Version 10.0.22631.4751]
(c) Microsoft Corporation. All rights reserved.

C:\Users\TEJAS>flutter
Manage your Flutter app development.

Common commands:

  flutter create <output directory>
    Create a new Flutter project in the specified directory.

  flutter run [options]
    Run your Flutter application on an attached device or in an emulator.

Usage: flutter <command> [arguments]

Global options:
-h, --help          Print this usage information.
-v, --verbose       Noisy logging, including all shell commands executed.
                    If used with "--help", shows hidden options. If used with "flutter doctor", shows additional
                    diagnostic information. (Use "-vv" to force verbose logging in those cases.)
-d, --device-id     Target device id or name (prefixes allowed).
--version           Reports the version of this tool.
--enable-analytics  Enable telemetry reporting each time a flutter or dart command runs.
--disable-analytics Disable telemetry reporting each time a flutter or dart command runs, until it is
                    re-enabled.
--suppress-analytics Suppress analytics reporting for the current CLI invocation.

Available commands:
```

Step 7:- Run the \$ flutter doctor command. This command checks for all the requirements of Flutter app development and displays a report of the status of your Flutter installation

```
Command Prompt - flutter - f x + v

You have received two consent messages because the flutter tool is migrating to a new analytics system. Disabling analytics collection will disable both the legacy and new analytics collection systems. You can disable analytics reporting by running 'flutter --disable-analytics'

C:\Users\TEJAS>flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 3.27.2, on Microsoft Windows [Version 10.0.22631.4751], locale en-US)
[✓] Windows Version (Installed version of Windows is version 10 or higher)
[X] Android toolchain - develop for Android devices
    X Unable to locate Android SDK.
      Install Android Studio from: https://developer.android.com/studio/index.html
      On first launch it will assist you in installing the Android SDK components.
      (or visit https://flutter.dev/to/windows-android-setup for detailed instructions).
      If the Android SDK has been installed to a custom location, please use
      'flutter config --android-sdk' to update to that location.
[✓] 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 (not installed)
[✓] VS Code (version 1.96.4)
[✓] Connected device (3 available)
[✓] Network resources

! Doctor found issues in 3 categories.
```

Step 8 :- Go to Android Studio and download the installer.

Developers Essentials Design & Plan Develop Google Play Community Search / Language Android Studio

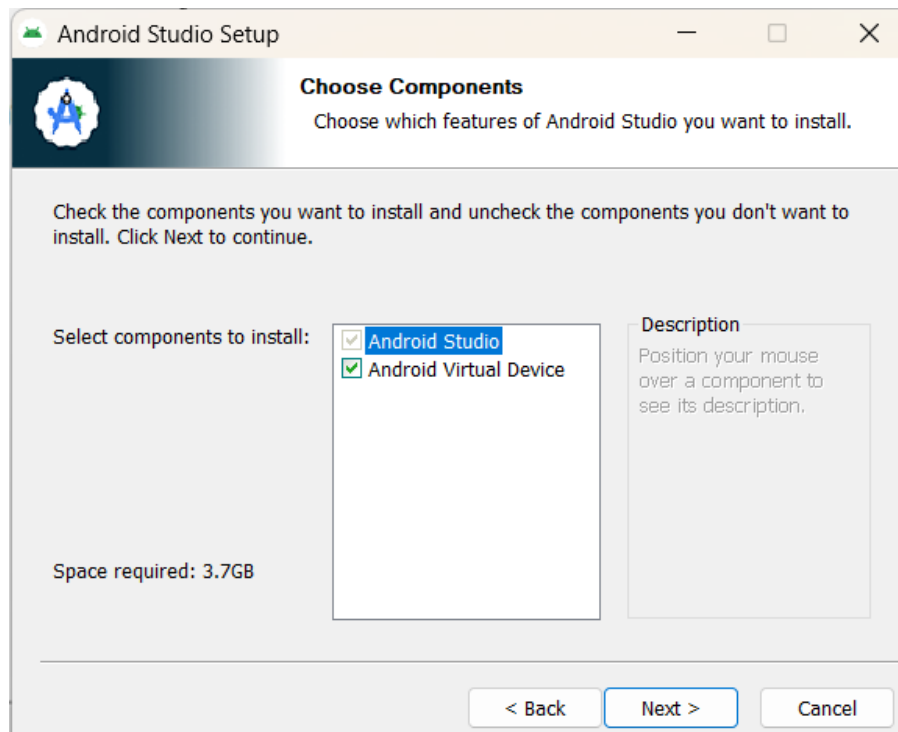
Download the latest version of Android Studio. For more information, see the [Android Studio release notes](#).

Platform	Android Studio package	Size	SHA-256 checksum
Windows (64-bit)	android-studio-2024.2.2.13-windows.exe Recommended	1.2 GB	7d93dd9bf3539f948f609b1968507bf1502bf6965d2d44bd38a7ff26cb5dd3e
Windows (64-bit)	android-studio-2024.2.2.13-windows.zip No .exe installer	1.2 GB	855945962ff9b84ea49ce39de0bf4189dbf451ae37a6fab7999da013b046b7f7
Mac (64-bit)	android-studio-2024.2.2.13-mac.dmg	1.3 GB	acfbb54d6ce8cf21f19b43510c7addcb9dde2824282f205fd1331be77d2e613
Mac (64-bit, ARM)	android-studio-2024.2.2.13-mac_arm.dmg	1.3 GB	688f8d007e612f3f0c18f316179079dc4565f93d8d1e6a7dad80c4fce356df7
Linux (64-bit)	android-studio-2024.2.2.13-linux.tar.gz	1.3 GB	b7fed4a7959bdaca7a8fd57461dbbf9a205eb23cc218ed828ed88e8b998cb5

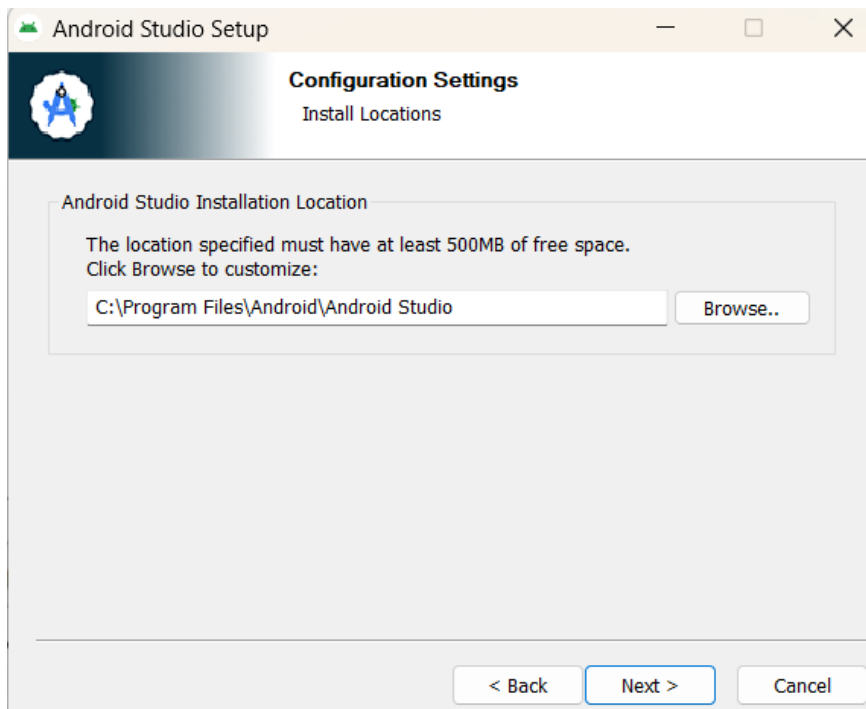
Step 8.1: - When the download is complete, open the .exe file and run it. You will get the following dialog box



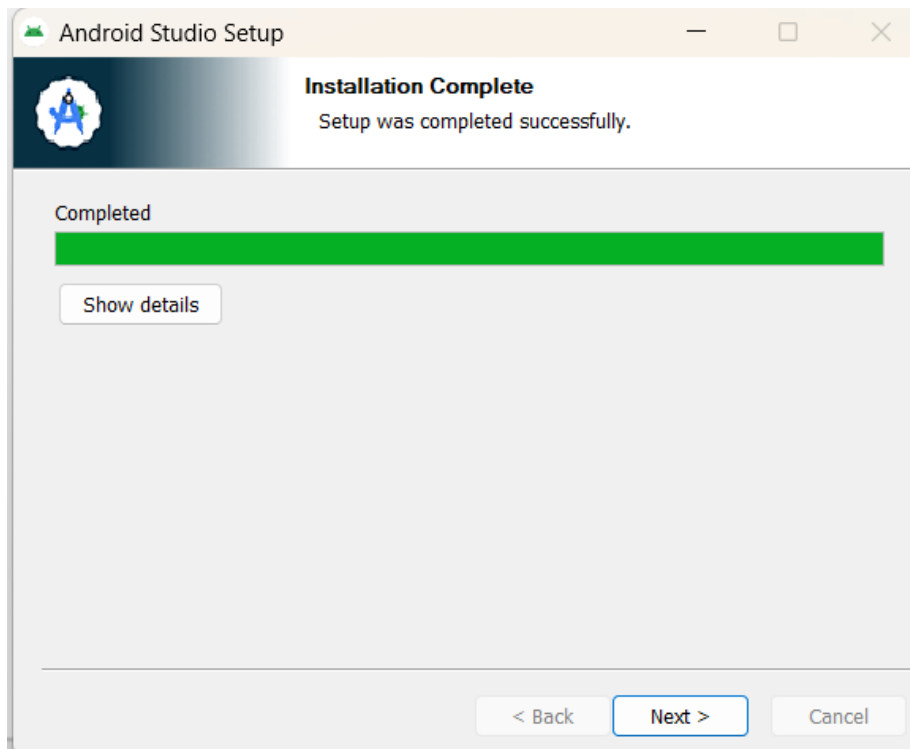
Step 8.2: - Select all the Checkboxes and Click on 'Next' Button.

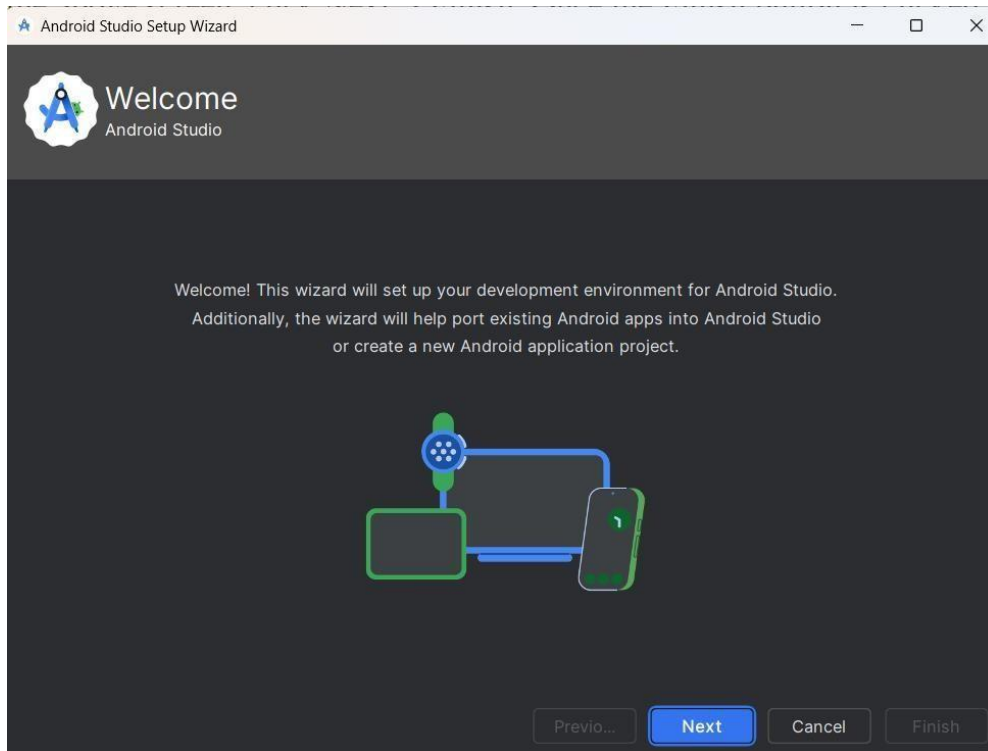


Step 8.3: - Change the destination as per your convenience and click on 'Next' Button.



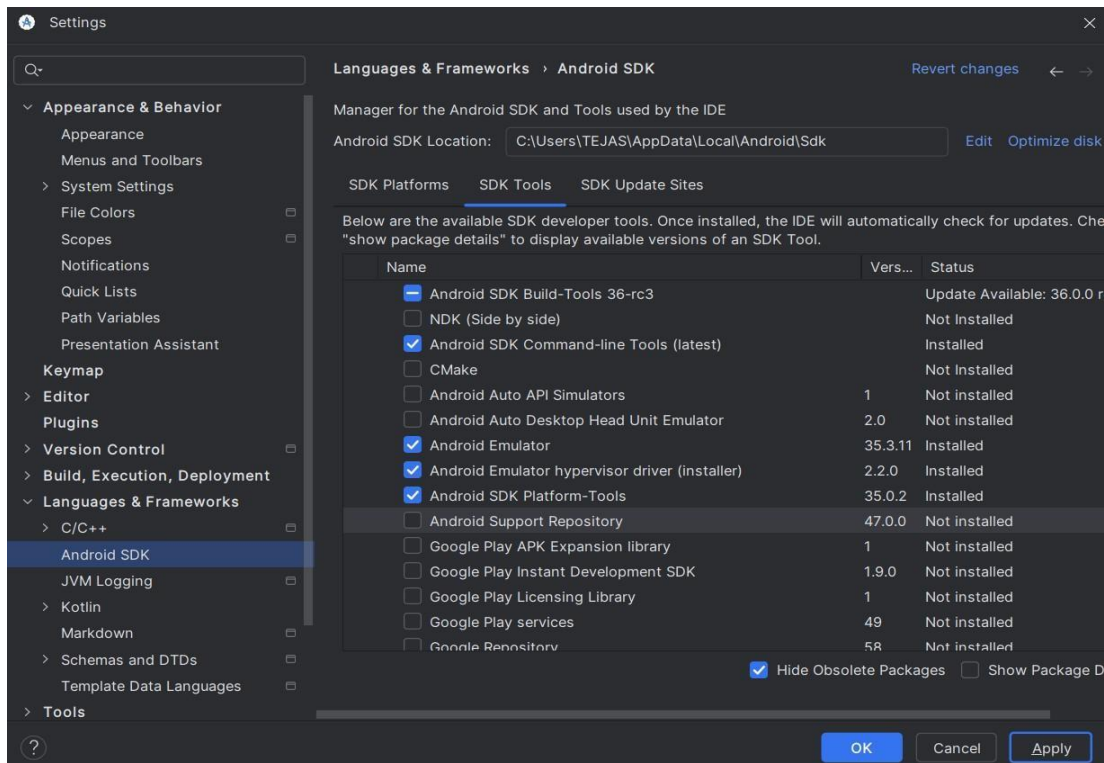
Step 8.4: - Follow the steps of the installation wizard. Once the installation wizard completes, you will get the following screen.





Step 8.5: - Go to Preferences > Appearance & Behavior > System Settings > Android SDK.

Select the SDK Tools tab and check Android SDK Command-line Tools and Install it.



Step 9: - Open a terminal and run the following command

```
Command Prompt - flutter - f  X + v

C:\Users\TEJAS>flutter doctor --android-licenses

Warning: Errors during XML parse:
Warning: Additionally, the fallback loader failed to parse the XML.ry...
Warning: Errors during XML parse:
Warning: Additionally, the fallback loader failed to parse the XML.
[=====] 100% Computing updates...
6 of 7 SDK package licenses not accepted.
Review licenses that have not been accepted (y/N)? y

1/6: License android-googletv-license:
-----
Terms and Conditions

This is the Google TV Add-on for the Android Software Development Kit License Agreement.

1. Introduction

1.1 The Google TV Add-on for the Android Software Development Kit (referred to in this License Agreement as the "Google TV Add-on" and specifically including the Android system files, packaged APIs, and Google APIs add-ons) is licensed to you subject to the terms of this License Agreement. This License Agreement forms a legally binding contract between you and Google in relation to your use of the Google TV Add-on.

1.2 "Google" means Google Inc., a Delaware corporation with principal place of business at 1600 Amphitheatre Parkway, Mountain View, CA 94043, United States.

2. Accepting this License Agreement

2.1 In order to use the Google TV Add-on, you must first agree to this License Agreement. You may not use the Google TV Add-on if you do not accept this License Agreement.
```

```
Command Prompt - flutter di  X + v

Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 3.27.2, on Microsoft Windows [Version 10.0.22631.4751], locale en-US)
[✓] 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
[!] Visual Studio - develop Windows apps (Visual Studio Community 2022 17.12.4)
    X The current Visual Studio installation is incomplete.
      Please use Visual Studio Installer to complete the installation or reinstall Visual Studio.
[✓] Android Studio (version 2024.2)
[✓] VS Code (version 1.96.4)
[✓] Connected device (3 available)
[✓] Network resources

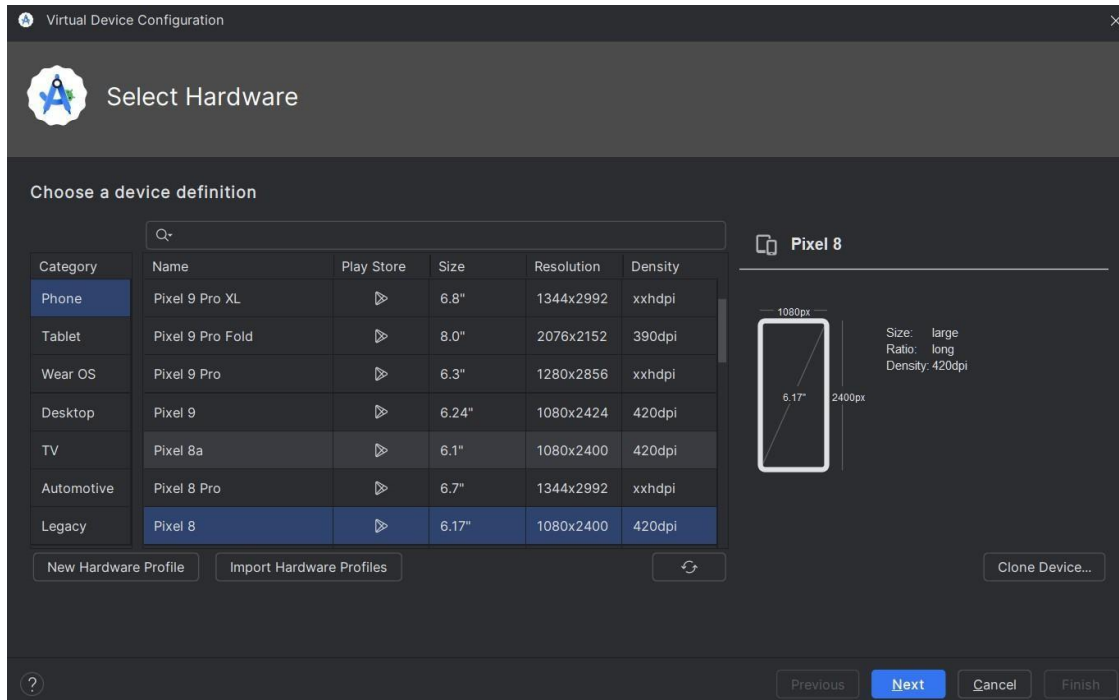
! Doctor found issues in 1 category.

C:\Users\TEJAS>flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 3.27.2, on Microsoft Windows [Version 10.0.22631.4751], locale en-US)
[✓] 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
[✓] Visual Studio - develop Windows apps (Visual Studio Community 2022 17.12.4)
[✓] Android Studio (version 2024.2)
[✓] VS Code (version 1.96.4)
[✓] Connected device (3 available)
[✓] Network resources

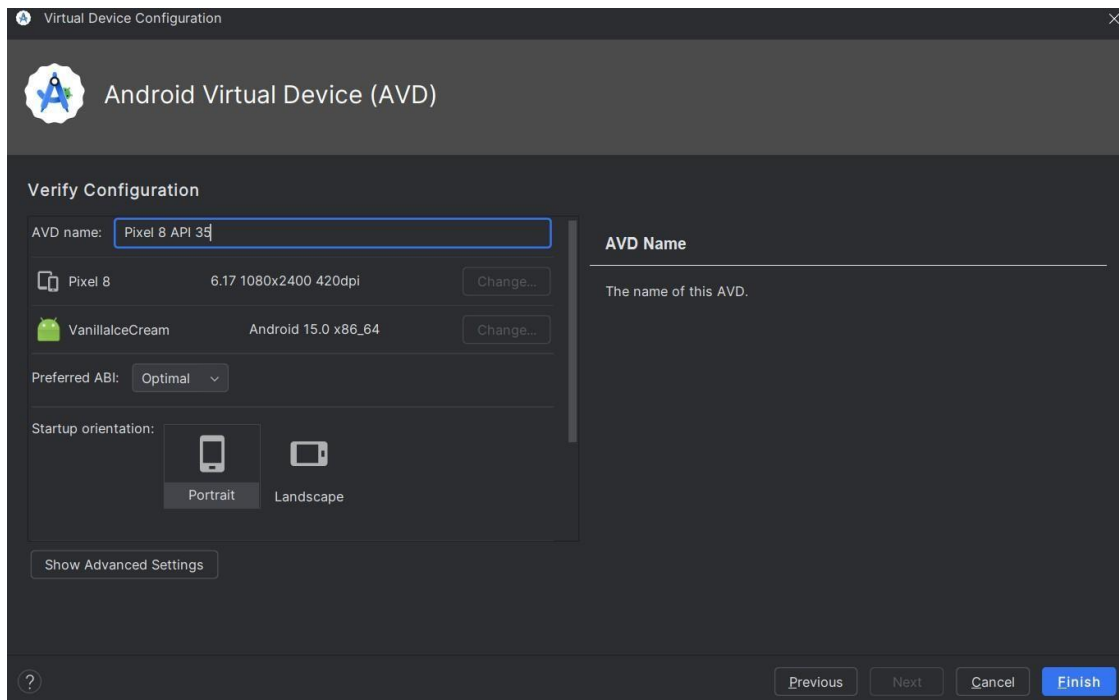
• No issues found!

C:\Users\TEJAS>
```

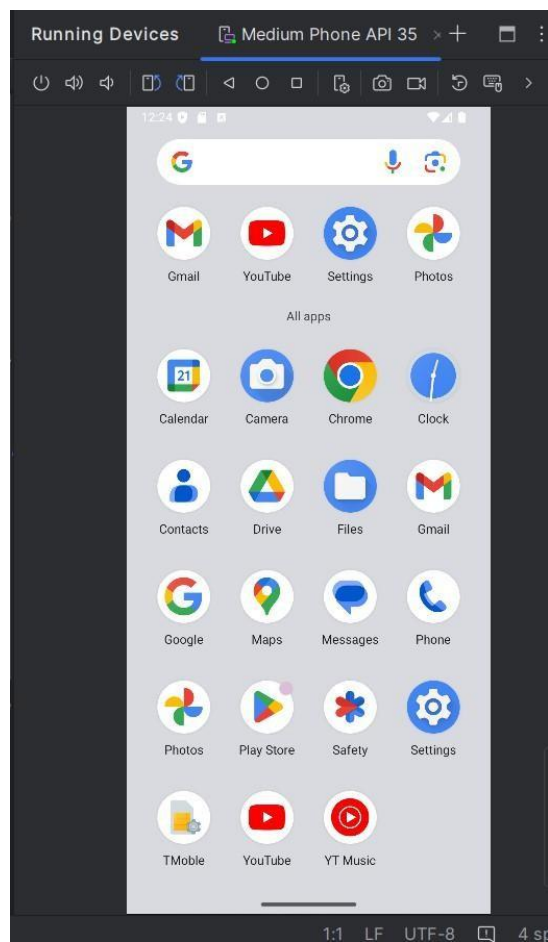
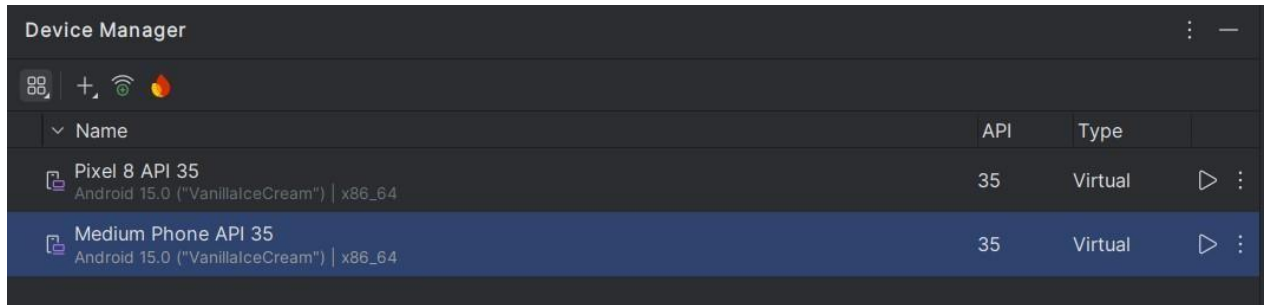

Step 10:- Next, you need to set up an Android emulator. It is responsible for running and testing the Flutter application



Step 10.1:- Open Android Studio and go to Tools > AVD Manager. Create a new virtual device.

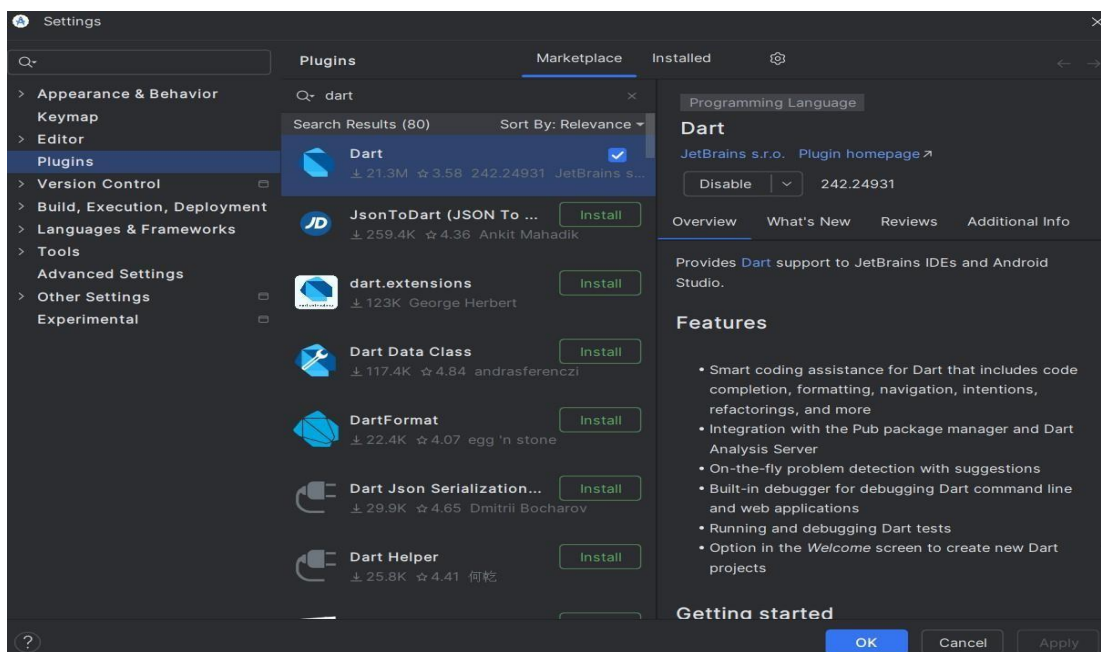
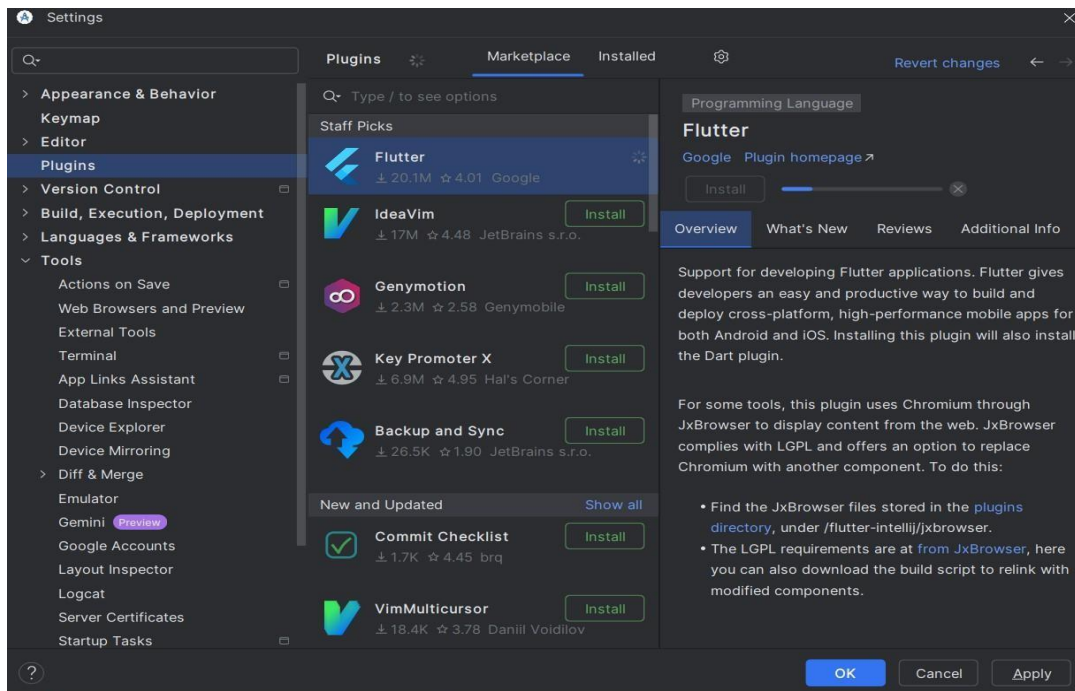


Step 10.2: - Click on the icon pointed into the red color rectangle. The Android emulator displayed as below screen



Step 11: - Now, install Flutter and Dart plugin for building Flutter application in Android Studio. These plugins provide a template to create a Flutter application, give an option to run and debug Flutter application in the Android Studio itself

Step 11.1: - Open the Android Studio and then go to File->Settings->Plugins. Now, search the Flutter plugin. If found, select Flutter plugin and click install



Step 11.2: - Restart the Android Studio

Step 12: - Go to File > New Project > Create Flutter Project, then select the project name and location, and click Next to proceed.

Code:

```
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(  
      debugShowCheckedModeBanner: false,  
      title: 'Hello World App',  
      theme: ThemeData(  
        primarySwatch: Colors.blue,  
        visualDensity: VisualDensity.adaptivePlatformDensity,  
      ),  
      home: const HomePage(),  
    );  
  }
```

```
  }  
  
  class HomePage extends StatelessWidget {  
    const HomePage({super.key});
```

```
    @override
```

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

```
      return Scaffold(  
        appBar: AppBar(  
          title: const Text(  
            'Hello World App',  
            style: TextStyle(fontWeight: FontWeight.bold),  
          ),
```

```
        centerTitle: true,
        elevation: 4,
        shadowColor: Colors.black54,
    ),
    body: Container(
      decoration: BoxDecoration(
        gradient: LinearGradient(
          begin: Alignment.topLeft,
          end: Alignment.bottomRight,
          colors: [Colors.blue.shade300, Colors.purple.shade300],
        ),
      ),
    ),
    child: const Center(
      child: Text(
        'Hello, Niraj!',
        style: TextStyle(
          fontSize: 28,
          fontWeight: FontWeight.bold,
          color: Colors.white,
          shadows: [
            Shadow(
              blurRadius: 4,
              color: Colors.black45,
              offset: Offset(2, 2),
            ),
          ],
        ),
      ),
    ),
  );
}
```

Output:

