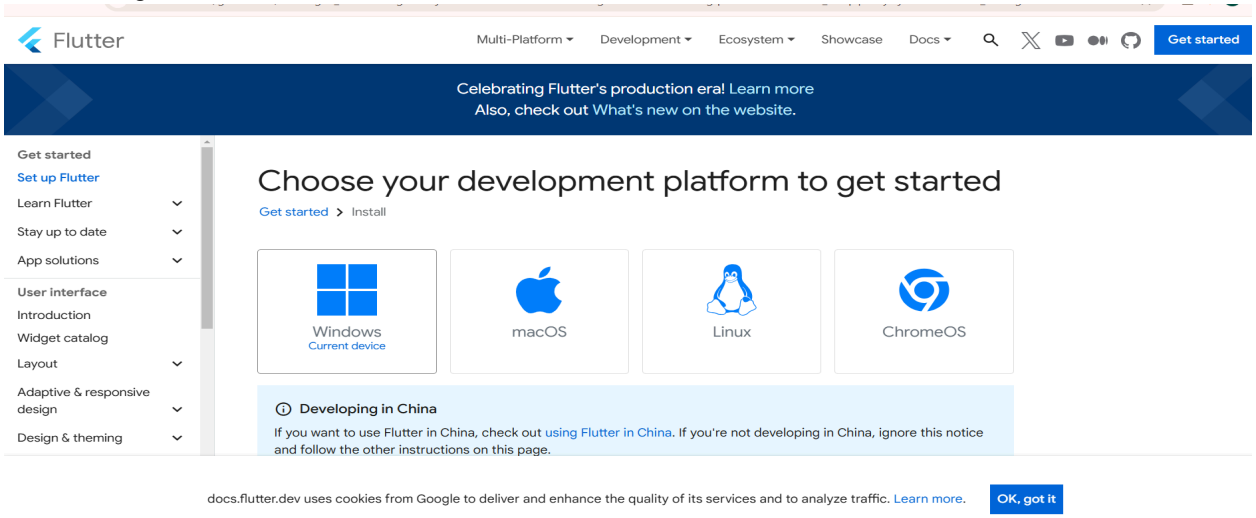
Experiment No. 1

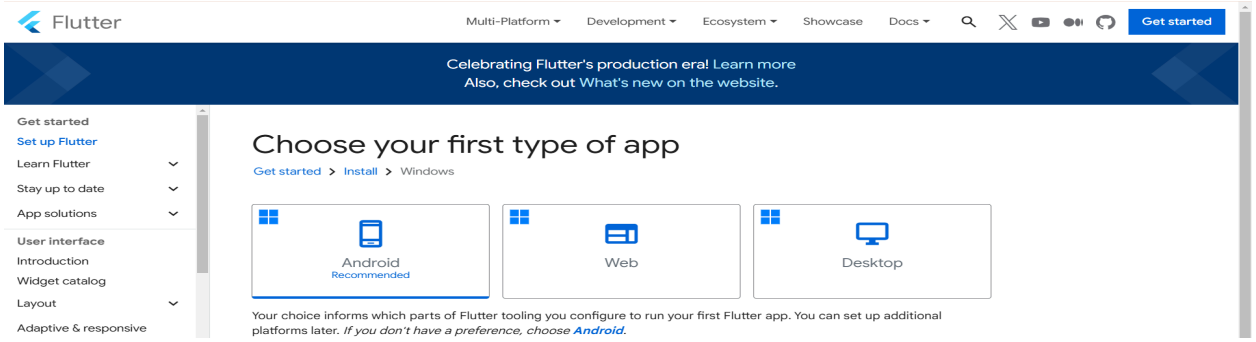
AIM : Installation and Configuration of Flutter Environment.

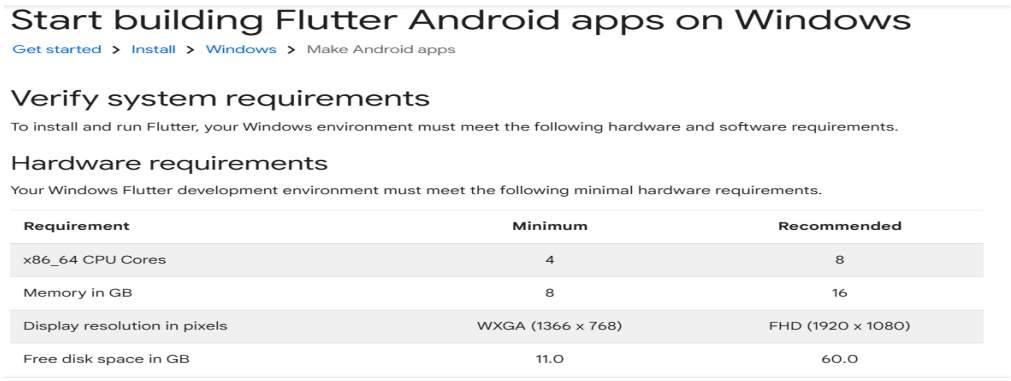
Steps :

Step 1: Download the installation bundle of the Flutter Software Development Kit for windows. To download Flutter SDK, Go to its official website https://docs.flutter.dev/get-started/install , you will get the following screen.



Step 2: Next, to download the latest Flutter SDK, click on the Windows **icon** and then select **Android**. Here, you will find system requirements and the download link for SDK.





Start building Flutter Android apps on Windows

Get started > Install > Windows > Make Android apps

Verify system requirements

To install and run Flutter, your Windows environment must meet the following hardware and software requirements.

Hardware requirements

Your Windows Flutter development environment must meet the following minimal hardware requirements.

Requirement	Minimum	Recommended
x86_64 CPU Cores	4	8
Memory in GB	8	16
Display resolution in pixels	WXGA (1366 x 768)	FHD (1920 x 1080)
Free disk space in GB	11.0	60.0

Use VS Code to install | Download and install

Download then install Flutter

To install Flutter, download the Flutter SDK bundle from its archive, move the bundle to where you want it stored, then extract the SDK.

1. Download the following installation bundle to get the latest stable release of the Flutter SDK.

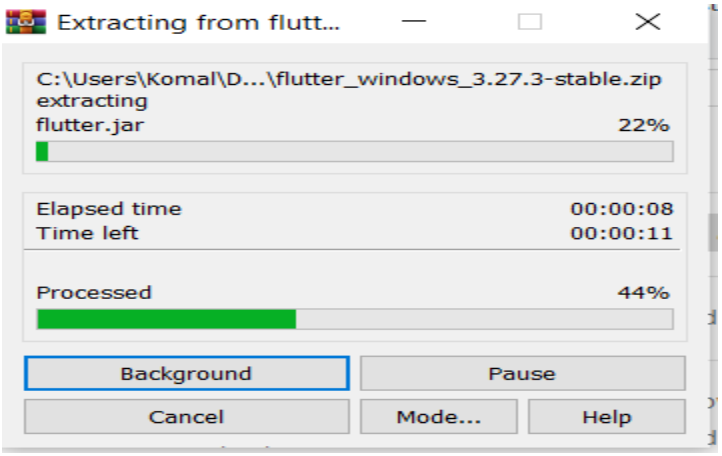
   flutter_windows_3.27.3-stable.zip

   For other release channels, and older builds, check out the SDK archive.

   The Flutter SDK should download to the Windows default download directory: `%USERPROFILE%\Downloads`.

   If you changed the location of the Downloads directory, replace this path with that path. To find your Downloads directory location, check out this Microsoft Community post.

Step 3: When your download is complete, extract the **zip** file and place it in the desired installation folder or location, for example, C: /Flutter.
(Here I have created Flutter folder in C drive and inside that created src folder and extracted in it.)

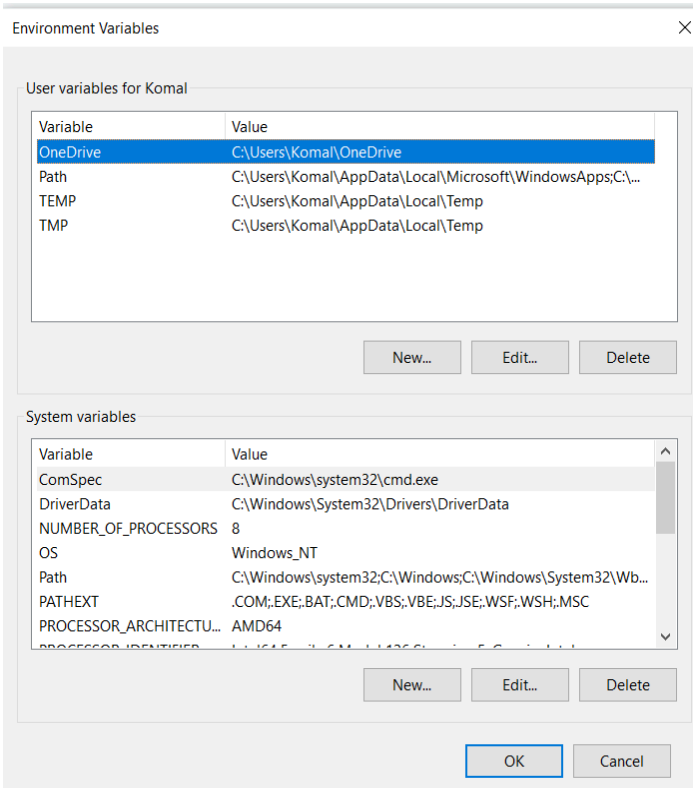


Step 4: Now run flutter doctor command in that folder bin directory we will get to know the status and what is remaining to install

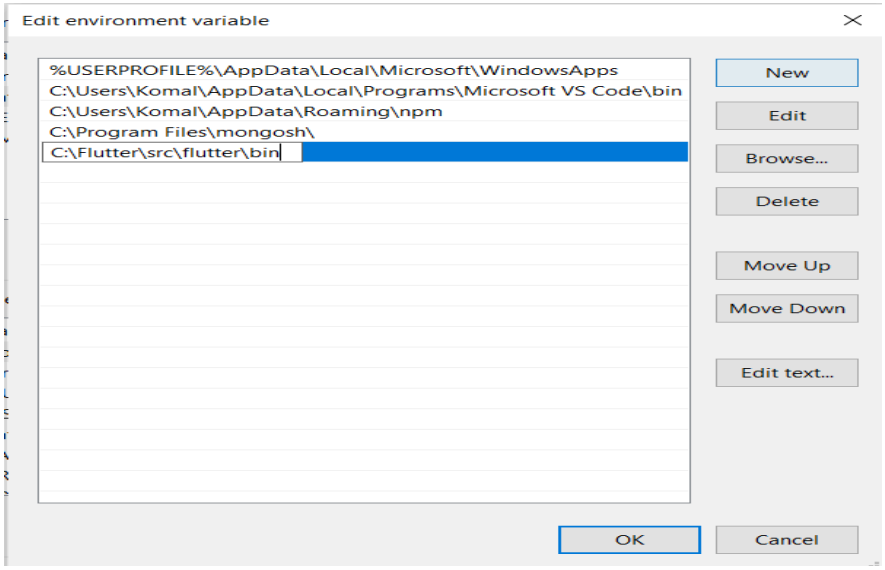
```
C:\Flutter\src\flutter\bin>flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[√] Flutter (Channel stable, 3.27.3, on Microsoft Windows [Version 10.0.19045.5371], locale en-US)
[√] Windows Version (Installed version of Windows is version 10 or higher)
[X] Android toolchain - 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.

C:\Flutter\src\flutter\bin>
```

Step 5: To run the Flutter command in regular windows console, you need to update the system path to include the flutter bin directory. The following steps are required to do this:

Step 5.1: Search for environment variables in search bar -> advanced tab -> environment variables. You will get the following screen.

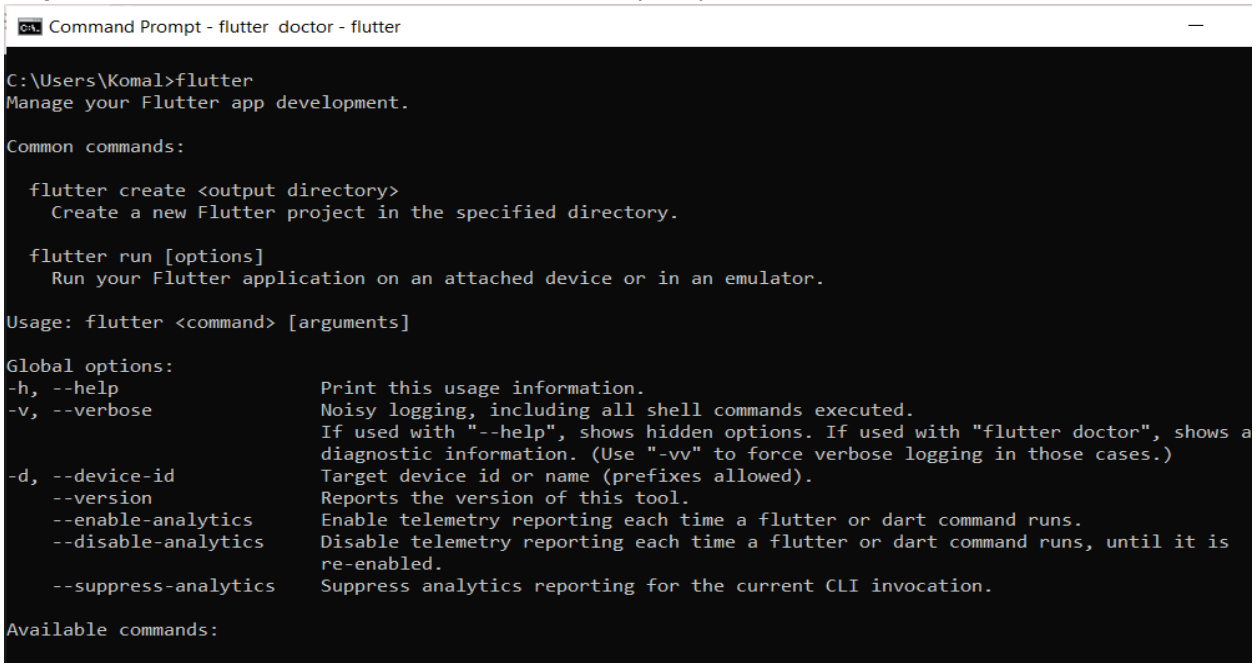


Step 5.2: Now, select path -> click on edit. The following screen appears



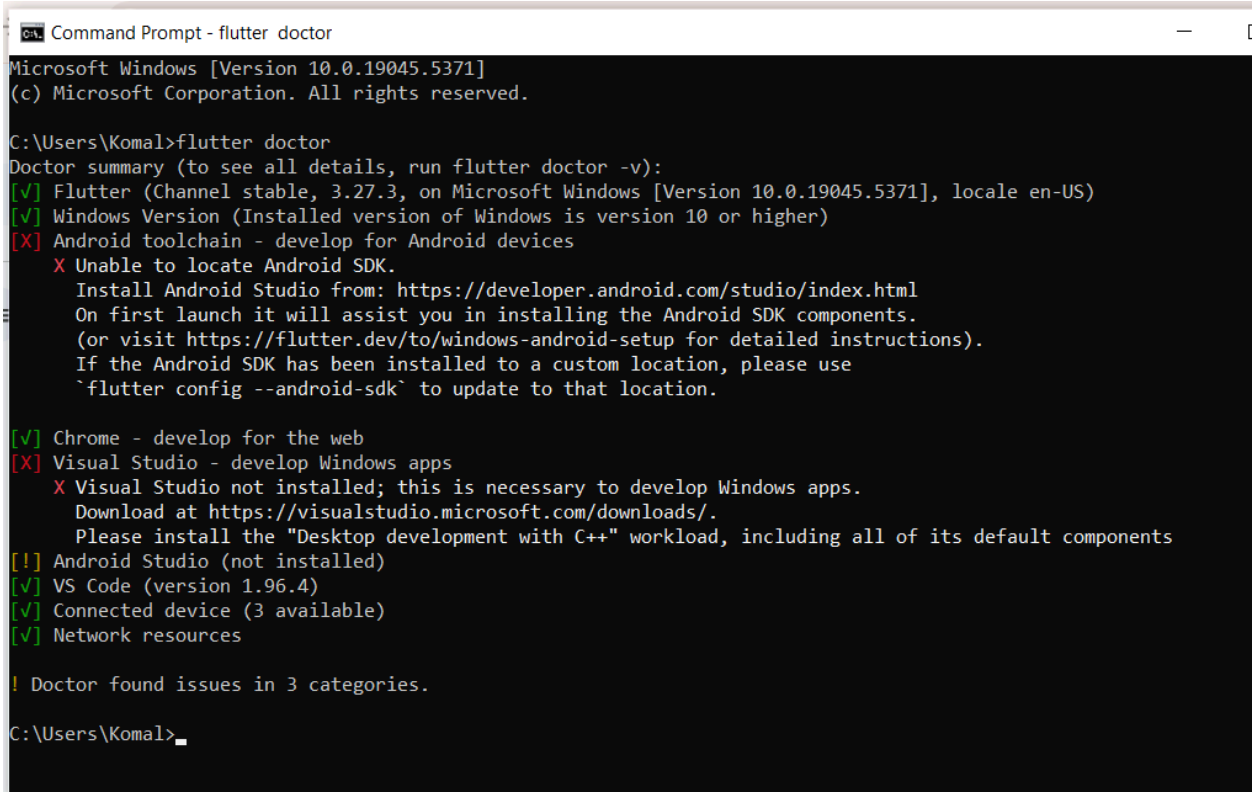
Step 5.3: In the above window, click on New->write path of Flutter bin folder in variable value - > ok -> ok -> ok. (your environment variable has set)

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



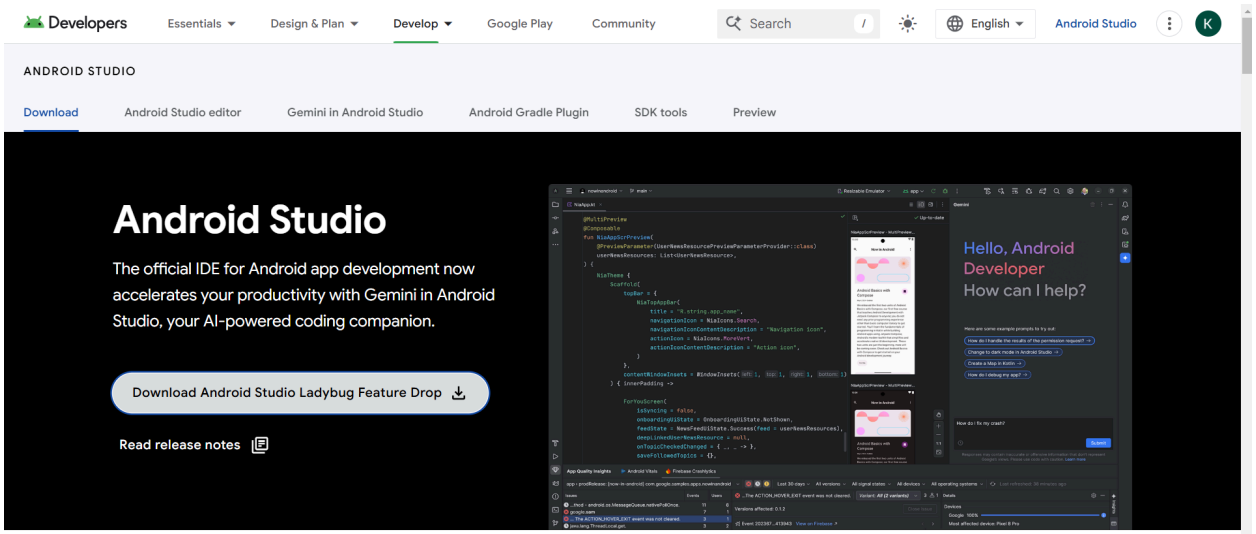
Step 7: Now, run the $ **flutter doctor** command. This command checks for all the requirements of Flutter app development and displays a report of the status of your Flutter installation.

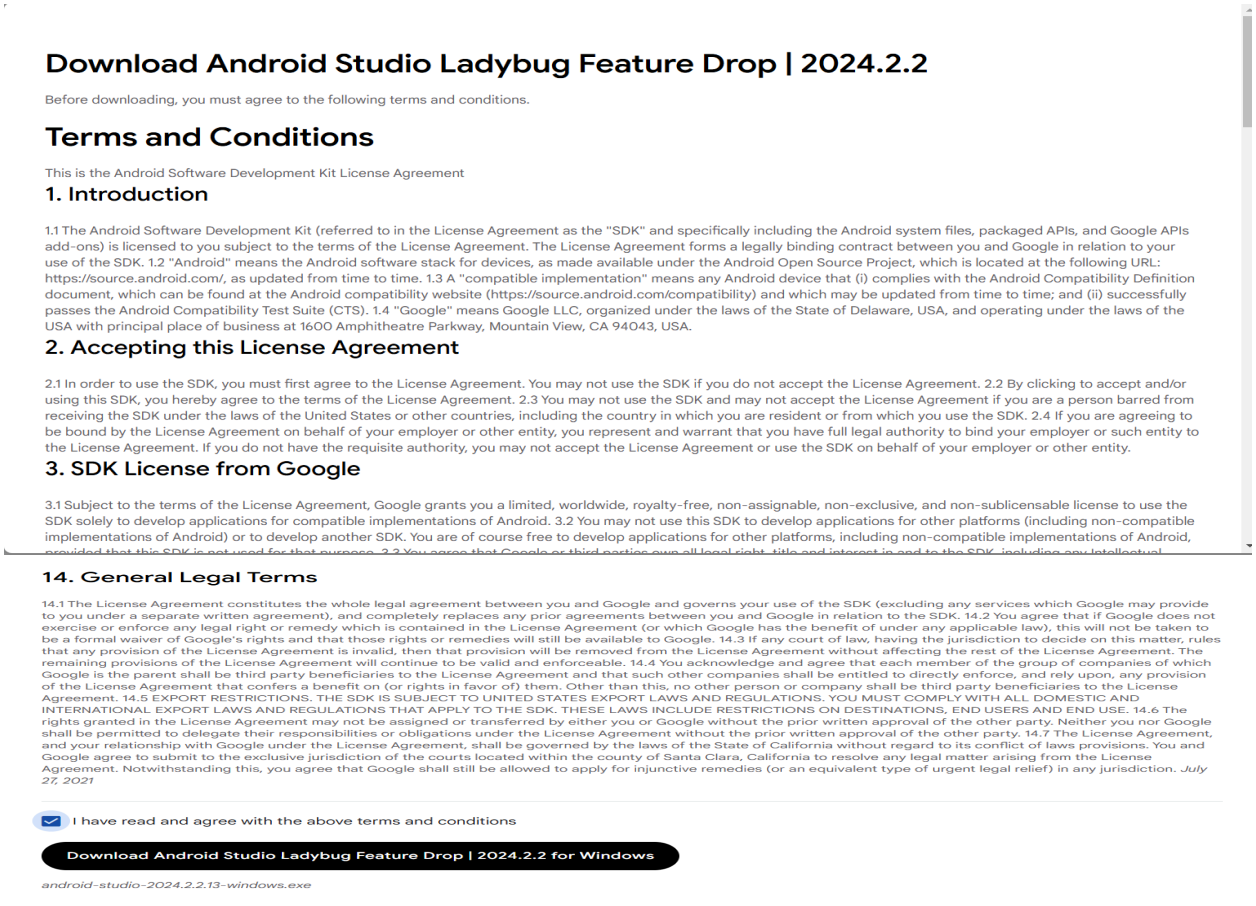
Step 8: When you run the above command, it will analyze the system and show its report, as shown in the below image. Here, you will find the details of all missing tools, which required to run Flutter as well as the development tools that are available but not connected with the device.



Step 9: Install the Android SDK. If the flutter doctor command does not find the Android SDK tool in your system, then you need first to install the Android Studio IDE. To install Android Studio IDE, do the following steps.

Step 9.1: Download the latest Android Studio executable or zip file from the official site by accepting terms and conditions.





Download Android Studio Ladybug Feature Drop | 2024.2.2

Before downloading, you must agree to the following terms and conditions.

Terms and Conditions

This is the Android Software Development Kit License Agreement

1. Introduction

1.1 The Android Software Development Kit (referred to in the License Agreement as the "SDK" and specifically including the Android system files, packaged APIs, and Google APIs add-ons) is licensed to you subject to the terms of the License Agreement. The License Agreement forms a legally binding contract between you and Google in relation to your use of the SDK. 1.2 "Android" means the Android software stack for devices, as made available under the Android Open Source Project, which is located at the following URL: https://source.android.com/, as updated from time to time. 1.3 A "compatible implementation" means any Android device that (i) complies with the Android Compatibility Definition document, which can be found at the Android compatibility website (https://source.android.com/compatibility) and which may be updated from time to time; and (ii) successfully passes the Android Compatibility Test Suite (CTS). 1.4 "Google" means Google LLC, organized under the laws of the State of Delaware, USA, and operating under the laws of the USA with principal place of business at 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA.

2. Accepting this License Agreement

2.1 In order to use the SDK, you must first agree to the License Agreement. You may not use the SDK if you do not accept the License Agreement. 2.2 By clicking to accept and/or using this SDK, you hereby agree to the terms of the License Agreement. 2.3 You may not use the SDK and may not accept the License Agreement if you are a person barred from receiving the SDK under the laws of the United States or other countries, including the country in which you are resident or from which you use the SDK. 2.4 If you are agreeing to be bound by the License Agreement on behalf of your employer or other entity, you represent and warrant that you have full legal authority to bind your employer or such entity to the License Agreement. If you do not have the requisite authority, you may not accept the License Agreement or use the SDK on behalf of your employer or other entity.

3. SDK License from Google

3.1 Subject to the terms of the License Agreement, Google grants you a limited, worldwide, royalty-free, non-assignable, non-exclusive, and non-sublicensable license to use the SDK solely to develop applications for compatible implementations of Android. 3.2 You may not use this SDK to develop applications for other platforms (including non-compatible implementations of Android) or to develop another SDK. You are of course free to develop applications for other platforms, including non-compatible implementations of Android, provided that this SDK is not used for that purpose. 3.3 You agree that Google or third parties own all legal right, title and interest in and to the SDK, including any Intellectual

14. General Legal Terms

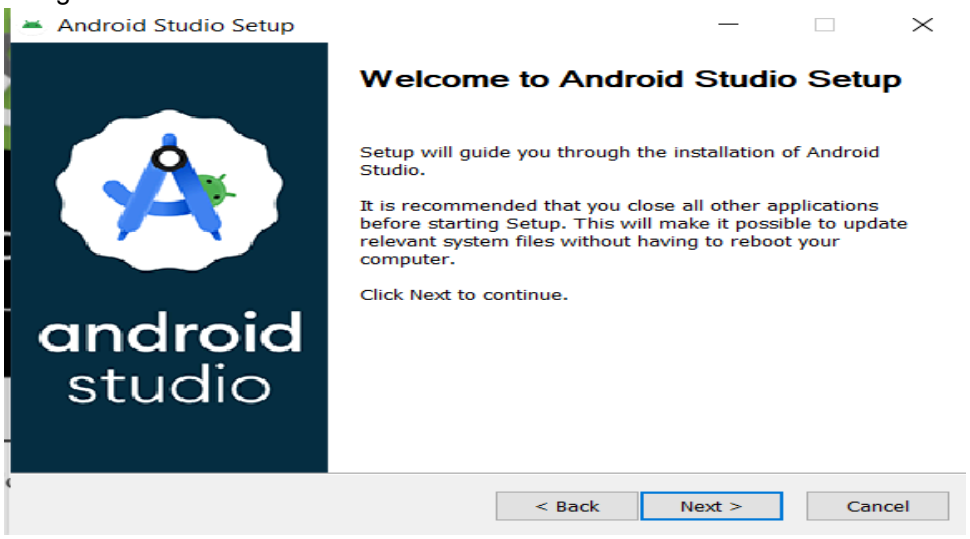
14.1 The License Agreement constitutes the whole legal agreement between you and Google and governs your use of the SDK (excluding any services which Google may provide to you under a separate written agreement), and completely replaces any prior agreements between you and Google in relation to the SDK. 14.2 You agree that if Google does not exercise or enforce any legal right or remedy which is contained in the License Agreement (or which Google has the benefit of under any applicable law), this will not be taken to be a formal waiver of Google's rights and that those rights or remedies will still be available to Google. 14.3 If any court of law, having the jurisdiction to decide on this matter, rules that any provision of the License Agreement is invalid, then that provision will be removed from the License Agreement without affecting the rest of the License Agreement. The remaining provisions of the License Agreement will continue to be valid and enforceable. 14.4 You acknowledge and agree that each member of the group of companies of which Google is the parent shall be third party beneficiaries to the License Agreement and that such other companies shall be entitled to directly enforce, and rely upon, any provision of the License Agreement that confers a benefit on (or rights in favor of) them. Other than this, no other person or company shall be third party beneficiaries to the License Agreement. 14.5 EXPORT RESTRICTIONS. THE SDK IS SUBJECT TO UNITED STATES EXPORT LAWS AND REGULATIONS. YOU MUST COMPLY WITH ALL DOMESTIC AND INTERNATIONAL EXPORT LAWS AND REGULATIONS THAT APPLY TO THE SDK. THESE LAWS INCLUDE RESTRICTIONS ON DESTINATIONS, END USERS AND END USE. 14.6 The rights granted in the License Agreement may not be assigned or transferred by either you or Google without the prior written approval of the other party. Neither you nor Google shall be permitted to delegate their responsibilities or obligations under the License Agreement without the prior written approval of the other party. 14.7 The License Agreement, and your relationship with Google under the License Agreement, shall be governed by the laws of the State of California without regard to its conflict of laws provisions. You and Google agree to submit to the exclusive jurisdiction of the courts located within the county of Santa Clara, California to resolve any legal matter arising from the License Agreement. Notwithstanding this, you agree that Google shall still be allowed to apply for injunctive remedies (or an equivalent type of urgent legal relief) in any jurisdiction. *July 27, 2021*

I have read and agree with the above terms and conditions

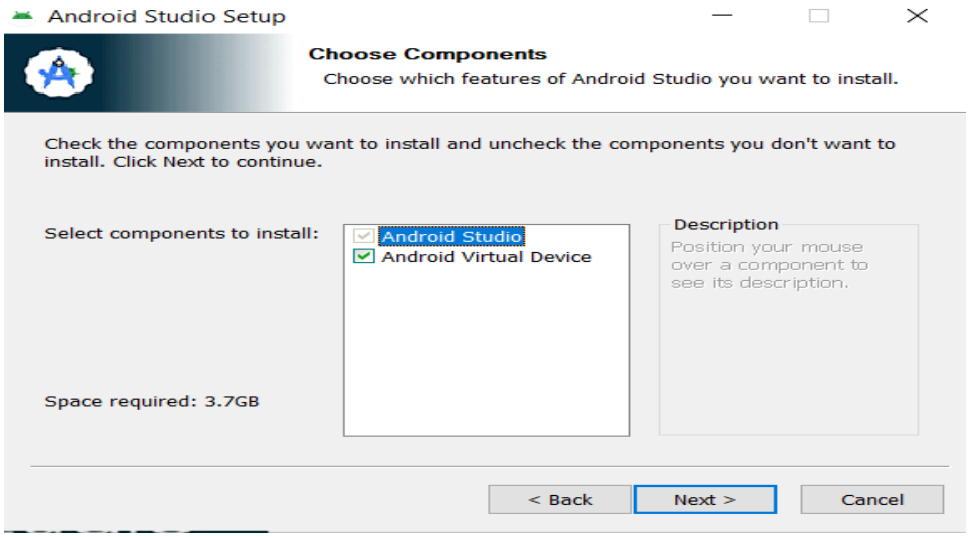
Download Android Studio Ladybug Feature Drop | 2024.2.2 for Windows

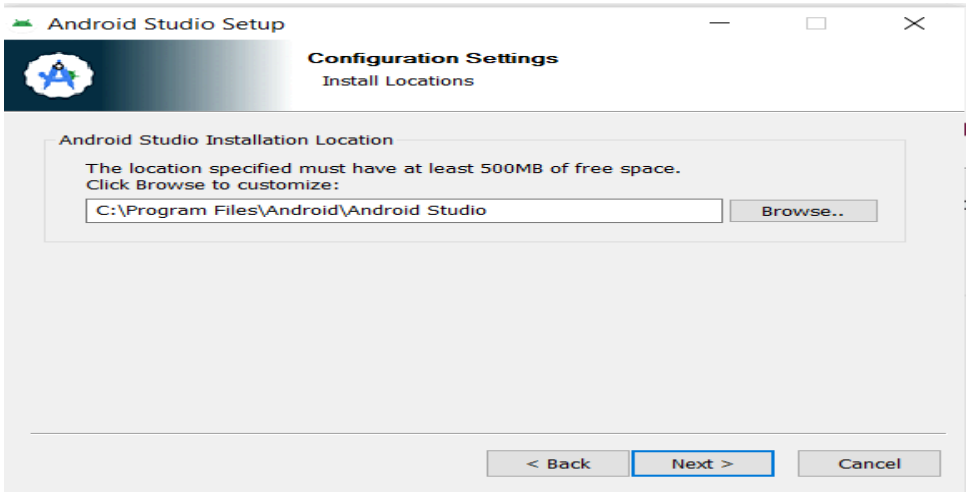
android-studio-2024.2.2.13-windows.exe

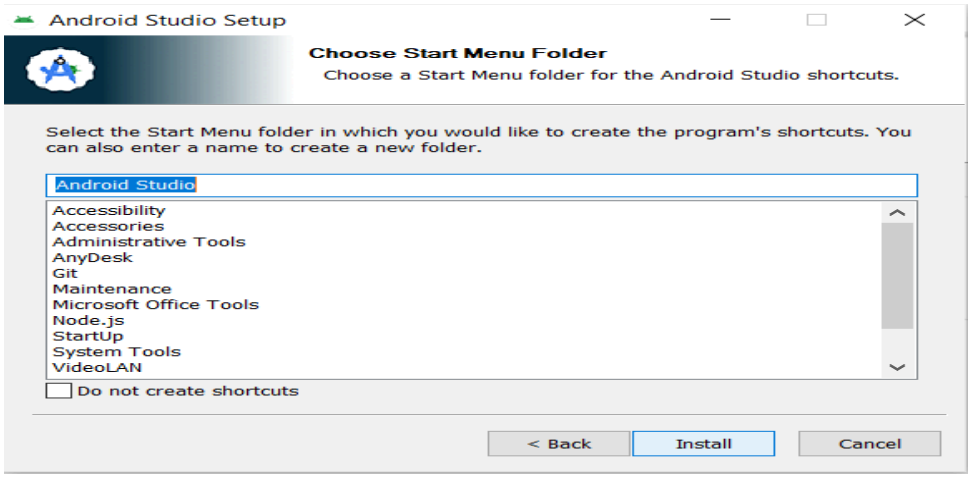
Step 9.2: When the download is complete, open the **.exe** file and run it. You will get the following dialog box.



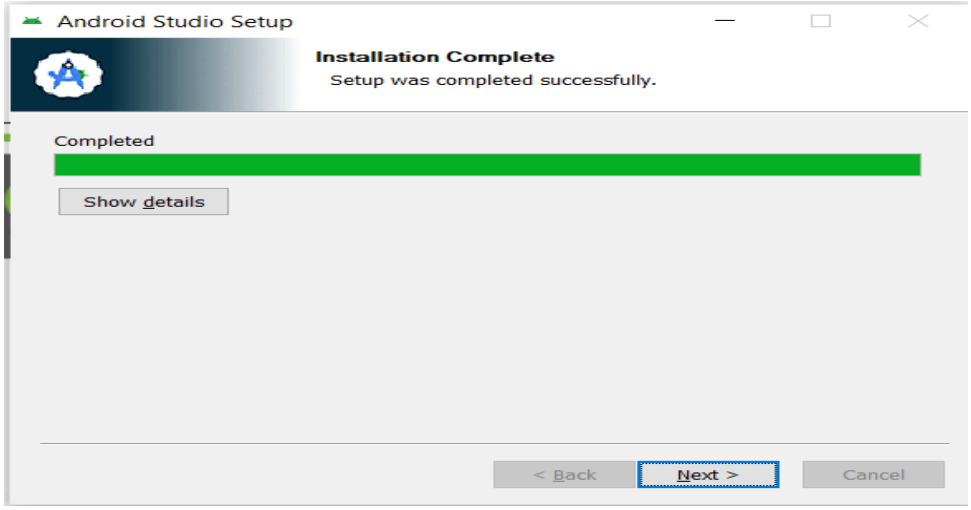
Step 9.3: Follow the steps of the installation wizard and also select installation location.



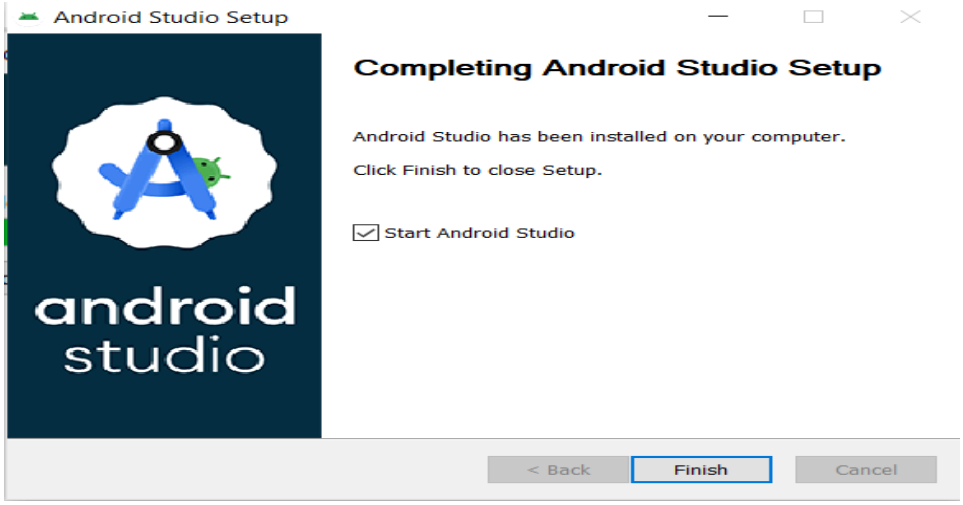


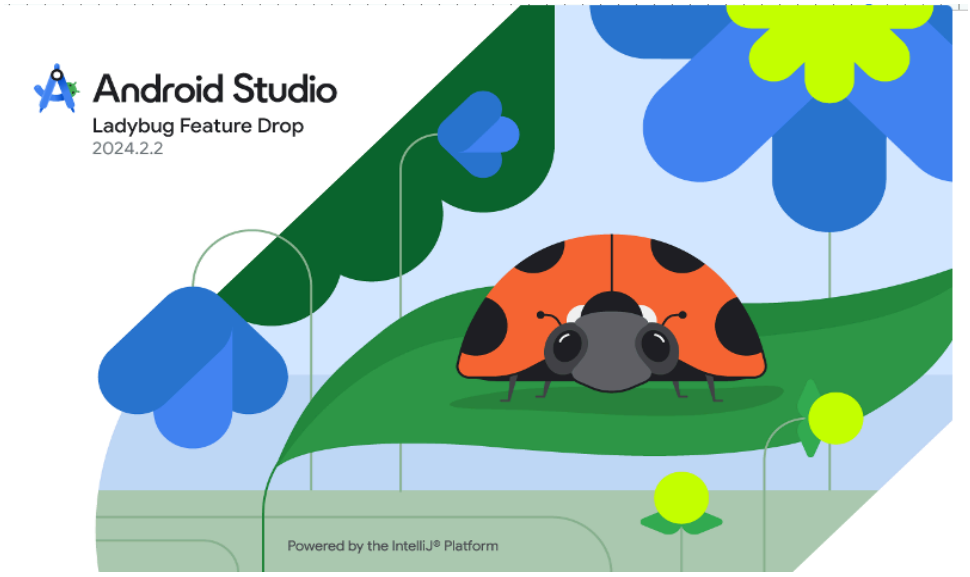


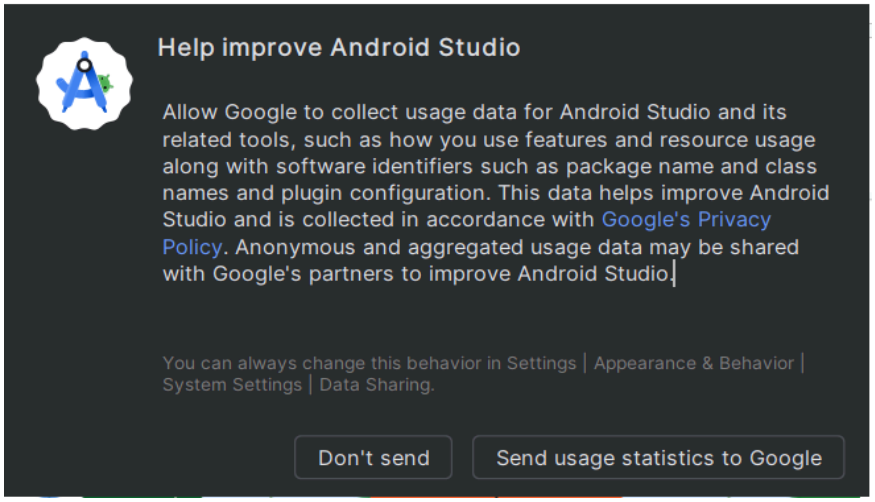
Step 9.4: Once the installation wizard completes, you will get the following screen.



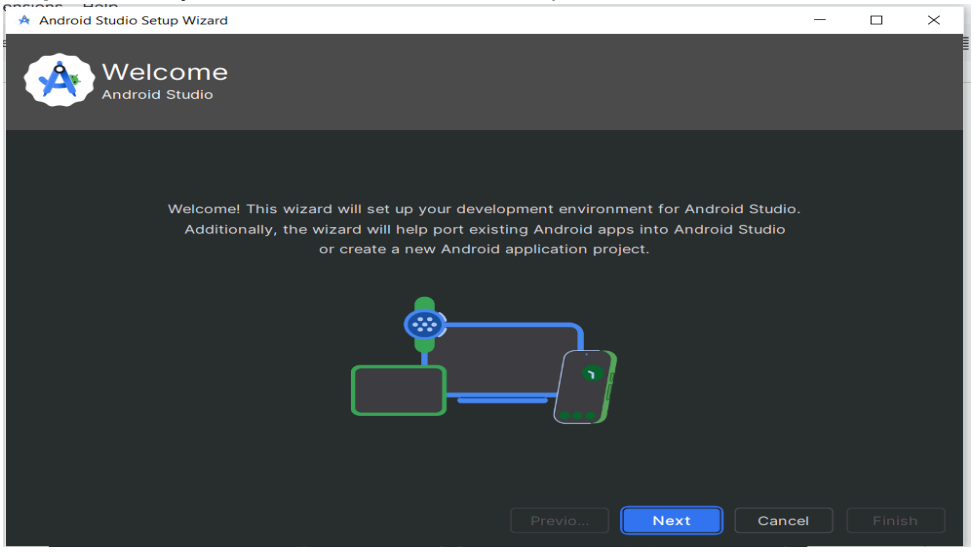
Step 9.5: In the above screen, click Next-> Finish. Once the Finish button is clicked, you need to choose the 'Don't import Settings option' and click OK. It will start the Android Studio. Also click on Don't send so that your data will not get shared with android studio.



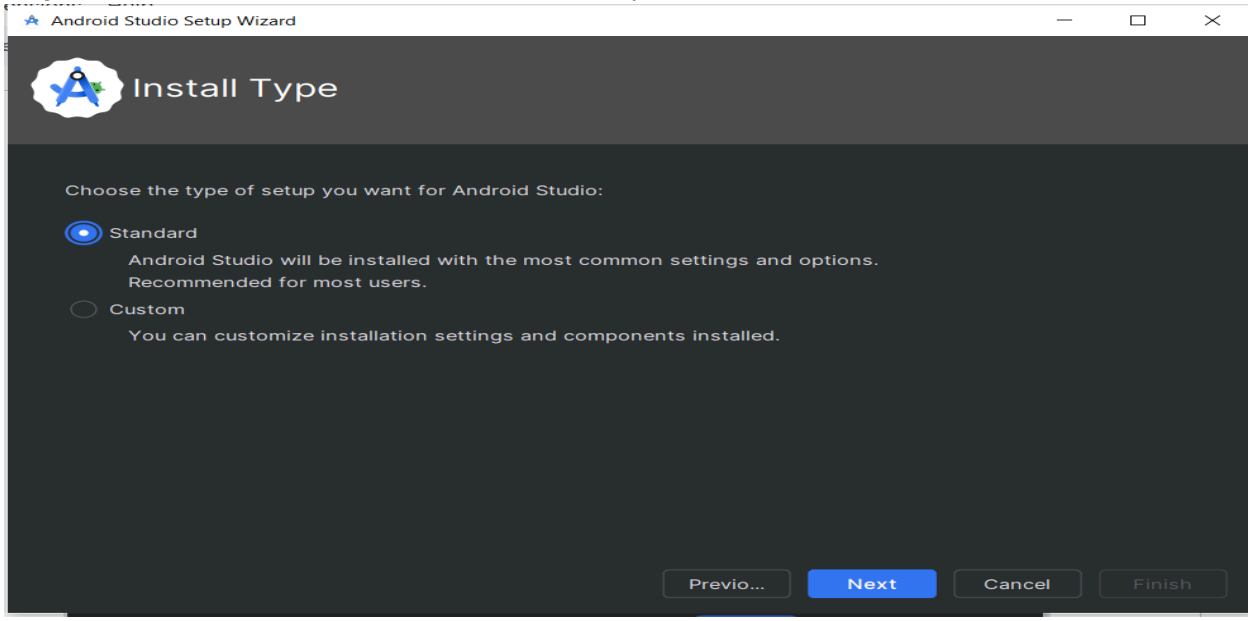


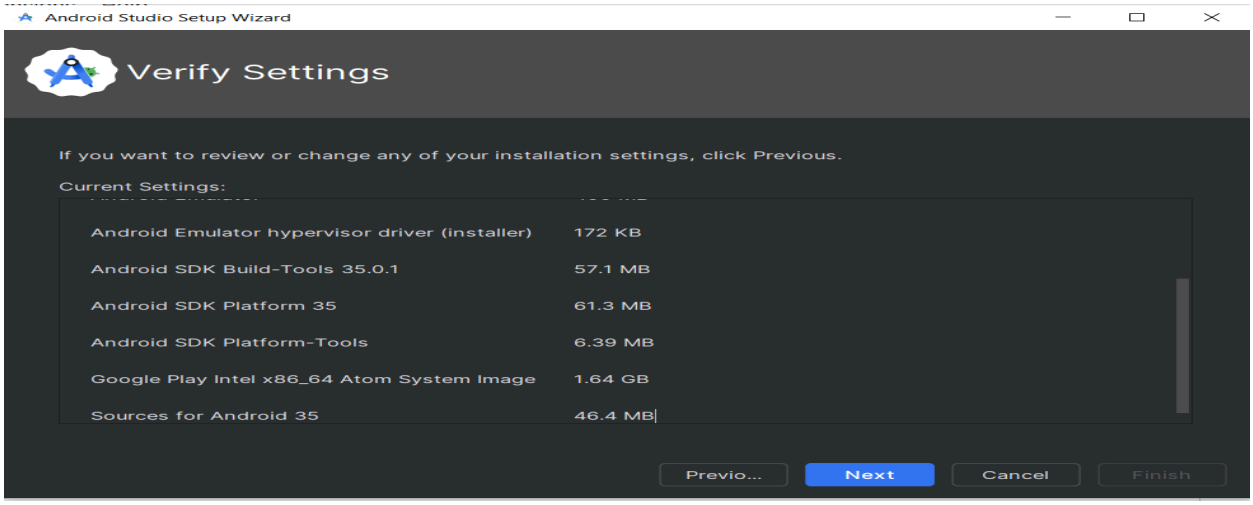


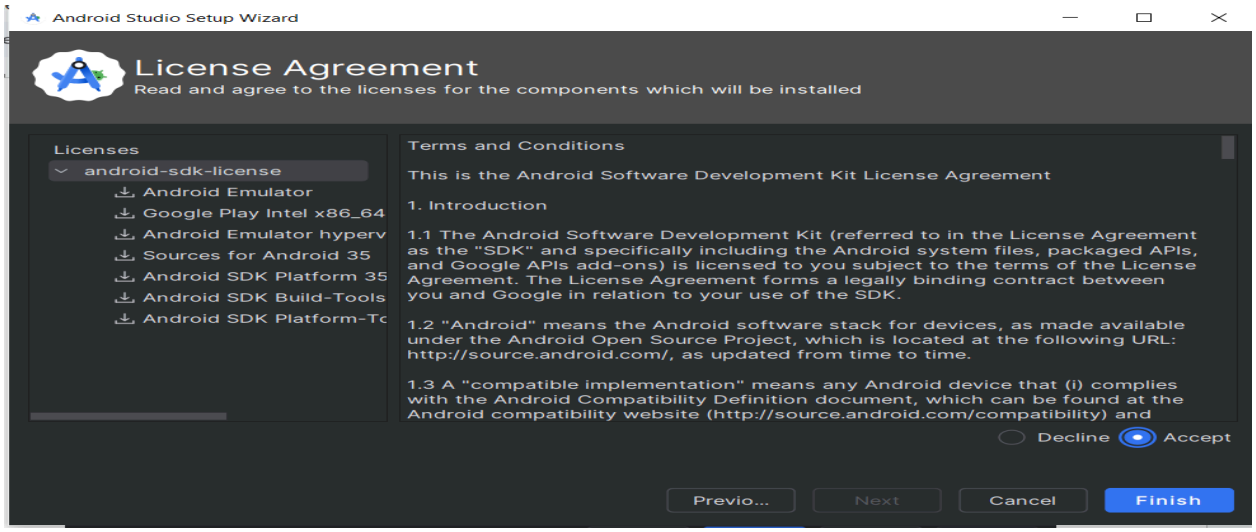
Step 9.6: Now you will see android studio setup wizard. Click next.



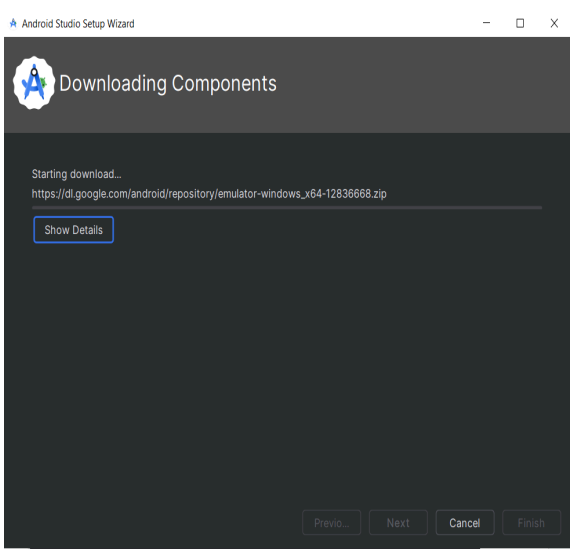
Step 9.7: Select **Standard** then Next -> Next -> Accept ->Finish.

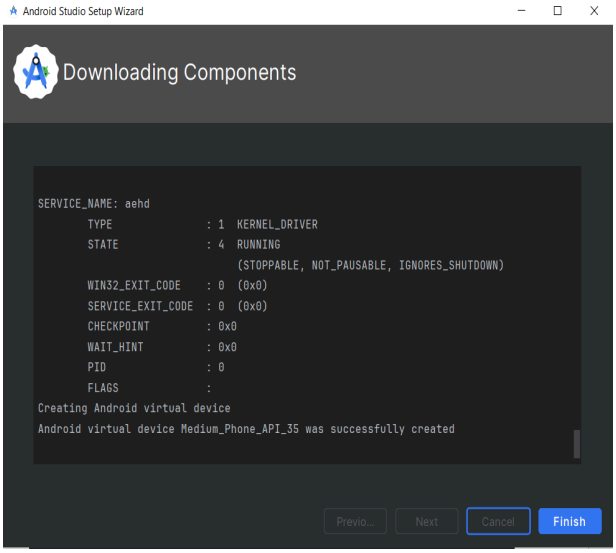




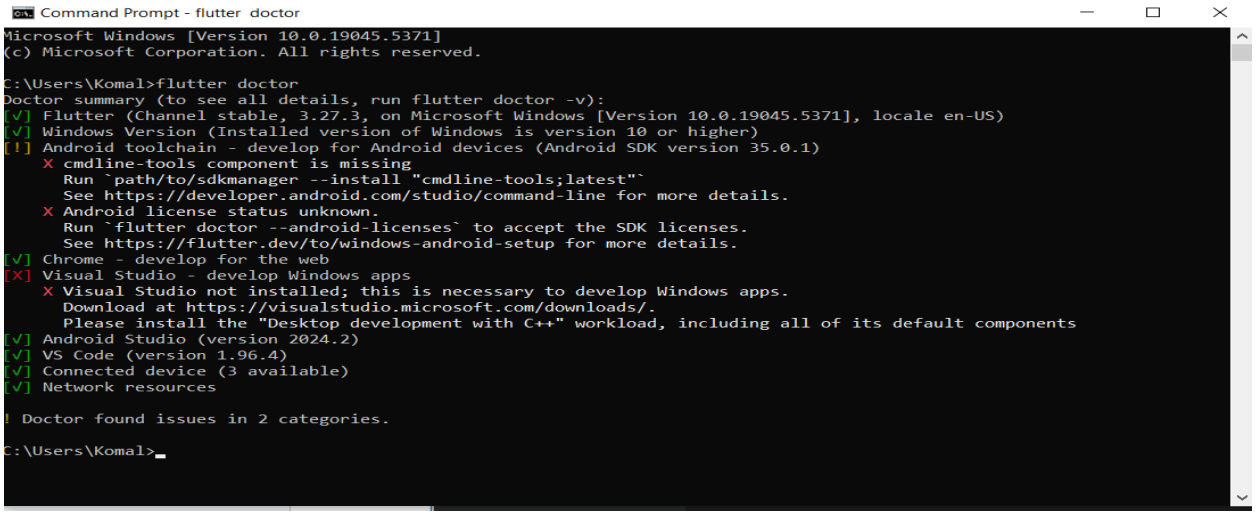


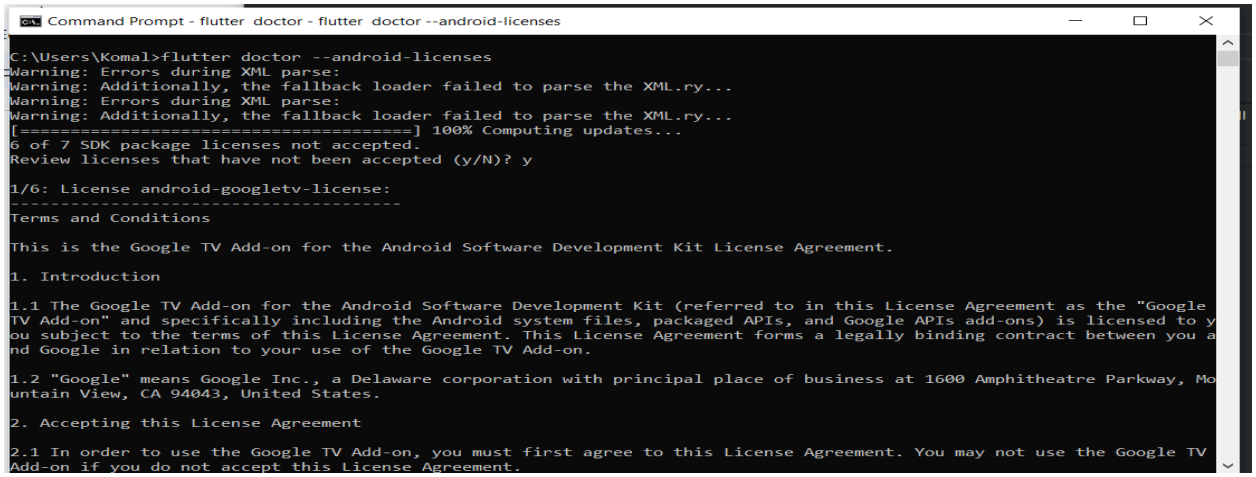
Step 9.8: Now you will see following downloading components wizard. After finishing download click on Finish.



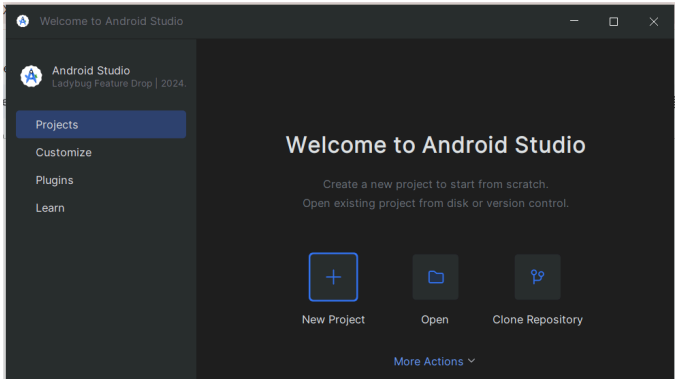


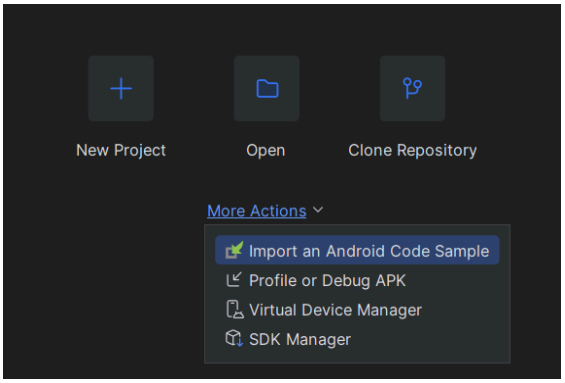
Step 9.9: run the $ **flutter doctor** command and Run flutter doctor --android-licenses command.

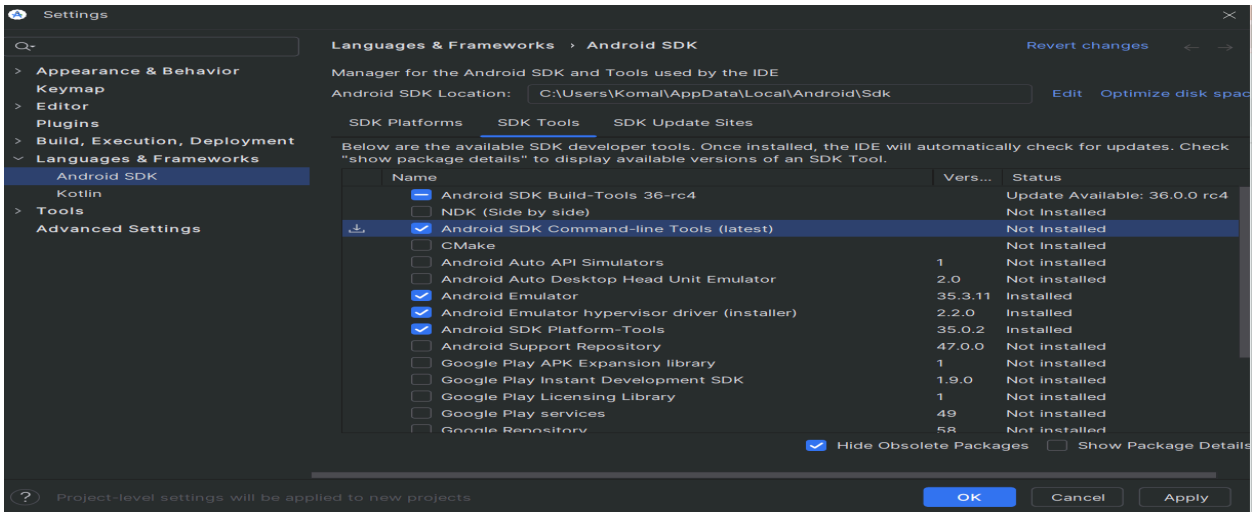


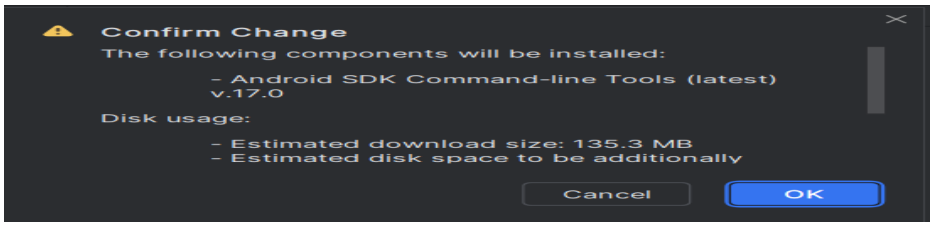


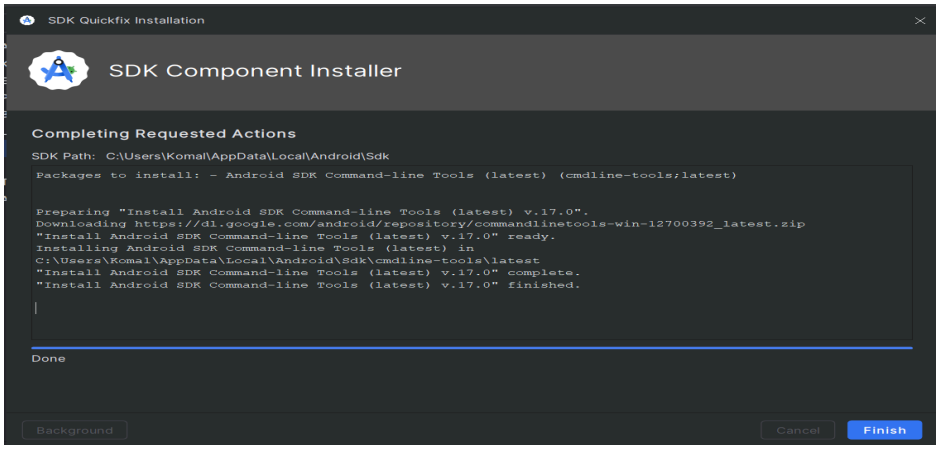
Step 9.10: Now open android studio you will see the following window. Click on more actions-> Import an android code Sample -> select Android SDK command-line tools (latest) this will download command-line tools.







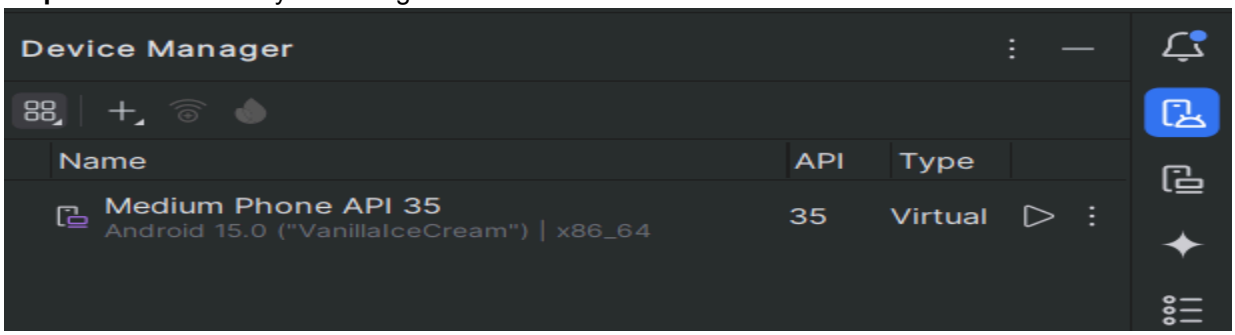


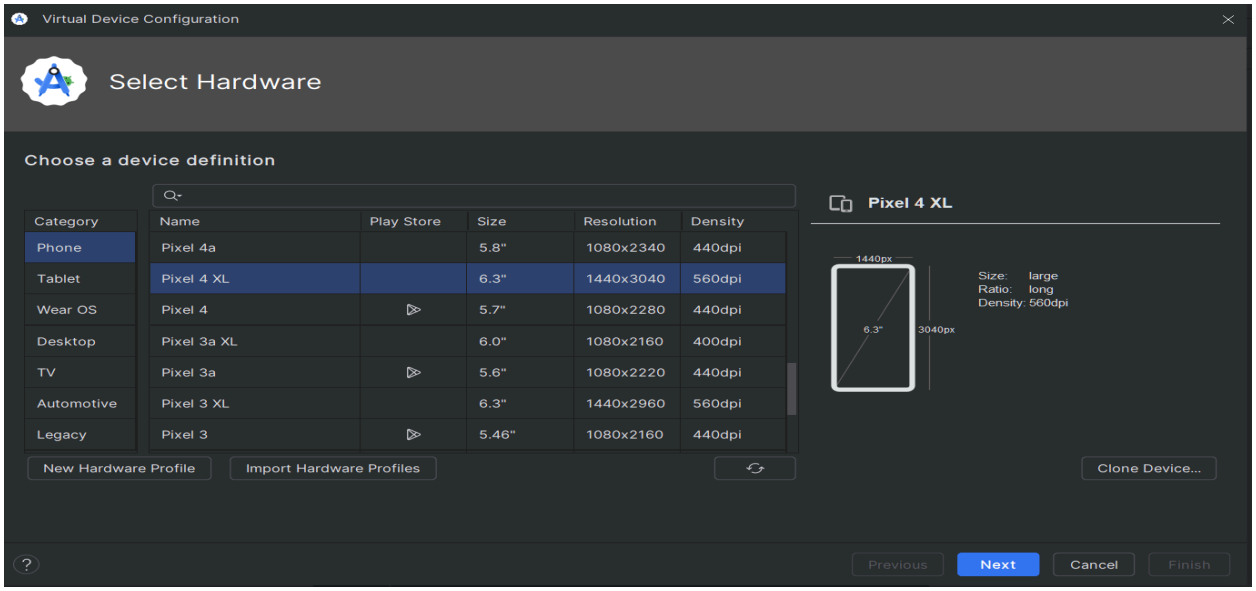


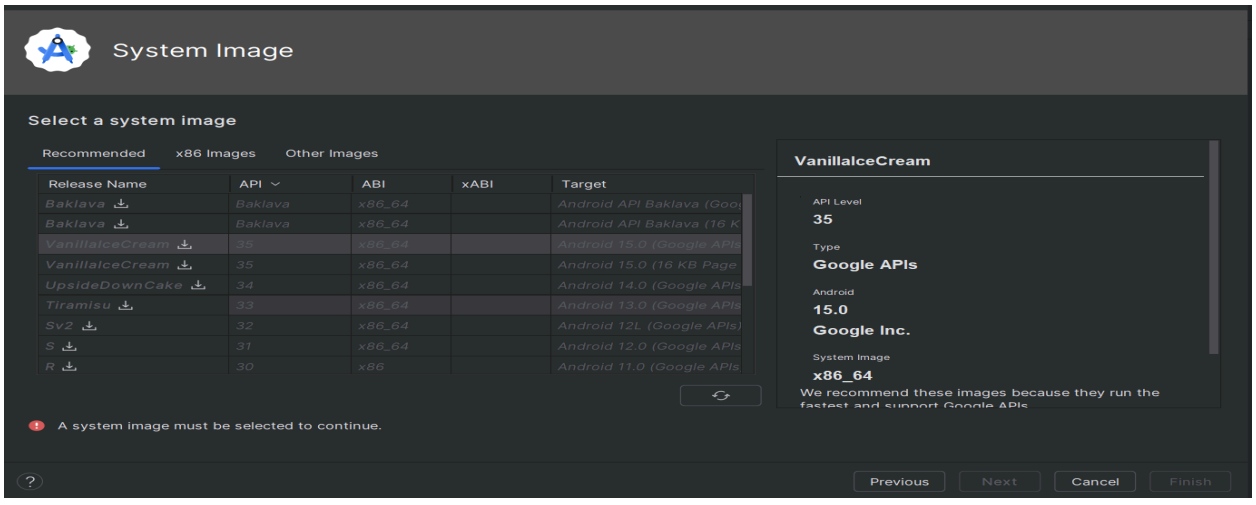
Step 10: Next, you need to set up an Android emulator. It is responsible for running and testing the Flutter application.

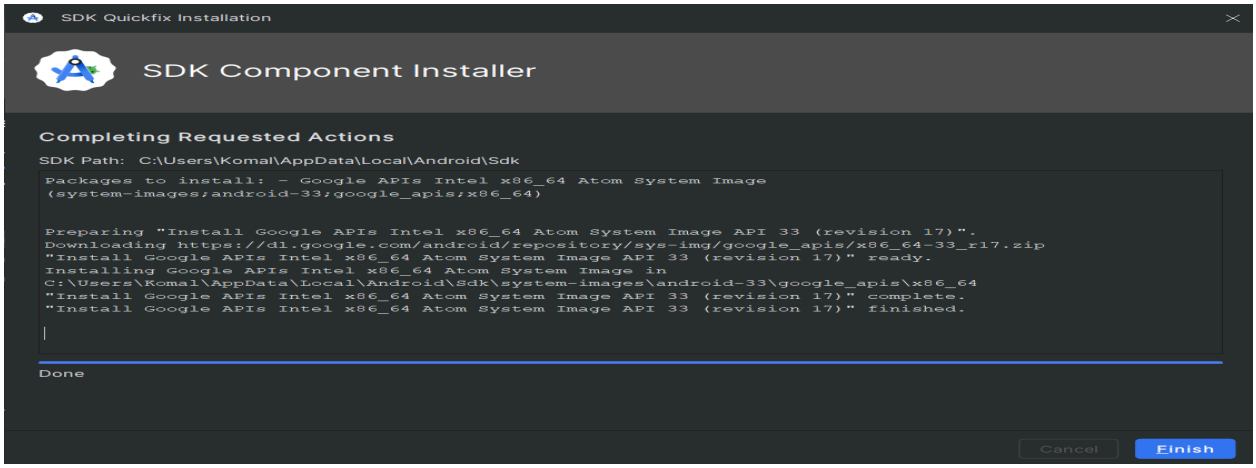
Step 10.1: To set an Android emulator, go to Android Studio > Tools > Android > AVD Manager and select Create Virtual Device. Or, go to Help->Find Action->Type Emulator in the search box. You will get the following screen.
Step 10.2: Choose your device definition and click on Next.

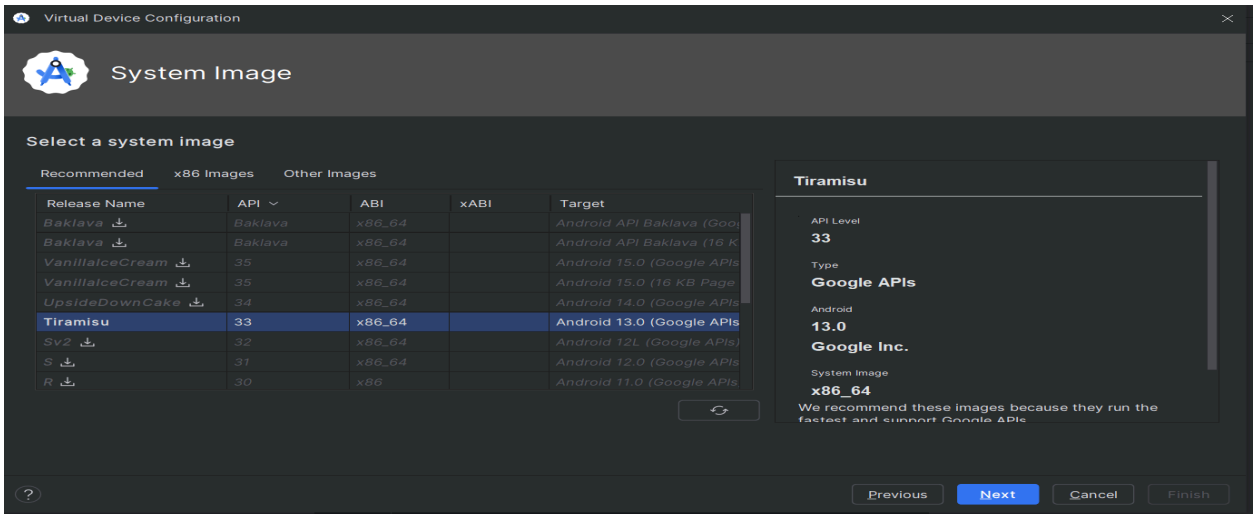
Step 10.3: Select the system image for the latest Android version and click on Next.



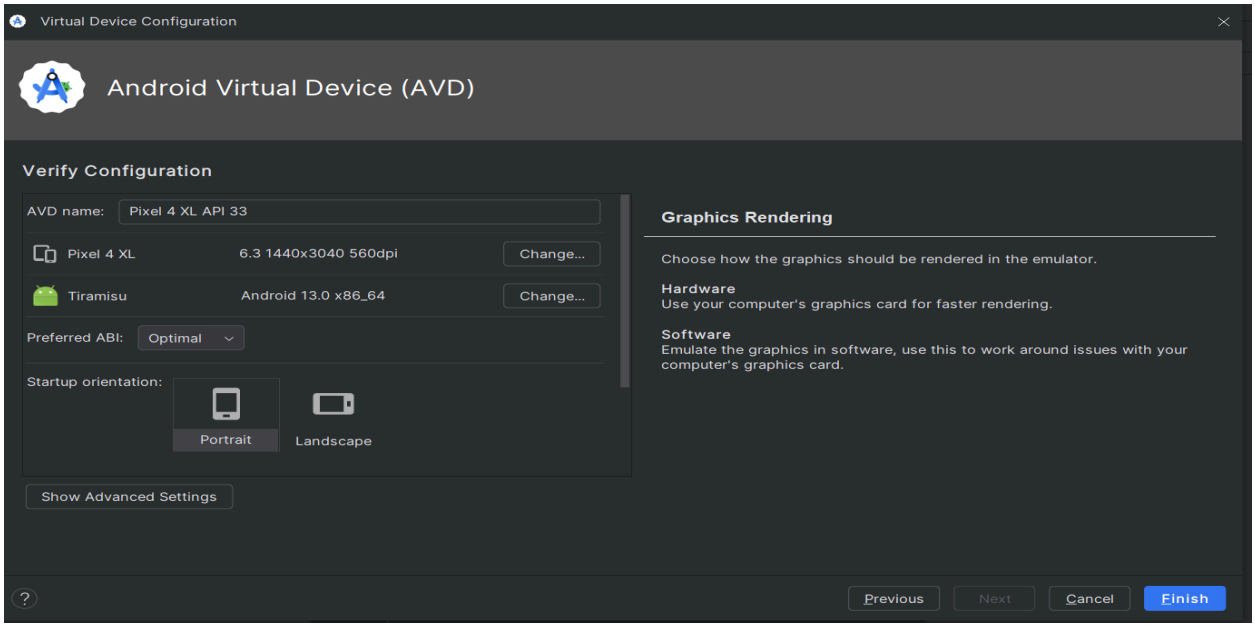


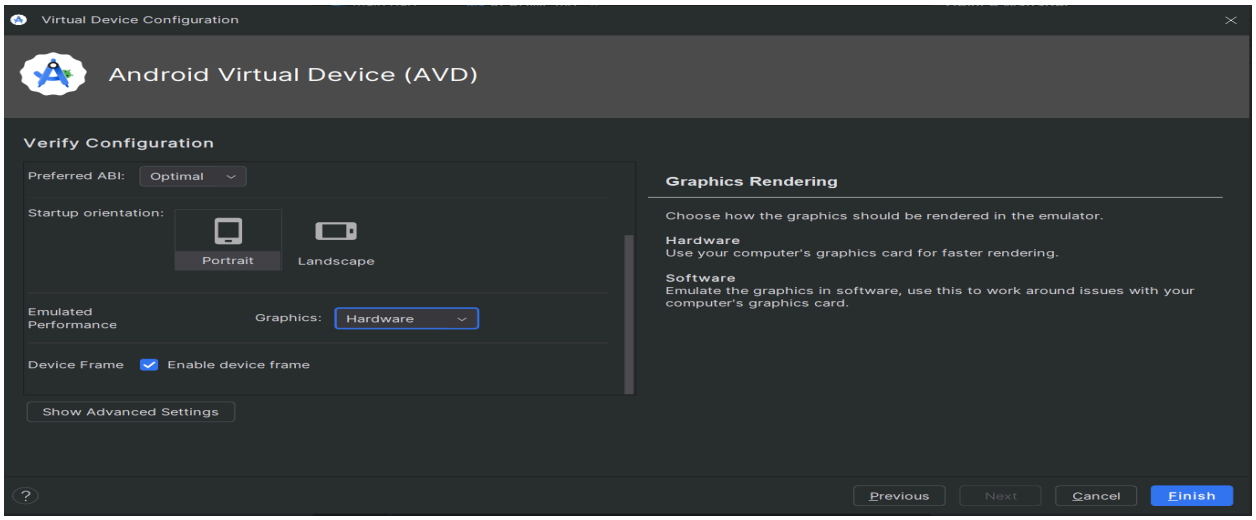




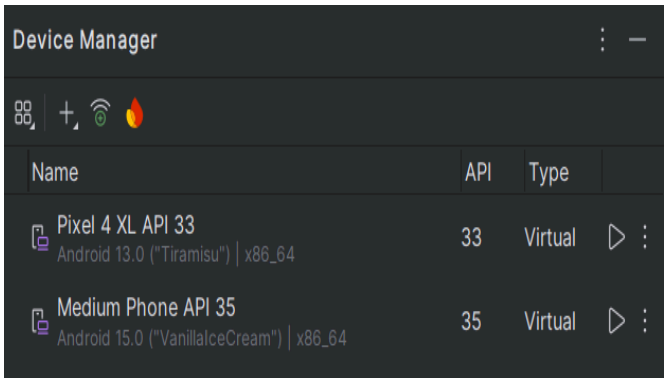


Step 10.4: Now, verify the all AVD configuration.Select Hardware in graphics. If it is correct, click on Finish.

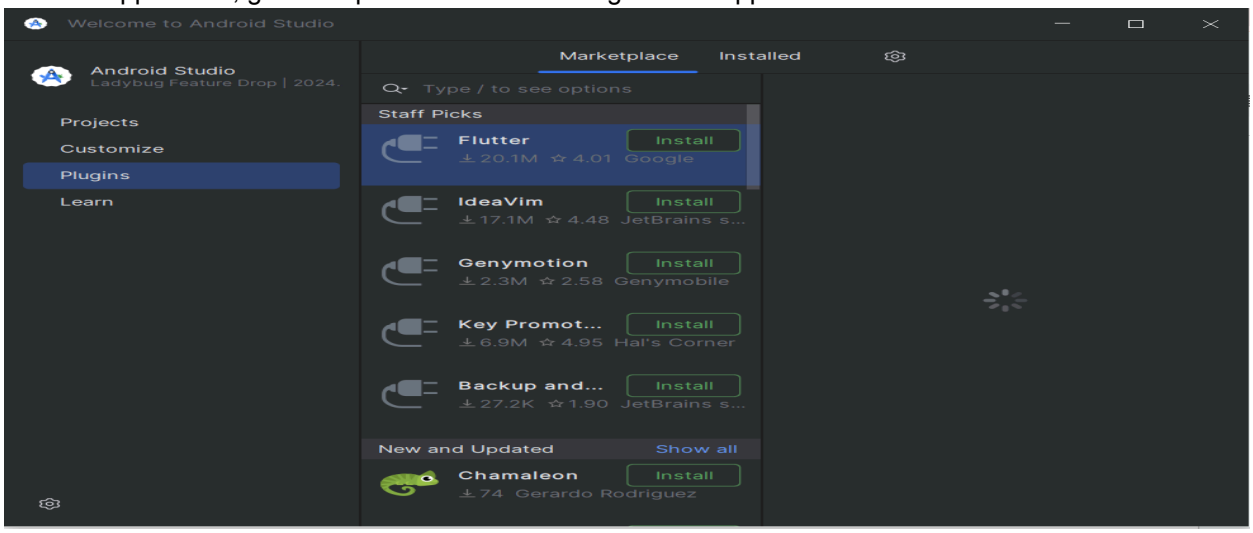


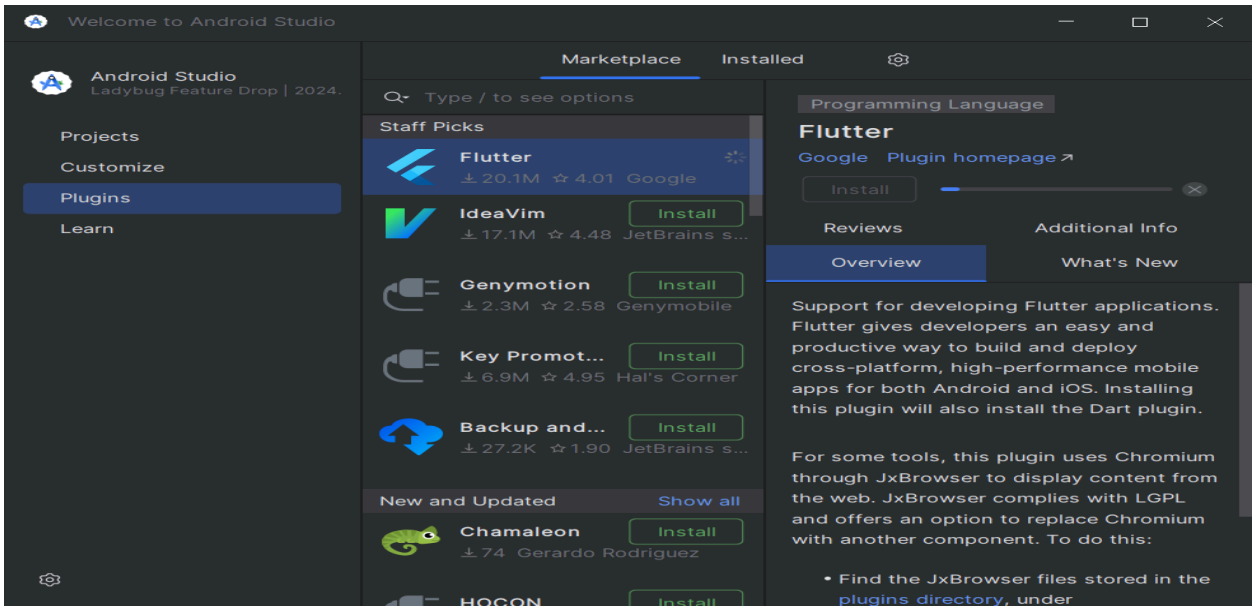


Step 10.5: Last, click on the icon pointed into the rectangle. The Android emulator displayed as below screen.

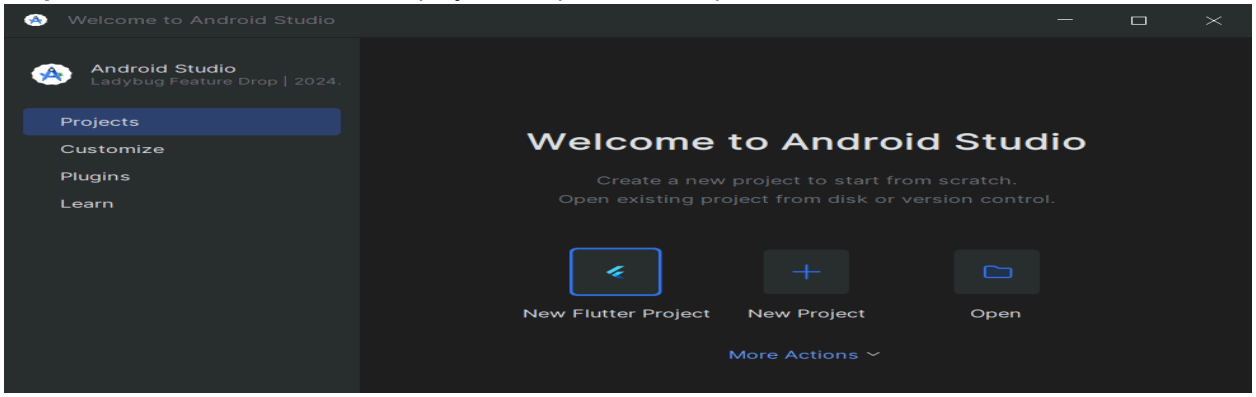


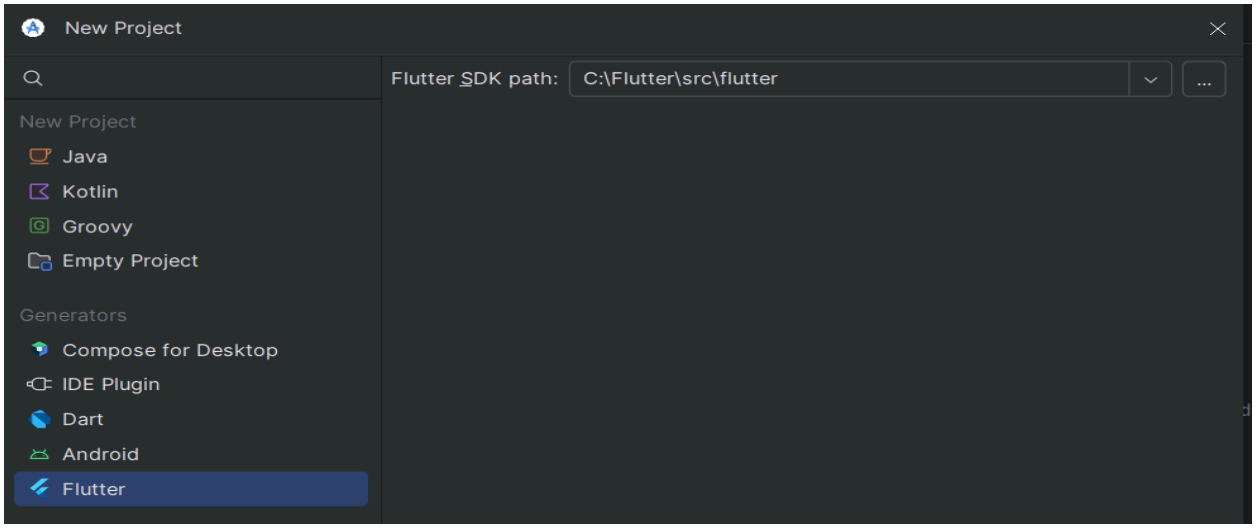
Step 11: Next, you need to install flutter plugin . Go to plugins ->Install Flutter plugin(it will automatically install dart) and then restart android studio.These plugins provide a template to create a Flutter application, give an option to run and debug Flutter application in the Android Studio itself.



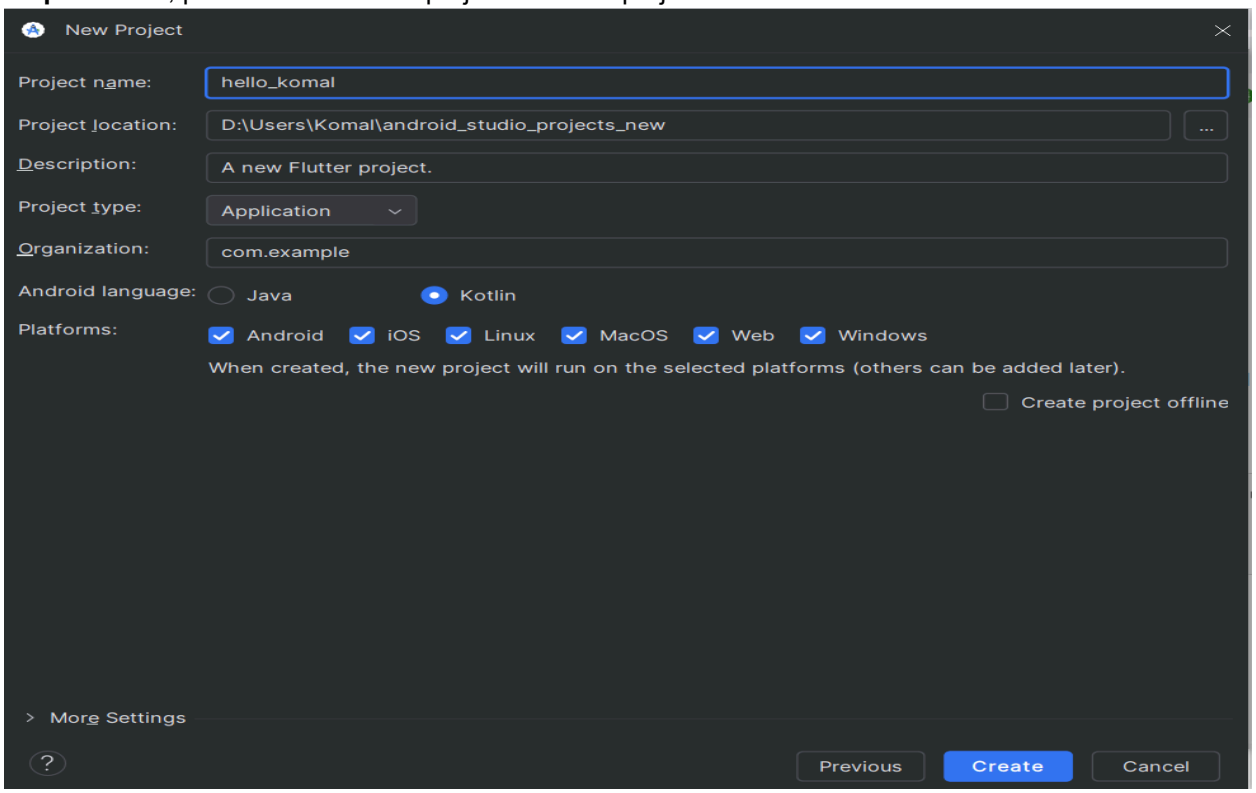


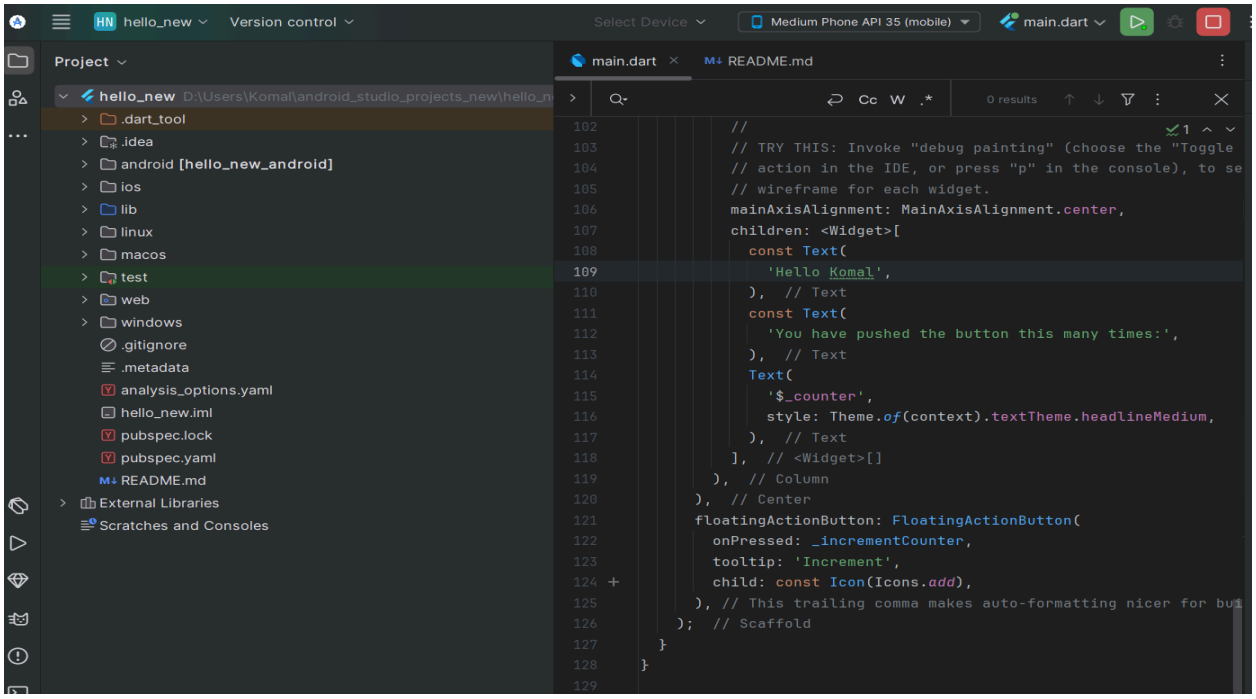
Step 12: Next, click on new Flutter project and provide SDK path ->Next.

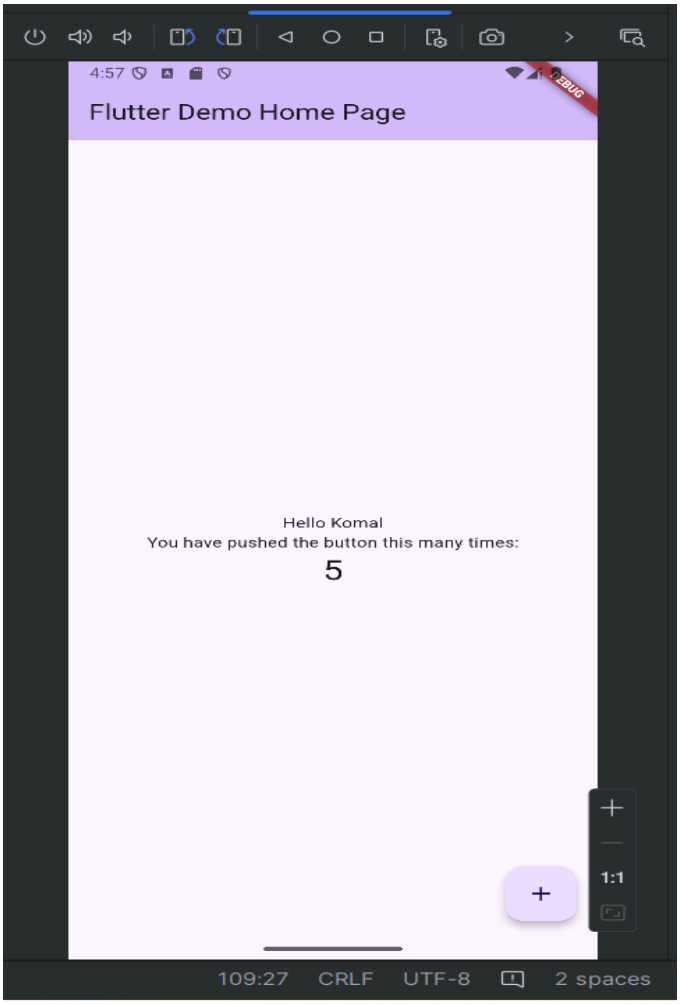




Step 12: Next, provide name of the project -> select project location -> create.




hello_new
Version control
Medium Phone API 35 (mobile)
main.dart
Project
hello_new D:\Users\Komal\android_studio_projects_new\hello_n
.dart_tool
.idea
android [hello_new_android]
ios
lib
linux
macos
test
web
windows
.gitignore
.metadata
analysis_options.yaml
hello_new.iml
pubspec.lock
pubspec.yaml
README.md
External Libraries
Scratches and Consoles
main.dart
README.md
0 results
// TRY THIS: Invoke "debug painting" (choose the "Toggle
// action in the IDE, or press "p" in the console), to se
// wireframe for each widget.
mainAxisAlignment: MainAxisAlignment.center,
children: <Widget>[
const Text(
'Hello Komal',
), // Text
const Text(
'You have pushed the button this many times:',
), // Text
Text(
'$_counter',
style: Theme.of(context).textTheme.headlineMedium,
), // Text
], // <Widget>[]
), // Column
), // Center
floatingActionButton: FloatingActionButton(
onPressed: _incrementCounter,
tooltip: 'Increment',
child: const Icon(Icons.add),
), // This trailing comma makes auto-formatting nicer for bu
); // Scaffold
}
}


4:57
DEBUG
Flutter Demo Home Page
Hello Komal
You have pushed the button this many times:
5
1:1
109:27
CRLF
UTF-8
2 spaces