

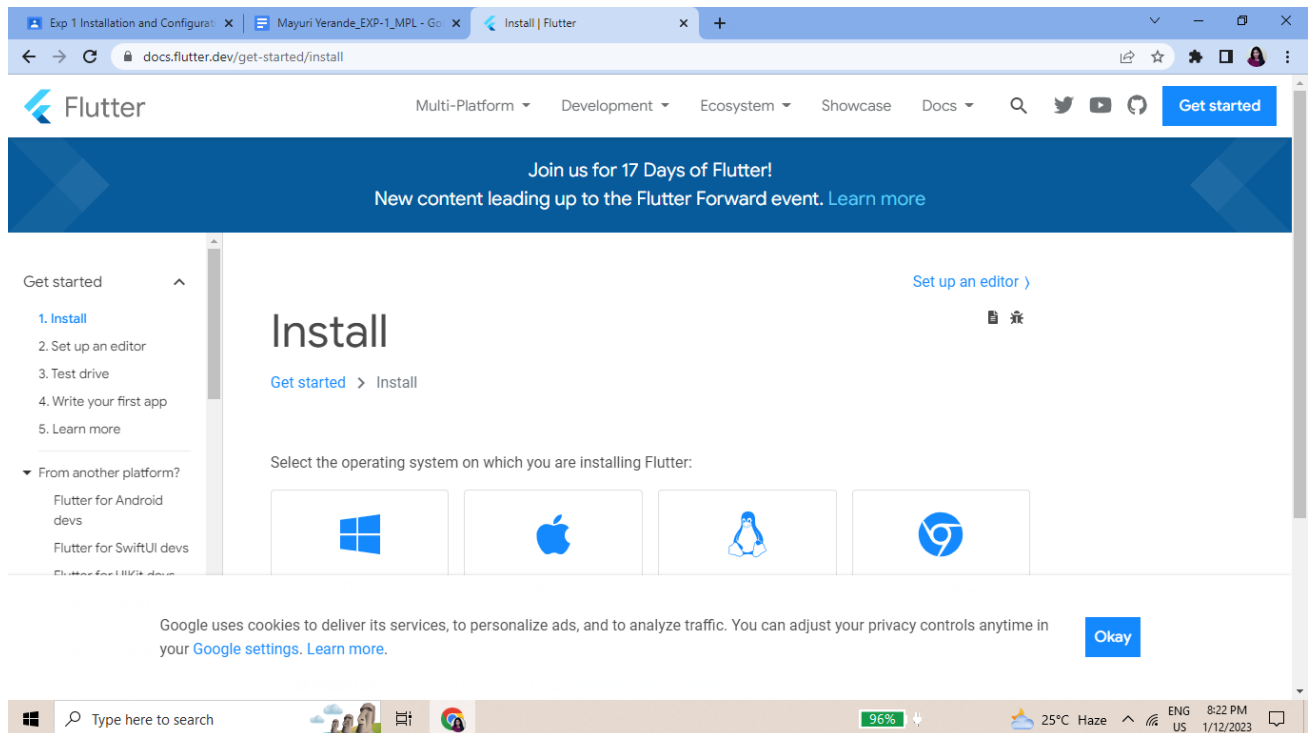
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Class: D15B
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EXPERIMENT - 1

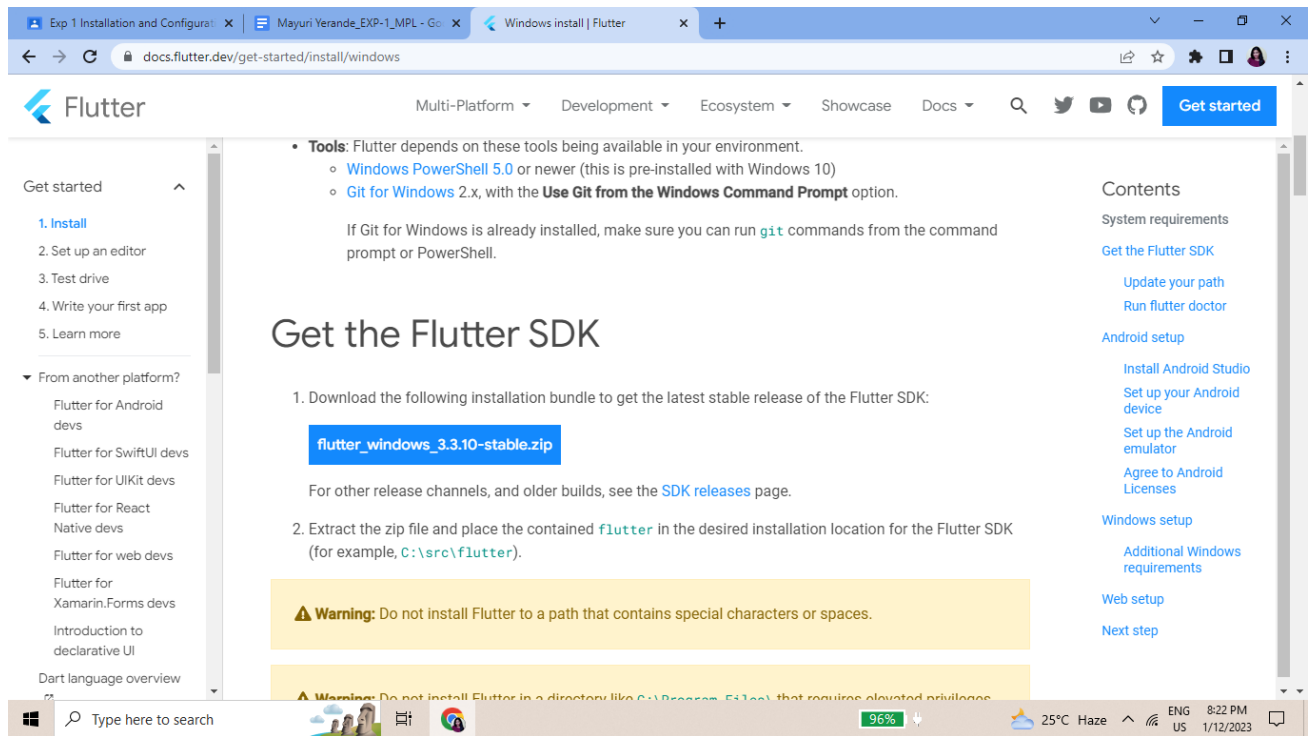
AIM: Installation and Configuration of Flutter Environment.

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.



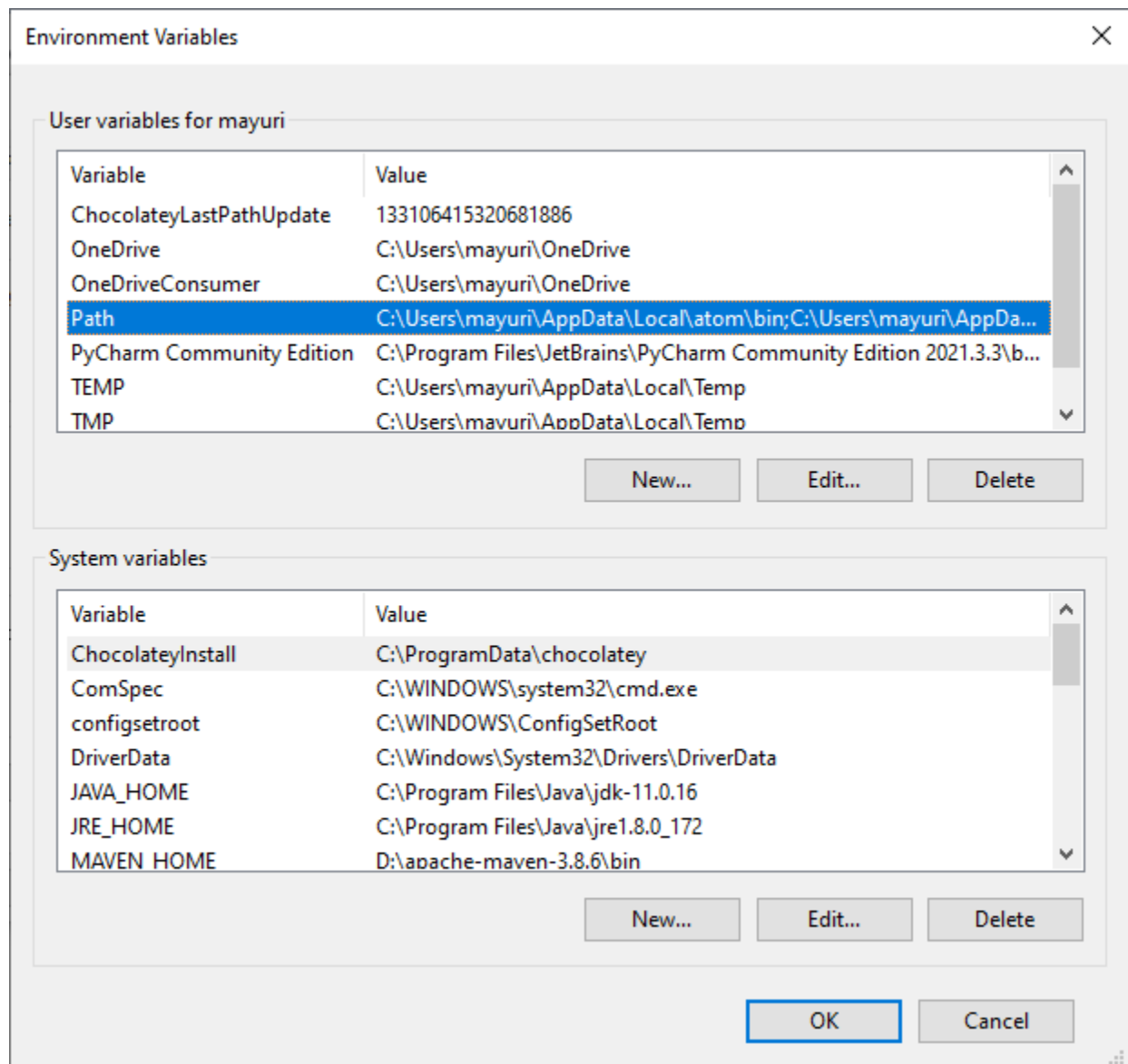
Step 2: Next, to download the latest Flutter SDK, click on the Windows **icon**. Here, you will find the download link for SDK.



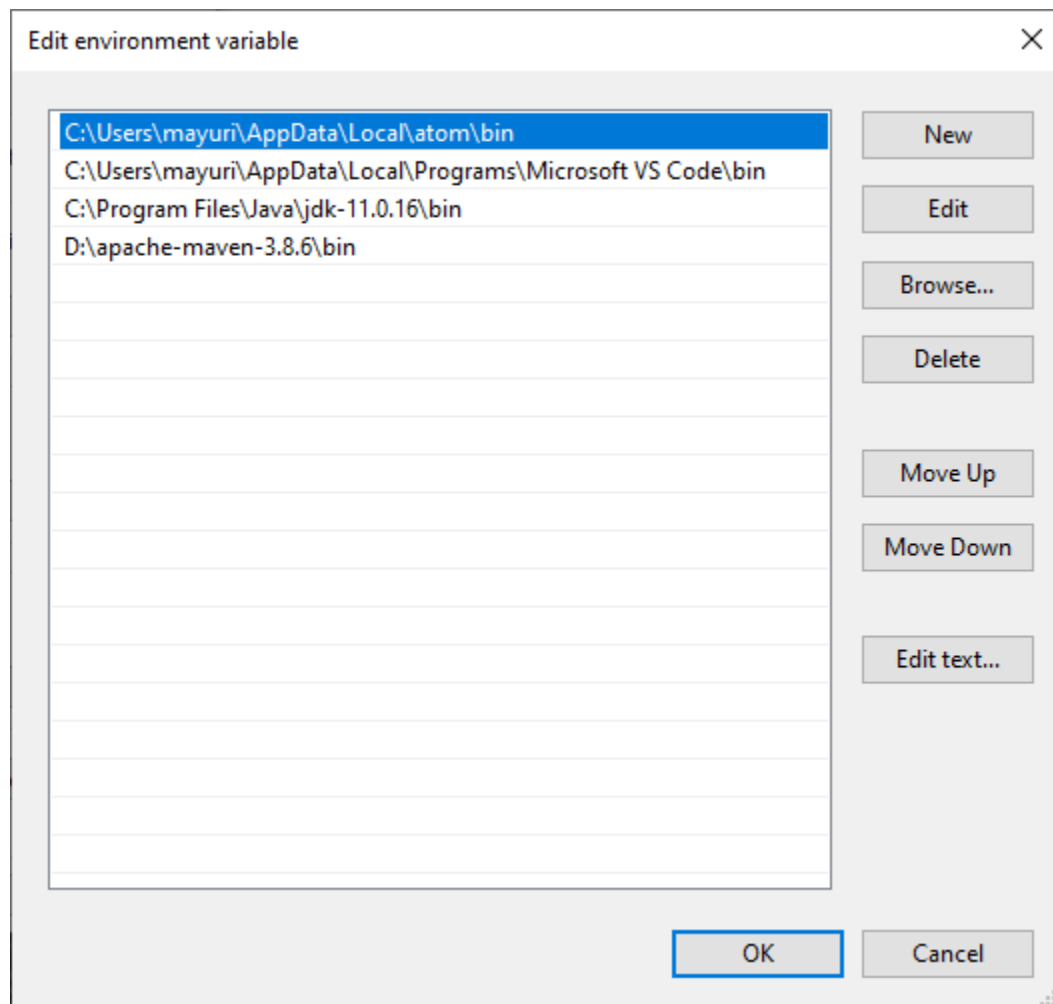
Step 3: When your download is complete, extract the **zip** file and place it in the desired installation folder or location, for example, C: /Flutter.

Step 4: To run the Flutter command in the regular windows console, you need to update the system path to include the flutter bin directory. The following steps are required to do this:

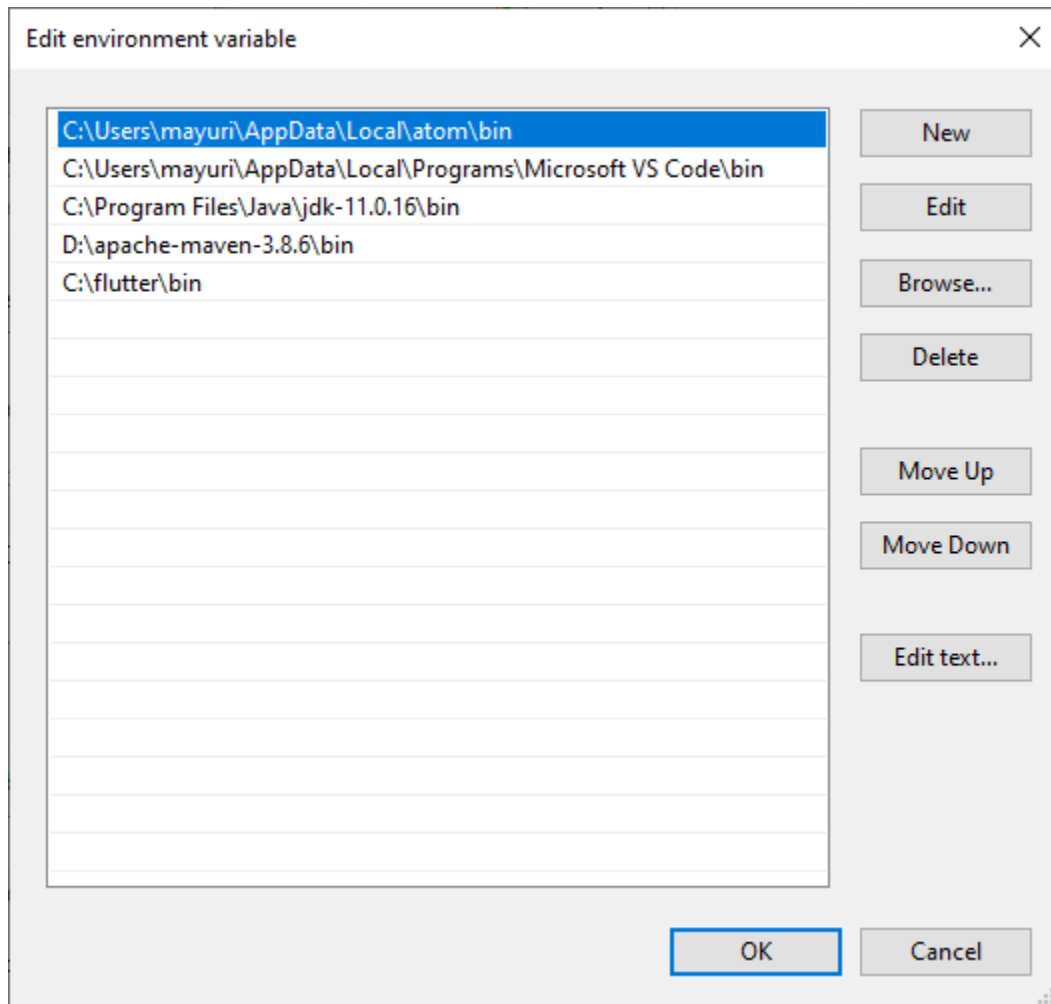
Step 4.1: Go to MyComputer properties -> advanced tab -> environment variables. You will get the following screen.



Step 4.2: Now, select path -> click on edit. The following screen appears



Step 4.3: In the above window, click on New->write path of Flutter bin folder in variable value -> ok -> ok -> ok.



Step 5: Now, run the \$ **flutter** command in command prompt.

```
Command Prompt
Microsoft Windows [Version 10.0.19044.2486]
(c) Microsoft Corporation. All rights reserved.

C:\Users\mayuri>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.
--suppress-analytics Suppress analytics reporting when this command runs.

Available commands:

Flutter SDK
  bash-completion  Output command line shell completion setup scripts.
  channel          List or switch Flutter channels.
```

```
Command Prompt

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.
Note: The Google Privacy Policy describes how data is handled in this
service.

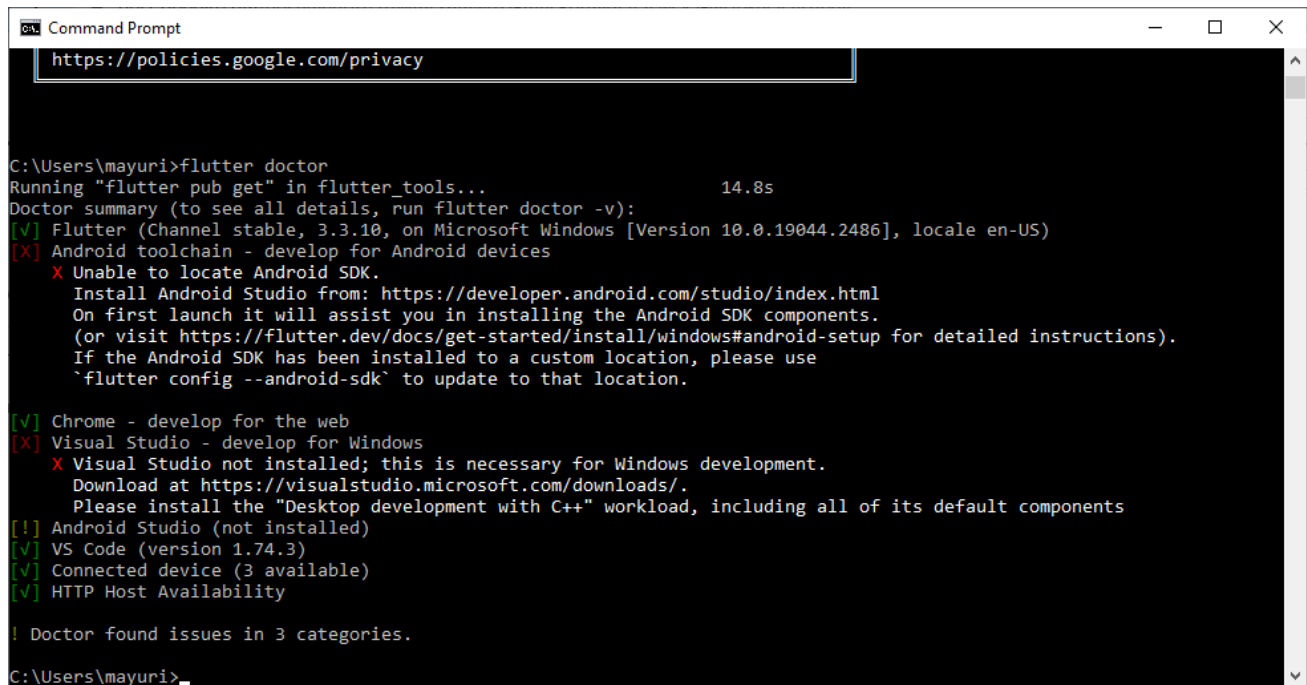
Moreover, Flutter includes the Dart SDK, which may send usage metrics and
crash reports to Google.

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

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

C:\Users\mayuri>
```

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.



```
C:\Users\mayuri>flutter doctor
Running "flutter pub get" in flutter_tools... 14.8s
Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 3.3.10, on Microsoft Windows [Version 10.0.19044.2486], locale en-US)
[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/docs/get-started/install/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 for Windows
    X Visual Studio not installed; this is necessary for Windows development.
      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 1.74.3)
[✓] Connected device (3 available)
[✓] HTTP Host Availability

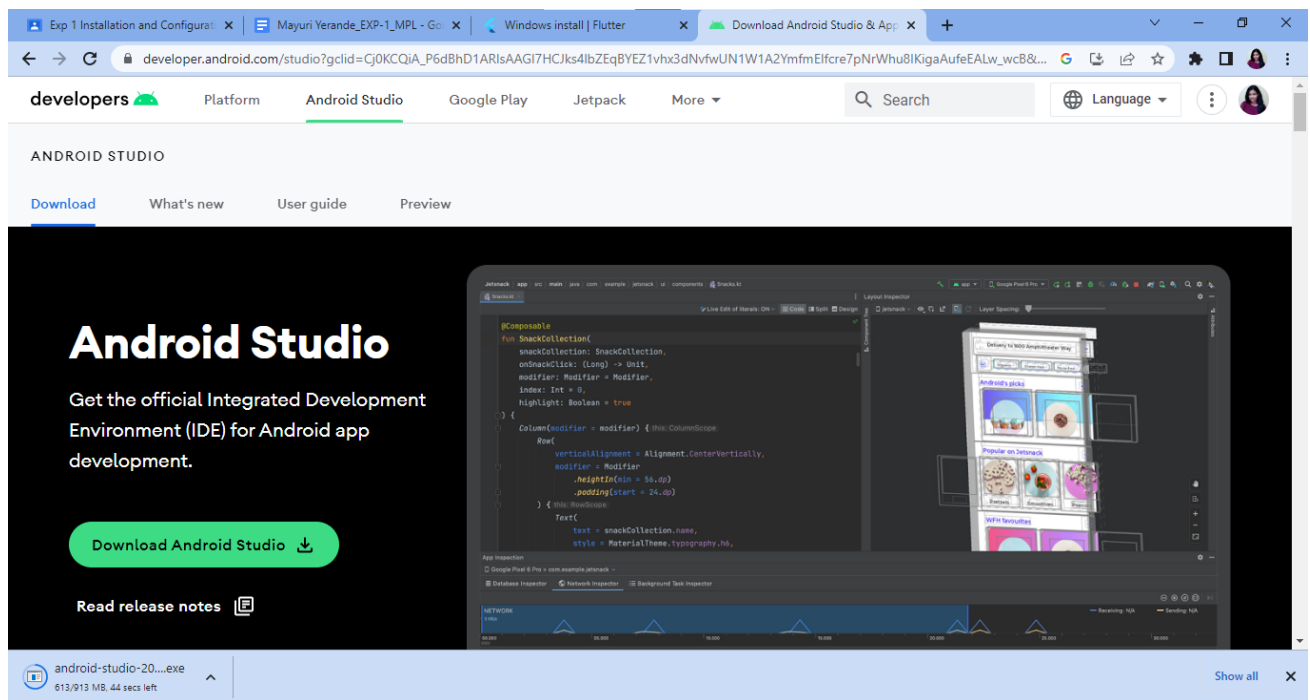
! Doctor found issues in 3 categories.

C:\Users\mayuri>
```

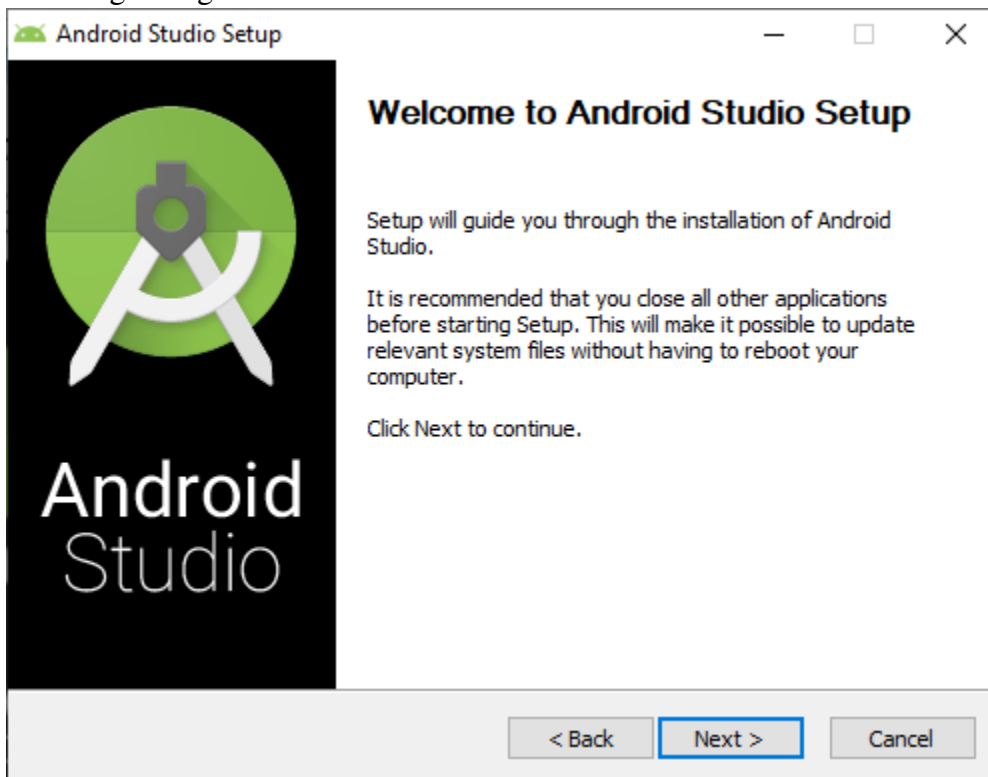
Step 6: When you run the above command, it will analyze the system and show its report, as shown in the below image. Here, you will find the details of all missing tools, which required to run Flutter as well as the development tools that are available but not connected with the device.

Step 7: 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.

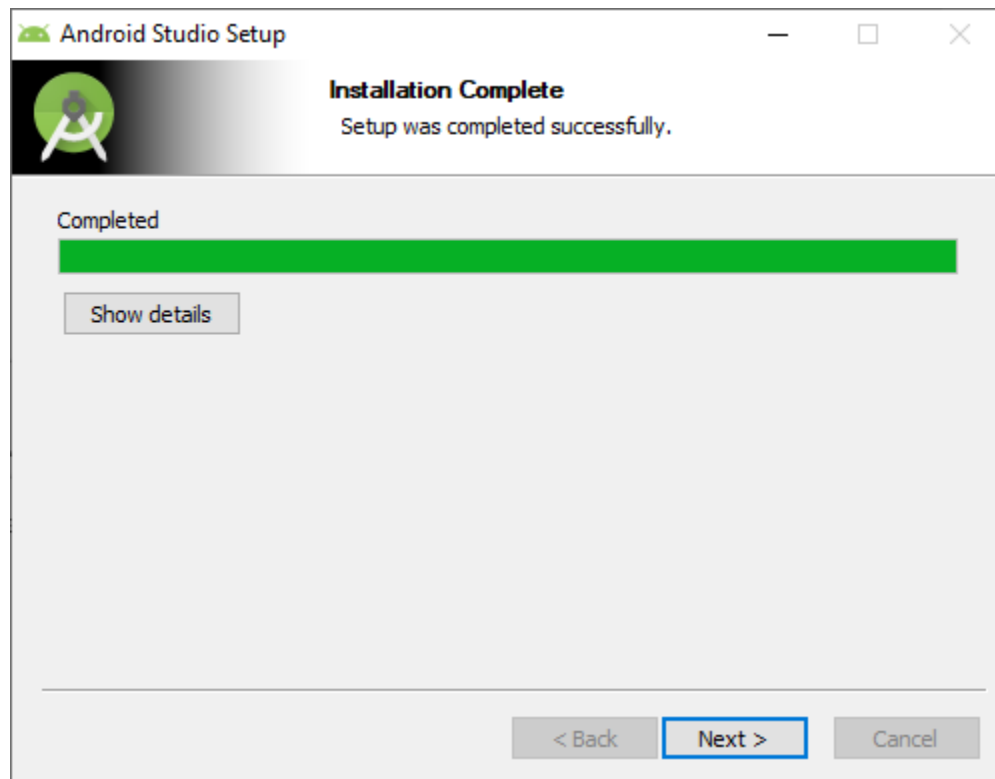
Step 7.1: Download the latest Android Studio executable or zip file from the [official site](https://developer.android.com/studio).



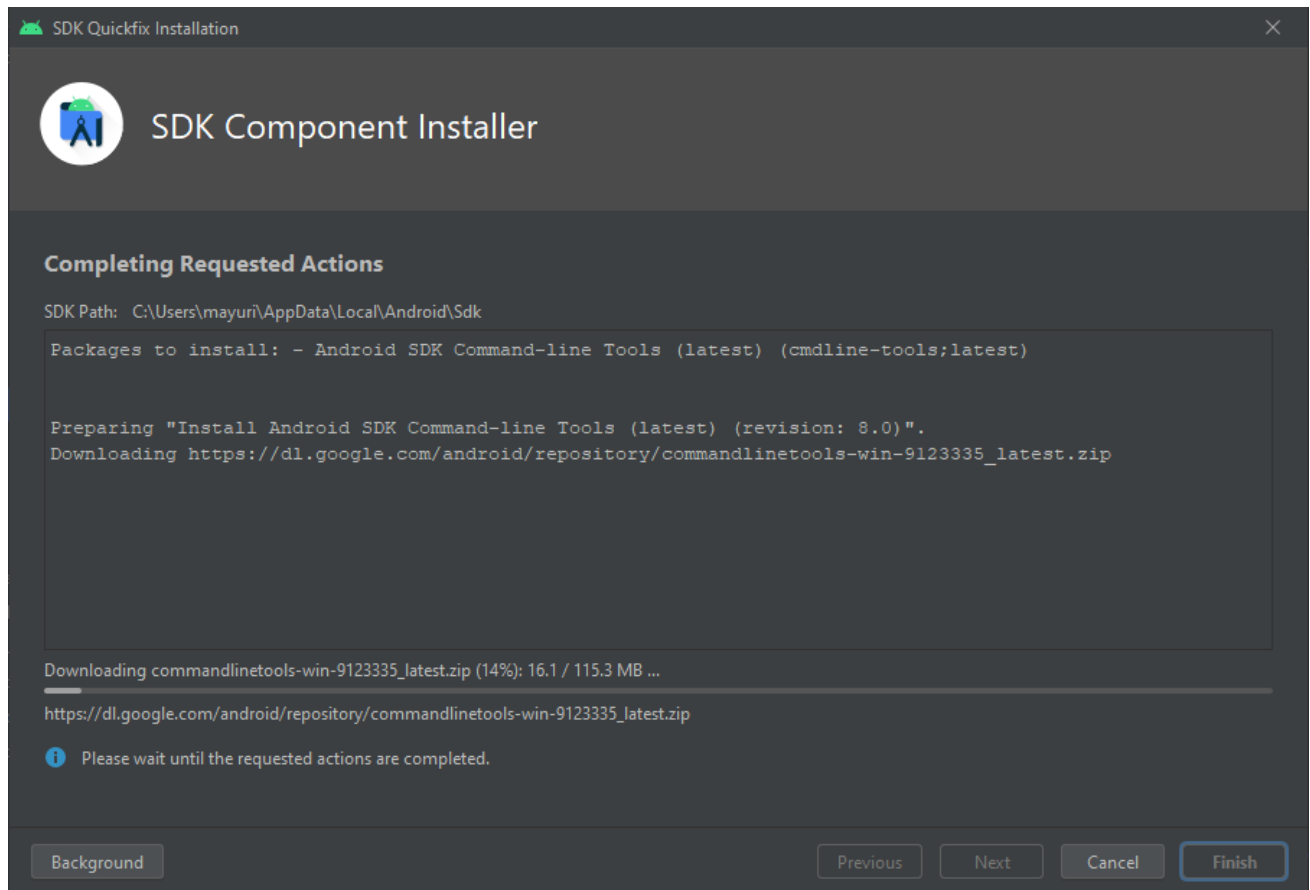
Step 7.2: When the download is complete, open the **.exe** file and run it. You will get the following dialog box.



Step 7.3: Follow the steps of the installation wizard. Once the installation wizard completes, you will get the following screen.



Step 7.4: 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.



Step 7.5 run the \$ **flutter doctor** command and Run flutter doctor --android-licenses command.

```
Command Prompt
Download at https://visualstudio.microsoft.com/downloads/.
Please install the "Desktop development with C++" workload, including all of its default components
[✓] Android Studio (version 2021.3)
[✓] VS Code (version 1.74.3)
[✓] Connected device (3 available)
[✓] HTTP Host Availability

! Doctor found issues in 2 categories.

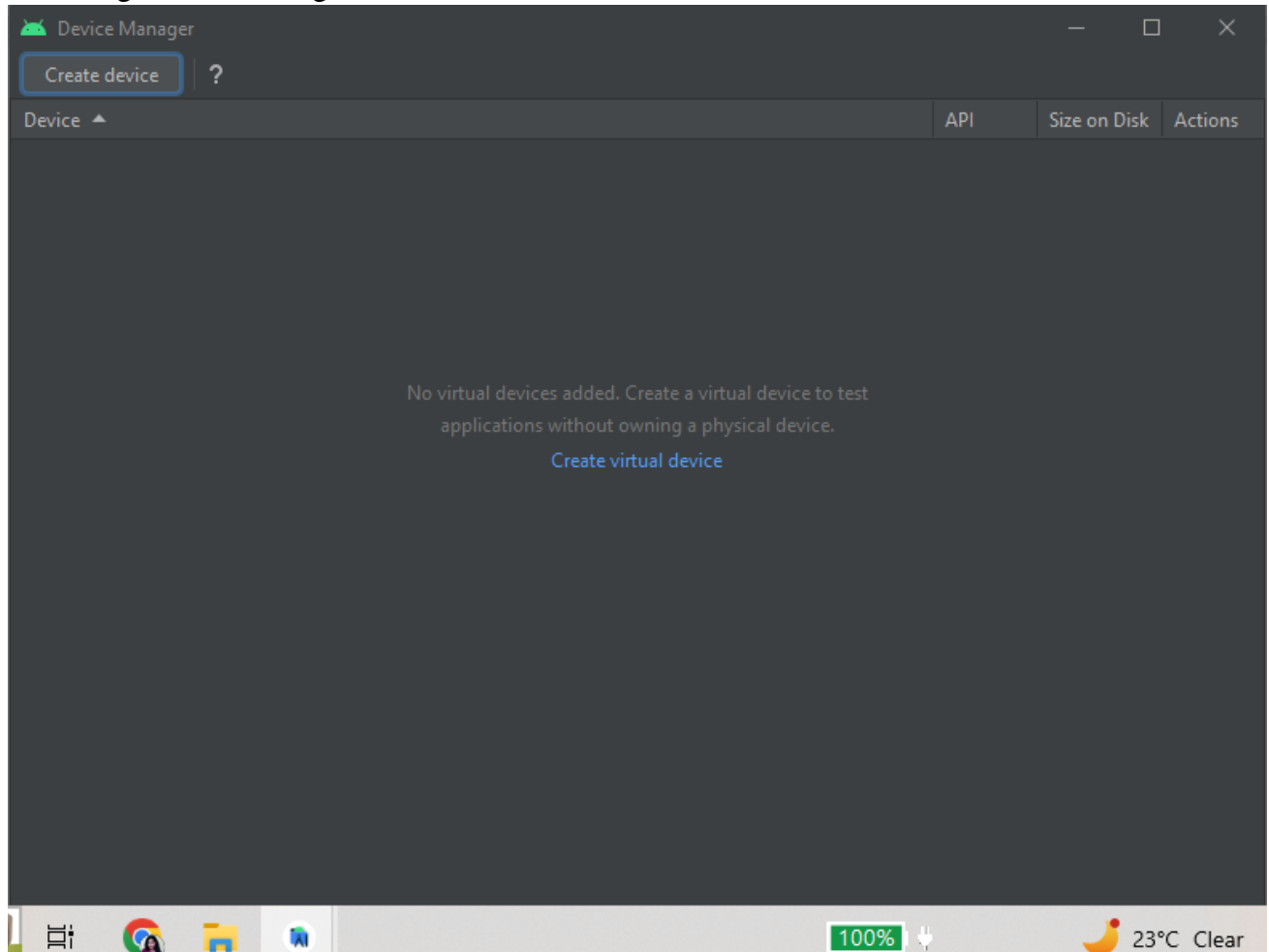
C:\Users\mayuri>flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[✓] Flutter (Channel stable, 3.3.10, on Microsoft Windows [Version 10.0.19044.2486], locale en-US)
[!] Android toolchain - develop for Android devices (Android SDK version 33.0.1)
    ! Some Android licenses not accepted. To resolve this, run: flutter doctor --android-licenses
[✓] Chrome - develop for the web
[!] Visual Studio - develop for Windows (Visual Studio Community 2022 17.4.4)
    x Visual Studio is missing necessary components. Please re-run the Visual Studio installer for the "Desktop
      development with C++" workload, and include these components:
        MSVC v142 - VS 2019 C++ x64/x86 build tools
        - If there are multiple build tool versions available, install the latest
        C++ CMake tools for Windows
        Windows 10 SDK
[✓] Android Studio (version 2021.3)
[✓] VS Code (version 1.74.3)
[✓] Connected device (3 available)
[✓] HTTP Host Availability

! Doctor found issues in 2 categories.

C:\Users\mayuri>
```

Step 8: Next, you need to set up an Android emulator. It is responsible for running and testing the Flutter application.

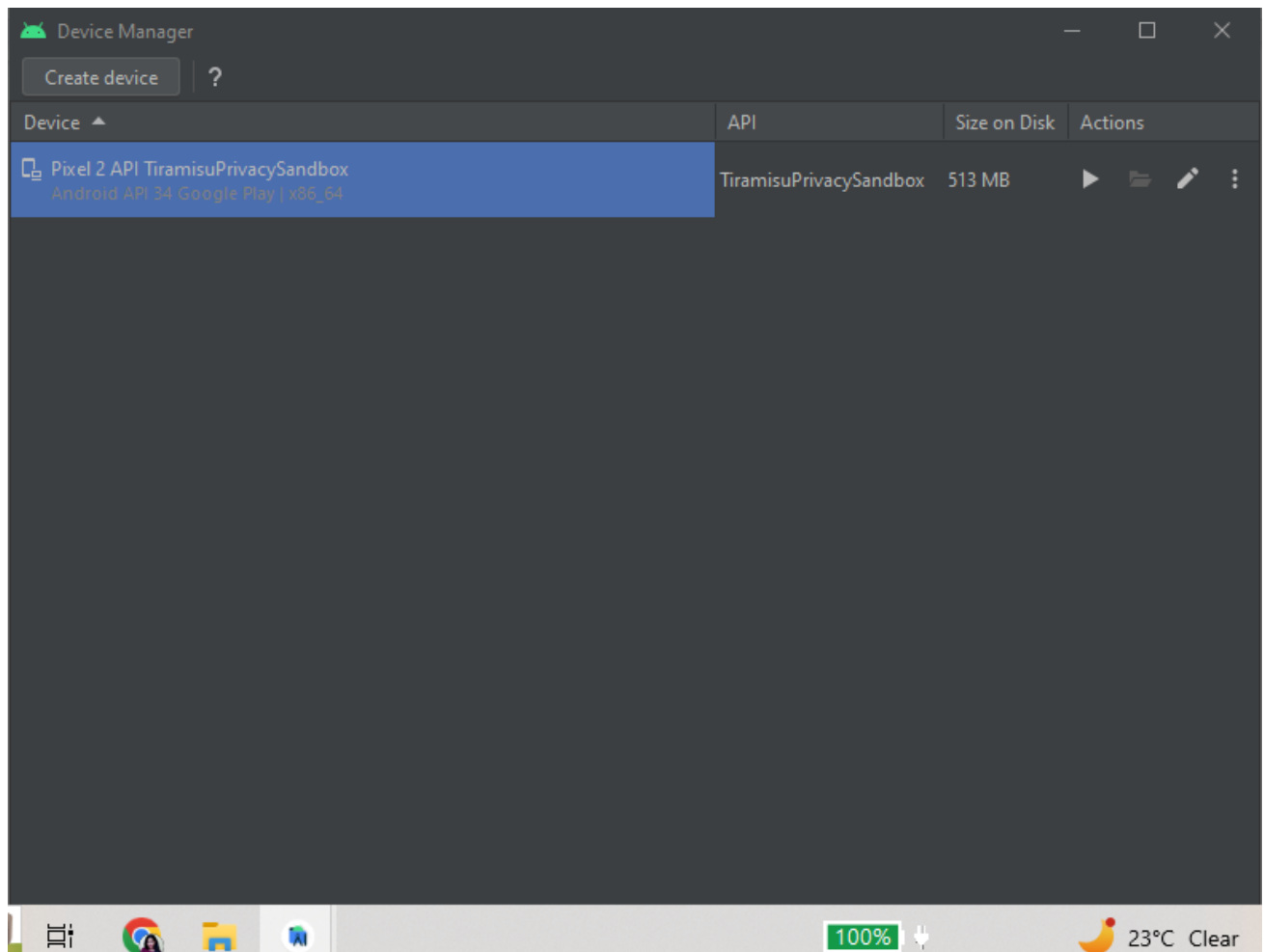
Step 8.1: To set an Android emulator, go to Android Studio > Tools > Android > AVD Manager and select Create Virtual Device. Or, go to Help->Find Action->Type Emulator in the search box. You will get the following screen.



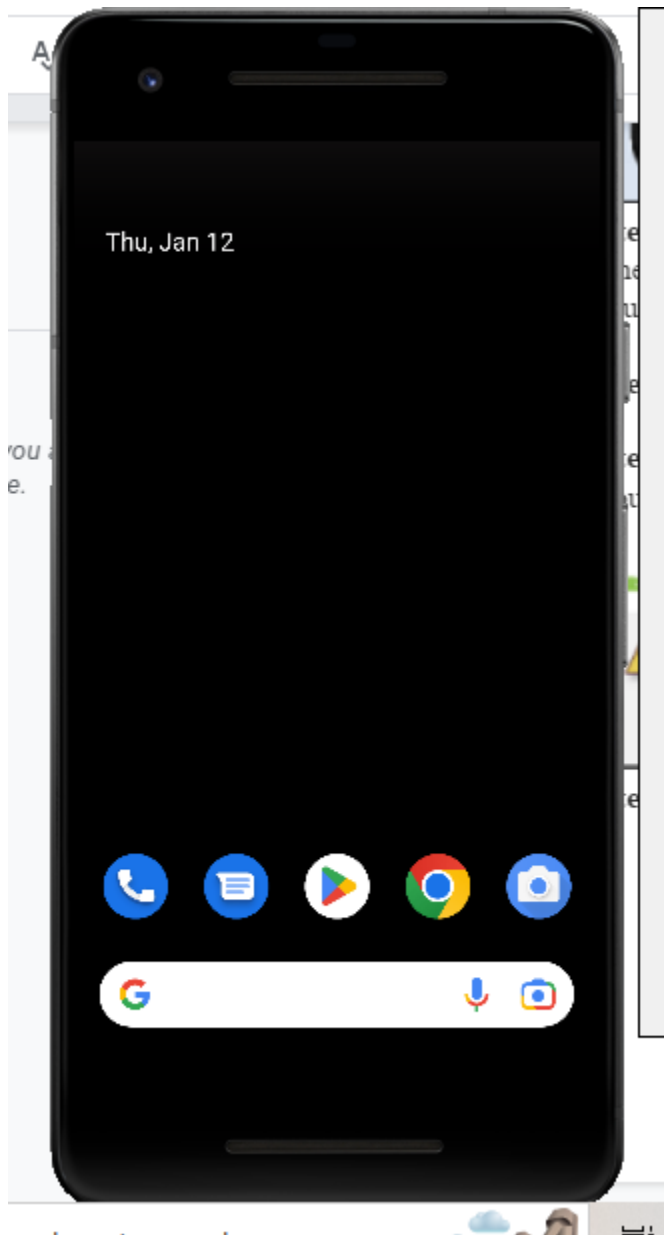
Step 8.2: Choose your device definition and click on Next.

Step 8.3: Select the system image for the latest Android version and click on Next.

Step 8.4: Now, verify the all AVD configuration. If it is correct, click on Finish. The following screen appears.



Step 8.5: Last, click on the icon pointed into the red color rectangle. The Android emulator displayed as shown below screen.

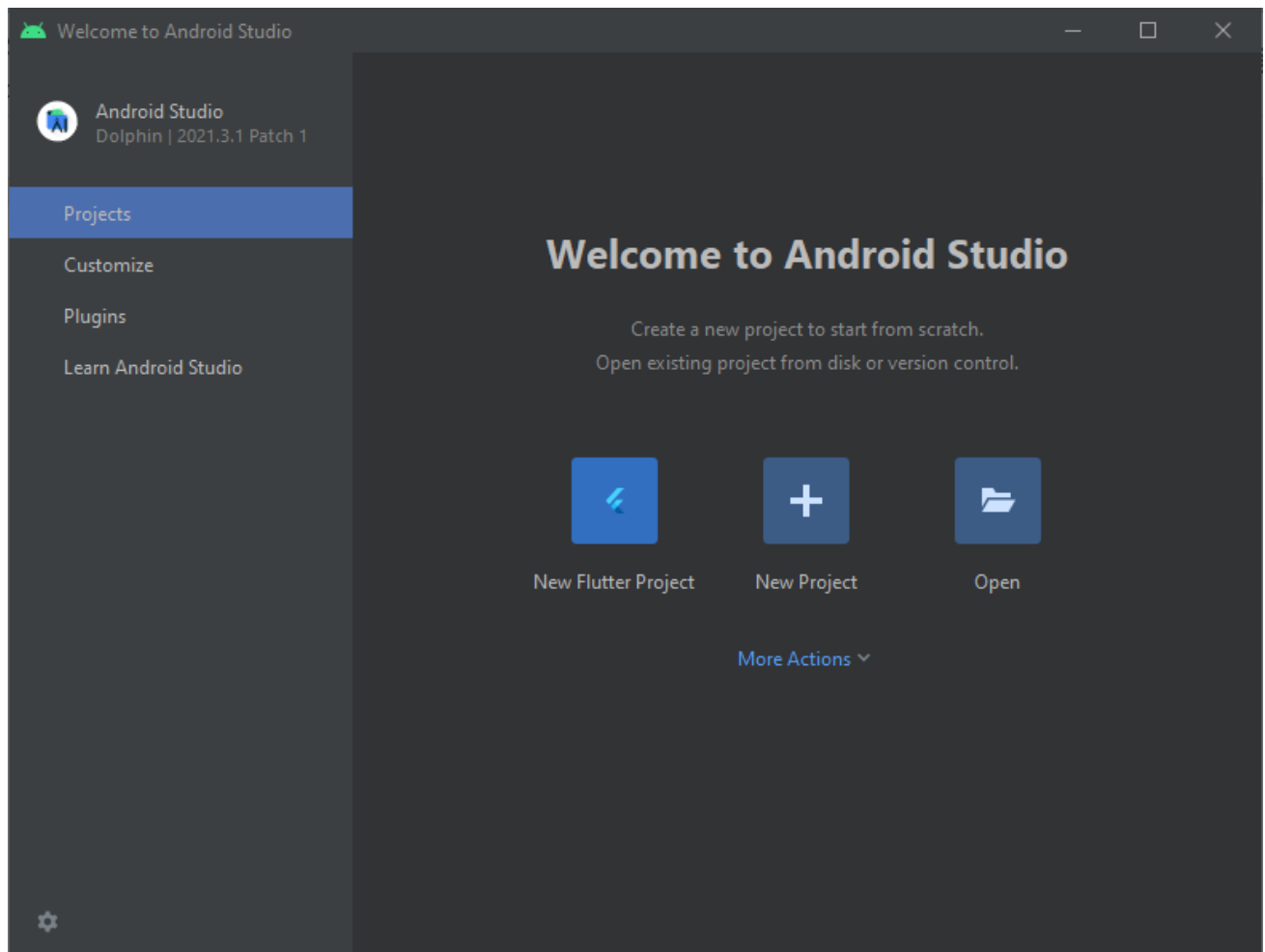


Step 9: Now, install the Flutter and Dart plugin for building Flutter applications in Android Studio. These plugins provide a template to create a Flutter application, give an option to run and debug Flutter application in the Android Studio itself. Do the following steps to install these plugins.

Step 9.1: Open the Android Studio and then go to File->Settings->Plugins.

Step 9.2: Now, search the Flutter plugin. If found, select Flutter plugin and click install. When you click on install, it will ask you to install the Dart plugin as shown below screen. Click yes to proceed.

Step 9.3: Restart the Android Studio.



Conclusion: Thus Flutter has been successfully installed. We have created our virtual machine and set up an Android emulator.