

**EXP 1: Installation and Configuration of Flutter Environment.**

**Aim:** To install and configure flutter environment.

**Theory:**

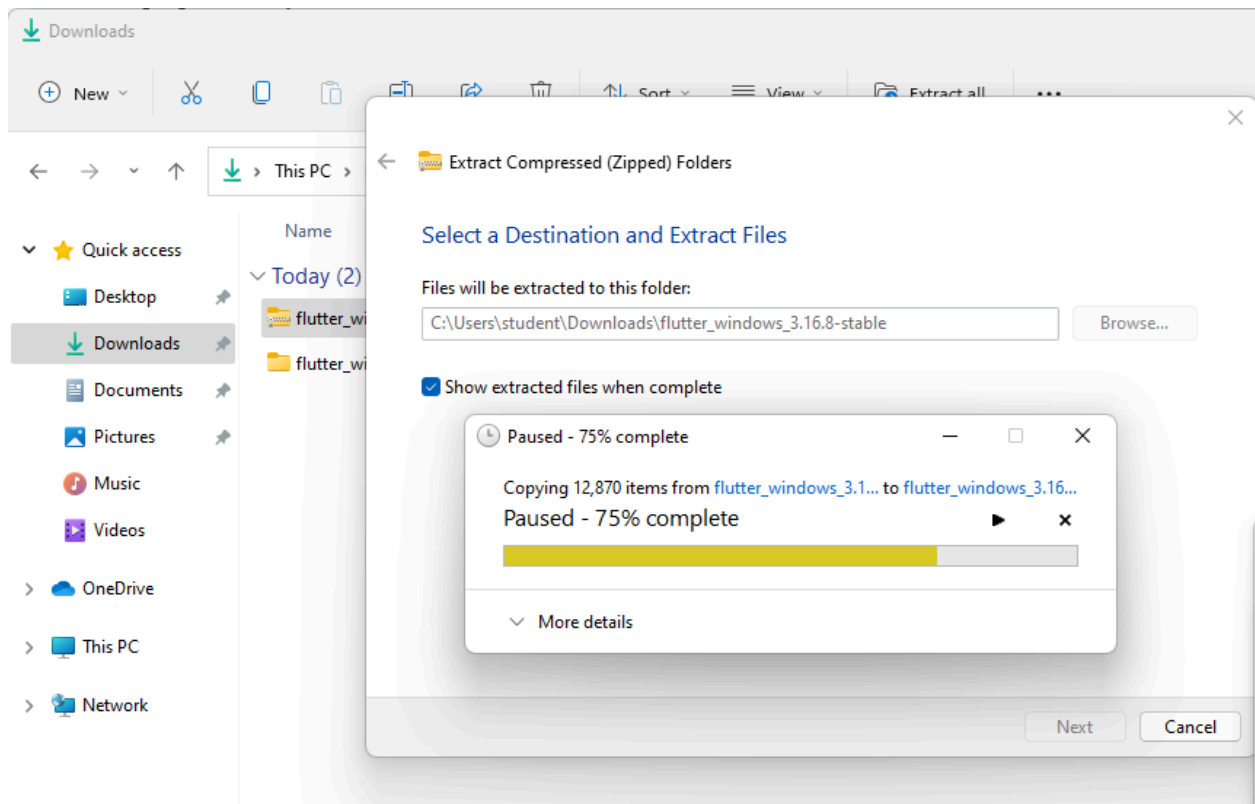
Install the Flutter SDK

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.

The image shows two screenshots of the Flutter documentation website. The top screenshot is the main 'Choose your development platform to get started' page. It features a navigation sidebar on the left with links like 'Get started', 'Test drive', and 'Write your first app'. The main content area has a heading 'Choose your development platform to get started' and four large buttons for 'Windows', 'macOS', 'Linux', and 'ChromeOS'. The 'Windows' button is highlighted. Below the buttons, there is an 'Important' note about developing apps in China. The bottom screenshot is a detailed view of the 'Download then install Flutter' page for Windows. It provides step-by-step instructions for downloading the Flutter SDK bundle, including a link to the 'flutter\_windows\_3.16.8-stable.zip' file. It also mentions the default download directory for Windows and the need to create a folder for Flutter. A 'Warning' box is present at the bottom of the instructions. The right sidebar of the bottom screenshot contains a 'Contents' section with links to 'System requirements', 'Hardware requirements', 'Software requirements', and other related topics.

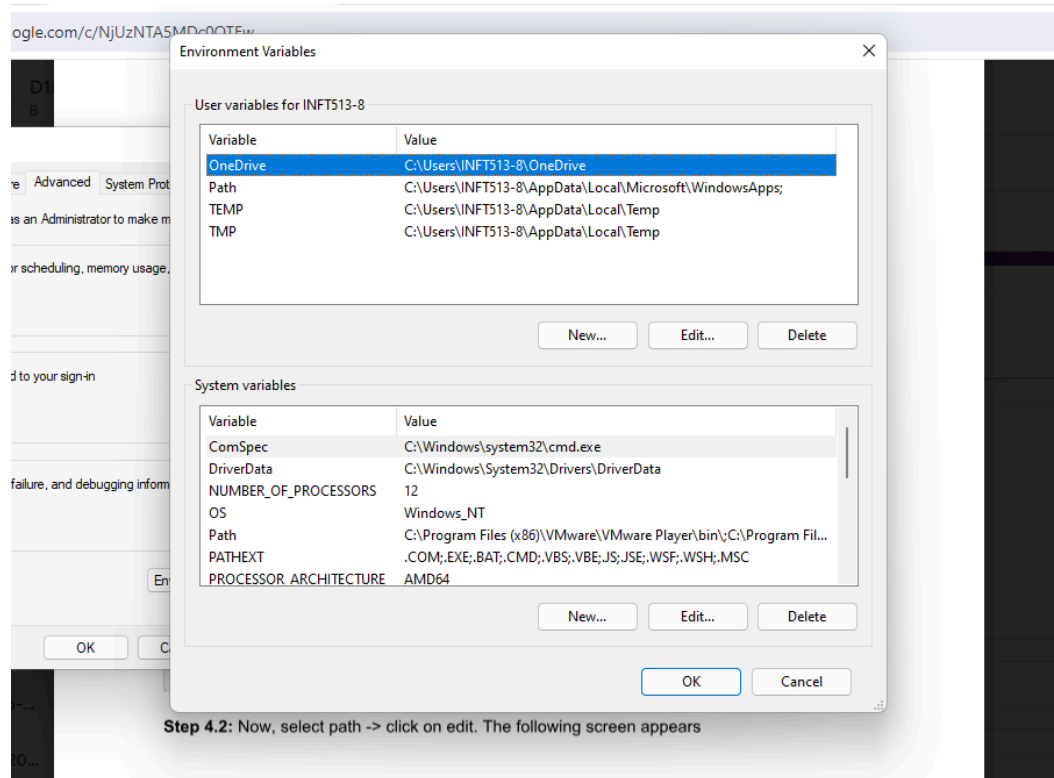
**Step 2:** Next, to download the latest Flutter SDK, click on the Windows icon. Here, you will

find the download link for SDK. When your download is complete, extract the zip file and place it in the desired installation folder or location, for example, C:/Users/Student/Flutter.

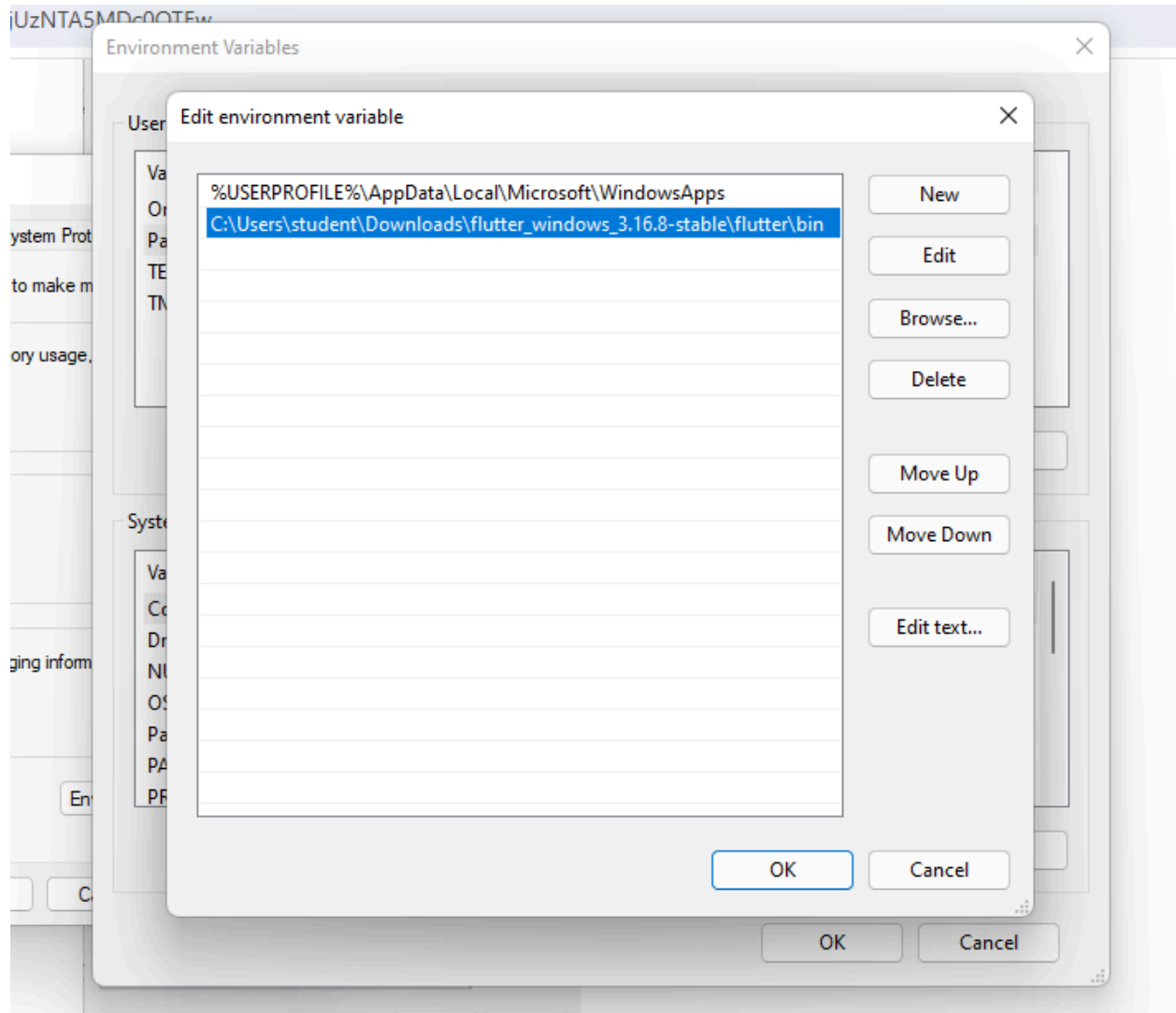


**Step 3:** To run the Flutter command in regular windows console, you need to update the system

path to include the flutter bin directory. The following steps are required to do this: search environment variables start menu. You will get the following screen.



**Step 3.1:** Now, select path in user variables; click on edit. The following screen appears. In the above window, click on New->write path of Flutter bin folder in variable value -> ok -> ok -> ok.



**Step 4:** Now, run the \$ flutter command in the command prompt.  
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.

```
Command Prompt - flutter
Microsoft Windows [Version 10.0.22000.556]
(c) Microsoft Corporation. All rights reserved.

C:\Users\INFT513-8>flutter
Command exited with code 128: git fetch --tags
Standard error: fatal: unable to access 'https://github.com/flutter/flutter.git/': SSL certificate problem: unable to
get local issuer certificate

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
```

```
Command Prompt - flutter - flutter doctor - flutter doctor - flutter doctor

Run 'flutter -h' (or 'flutter <command> -h') for available flutter commands and options.

C:\Users\INFT513-8>flutter doctor
Terminate batch job (Y/N)? y

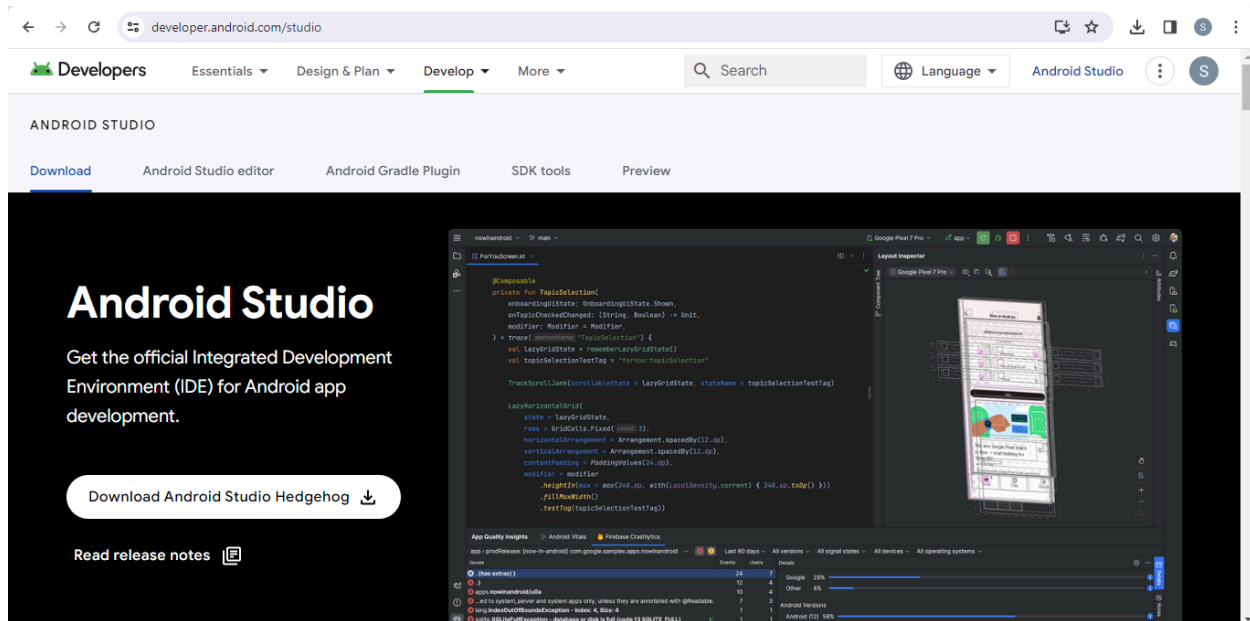
C:\Users\INFT513-8>flutter doctor
Doctor summary (to see all details, run flutter doctor -v):
[V] Flutter (Channel stable, 3.16.8, on Microsoft Windows [Version 10.0.22000.556], locale en-IN)
[V] Windows Version (Installed version of Windows is version 10 or higher)
[X] Android toolchain - develop for 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/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.
[V] 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)
[V] Connected device (3 available)
[V] Network resources

! Doctor found issues in 3 categories.

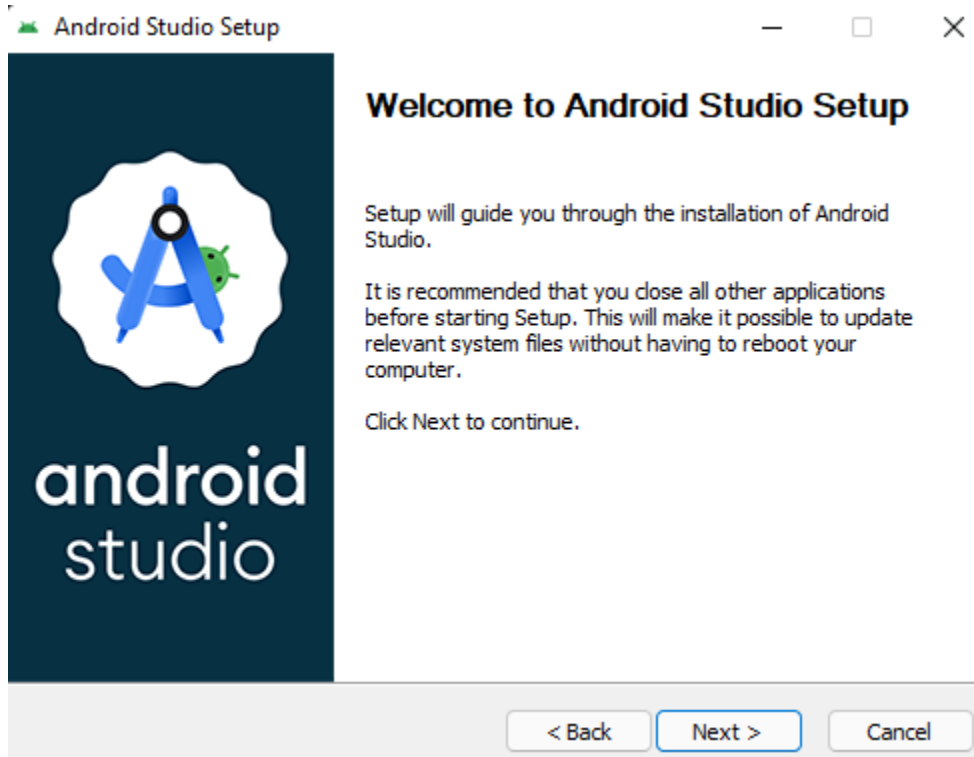
C:\Users\INFT513-8>
```

**Step 5:** 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.

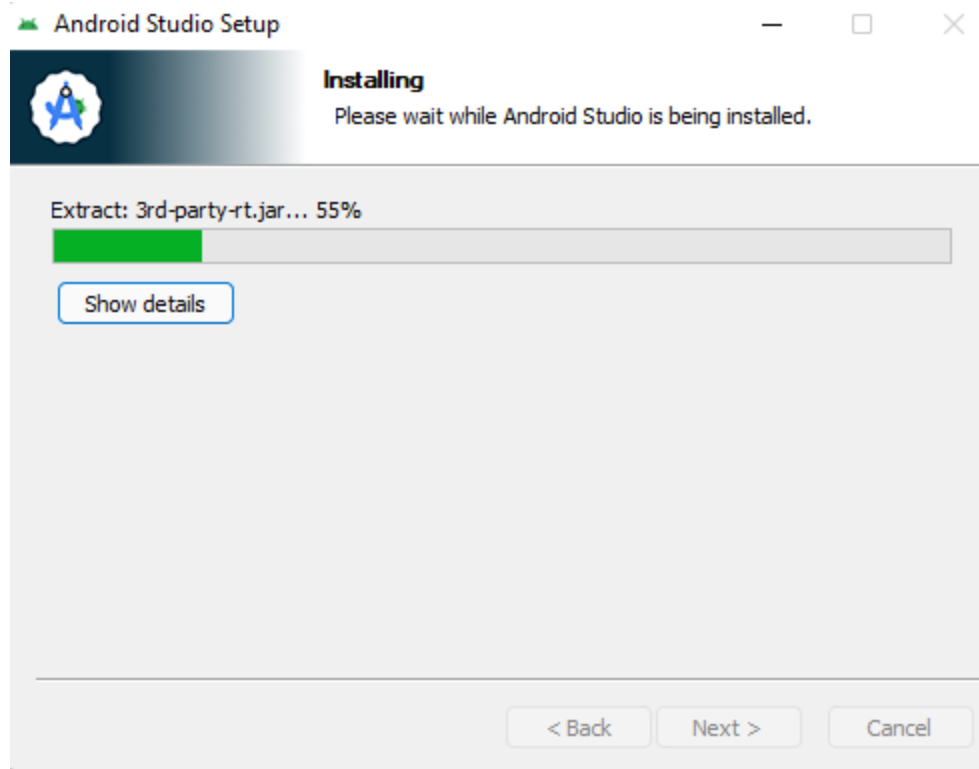
**Step 5.1:** Download the latest Android Studio executable or zip file from the official site.



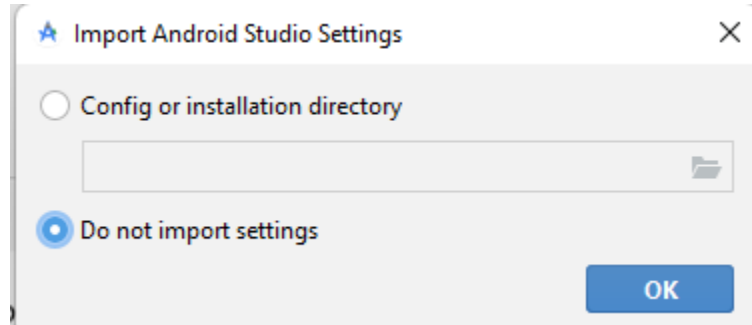
**Step 5.2:** When the download is complete, open the .exe file and run it. You will get the following dialog box.



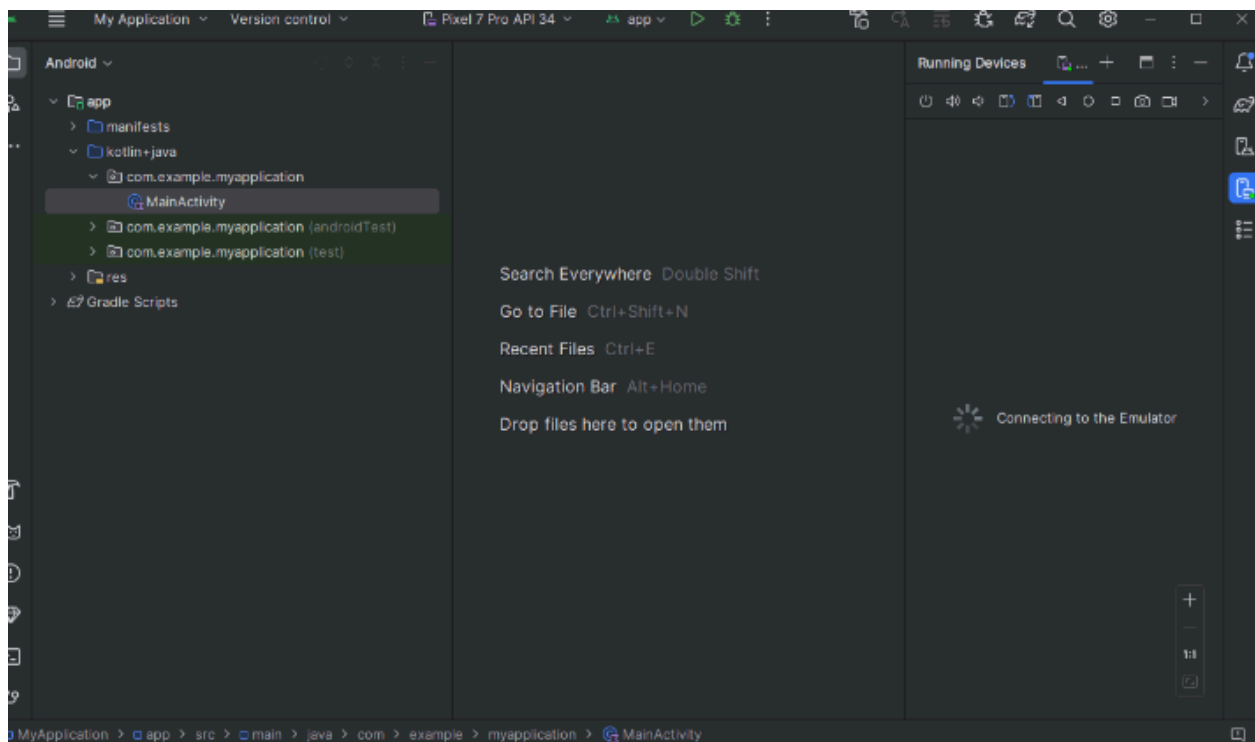
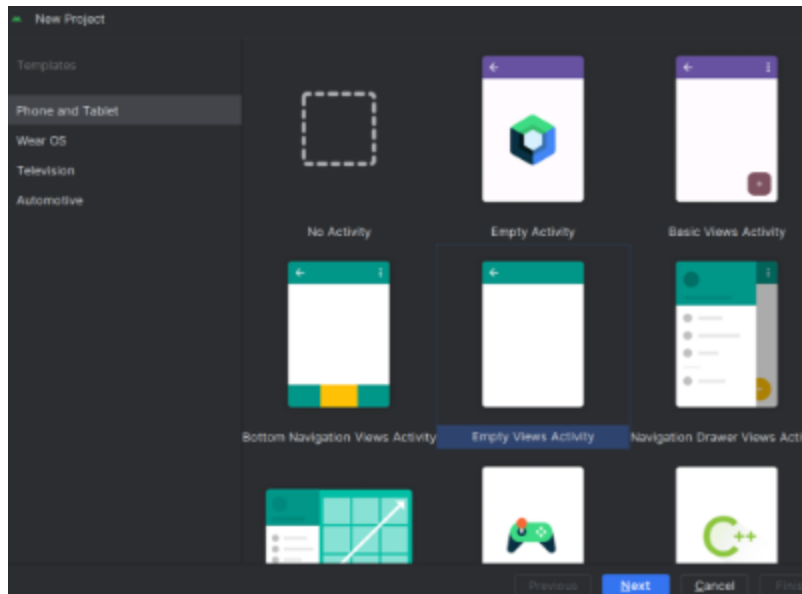
**Step 5.3:** Follow the steps of the installation wizard. Once the installation wizard completes, you will get the following screen.



**Step 5.4:** 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 6.1:** 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 6.2:** Choose your device definition and click on Next. Select the system image for the latest Android version and click on Next. Now, verify the all AVD configuration. If it is correct, click on Finish. Last, click on the icon pointed into the red color rectangle. The Android emulator displayed as below screen.





**Conclusion:** In the above experiment, I have understood the process of installing Flutter framework. I had faced some errors during configuring android studio but got resolved after searching on stackoverflow. To conclude I have successfully installed and configured flutter in my machine and am ready to create a new Flutter application.