# Setup Flutter Development Environment

Flutter is Google's UI toolkit for building applications for mobile, web, and desktop from a single codebase. In this practical, you will install the necessary files and build the following Flutter application:

    1. Download the following installation files:

        a. Flutter SDK (https://docs.flutter.dev/get-started/install)
        b. Android Studio (https://developer.android.com/studio)
        c. Git [Optional] (https://git-scm.com/downloads)
        d. Node.Js [Optional] (https://nodejs.org/en/download/current)

    2. Extra the Flutter SDK to a local drive. E.g. C:\flutter\

    3. Install Android Studio.

    4. Launch Android Studio and install the following components:

        a. Android SDK Platform, API 35.0.1
        b. Android SDK Command-line Tools
        c. Android SDK Build-Tools
        d. Android SDK Platform-Tools
        e. Android Emulator

    5. Upon completion of Android Studio installation, on the welcome screen, click Plugins.
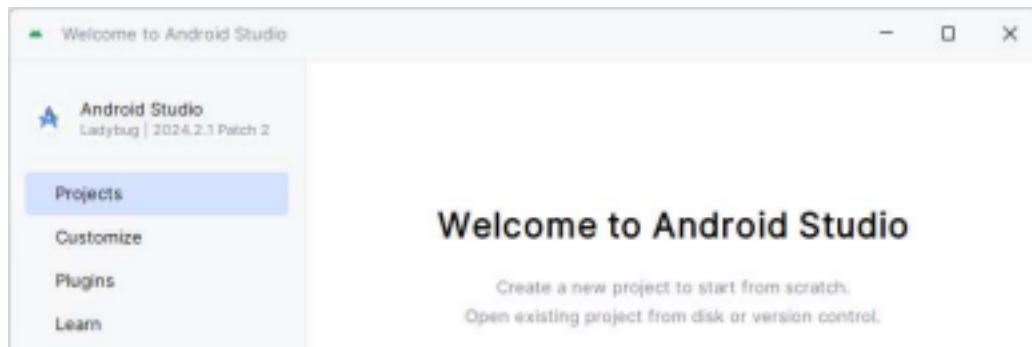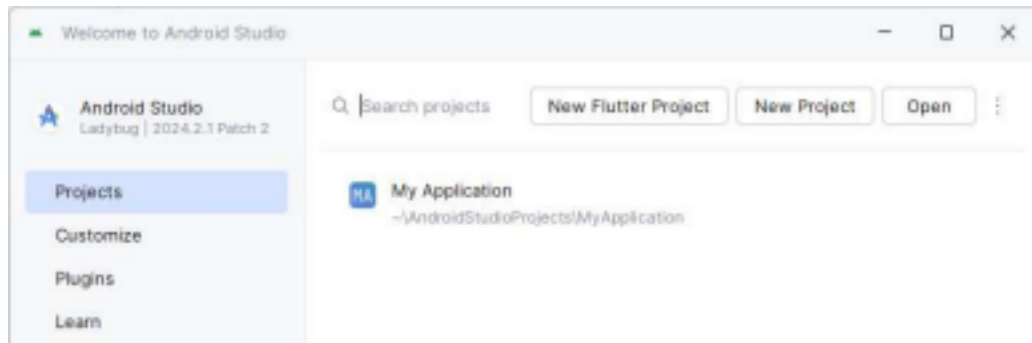
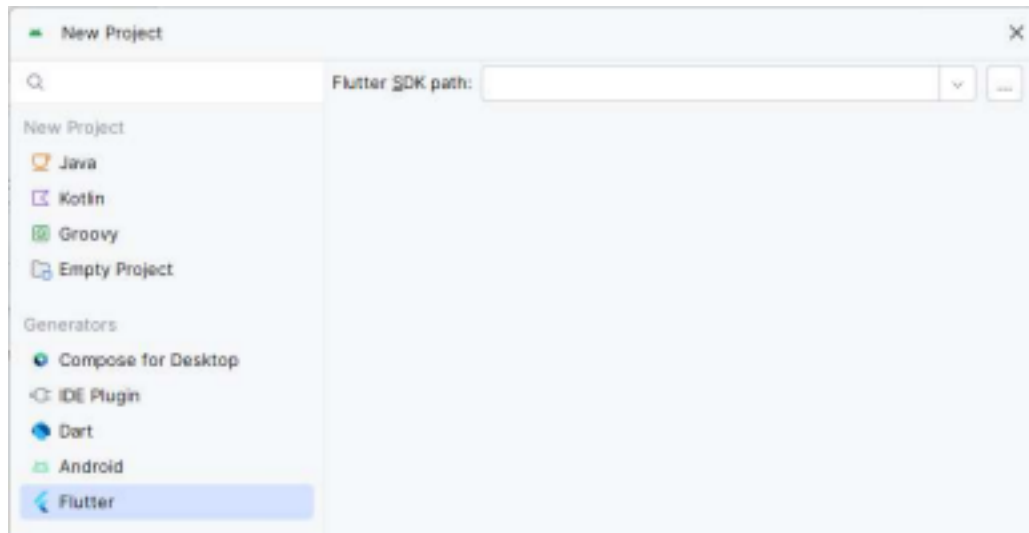6. Under the Marketplace tab, search the keyword flutter.
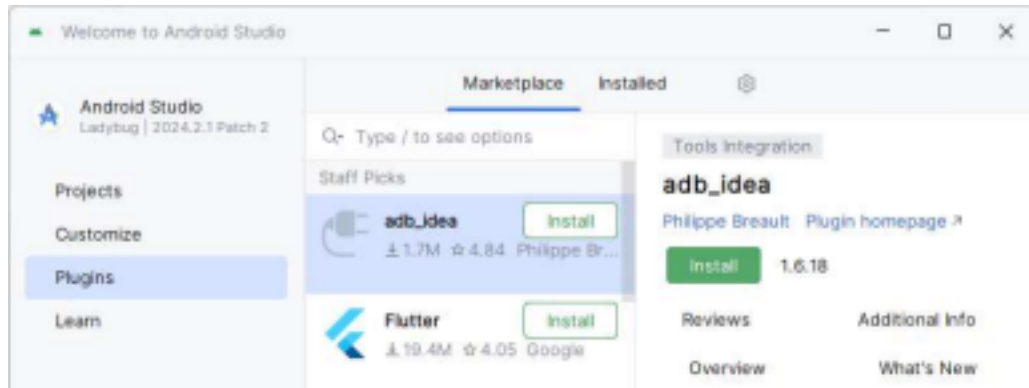
7. Click the Install button next to Flutter. Once the installation is completed, press the Restart IDE and "Restart".
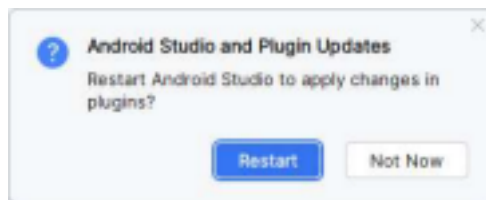
8. Next, on the Welcome Screen, click New Flutter Project.

9. Click Flutter on the left panel. Enter the Flutter SDK path (E.g. C:\flutter\) and click Next button.

10. Click the Device Manager ( ) on the right panel and press the Run ( ) button.

However. If you do not see any device in the Device Manager, you may click the Add a new device ( ) button and click Create Virtual Device. Select a device definition from the list and click the Next button.
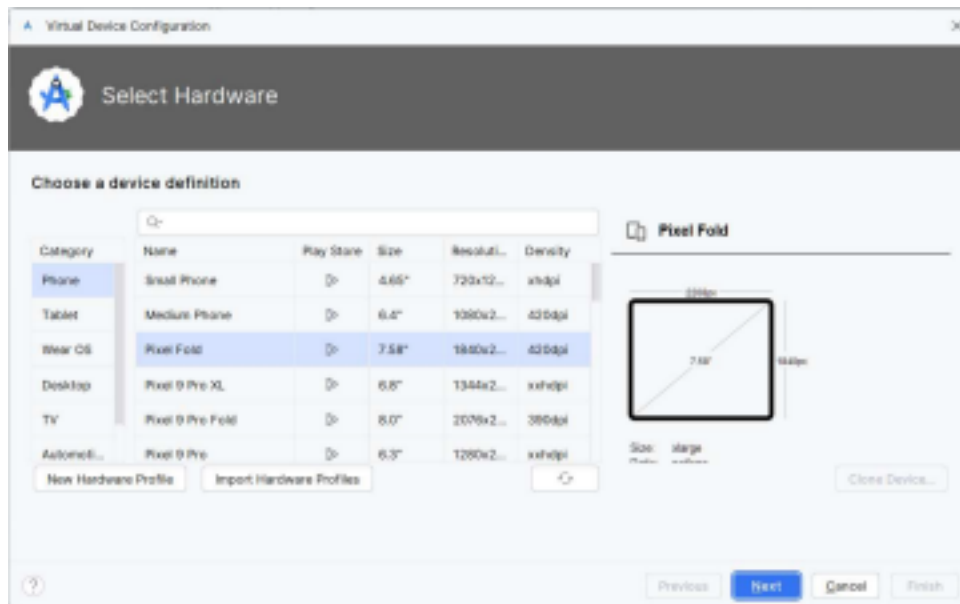
Then, select a system image and click the Next button.
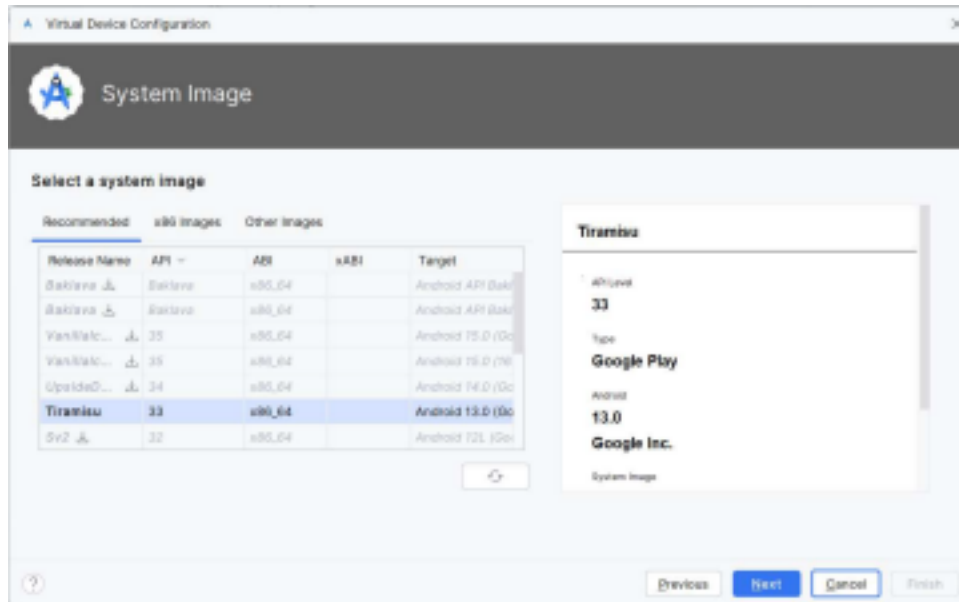
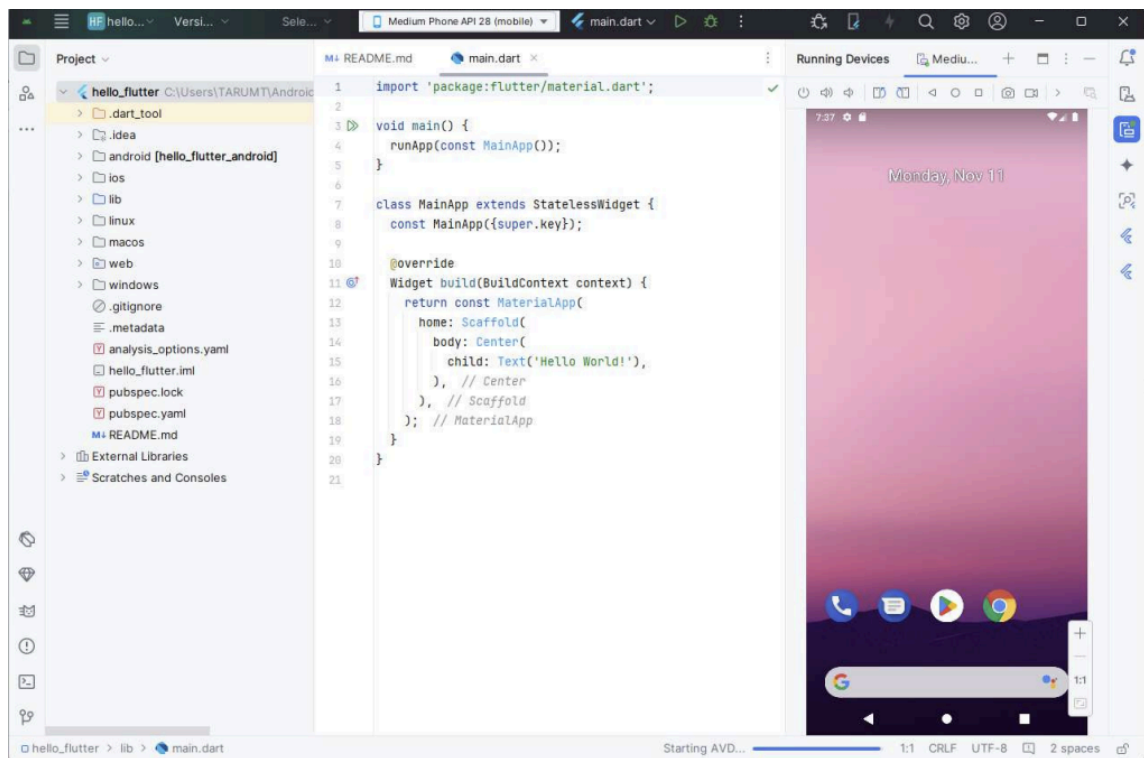Enter a name in the AVD (Android Virtual Device) and click the Finish button.

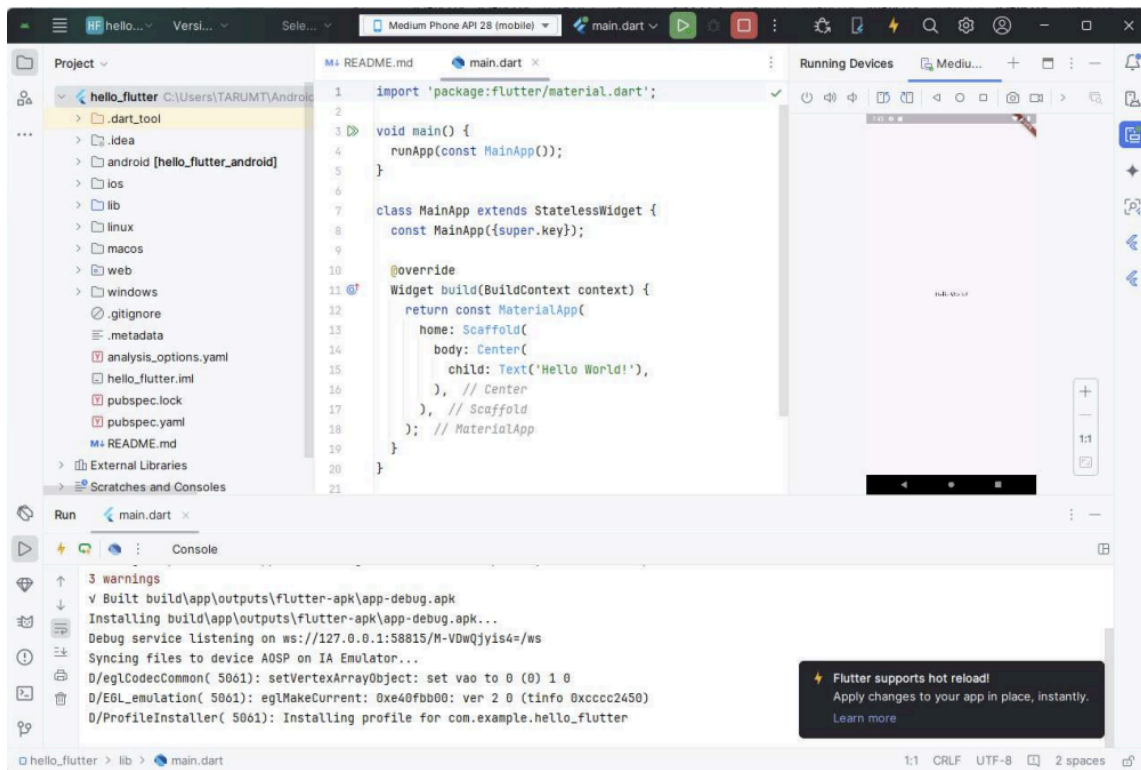The newly created AVD should appear in the Device Manager.

11. On the top of the screen, press the Run ( ) button. Running the app for the first time will take a long time depending on quality of network.

12. You will see the running device as follows: -

13. The app run as follows: -

In the Running Devices tab (▢), examine the top panel that has a list of common functions associated with a mobile device such as On/Off button, volume up/down, etc.