

Instruction to Setup Flutter Development Environment on Ubuntu 16.04

We need to install (consider installing recent versions

1. Flutter
2. Android Studio
3. Visual Studio Code

Ubuntu utilities required: snap, apt, apt-get, unzip,

Install Flutter

Steps:

1. `sudo snap install flutter --classic`
2. `flutter doctor -v`
 - a. You might see a lot of dependencies, but, that's ok
3. `which flutter`
 - a. Will show you the path to flutter SDK. Note it down
4. Make sure that flutter works anywhere, not just in the installation directory: Set Path
 - a. Open or create a .bashrc file in \$HOME
 - i. `vi .bashrc` -(in home directory)
 - ii. `i` -(to start editing .bashrc file)
 - iii. Include flutter path in .bashrc or add as below

```
export PATH="$PATH:[PATH_OF_FLUTTER_GIT_DIRECTORY]/bin"
```

Install Android Studio

Steps:

1. Download latest version of Android studio from
<https://developer.android.com/studio>
2. `cd /usr/local`
3. `sudo tar -zxvf ~/Downloads/<android_studio_package>.tar.gz`

4. flutter doctor

- a. Note if your flutter recognizes android studio, if it does not manually set the path as below

- b. `flutter config --android-studio-dir <directory>`

5. Add flutter plugin to Android Studio

- a. Start Android Studio.
- b. Open plugin preferences (Preferences > Plugins)
- c. Select the Flutter plugin and click Install.
- d. Click Yes when prompted to install the Dart plugin.
- e. Click Restart when prompted.

6. Adding an emulator device

- a. Start Android Studio.
- b. Click: Device Manager → Create Device
- c. Choose one device from the list and create a device for the emulator (Choose a nexus device for easy emulation,)
- d. Select one or more system images for the Android versions you want to emulate, and select Next. An x86 or x86_64 image is recommended.
- e. Under Emulated Performance, select Hardware - GLES 2.0 to enable [hardware acceleration](#).
- f. Verify the AVD configuration is correct, and select Finish.

7. Accept android licenses

- a. `flutter doctor --android-licenses`
- b. Review carefully and accept I licenses one by one

8. Additional Linux Requirements

- a. For Linux desktop development, you need the following in addition to the Flutter SDK:
 - i. Clang
 - ii. CMake
 - iii. GTK development headers
 - iv. Ninja build
 - v. Pkg-config
 - vi. Liblzma-dev
- b. Run the following COMMAND

`sudo apt-get install clang cmake ninja-build pkg-config libgtk-3-dev liblzma-dev`

Install VS Code

1. Download VS code from <https://code.visualstudio.com/download> (.deb version for ubuntu)
2. Run following commands to install Android Studio
 - a. `sudo apt install ./<file>.deb`
 - b. `sudo apt install apt-transport-https`
 - c. `sudo apt update`
 - d. `sudo apt install code # or code-insiders`
3. Add flutter extension to VS code
 - a. Open VS code
 - b. Search for flutter in extension and install (flutter and dart both get installed)

Android Studio + emulator Installation - Problems

1. **Problem:** If you are seeing an error relating to **licenses have not been accepted**

Solution: First make sure that you have updated Android studio to the latest version.

Next, you need to accept the Android studio licenses, see here:

<https://stackoverflow.com/questions/48604914/flutter-run-error-you-have-not-accepted-the-license-agreements>

2. **Problem:** If you are seeing an error relating to **licenses have not been accepted**, e.g.

Solution: First check that you've typed `flutter --version` with a space between `flutter` and `--version`.

Next, Make sure you have added the path to the flutter/bin directory correctly as seen in [this video lesson](#) at the 4 minute time mark.

Next, check the accepted answer by Brandon here:

<https://www.udemy.com/course/flutter-bootcamp-with-dart/learn/lecture/14481772#questions/7203546>

3. **Problem:** If you are seeing an error relating to **Error connecting to the service protocol**.
E.g

Solution: Downgrade your Android emulator to P instead of Q.

See this link for more details: <https://github.com/flutter/flutter/issues/32696>

4. **Problem:** If you are trying to create an Android emulator and get an error about "Intel HAXM" e.g.

Solution: You need to enable virtualisation in your BIOS. See this:

<https://www.howtogeek.com/213795/how-to-enable-intel-vt-x-in-your-computers-bios-or-uefi-firmware/>

If that still doesn't work, try this:

<https://www.thecodecity.com/2017/01/intel-haxm-is-required-to-run-this-avd.html>

5. **Problem:** Getting an error from **gradle** when you try to run your app about **Java heap space**. E.g.

Solution: Check out this StackOverflow answer on this exact topic:

<https://stackoverflow.com/questions/41645747/android-studio-gradle-build-failing-java-heap-space>

Other Problems: Programming and development always involve lots of problems and solving problems is the main skill. If you get a different problem, be sure to check out all of these places where other flutter developers can help you:

[Flutter GitHub Repository](#)

[Flutter Google Community](#)

