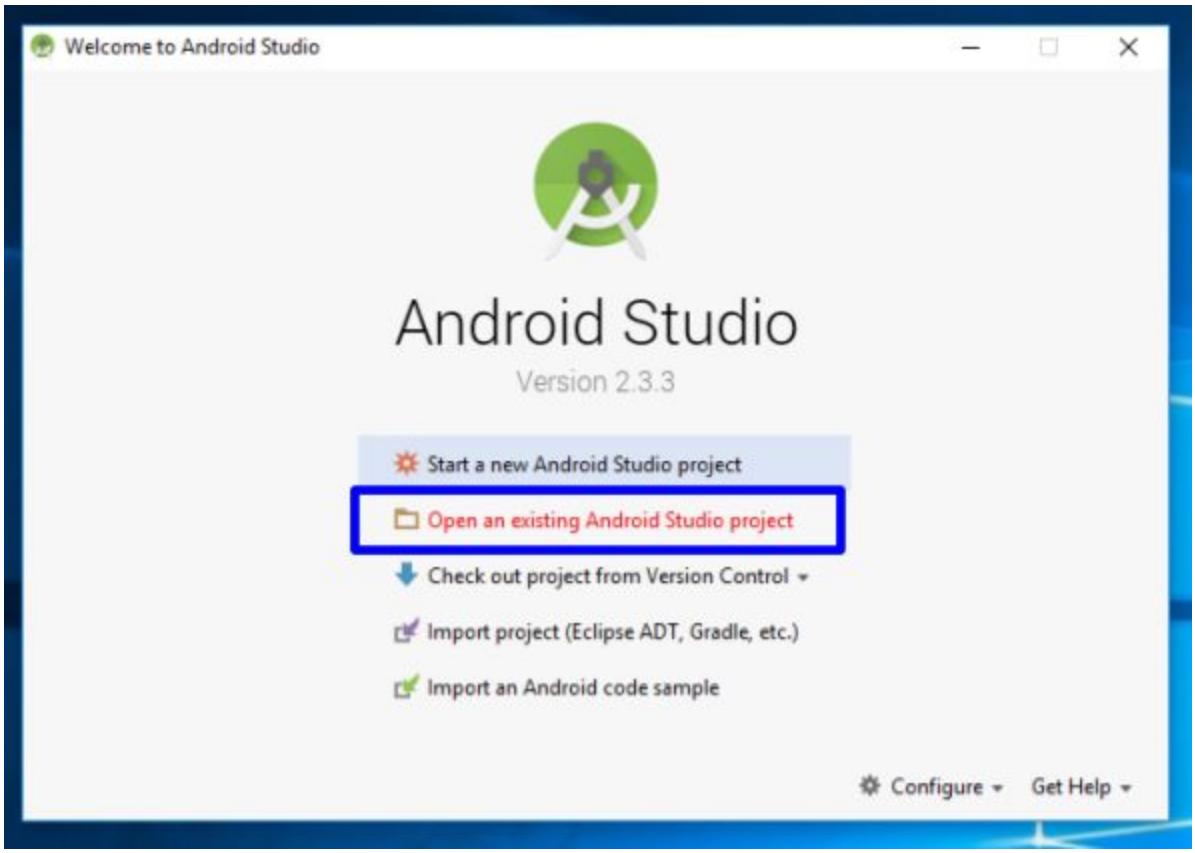
Android Studio Tutorial - Windows Users

This installation tutorial was completed on Windows 10, but the instructions should not differ for other versions of Windows as long as they are compatible with Android Studio.

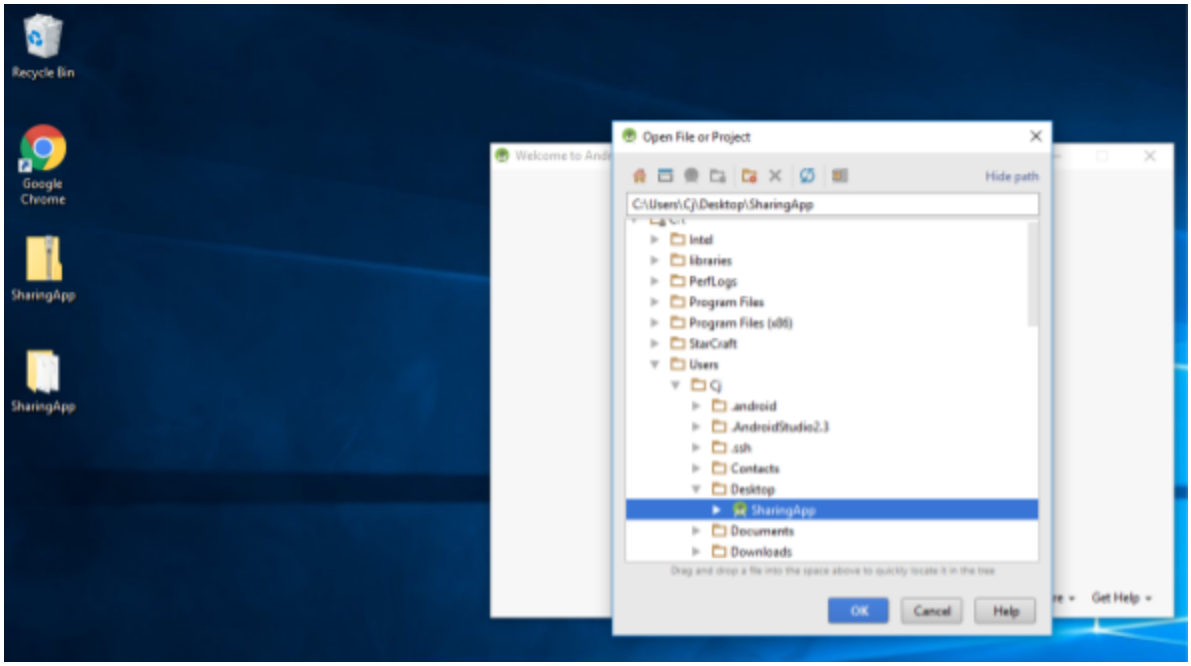
Download and install the latest version of Android Studio (version 2.3.3 or newer) for your computer: https://developer.android.com/studio/index.html
Leave the Android SDK and Android Virtual Device boxes checked. They are necessary.
It will take a while for the program to install.
If asked to import settings from a previous version/setup, ignore and continue with the setup.

Open an existing project in Android Studio.

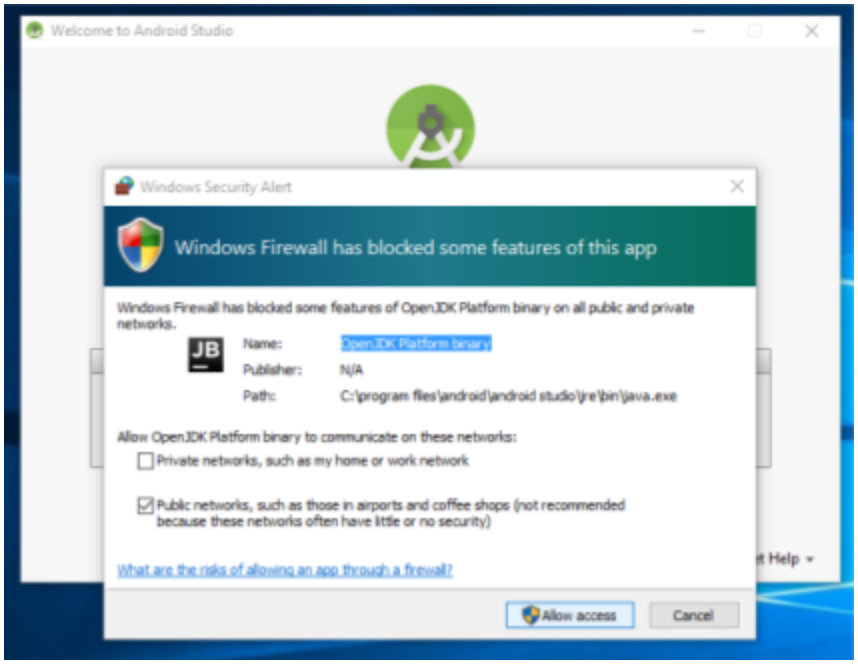
- When Android Studio starts, click on “Open an existing Android Studio project”



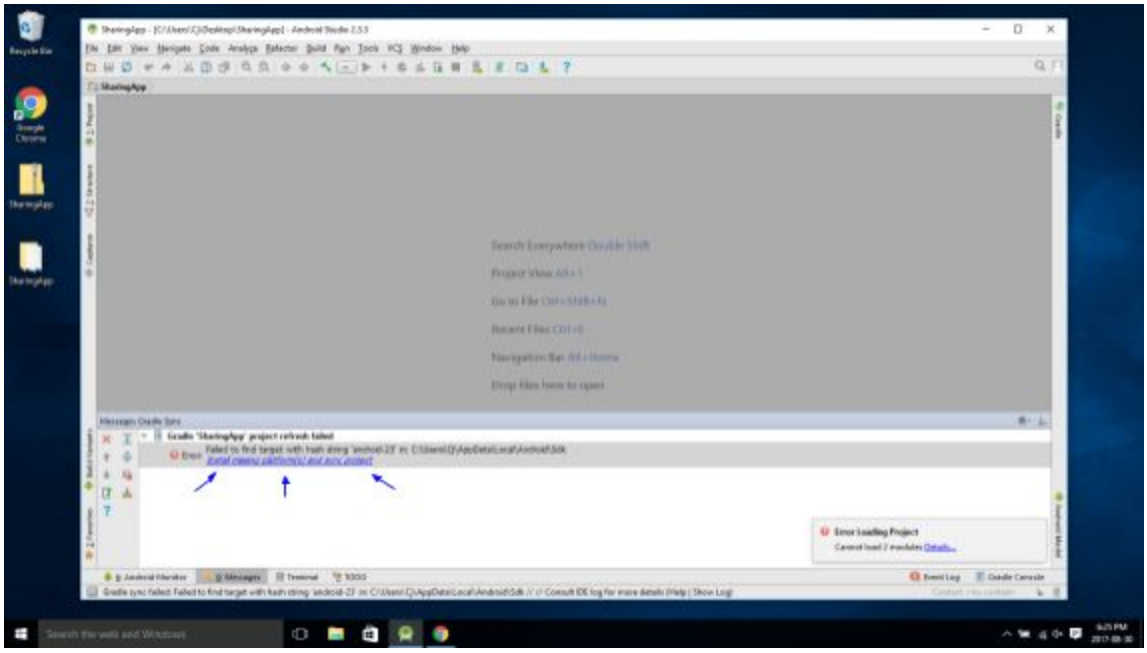
- Select the app



- Once you click ‘Ok’ it will start ‘Building “SharingApp” Gradle project info’, which may take a few minutes to complete.
- You may receive this message from Windows Firewall when it is done. For the purposes of this app, it is alright to select ‘Public networks’ and click ‘Allow Access’.



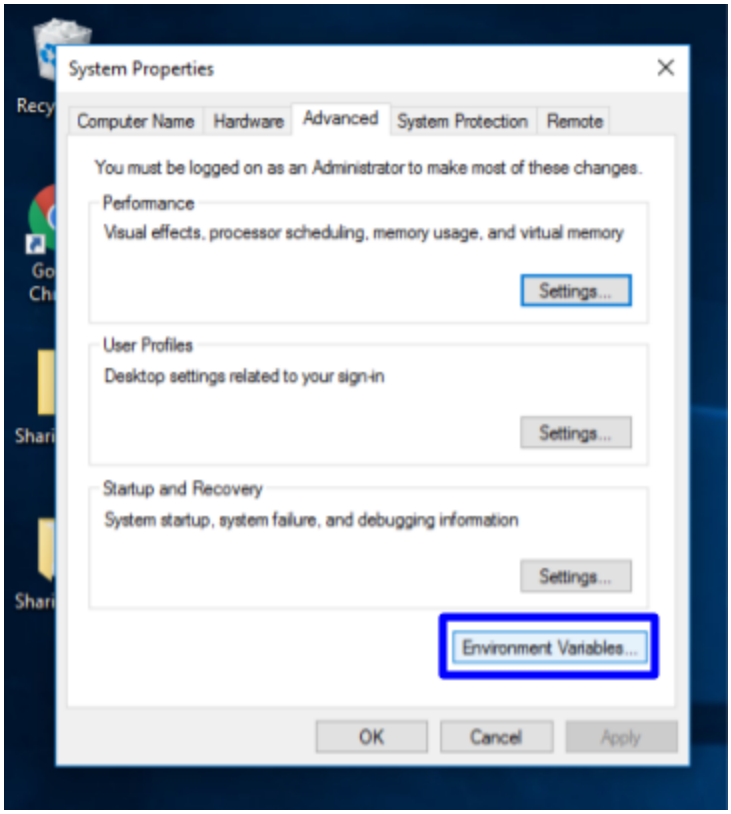
- You may need to download or update java -- Android studio will let you know when you try to build the project.



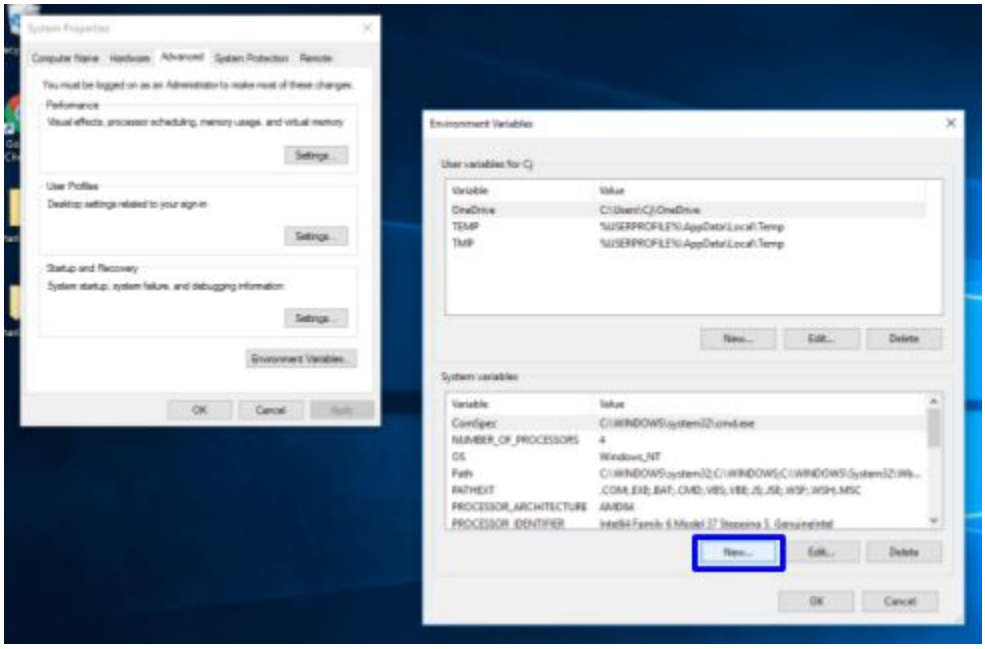
- Update everything it prompts you to update by clicking on the blue link.
- When it is done updating, it will still show the previous prompt and clicking on it will do nothing. Restart Android Studio to fix this and no prompts should pop up.
- At some point, if you've downloaded/updated to the correct version of Java, you must complete the extra step below or you will continue getting errors.

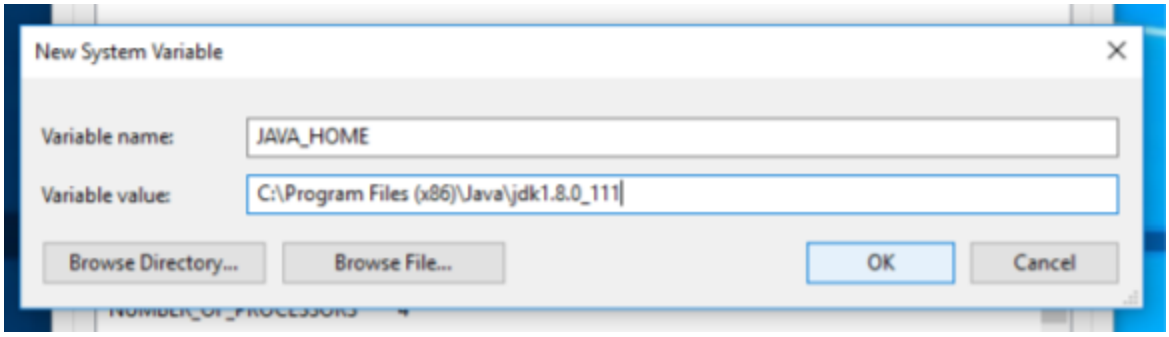
EXTRA STEP: This step is for Windows users only. Android Studio will **not** run the project if you do not complete this step.

- Go to System Properties > Advanced > Environment Variables. You can find System Properties under the advanced system settings in the Control Panel.



- Create a New System Variable called JAVA_HOME. Android Studio will use JAVA_HOME to find the version of java that you require and is saved in Program Files by default.

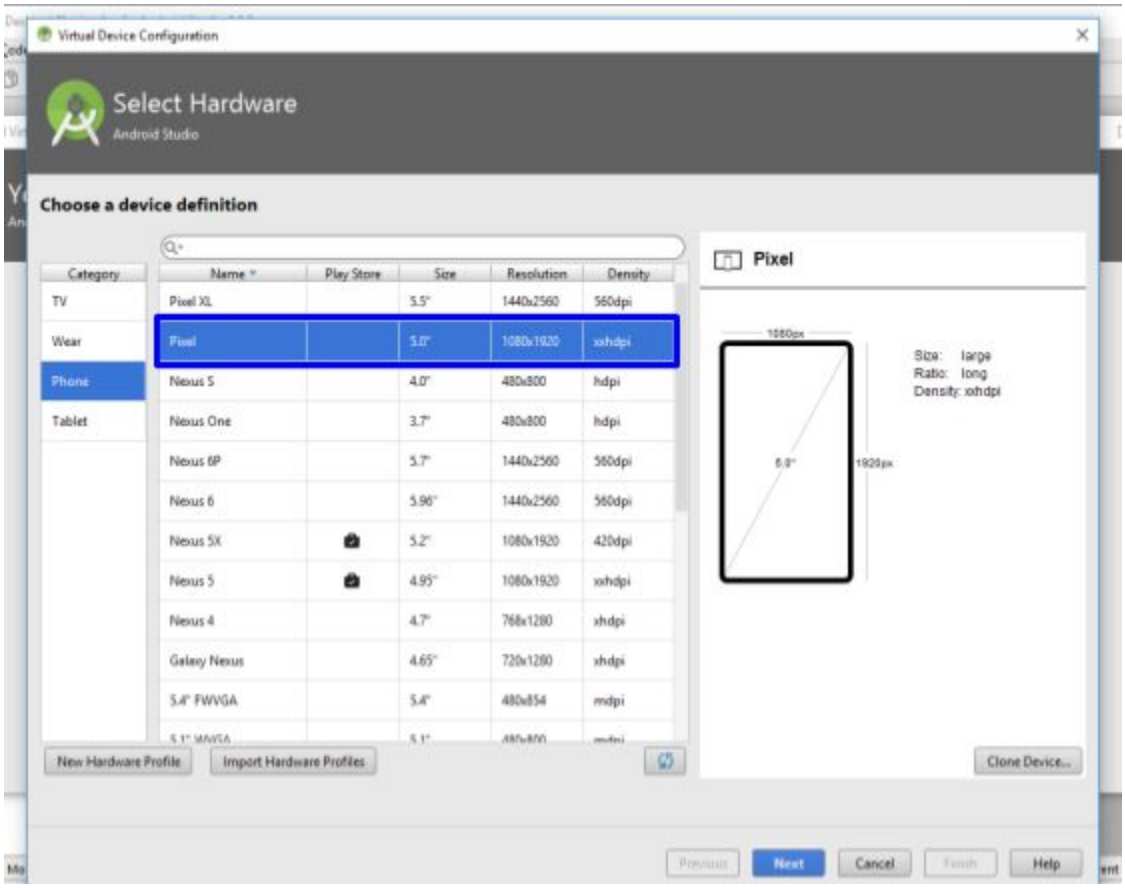




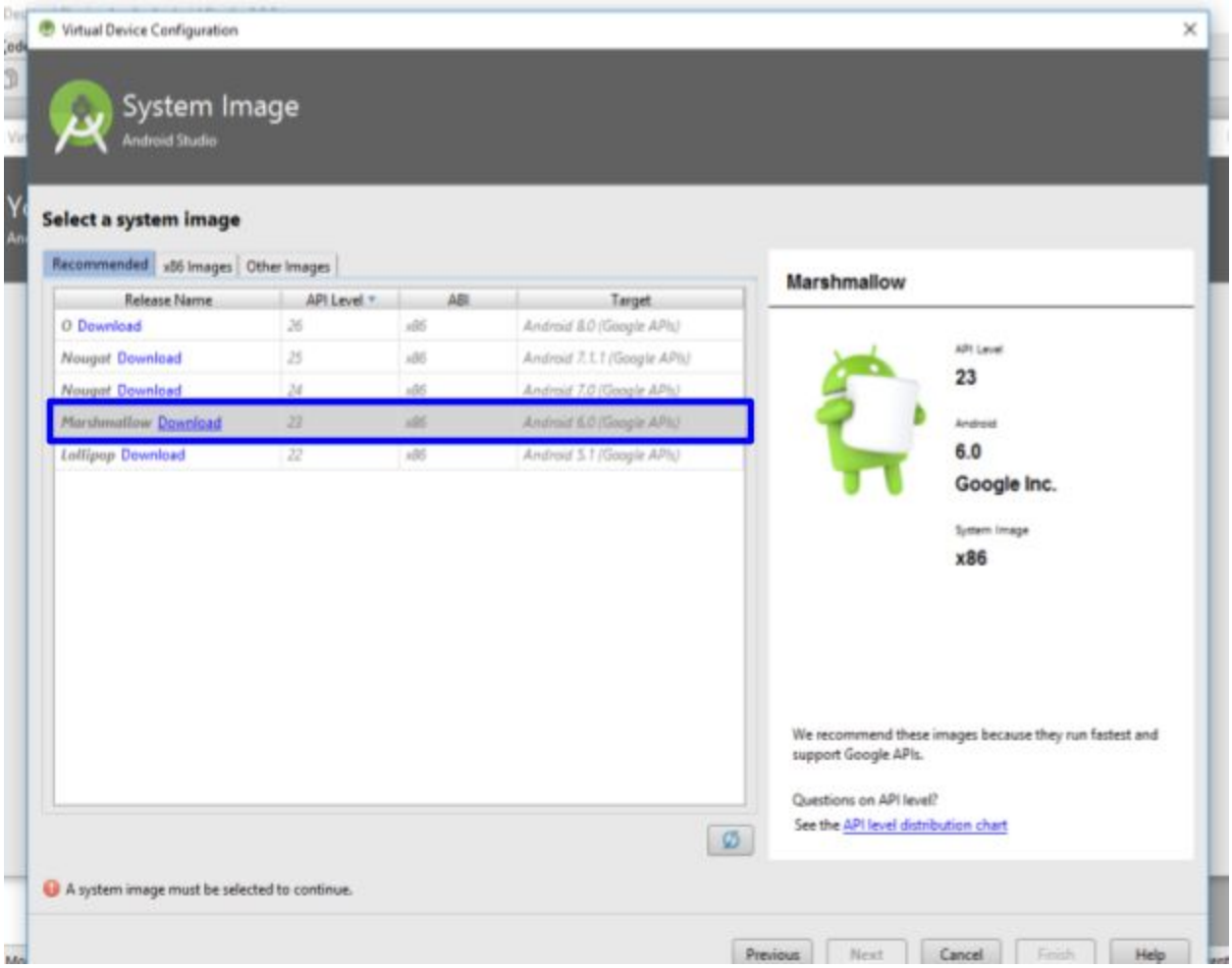
- After accepting the new System Variable, you can close these windows. No other variables need to be made, nor do you have to delete any others.

Next you will need to **create a virtual device** (android emulator).

- Open Android Virtual Device Manager. Go to Tools → Android → AVD Manager.
- Create a new virtual device (found in the bottom left corner of the window)
- Select the Pixel and click Next



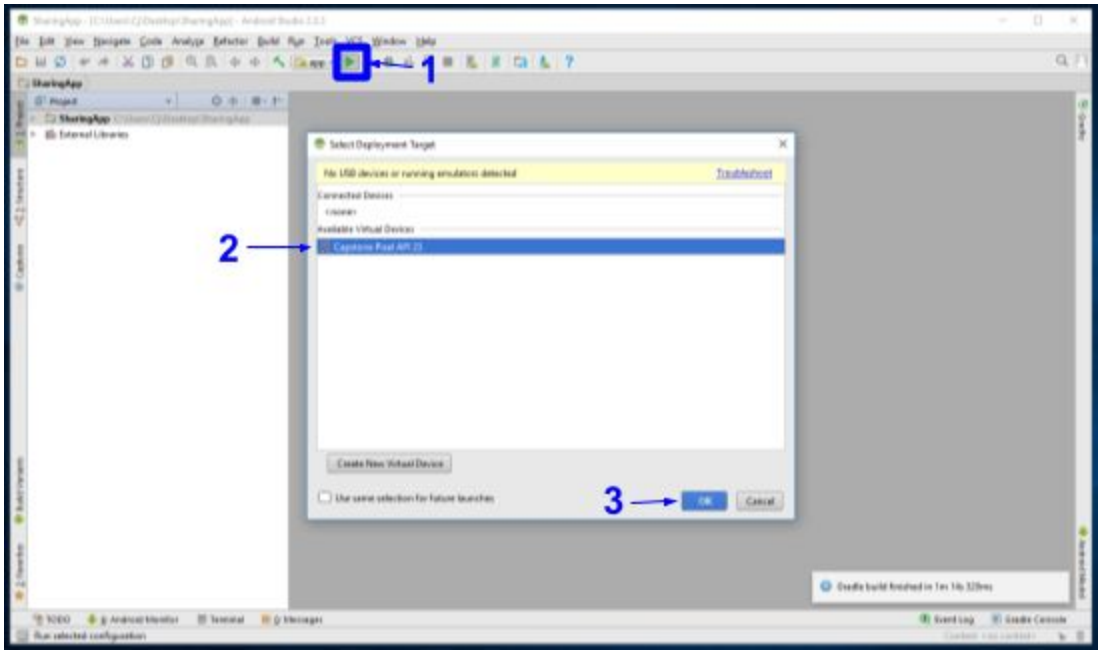
- Select *Marshmallow* (API 23). You may have to download this first, which may take a while.



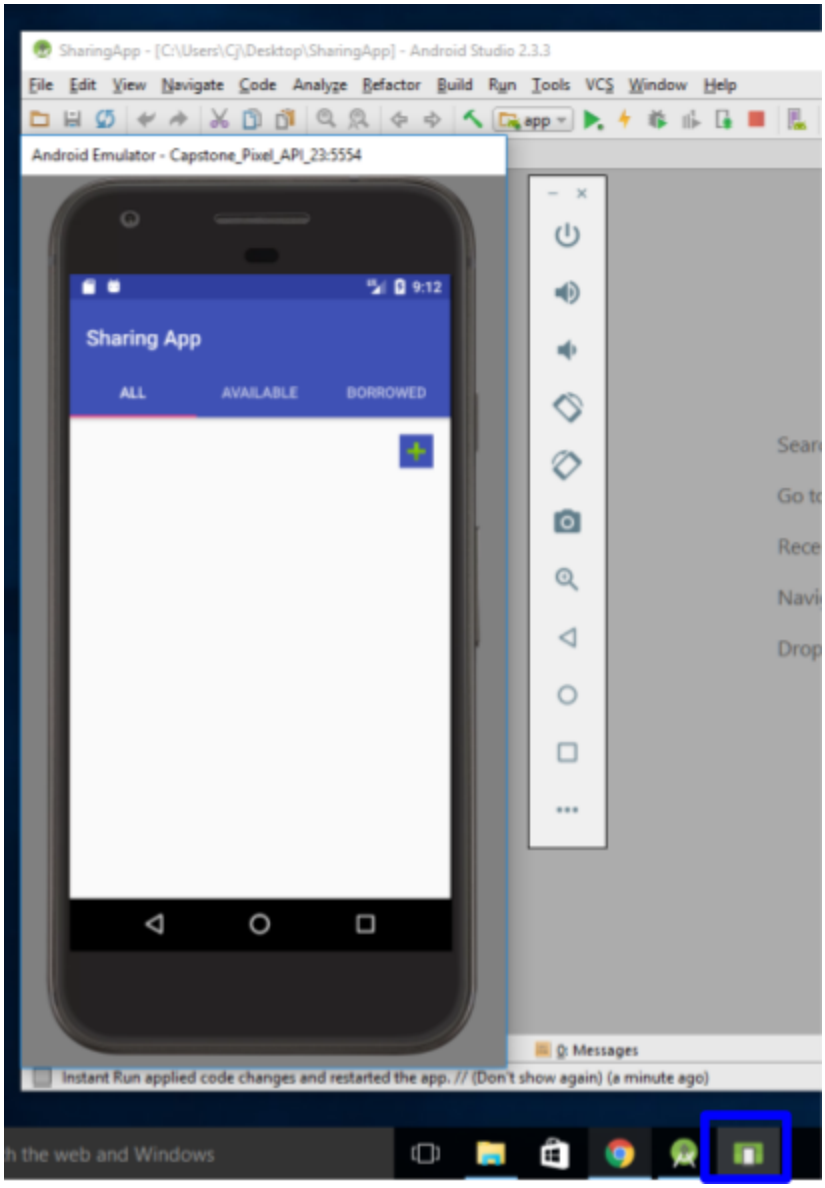
- It will prompt you to give it a name to identify it. The name will have no effect on how the program runs, as long as you know which one you need to run the app.
- Click “Finish” when this is complete.

Running the app

- Click the run button.
- Select your virtual device and press “Ok”. Sometimes the emulator takes a while to load, install and run your app. Be patient!



- Eventually your emulator will finish loading and the app will start:

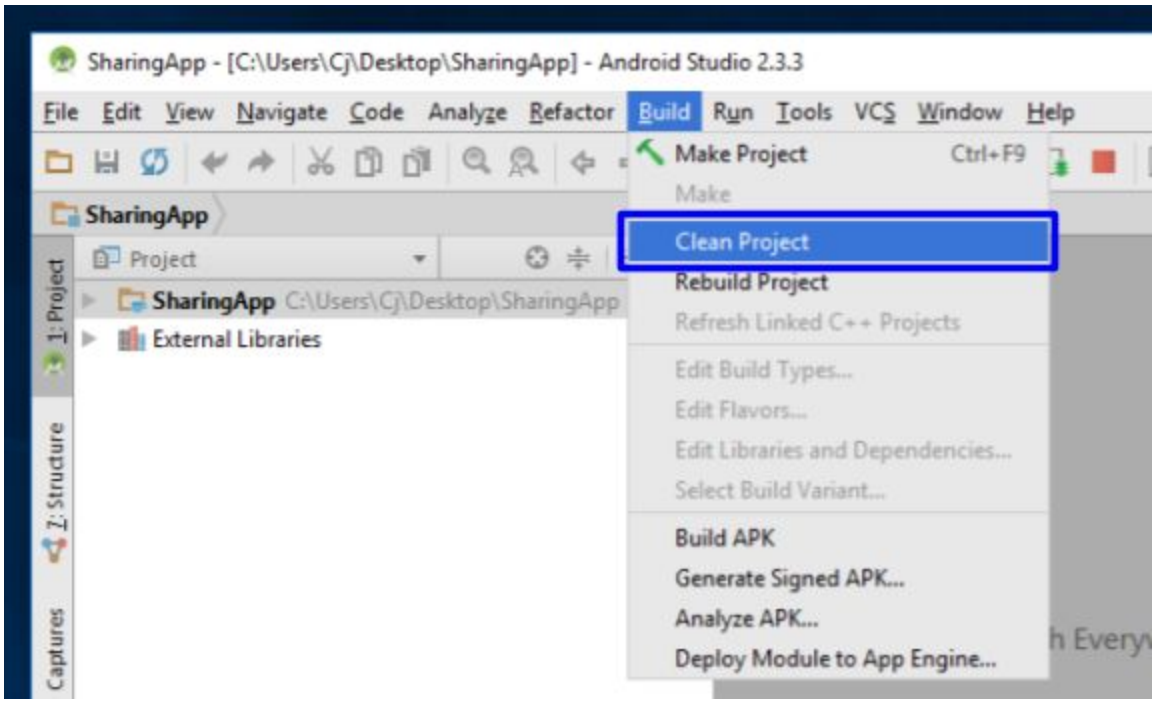


- Congrats, you can now start programming in Android Studio! Play around with the app to see how it works!

Tips

1. **Clear the app's data** whenever you make changes to the model. If you don't, you may encounter errors when data is being stored and read from memory. (Really annoying when trying to debug new features!) On your emulator navigate to
    - Settings → Apps → Sharing App → Storage → Clear Data

2. Before uploading your code **"clean" your project**. This removes some files and folders that are created when your project is compiled. If you don't clean your code before sharing it with someone else, they will have to clean it before they can run it or it will not work properly. Cleaning the project can (on occasion, but not always) also clear up bugs you are running into with your app.



3. The **Android Monitor** is a useful tool that can be used while running the app. It will display errors and log statements you've added to your code here.
   If you don't see any new messages popping up and the app is running, make sure the android device you are looking at doesn't say [DEAD] beside it. Simply select your android device from the drop down menu to get the current running device.