Front-End Development

React Native

#1 Getting Started

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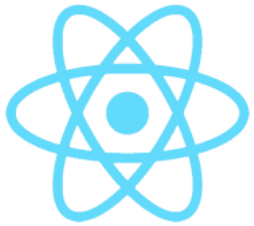

React

- ***React Native*** lets you build mobile apps (iOS and/or Android) using only JavaScript. It uses the same design as React, letting you compose a rich mobile UI from declarative components.

- More info: *facebook.github.io/react-native*

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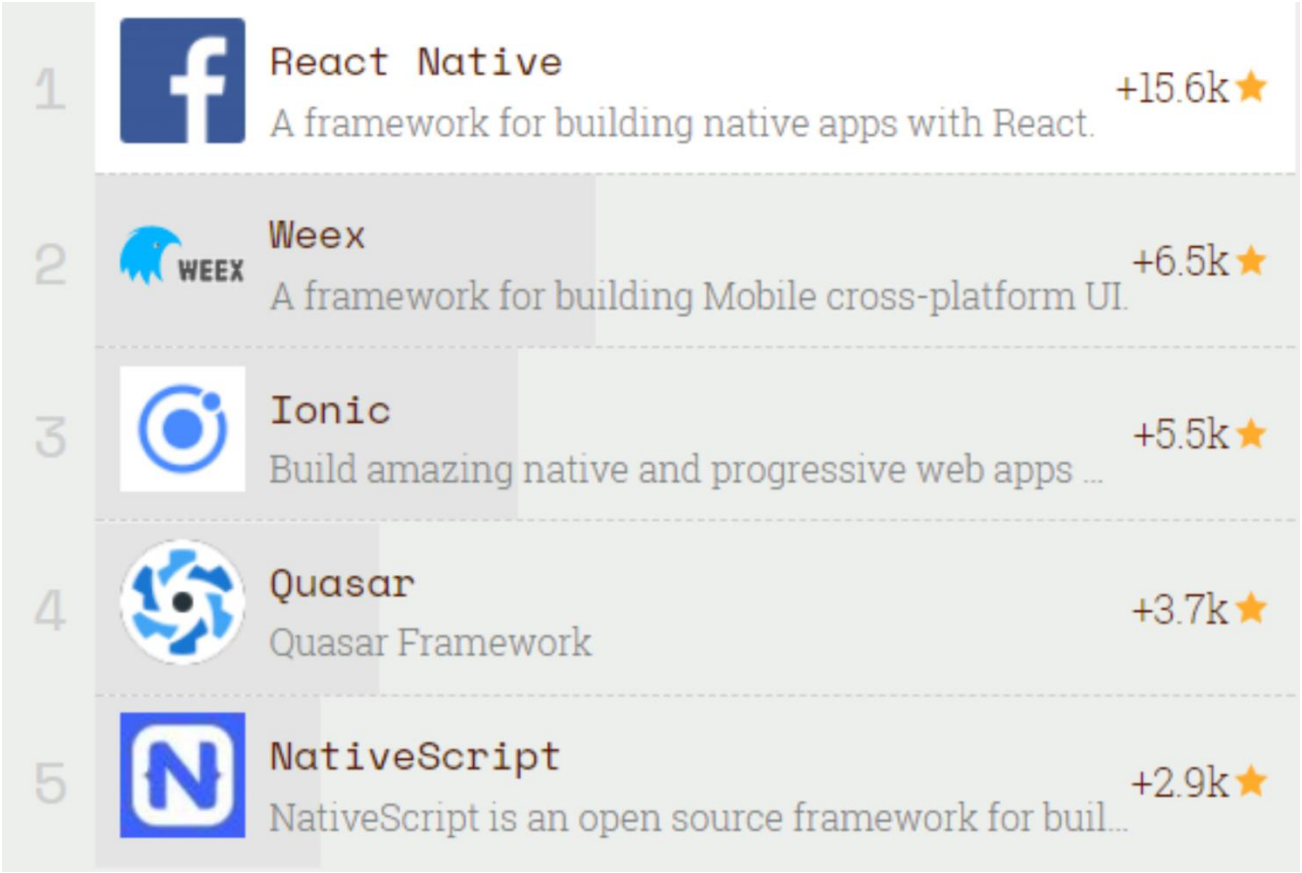
Top JS Mobile Frameworks 2017



https://risingstars.js.org/2017/en/

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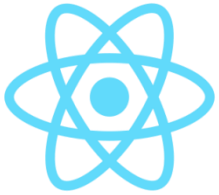

Advantages

- Design simple declarative views for each state in an application.
- Encapsulated components.
- Dynamics properties & state.
- Light & faster virtual DOM.
- Independent of the rest of application.
- Can render on client or server.

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Initial Setup:

- Android Studio
- Android SDK
- ANDROID_HOME
- JAVA_HOME
- Platform-tools

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#1 Android Studio

- Download then install Android Studio: *developer.android.com/studio/index.html*.
- Choose a "Custom" setup and make sure the following boxes are checked:

  Android SDK

  Android SDK Platform

  Performance (Intel ® HAXM)

  Android Virtual Device

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Android Studio

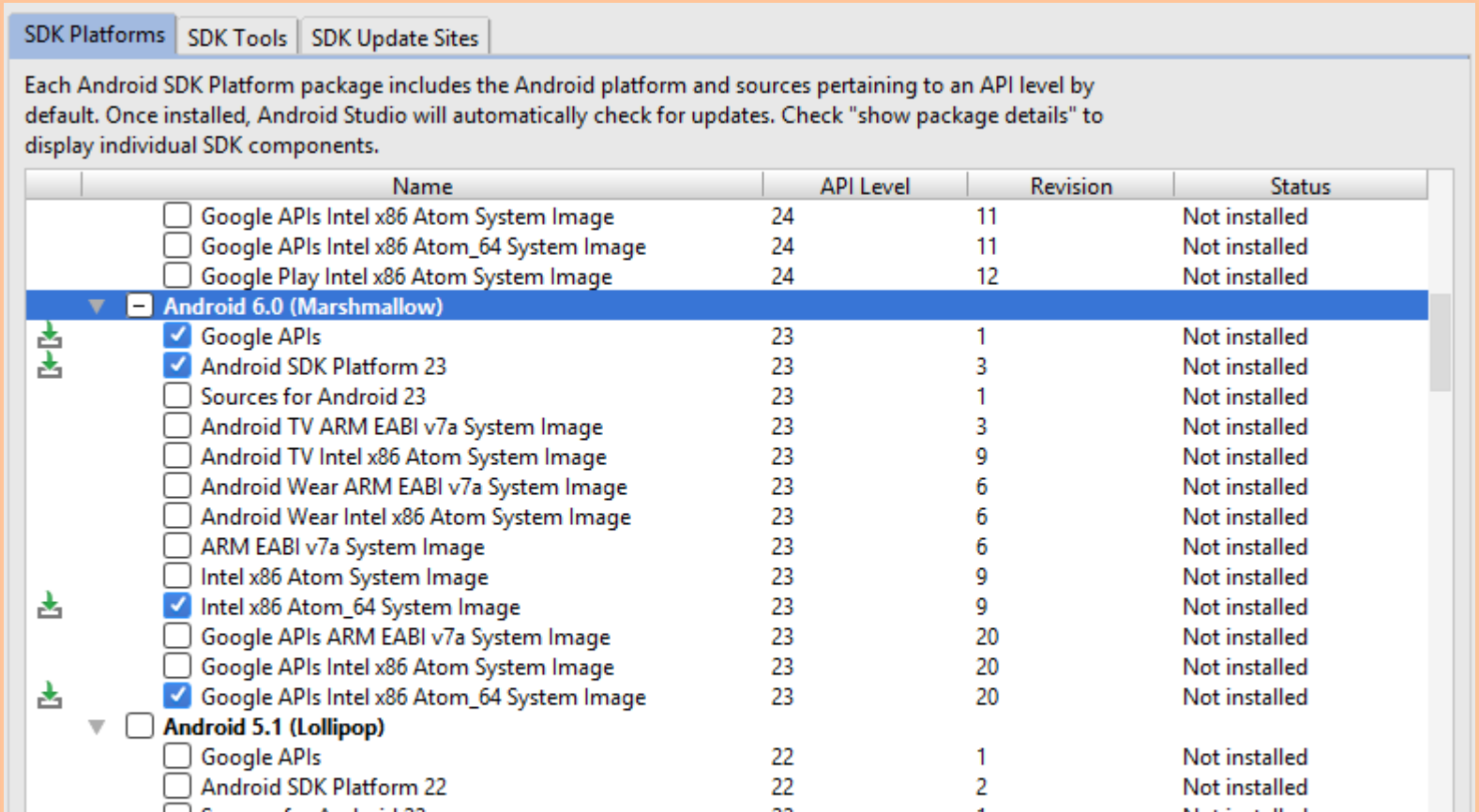
#2 Android SDK

- Access SDK Manager from the ***"Welcome to Android Studio"*** screen. Click on ***Configure***, then select ***SDK Manager***.

Android Studio

#2 Android SDK

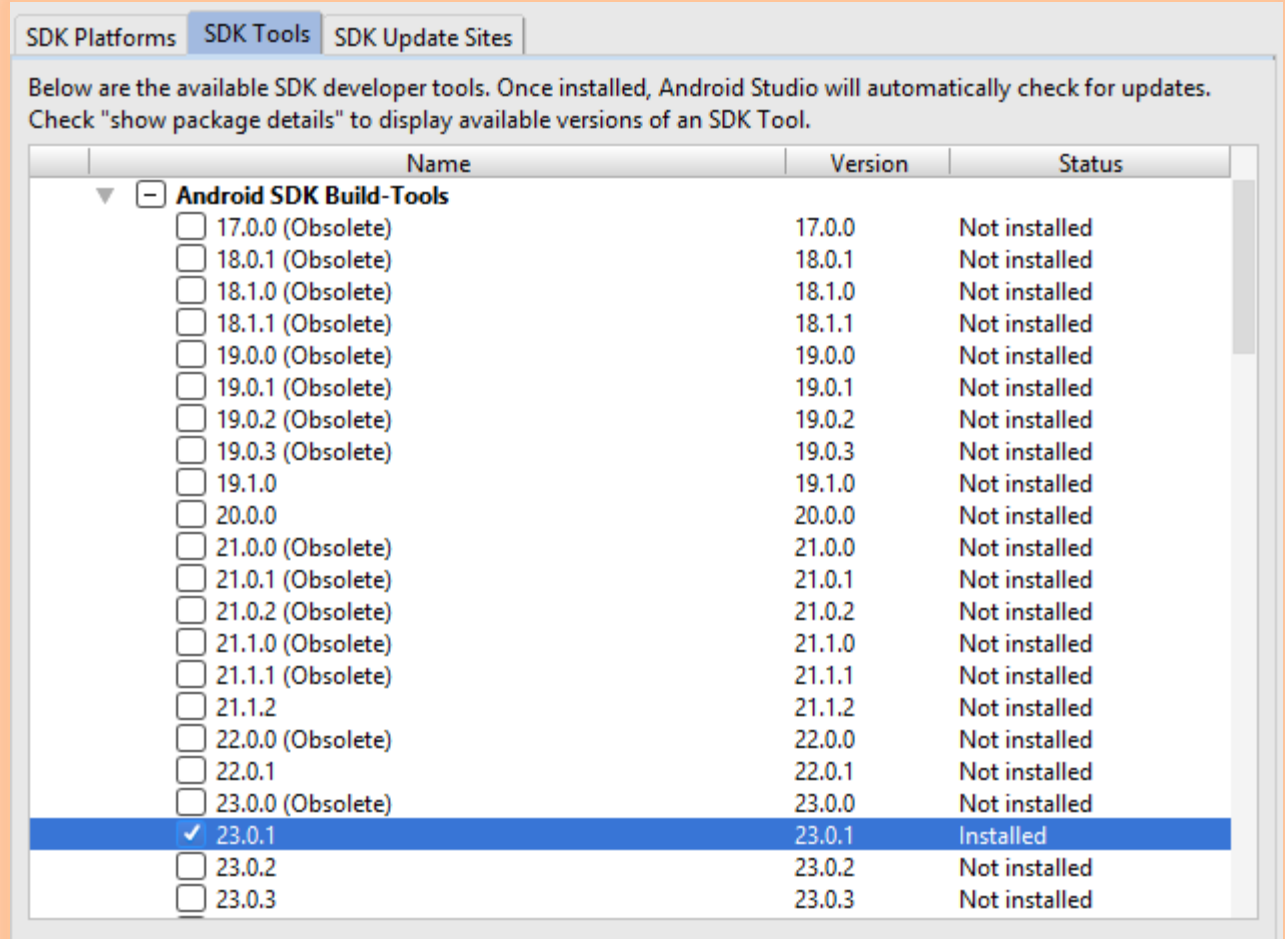
- Select the ***SDK Platforms*** tab from within the SDK Manager, then check the box next to ***Show Package Details*** in the bottom right corner. Look for and expand the ***Android 6.0 (Marshmallow)*** entry, then make sure the following items are all checked:



Android Studio

#2 Android SDK

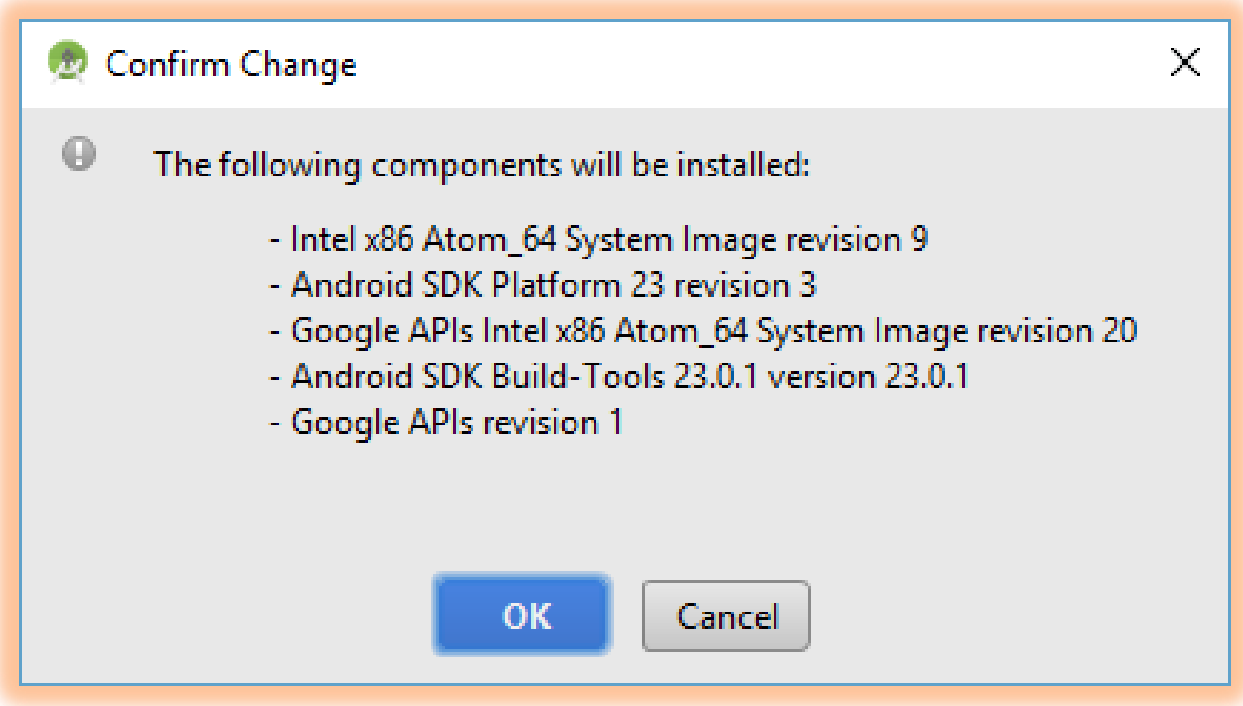
- Next, select the ***SDK Tools*** tab and check the box next to ***Show Package Details*** here as well. Look for and expand the ***Android SDK Build-Tools*** entry, then make sure that ***23.0.1*** is selected.



Android Studio

#2 Android SDK

- Finally, click ***Apply*** to download and install the Android SDK and related build tools.



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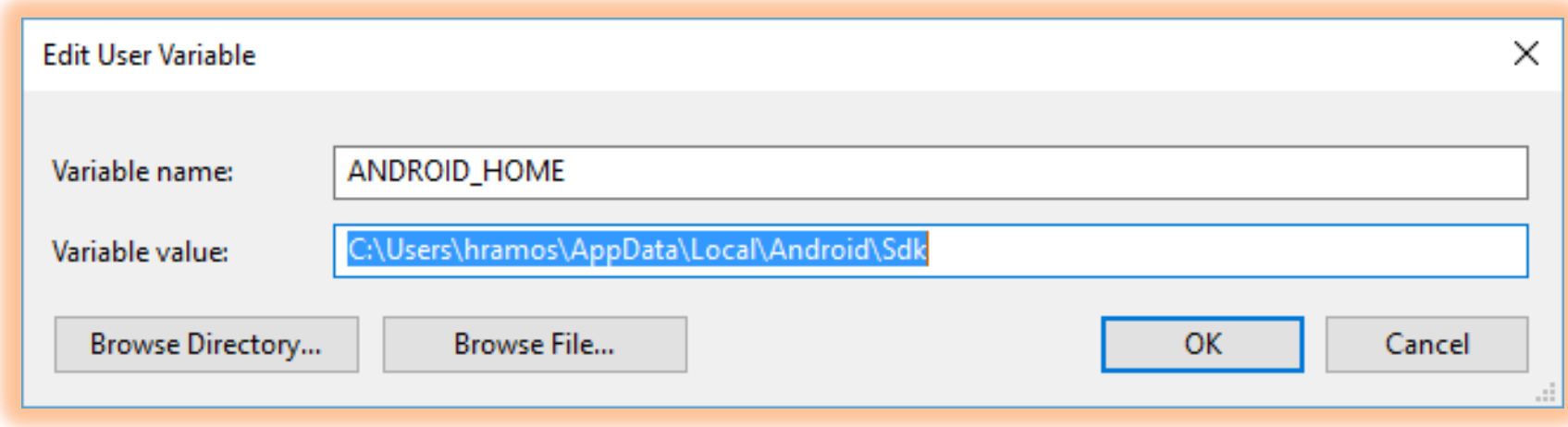
Android Studio

#3 ANDROID_HOME

- Open the ***System*** pane under ***System and Security*** in the ***Control Panel***, then click on ***Change settings....*** Open the ***Advanced*** tab and click on ***Environment Variables....*** Click on ***New...*** to create a new ***ANDROID_HOME*** user variable that points to the path to your Android SDK:



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Android Studio

#3 ANDROID_HOME

- The SDK is installed, by default, at the following location:
  C:\Users\name\AppData\Local\Android\Sdk
- You can find the actual location of the SDK in the Android Studio *"Preferences"* dialog, under ***Appearance & Behavior > System Settings > Android SDK***.
- Open a new Command Prompt window to ensure the new environment variable is loaded before proceeding to the next step.

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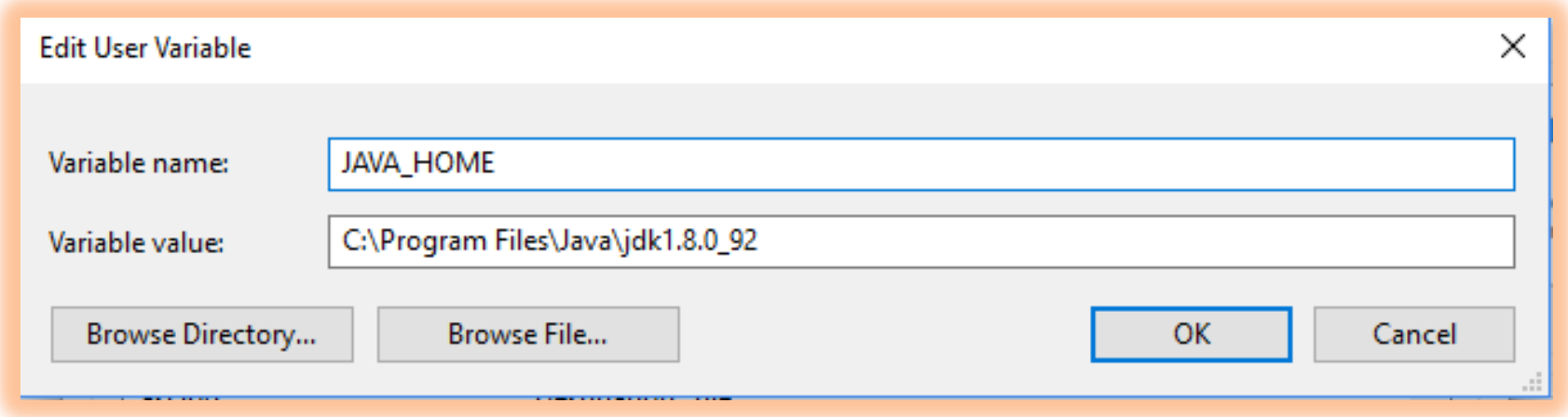
#4 JAVA_HOME

- Open the ***System*** pane under ***System and Security*** in the ***Control Panel***, then click on ***Change settings....*** Open the ***Advanced*** tab and click on ***Environment Variables....*** Click on ***New...*** to create a new ***JAVA_HOME*** user variable that points to the path to your JDK:



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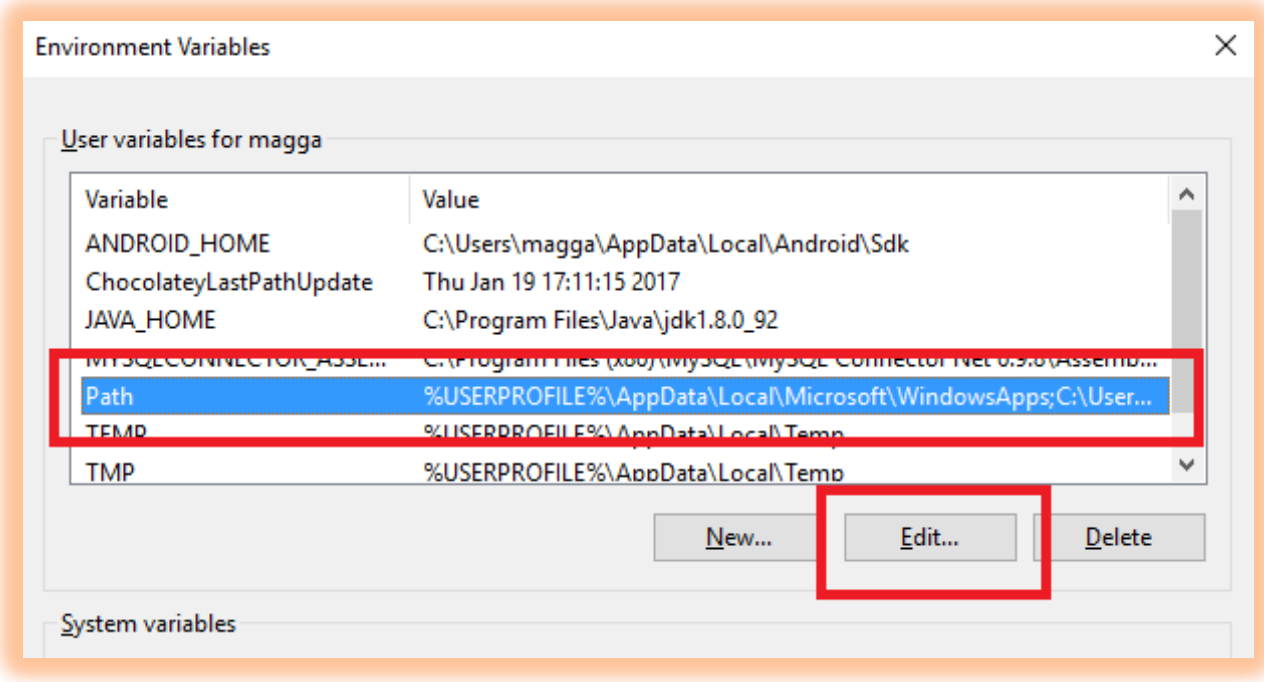
#5 platform_tools

- Open the ***System*** pane under ***System and Security*** in the ***Control Panel***, then click on ***Change settings....*** Open the ***Advanced*** tab and click on ***Environment Variables....*** Click on ***Path*** then ***Edit.***



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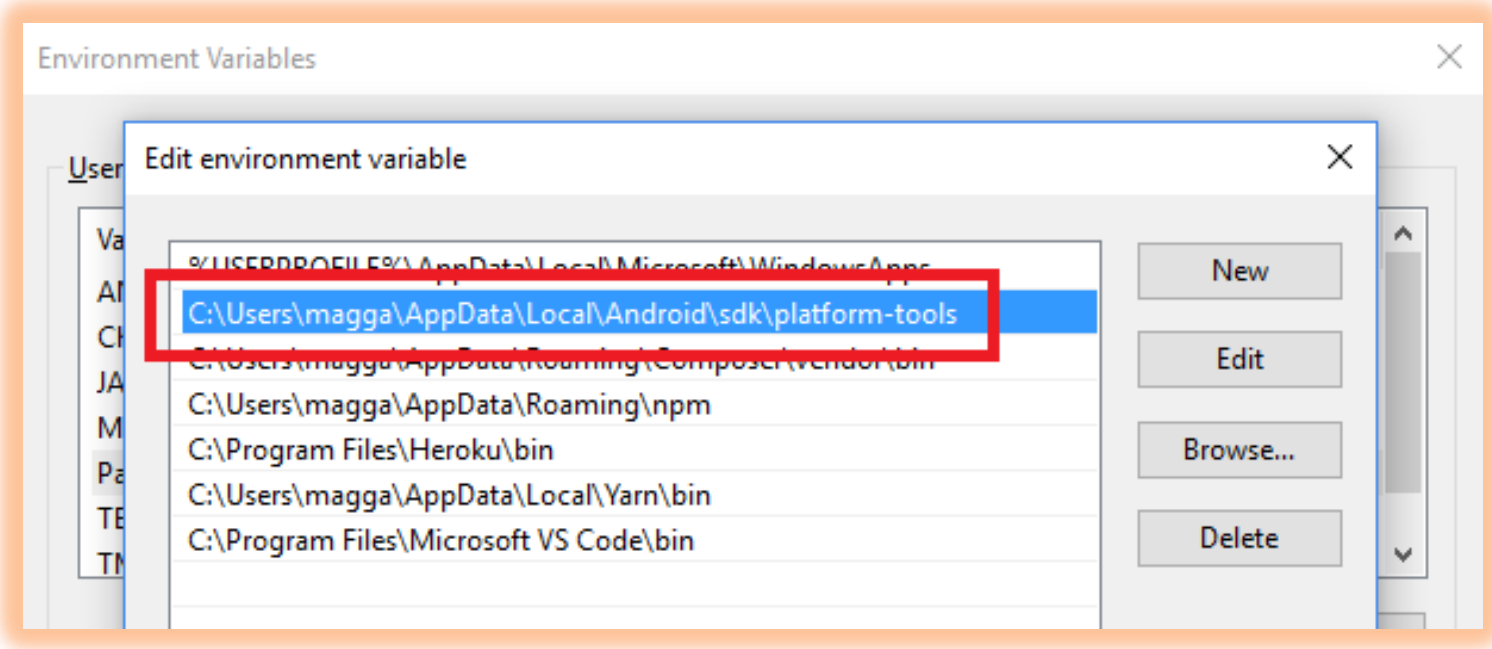
Android Studio

#5 platform_tools

- Click New then add the path to your Android SDK's platform tools:
  C:\Users\name\AppData\Local\Android\Sdk\platform-tools
- Click ***OK*** to finish the setup.



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React Native Setup:

- Set Android AVD
- React Native CLI
- local.properties
- Running Project

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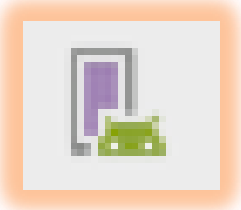
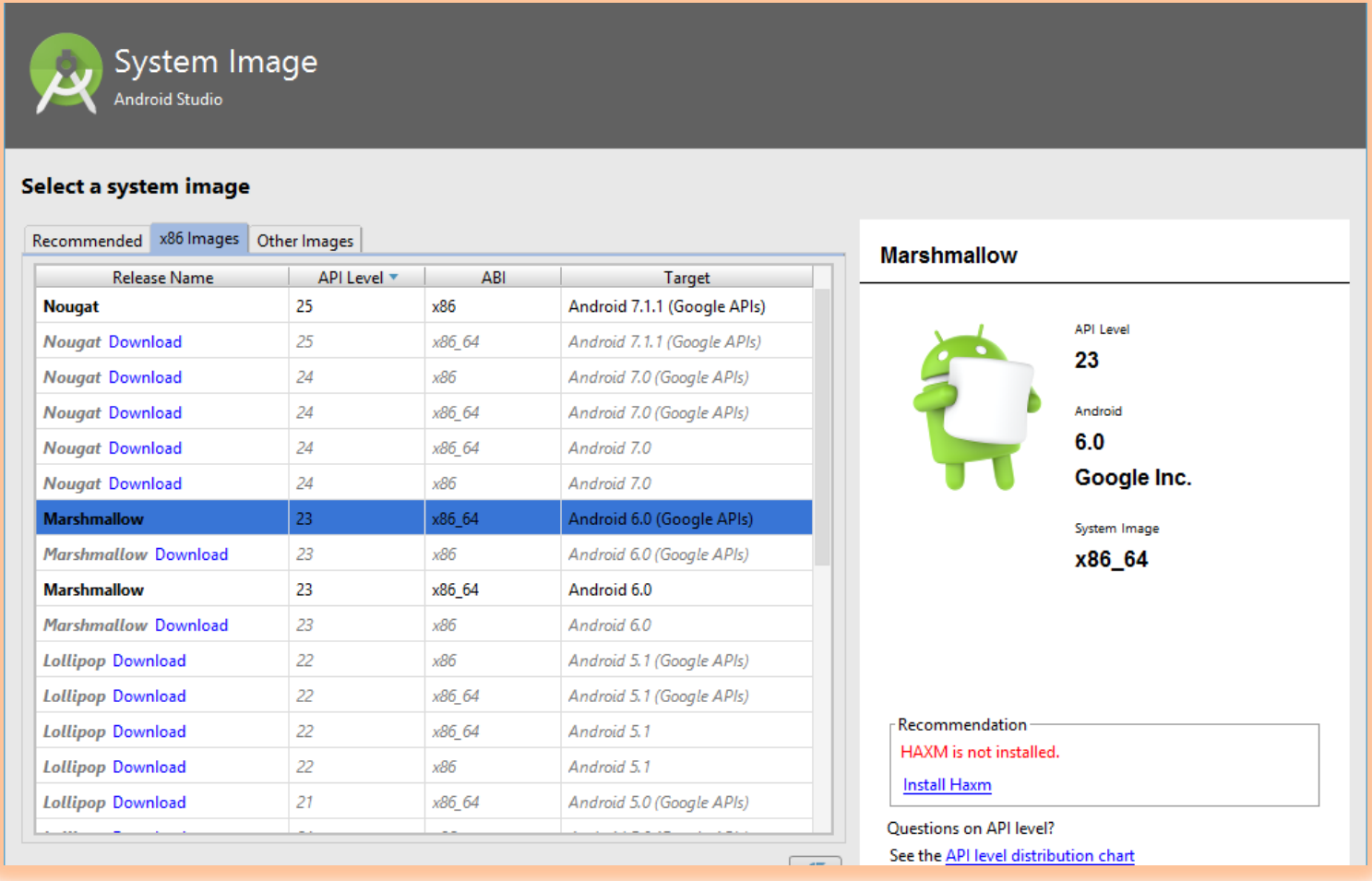


#1 Android Virtual Device

- If you have just installed Android Studio, you will likely need to create a new AVD. Select ***Create Virtual Device...***, then pick any Phone from the list and click ***Next***.

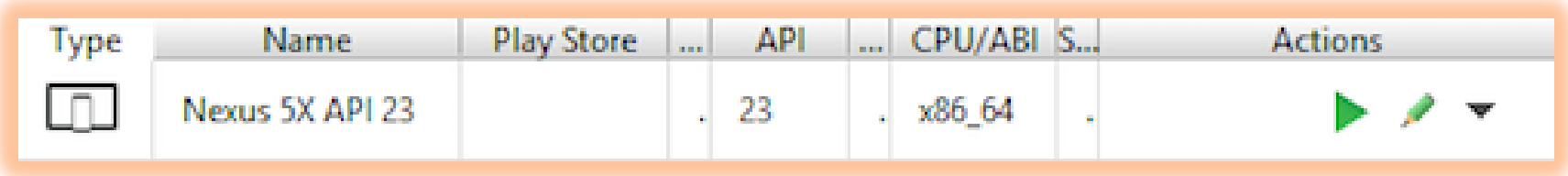
#1 Android Virtual Device

- Select the ***x86 Images*** tab, then look for the ***Marshmallow API Level 23, x86_64*** ABI image with a ***Android 6.0 (Google APIs)*** target.



#1 Android Virtual Device

- If you don't have HAXM installed, click on ***Install HAXM*** or follow these instructions to set it up, then go back to the ***AVD Manager***.



- Click ***Next*** then ***Finish*** to create your AVD. At this point you should be able to click on the green triangle button next to your AVD to launch it, then proceed to the next step.

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#2 React Native CLI

- Install React Native CLI first. Open terminal, on project directory type:

```
$ npm install -g react-native-cli
```

- Create React Native project then run it:

```
$ react-native init andro_lin
$ cd andro_lin
$ react-native run-android

// for next (if using Android Studio) just
$ npm start
```

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#3 local.properties

- If error when running the project, you have to create a local.properties file on your project_directory/android! Fill it with your Android SDK path, for instance:

```
sdk.dir=C:\\Users\\lintangwisesa\\AppData
\\Local\\Android\\Sdk
```

- Then run again.

```
$ react-native run-android
```

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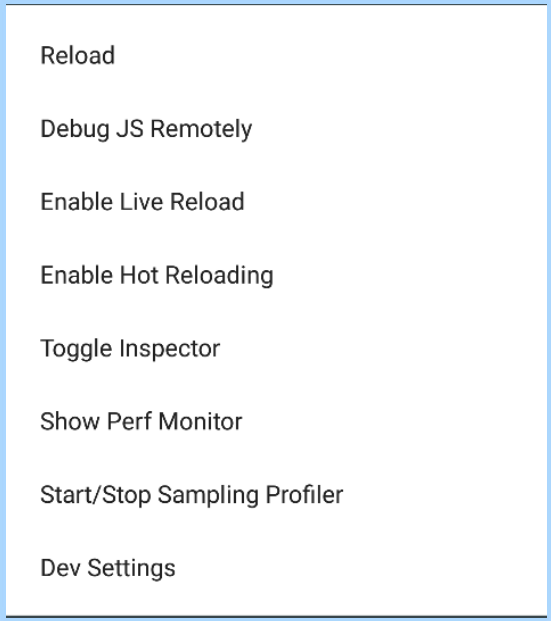
- If everything is set up correctly, you should see your new app running in your Android Studio emulator shortly.

- Press CTRL+M to show main menu on our emulator.



GENYMOTION

Using Genymotion is Lighter Than Android Studio AVD!

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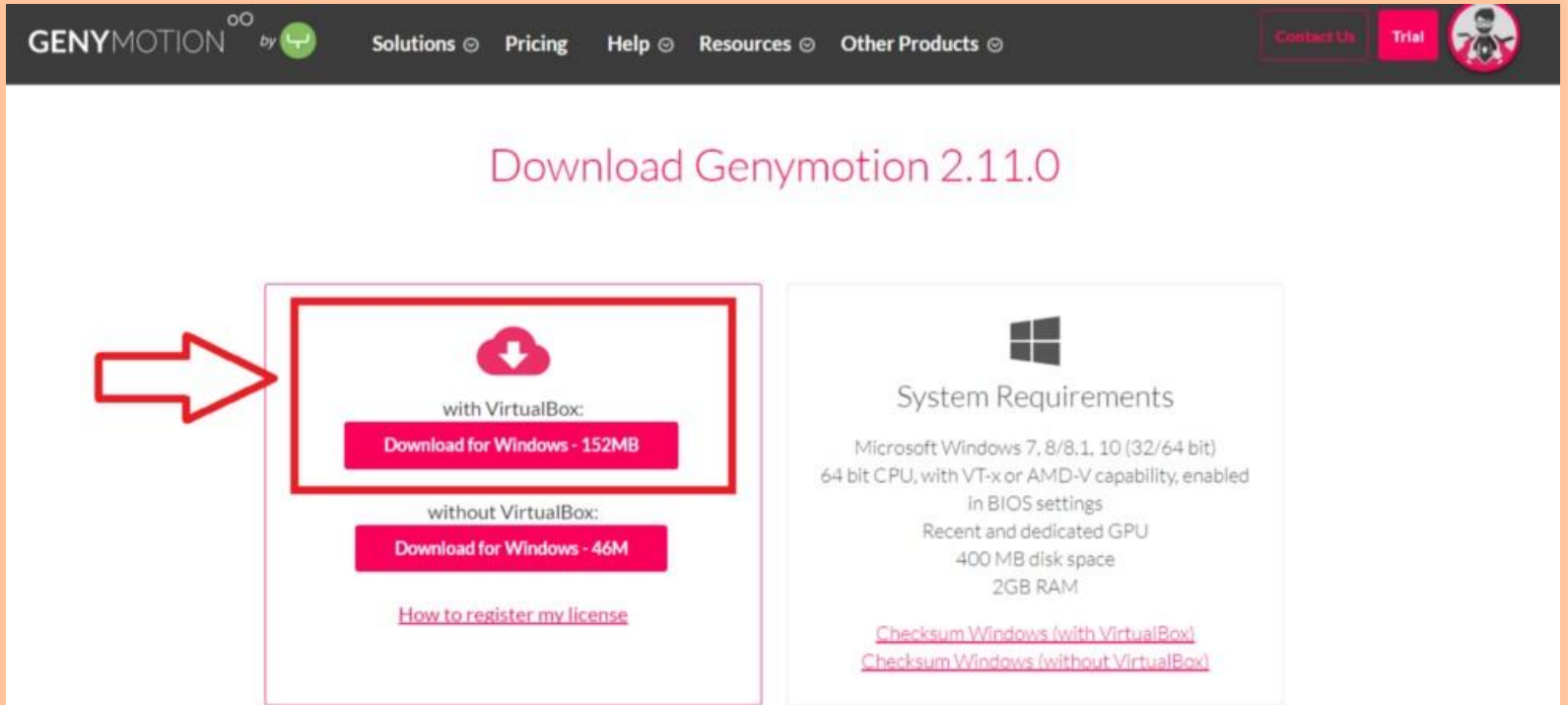
GENYMOTION

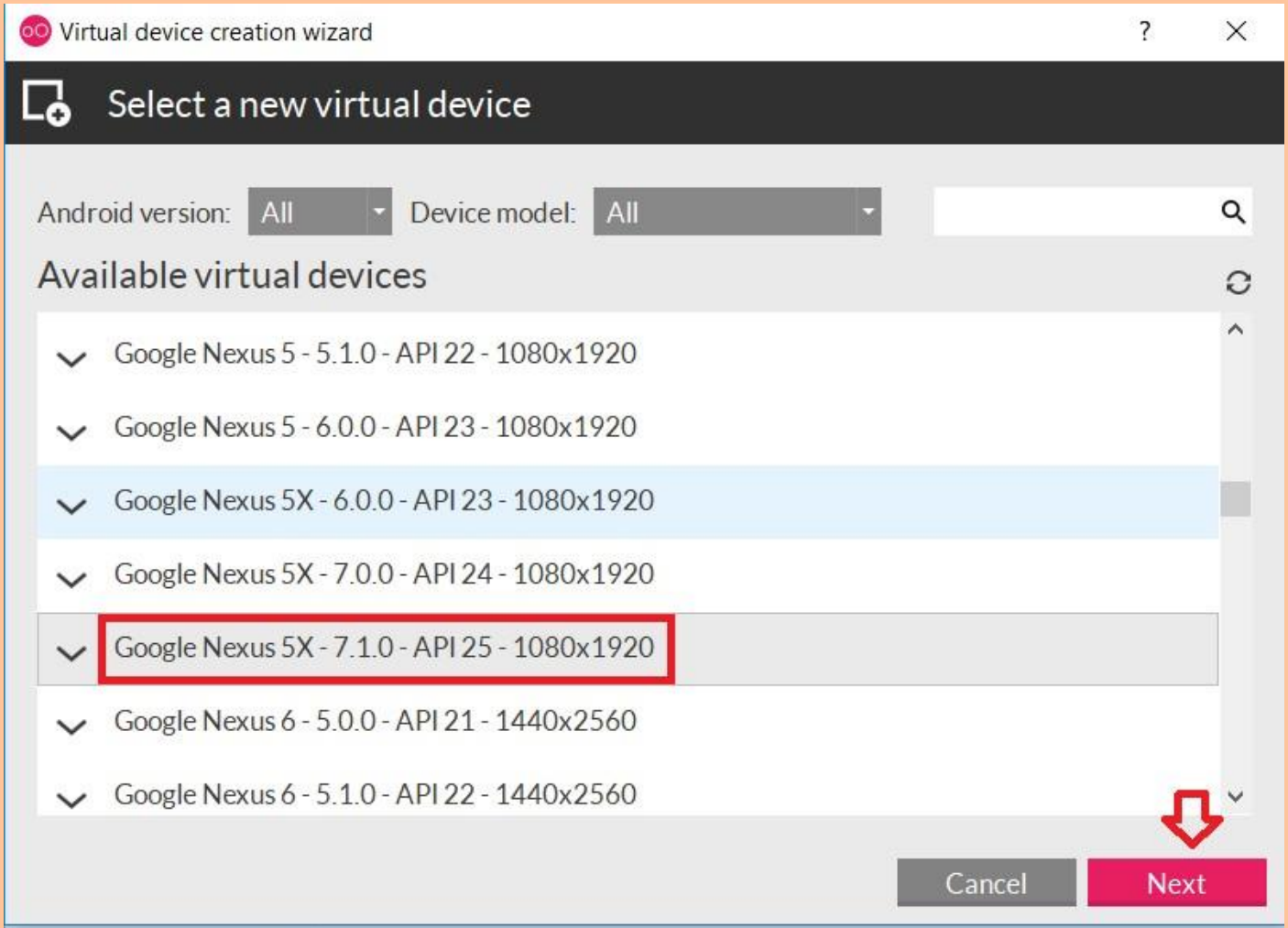
GenyMotion is a third party program that offers Android virtualization so you can test against different versions of Android, and for debugging.

Download its personal edition for free (with Virtual Box):
www.genymotion.com/fun-zone



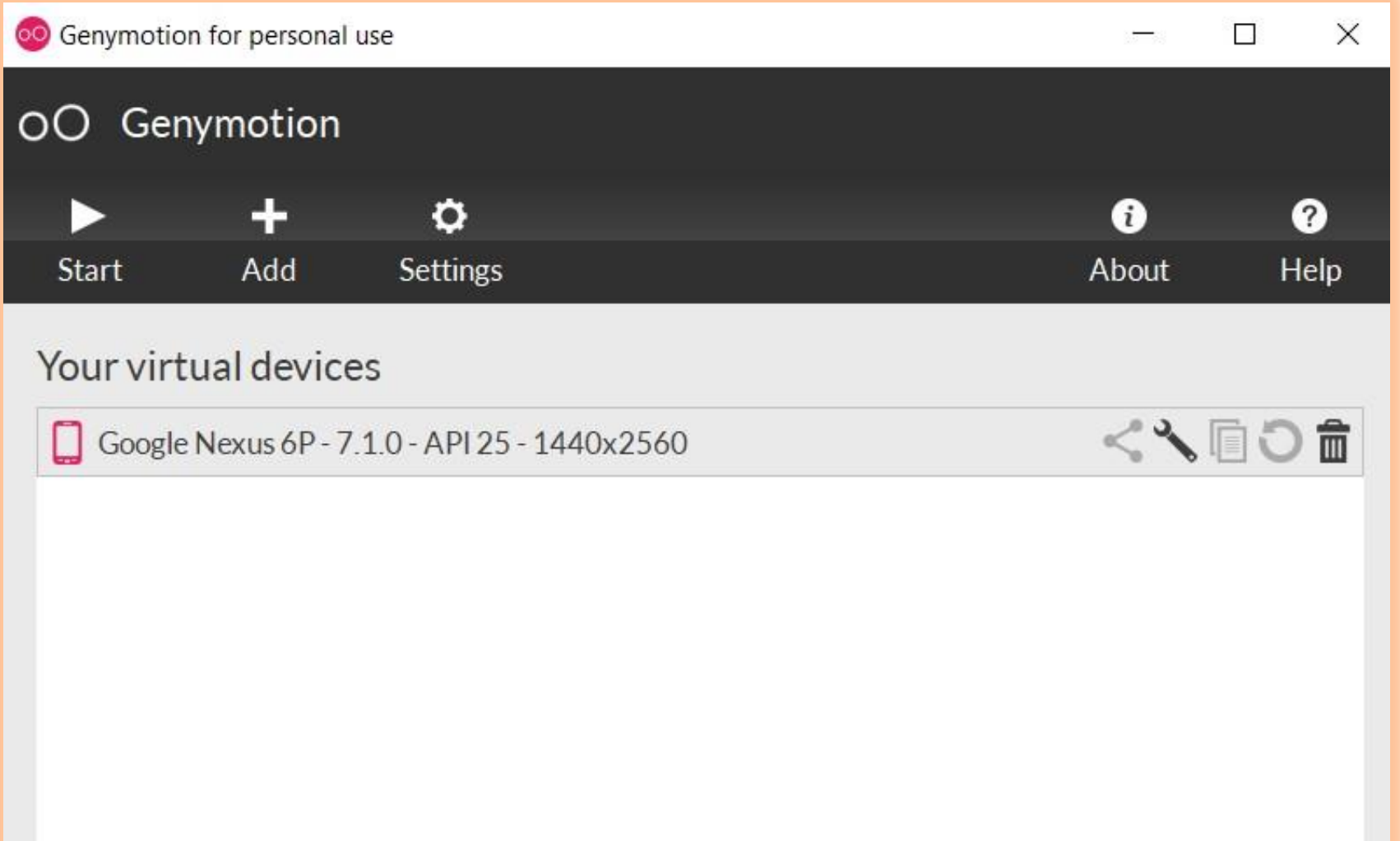
#1 Add Virtual Device

- Once downloaded, open Genymotion and login with your account. Now, you'll be able to add a new Virtual Device (Ctrl+N).



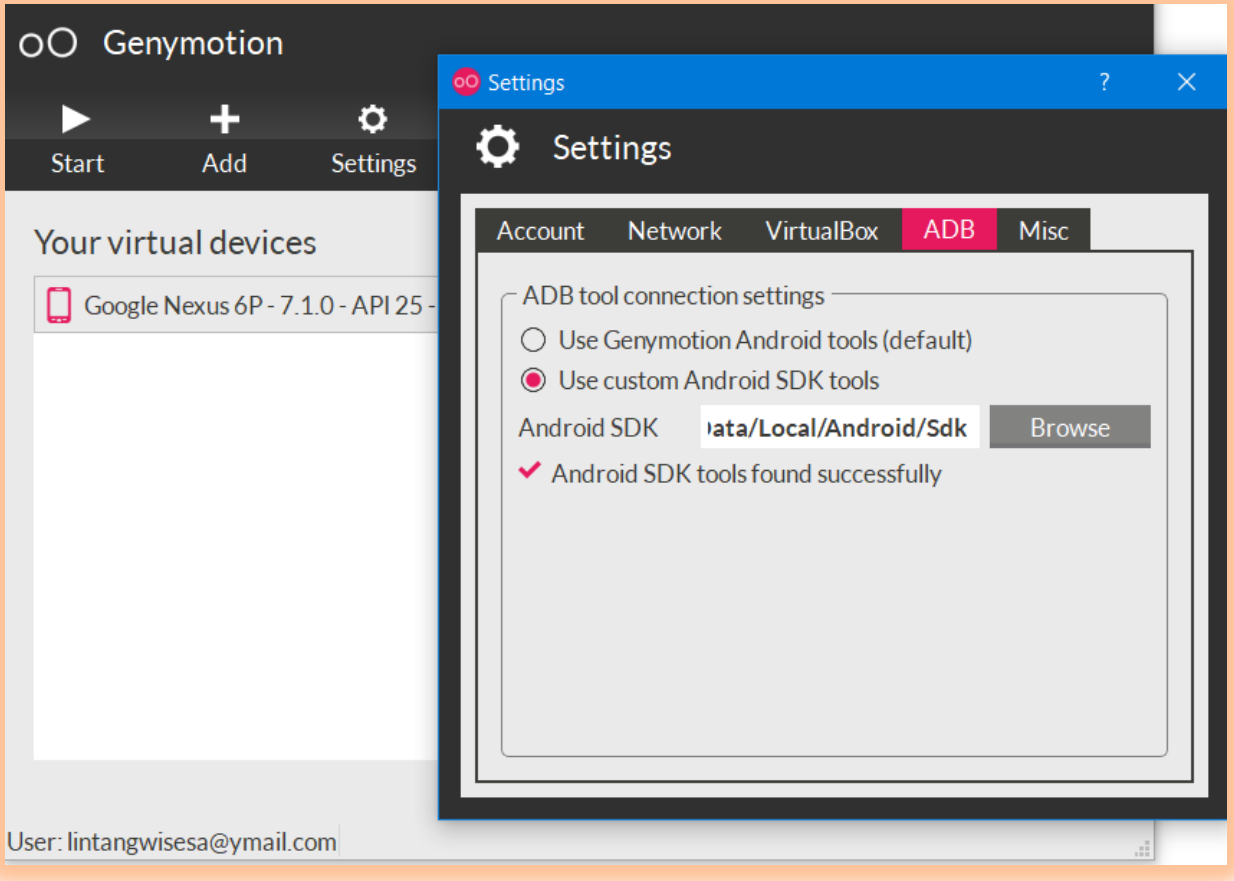
#1 Add Virtual Device

- Once done you'll see your devices listed under Virtual devices:



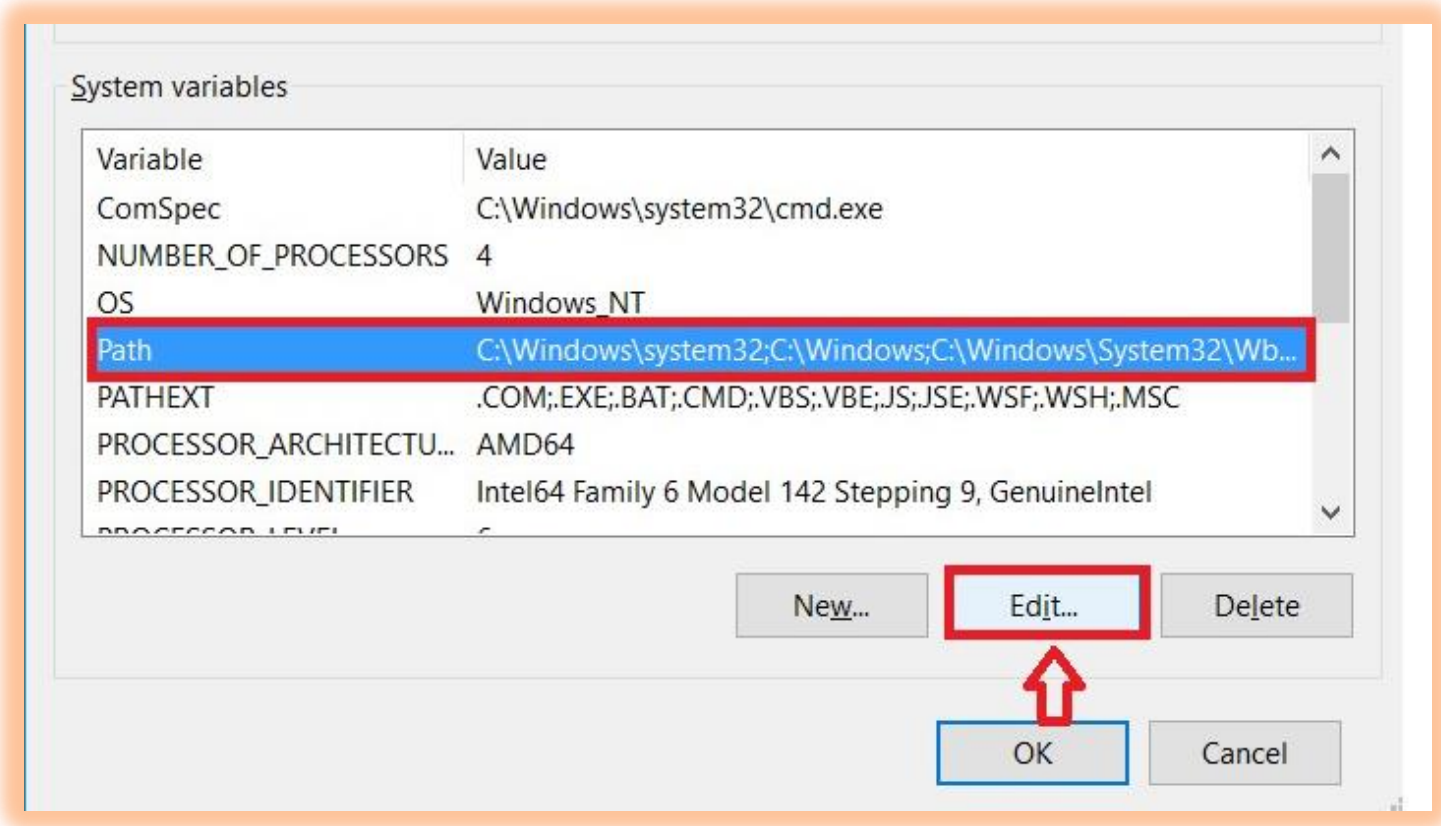
#2 ADB to SDK

- On Genymotion, click ***Settings***, on tab ***ADB*** choose ***Use custom Android SDK tools*** then browse your Android SDK's path, e.g: ***C:\Users\name\AppData\Local\Android\Sdk***

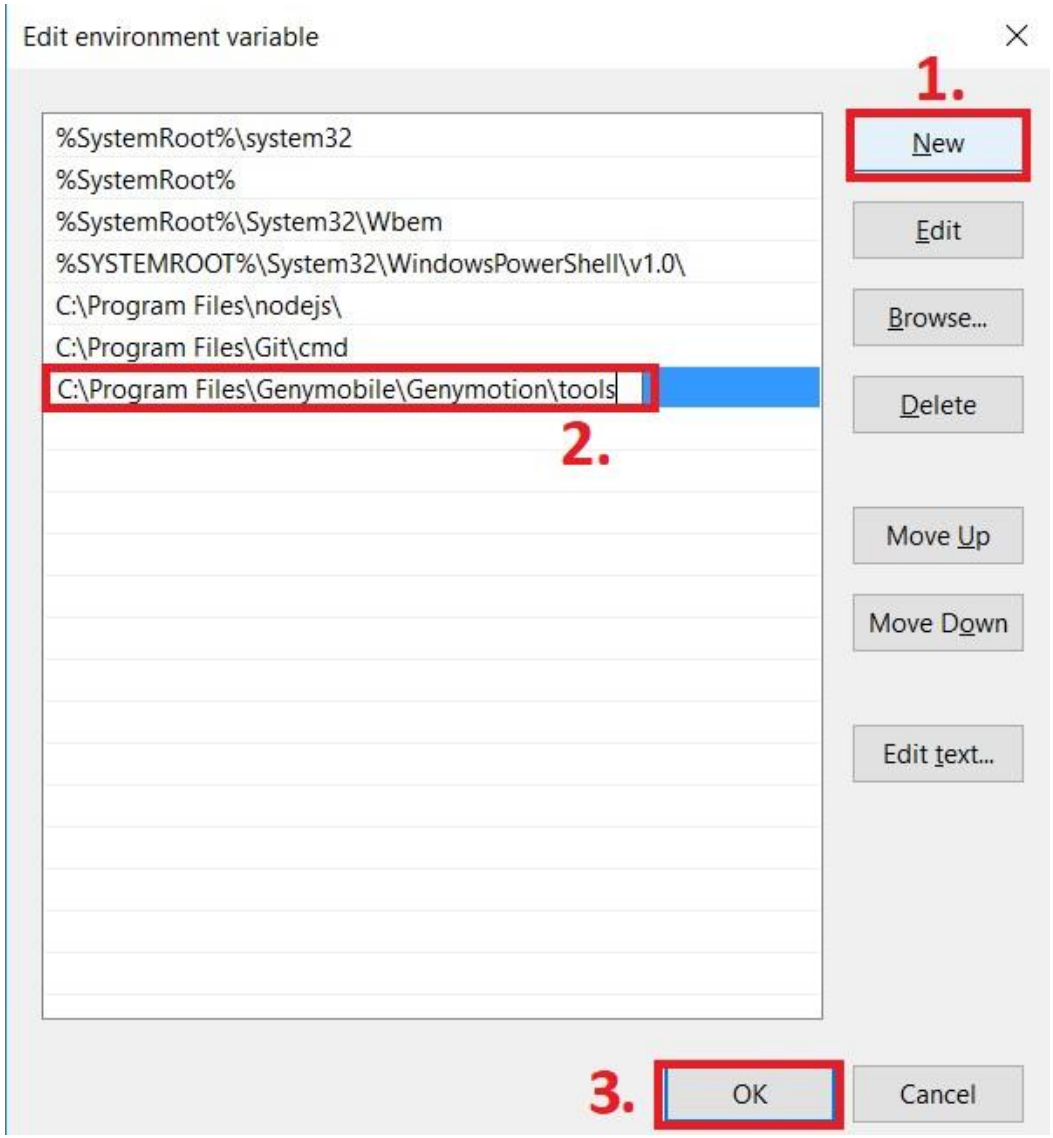


#3 Environment Variables

- Right click **This PC (My Computer) > Properties > Advanced system.** Next click on **Environment Variables** on the bottom right. Under **System variables** bracket select **Path** and click **Edit.**



#3 Environment Variables



Next, in the edit environment variable window, click **New,** then add path

C:\Program Files\ Genymobile\ Genymotion\ tools

And finally click **OK** until all windows close.

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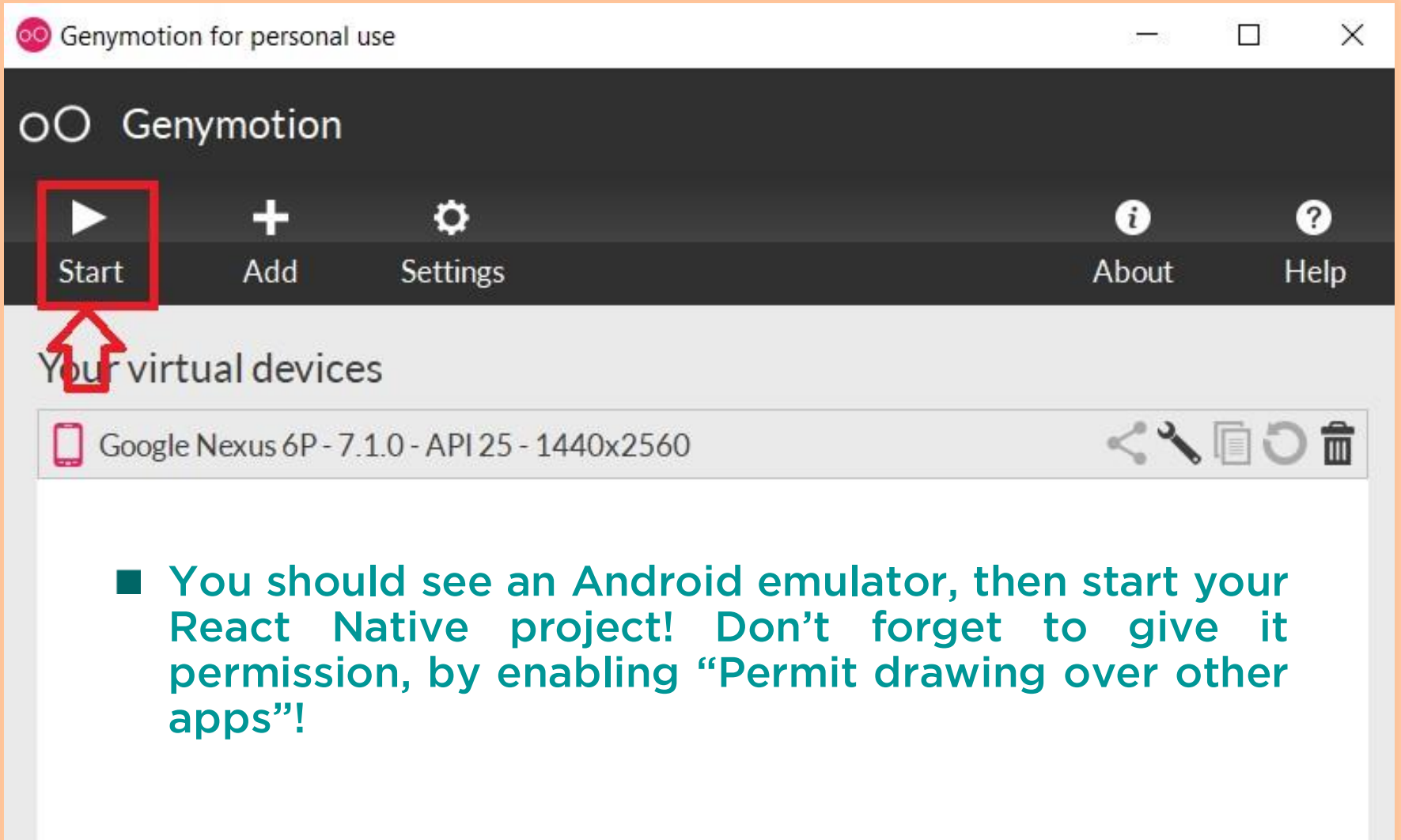
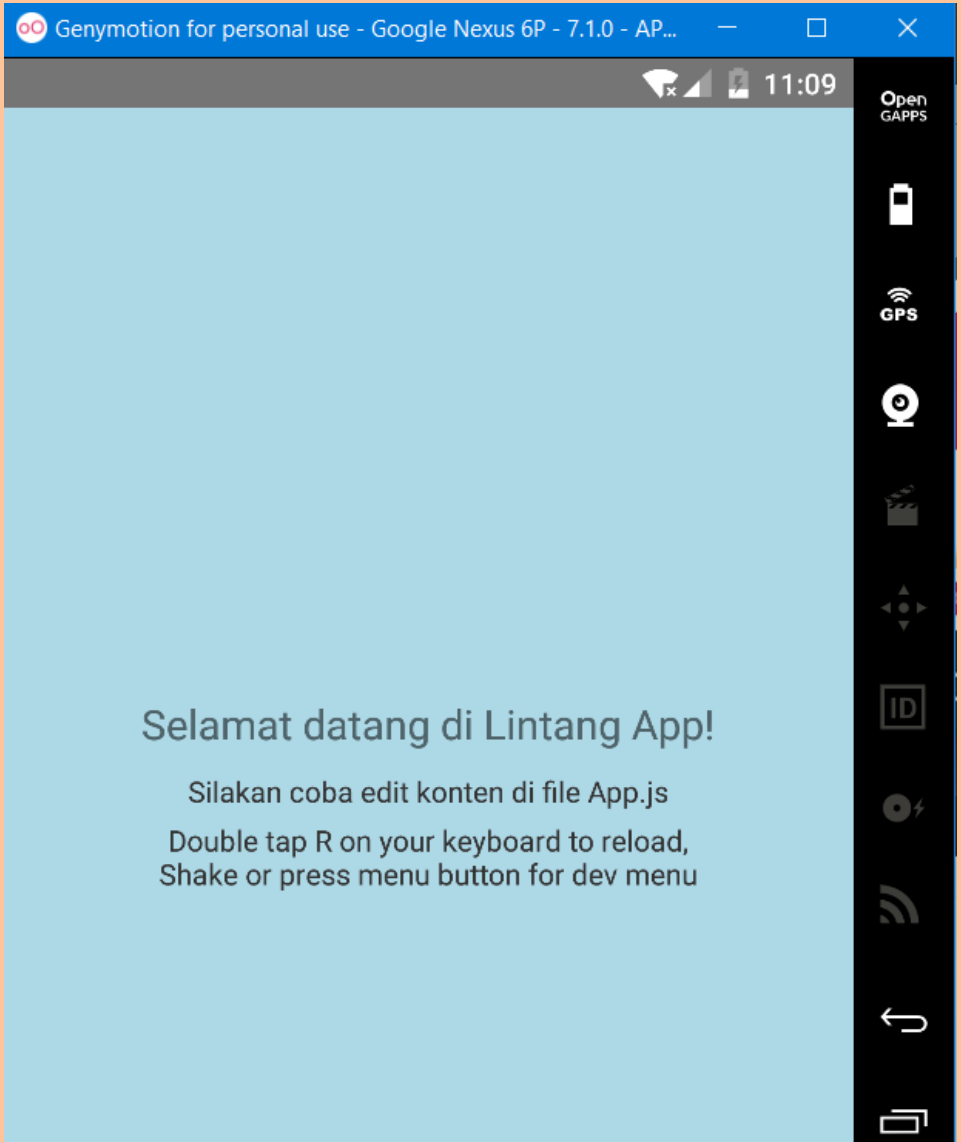
#4 Starting Emulator

- Next, restore the previously minimized Genymotion window and click Start.

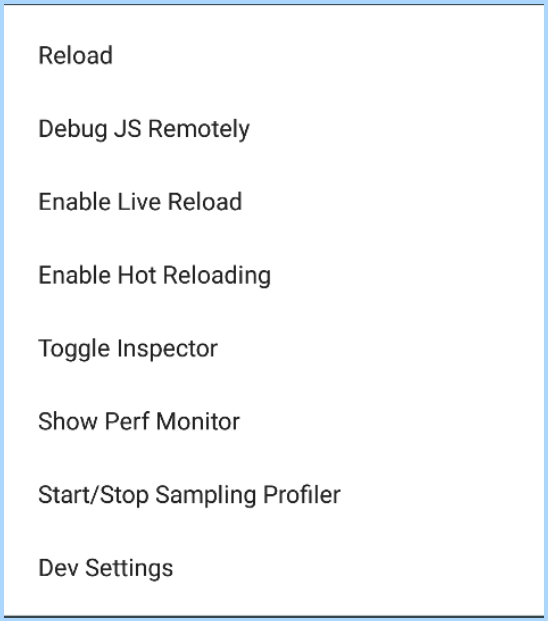


- You should see an Android emulator, then start your React Native project! Don't forget to give it permission, by enabling "Permit drawing over other apps"!

#4 Starting Emulator



- Press **CTRL+M** to show main menu on our emulator.



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