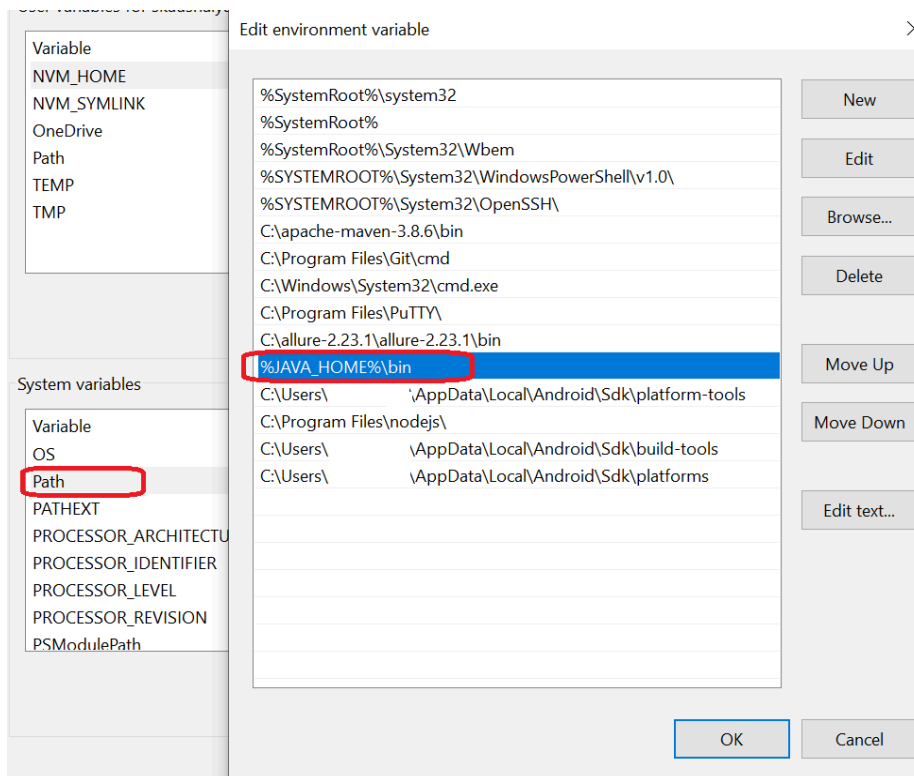
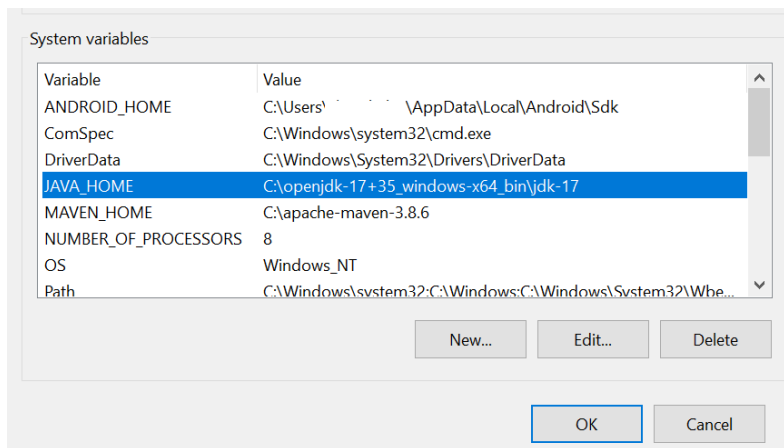


Android/ios setup for Appium Testing.

- Take java and setup the java path, and java home

You can take Open jdk from <https://jdk.java.net/java-se-ri/11-MR2> . You can use another open java development kit or oracle java.

If you take open jdk from the above site, extract it somewhere in your machine and set up the java path and JAVA_HOME as follows.



Mac users can install openJDK as a brew install.

brew update

brew install openjdk@[version]

Further Mac users can download OpenJDK from <https://jdk.java.net/archive/> according to your processor chip and then configure.

Mac users can set up the path as follows.

First you need to find the java installed directory. You need to open the finder window and then click “go-> go to folder” in the menu bar. You can find it under the “/Library/Java” folder.

Then you can open the terminal and go to home using “*cd ~*”

List all the files using the “*ls -la*” command, and check whether the .zshrc file exists; or else create it using the “*touch .zshrc*” command.

Open the “.zshrc” file using your preferred editor. For this tutorial I used the “*vi .zshrc*” command to open.

```
Terminal Shell Edit View Window Help
@192 ~ % cd ~
@192 ~ % ls -la
total 1288
drwxr-x---+ 38  staff  1216 Oct 31 00:20 .
drwxr-xr-x   6  root   192 Oct 12 15:46 ..
-r-----   1  staff    7 Oct 26 23:50 .CFUserTextEncoding
-rw-r--r--@   1  staff 10244 Oct 30 23:50 .DS_Store
drwx-----+ 65  staff  2080 Oct 30 23:36 .Trash
drwxr-x---   14  staff   448 Oct 13 22:55 .android
drwxr-xr-x   4  staff   128 Oct 26 12:59 .appium
drwxr-xr-x   4  staff   128 Aug 19 18:23 .aws
-rw-----   1  staff 10828 Oct 31 00:20 .bash_history
drwx----- 65  staff  2080 Oct 31 00:20 .bash_sessions
drwxr-xr-x   3  staff    96 Aug 13 20:28 .cdk
drwxr-xr-x   3  staff    96 Jul  3 19:54 .cocoapods
-rw-----   1  staff   16 Oct 13 22:36 .emulator_console_auth_token
drwxr-xr-x  10  staff   320 Jul  3 19:22 .gradle
-rw-----   1  staff    20 Oct  1 17:42 .lessht
drwxr-xr-x   3  staff    96 Jul  9 07:47 .m2
drwxr-xr-x   9  staff   288 Oct 13 22:11 .npm
drwxr-xr-x   4  staff   128 Jul  4 21:50 .nvm
drwxr-xr-x   3  staff    96 Jul  4 22:37 .react-native-cli
drwx-----   7  staff   224 Jun 23 23:14 .ssh
drwxr-xr-x   4  staff   128 Jul  4 21:45 .swiftpm
-rw-----   1  staff  8372 Oct 31 00:12 .viminfo
drwxr-xr-x   5  staff   160 Jul  2 14:46 .vscode
-rw-----   1  staff  6379 Aug 20 17:07 .zsh_history
drwx----- 16  staff   512 Oct 31 00:20 .zsh_sessions
-rw-r--r--   1  staff   251 Oct 31 00:05 .zshrc
drwx-----@   4  staff   128 Aug 20 17:12 Applications
drwx-----+  5  staff   160 Oct 31 00:23 Desktop
drwx-----@   9  staff   288 Oct 30 23:36 Documents
drwx-----+ 29  staff   928 Oct 27 21:58 Downloads
drwx-----@ 81  staff  2592 Oct 30 23:50 Library
drwx-----   4  staff   128 Apr 14 2023 Movies
drwx-----+  4  staff   128 Aug 27 10:13 Music
drwx-----+  4  staff   128 Apr 14 2023 Pictures
drwxr-xr-x+  5  staff   160 Oct 28 00:23 Public
drwxr-xr-x 360  staff 11520 Oct 13 22:52 node_modules
-rw-r--r--   1  staff 591317 Oct 13 22:52 package-lock.json
-rw-r--r--   1  staff   114 Oct 13 22:52 package.json
@192 ~ %
@192 ~ % vi .zshrc
```

Then you can set the paths as follows. Save and then exit the editor.

```
Terminal Shell Edit View Window Help
@192 ~ % vi .zshrc
export JAVA_HOME=/Library/Java/JavaVirtualMachines/jdk-11.0.0.1
export ANDROID_HOME=/Users/ /Library/Android/sdk
export PATH=$JAVA_HOME/bin:$ANDROID_HOME/build-tools:$ANDROID_HOME/platform-tools:$ANDROID_HOME/platforms:$ANDROID_HOME/tools:$PATH
~
~
```

Once you have done, run “source ~/.zshrc” command to push the changes.

Once you have done the above steps, you can check the java version by typing “java --version” on cmd or terminal.

- Install NodeJS

You can download from the following site. take the relevant installer according to your

OS

<https://nodejs.org/en/download>

Once you have completed the installation, you can check the node version by typing “node -v” on cmd or terminal.

- Set up appium

Once you have completed nodeJS setup, open your cmd or terminal and type the following commands.

For appium server 2.0 installation run “npm i -g appium@next”

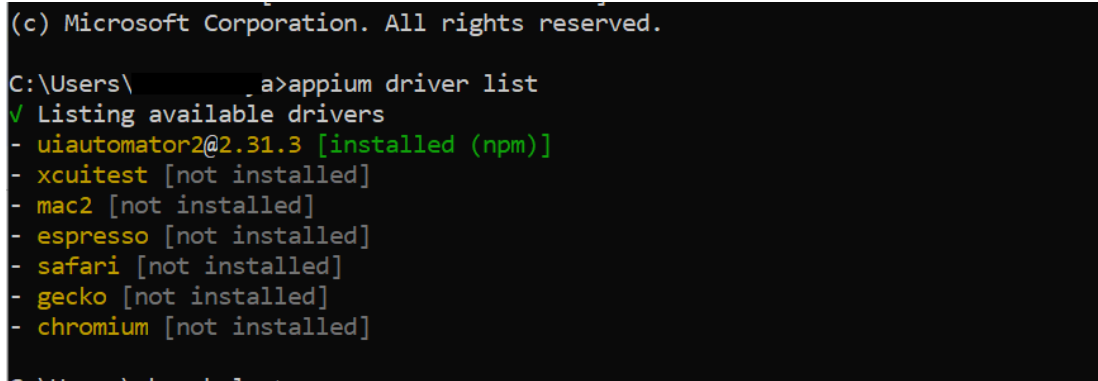
You can start the appium server by typing “appium”

You can stop the server by click on “Ctrl+c”

- Set up appium drivers

First you need to list all available appium drivers by typing following command

appium driver list



```
(c) Microsoft Corporation. All rights reserved.  
  
C:\Users\...a>appium driver list  
✓ Listing available drivers  
- uiautomator2@2.31.3 [installed (npm)]  
- xcuitest [not installed]  
- mac2 [not installed]  
- espresso [not installed]  
- safari [not installed]  
- gecko [not installed]  
- chromium [not installed]
```

You can see that all the available drivers are listed with installation status.

If you need to install a new driver, you can type as follows with the driver name.

appium driver install uiautomator2

If you are using mac, you can use following driver for xcode simulator

appium driver install xcuitest

If you need to update, use following command

appium driver list --update

- Appium doctor

You can use appium doctor to find out any errors or warnings of your appium configurations.

You can install appium doctor by typing “npm i -g appium-doctor” on terminal or cmd.

If you need to check android configuration, you just want to type “appium-doctor --android”

- **Appium inspector download**

To capture objects of mobile applications, we can use appium inspector. You can download appium inspector from the following url.

<https://github.com/appium/appium-inspector/releases>

You can download any release from the above. For our course training we used, Appium-Inspector-windows-2023.10.4.zip and Appium-Inspector-2023.10.4-universal-mac.zip

You can run it by double click on “appium inspector.exe” or “appium inspector.app”

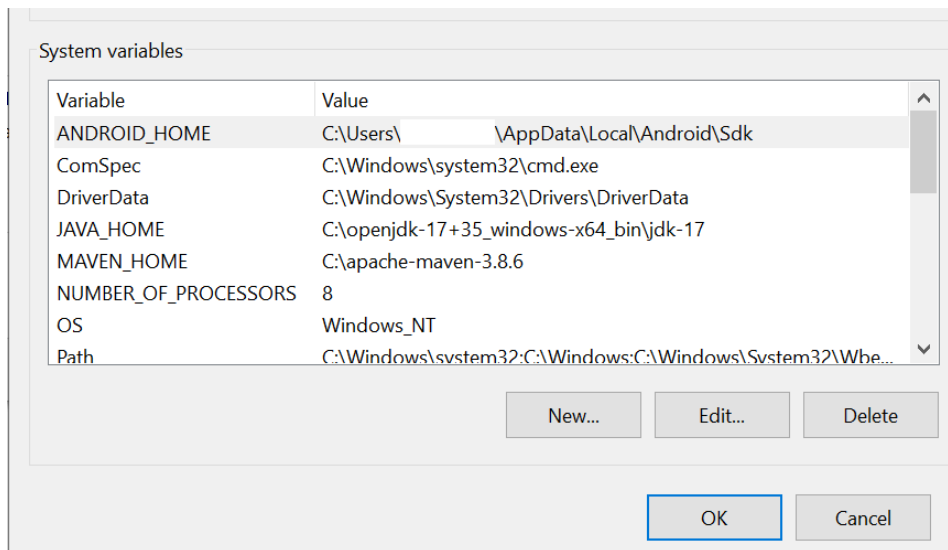
When you run the “Appium Inspector” on Mac OS for the very first time, you need to allow this app to run via the “security and privacy” section.

- **Install Android SDK**

You can download android studio via “<https://developer.android.com/studio>”.

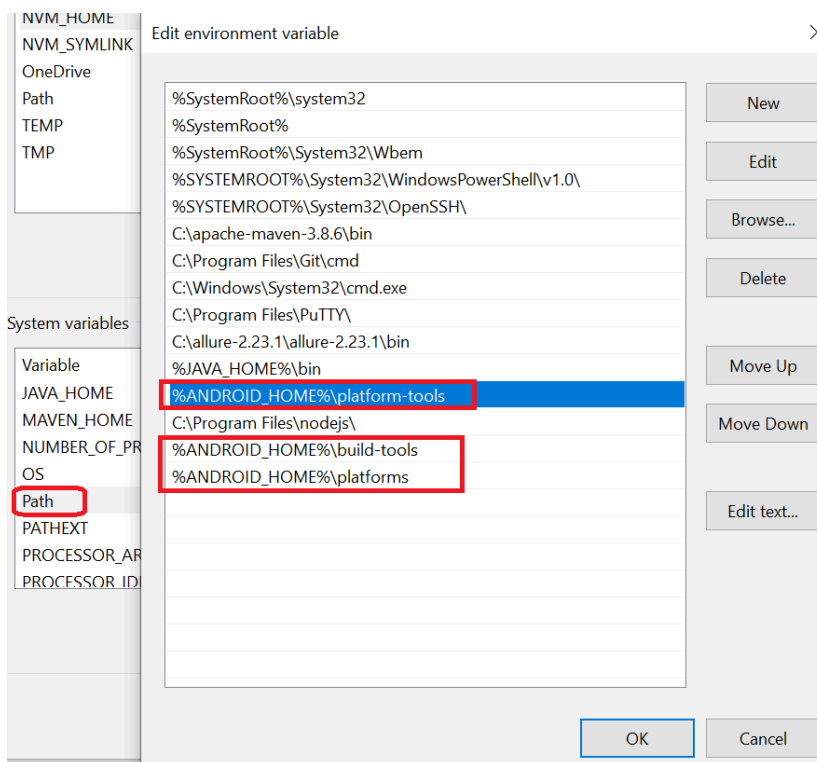
You can follow the general standard option to install android studio.

Then setup the ANDROID_HOME as follows.



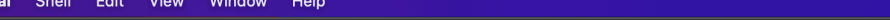
You can see that, android Sdk is installed to the “AppData\Local” folder in windows.

Then setup following paths in path variables are build-tools, platforms, platform-tools.



Mac OS users can do the above steps as follows.

As the above steps(JAVA_HOME and java path), open ~/.zshrc file and edit it as below.



The screenshot shows a macOS Terminal window with a purple title bar containing the menu items: Terminal, Shell, Edit, View, Window, and Help. The window has standard macOS window controls (red, yellow, green buttons) on the top left. The top right of the window displays a file icon, a redacted name, and the text `— vi .zshrc — 204x54`. The terminal content shows the following commands being entered and executed:

```
export JAVA_HOME=/Library/Java/JavaVirtualMachines/jdk-11.0.0.1
export ANDROID_HOME=/Users/ /Library/Android/sdk
export PATH=$JAVA_HOME/bin:$ANDROID_HOME/build-tools:$ANDROID_HOME/platform-tools:$ANDROID_HOME/platforms:$ANDROID_HOME/tools:$PATH
```

Below the commands, there are four lines of tilde characters (`~`) representing the shell prompt.

- **Demo app**

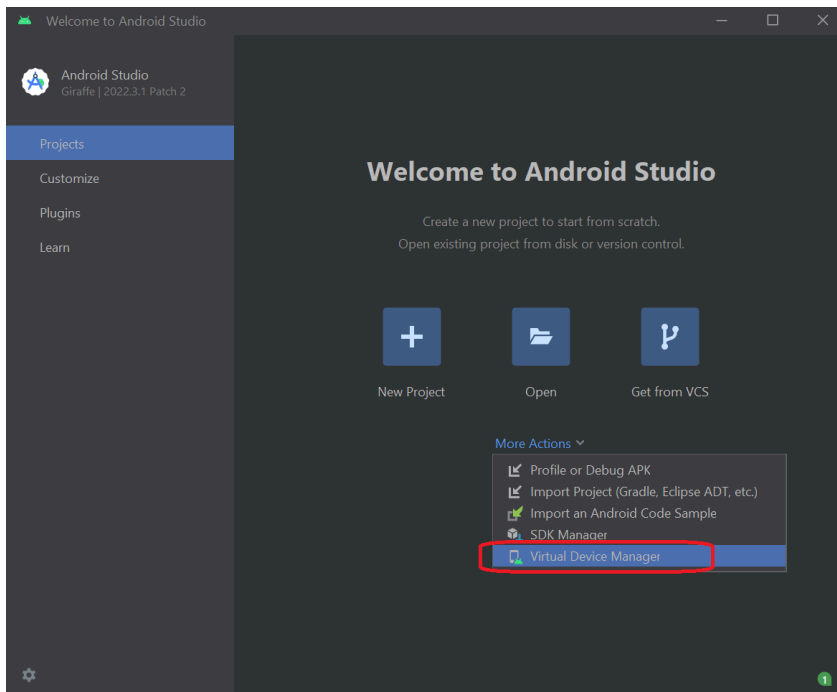
We take .apk file to study from following url

<https://github.com/webdriverio/native-demo-app/releases> take “.apk” file.

Download “.app.zip” file for testing on ios.

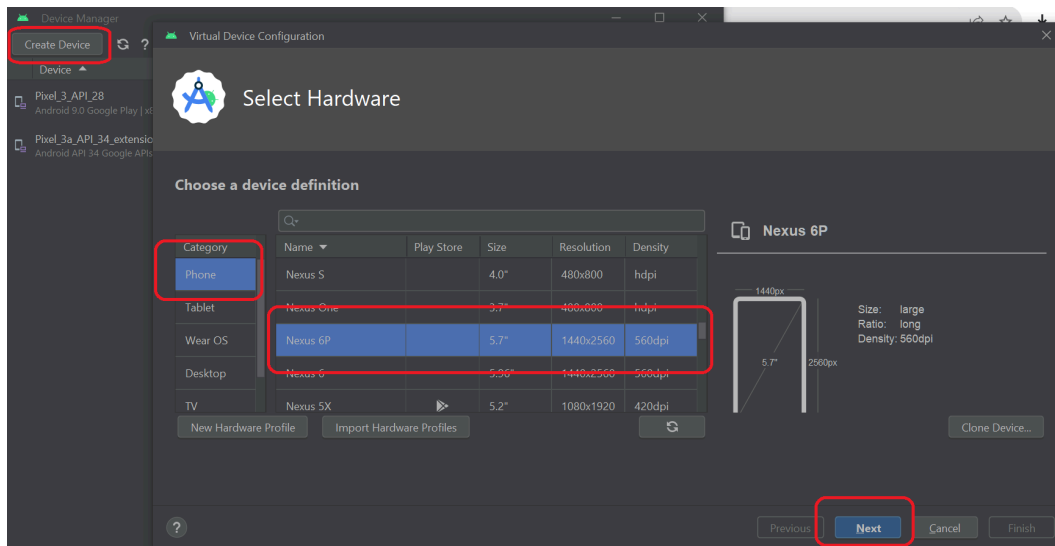
- **Create an emulator**

Open the “Android studio” and then you can create the emulator using following option

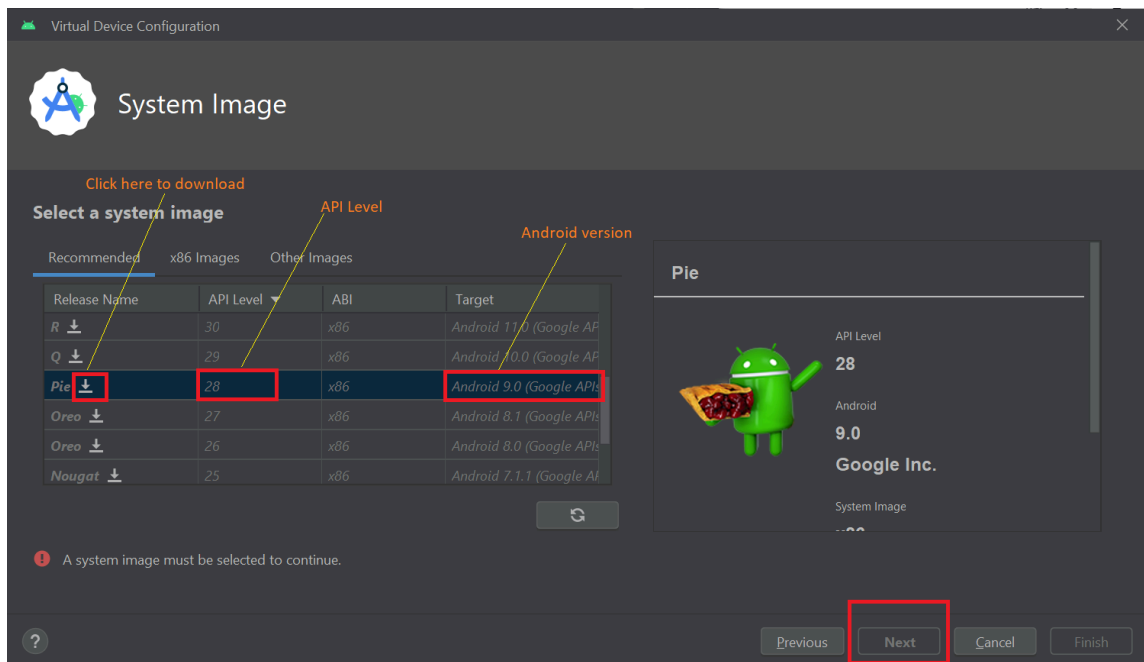


Once you click on that, you will navigate to a new screen. If you need to create a new emulator, you can click on the “Create Device” button.

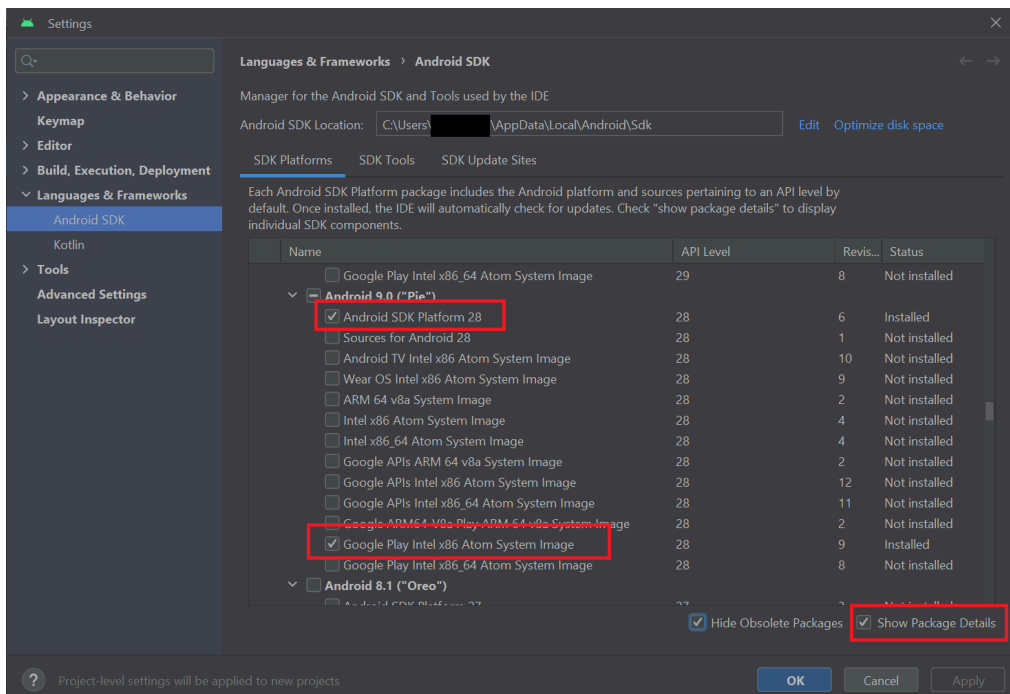
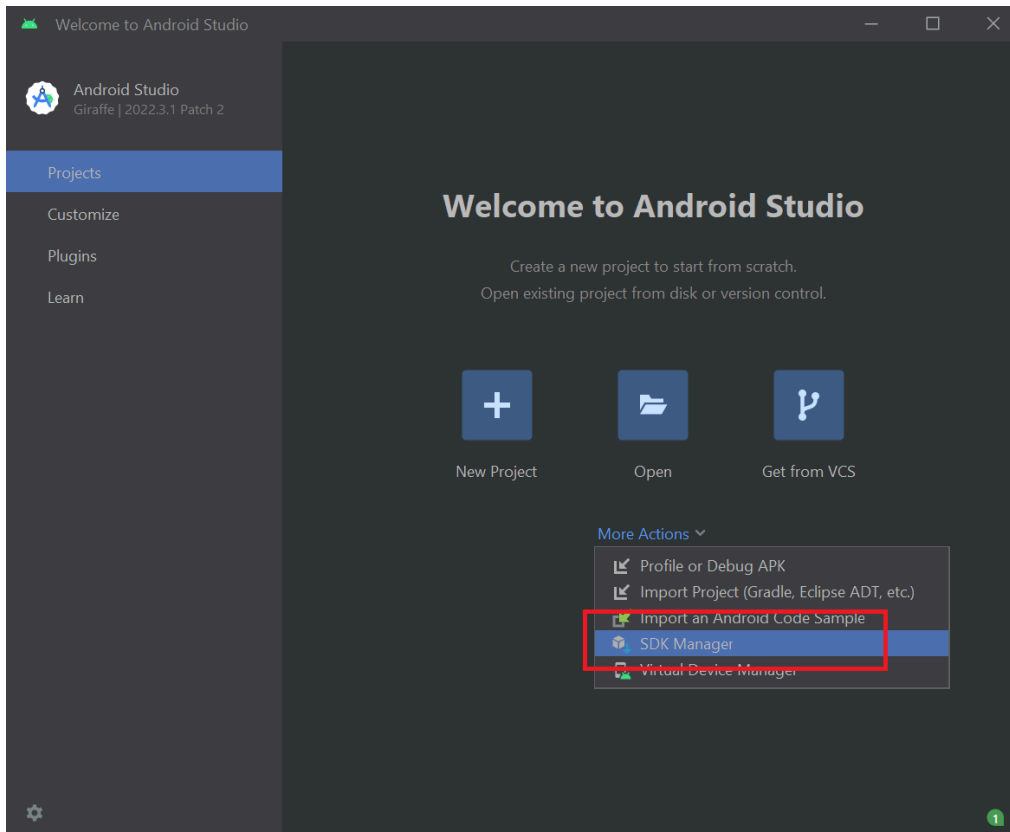
Then select the phone model you need and hit the “next” button.



Then select the android version you need and continue. Please make sure to notice the api level according to your selection.

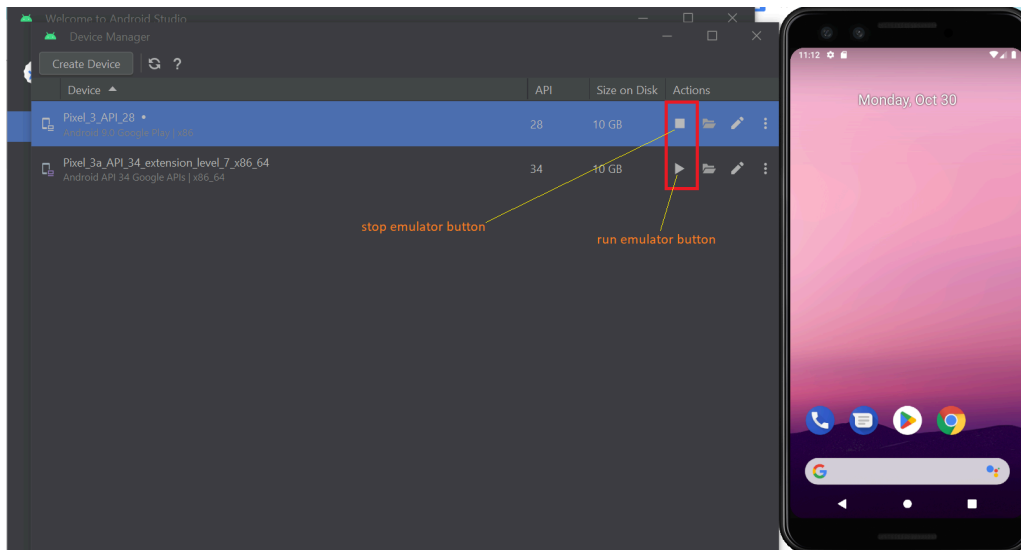


According to your API level, you need to select an SDK platform and one system image.



- Capture elements via "appium inspector"

First you need to run your emulator



Then you can drag and drop your “.apk” file to the running emulator.

Mac OS users can run the same on ios simulator. If you need to run the same on ios, first create an ios simulator on your mac.



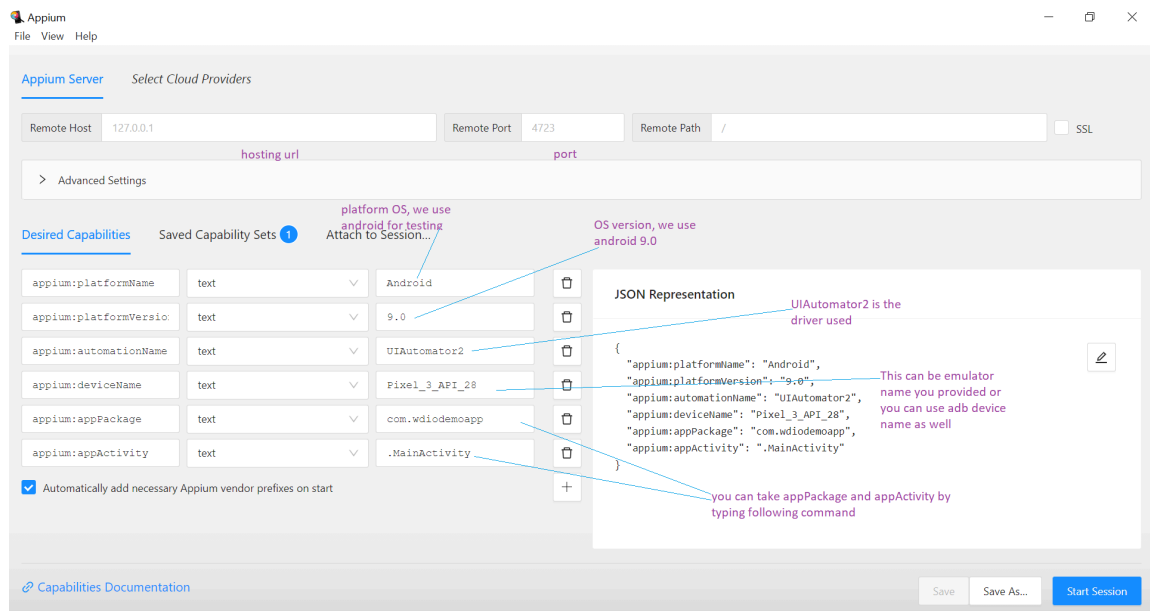
Once the simulator app is running, you can create a new simulator if needed.

Then all you need to do is extract your “.app.zip” file to get the “.app” and then drag and drop it to the simulator you have created.

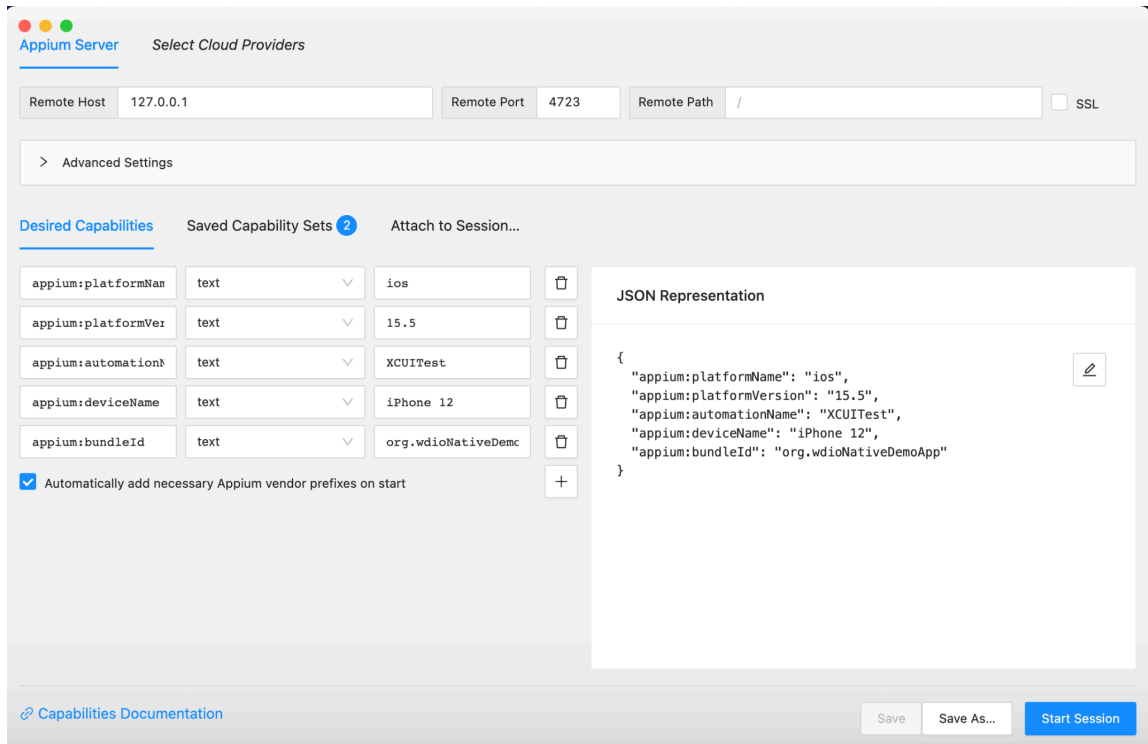
Then you can run your appium server.

Then you can run your appium inspector.

Once the appium inspector is running, you need to set up the configuration as follows and save it.



Use the following configurations for ios simulation.



You can get the device name by typing “adb devices”

```

C:\A. Command Prompt

Microsoft Windows [Version 10.0.19045.3570]
(c) Microsoft Corporation. All rights reserved.

C:\Users\>adb devices
list of devices attached
emulator-5554 device

C:\Users\>

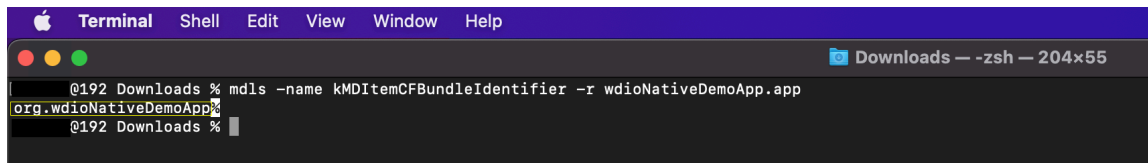
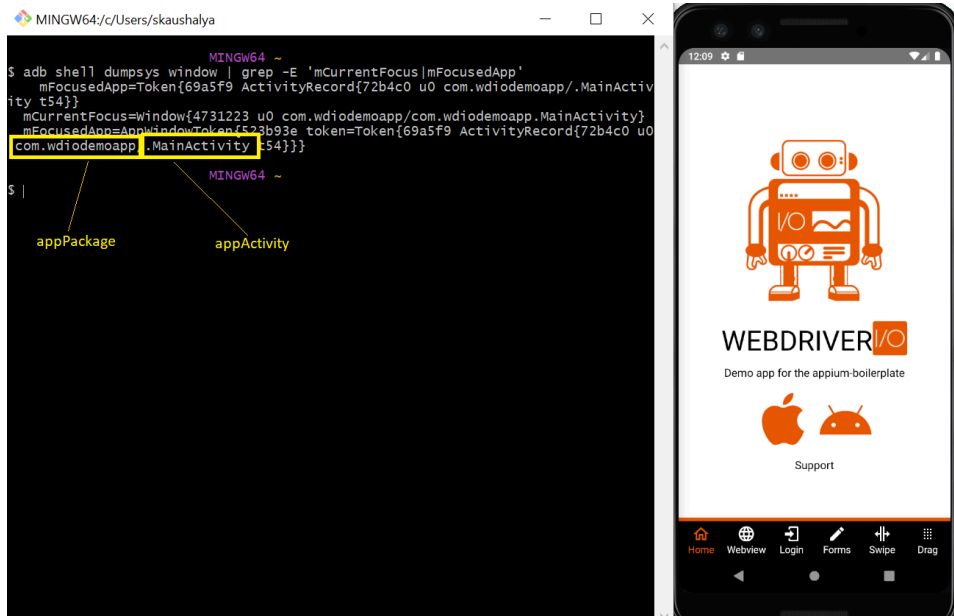
```

Make sure to run the testing application before typing following command to get appPackage and appActivity

```
adb shell dumpsys window | grep -E 'mCurrentFocus|mFocusedApp'
```

For ios simulation, you can get the bundleId via following command

```
mdls -name kMDItemCFBundleIdentifier -r wdioNativeDemoApp.app
```



Then click on the “Start Session” button in the appium inspector.

Once it is loaded you can capture the mobile objects.

