
=====Appium setup on Mac - iOS - START=====



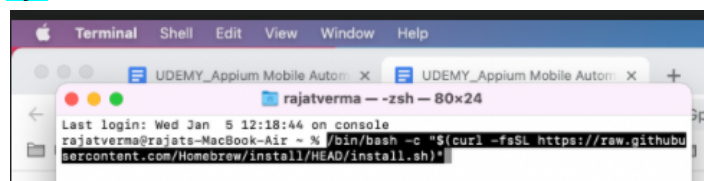
Softwares:

HomeBrew

- Package manager for mac OS; used to install Software packages
- Go to: <https://brew.sh/>
- Hit this command in Terminal (This will download and install Command Line Tools for XCode first):

- `/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"`

ii.



```

HEAD is now at 5fc487f2abe cloudflare-wrangler: update 1.19.7 bottle.
==> Downloading https://ghcr.io/v2/homebrew/portable-ruby/portable-ruby/blobs/sha256:f2d5c
3cd0a1f61642fea247d1c25aa40cd43f1be290b5
#####
==> Pouring portable-ruby-2.6.8.arm64_big_sur.bottle.tar.gz
Warning: /opt/homebrew/bin is not in your PATH.
Instructions on how to configure your shell for Homebrew
can be found in the 'Next steps' section below.
==> Installation successful!

==> Homebrew has enabled anonymous aggregate formulae and cask analytics.
Read the analytics documentation (and how to opt-out) here:
  https://docs.brew.sh/Analytics
No analytics data has been sent yet (nor will any be during this install run).

==> Homebrew is run entirely by unpaid volunteers. Please consider donating:
  https://github.com/Homebrew/brew#donations

==> Next steps:
- Run these two commands in your terminal to add Homebrew to your PATH:
  echo 'eval "$(/opt/homebrew/bin/brew shellenv)"' >> /Users/rajatverma/.zprofile
  eval "$(/opt/homebrew/bin/brew shellenv)"
- Run brew help to get started
- Further documentation:
  https://docs.brew.sh

rajatverma@rajats-MacBook-Air ~ %
rajatverma@rajats-MacBook-Air ~ %

```

iii.

- d. Hit these commands:
 - i. `echo 'eval "$(/opt/homebrew/bin/brew shellenv)"' >> /Users/rajatverma/.zprofile`
 - ii. `eval "$(/opt/homebrew/bin/brew shellenv)"`
- e. To verify that Brew is setup successfully
 - i. `brew help`

Node

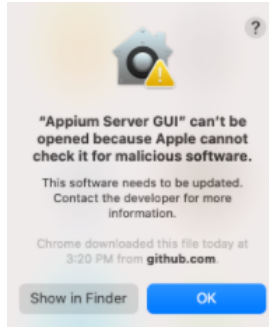
- a. Command to install node (this will install npm as well)
 - i. `brew install node`
- b. If node is already installed in your machine and you want to upgrade the version
 - i. `brew upgrade node`
- c. To check the version of Node
 - i. `node -v`
- d. To check the path of Node installation
 - i. `where node`

Appium CLI

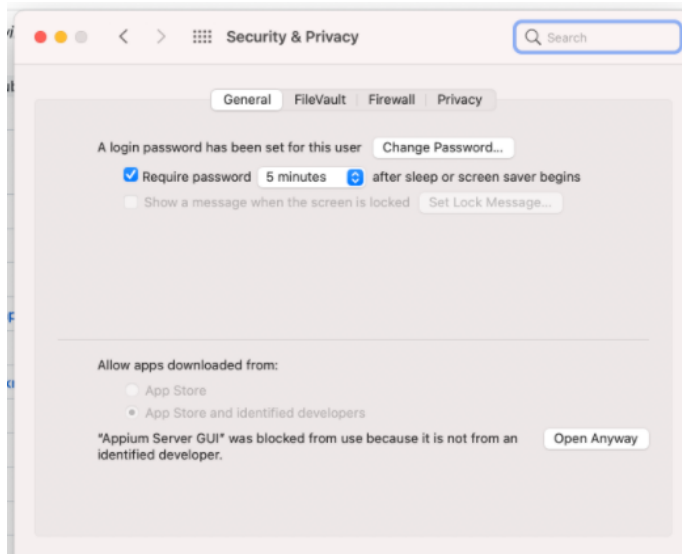
- a. To install Appium using NPM
 - i. `npm install -g appium`
- b. To check the version of Appium
 - i. `appium -v`
- c. To check the path of Appium installation
 - i. `where appium`
- d. To start the Appium server (Default port: 4723)
 - i. `appium`

Appium Desktop Client

- a. Go to: <https://appium.io/downloads.html>
- b. Download the DMG file and install it
- c. NOTE:
 - i. If you are unable to install it -> throws Error like this:



- 1.
- ii. Then,
 1. Go to System Preferences -> Security & Privacy -> Open Anyway
 2. Right click on the Appium app -> Click on Open



Appium Inspector

- a. In the latest version:
 - i. **They are not giving Appium Inspector included in this app**
 1. This inspector helps in identifying the UI elements for Native apps.
 - ii. You need to download other application:
 1. <https://github.com/appium/appium-inspector/releases>
 2. **Appium-Inspector-mac-2021.12.2.dmg**

NOTE:

1. We have installed Appium CLI and Appium Desktop app
2. **We can not run both on the same ports**
 - a. To run Appium server on a different port: **appium -p 4725**

XCode

- a. Appium requires XCode to communicate with XCUITest framework
 - i. Before start installation,
 1. Make sure you have latest version OS

- a. Click on Safari icon (top-left corner) -> About This MAC -> Software Update
2. Configure Apple ID in Account preferences
 - a. System preferences -> Sign in with Apple ID
- b. To download Xcode:
 - i. **App Store -> XCode**

XCode Command Line Tool

- a. Terminal ->
 - i. **xcode-select --install**

XCPretty

- a. Optional component
- b. It is used to make XCode output reasonable
- c. Terminal ->
 - i. **gem install xcpretty**
 - ii. If you face any issue -
 1. **sudo gem install xcpretty**

Carthage

- a. Dependency Manager
- b. Required for WebDriverAgent
- c. Terminal ->
 - i. **brew install carthage**

Appium Doctor

- a. To install Appium-Doctor:
 - i. Terminal ->
 1. **npm install -g appium-doctor**
 2. **appium-doctor --h**

Check Appium setup for iOS

- a. Terminal ->
 - i. **appium-doctor --ios**
- b. Now, if you face any warning for XCode like below:

```

info AppiumDoctor Bye! Run appium-doctor again when all manual fixes have been applied!
info AppiumDoctor
rajatverma@rajats-MacBook-Air ~ % appium-doctor --ios
info AppiumDoctor Appium Doctor v.1.16.0
info AppiumDoctor ### Diagnostic for necessary dependencies starting ###
info AppiumDoctor ✓ The Node.js binary was found at: /opt/homebrew/bin/node
info AppiumDoctor ✓ Node version is 17.3.0
WARN AppiumDoctor ✗ Error running xcrun simctl
info AppiumDoctor ✓ Xcode Command Line Tools are installed in: /Library/Developer/CommandLineTools
info AppiumDoctor ✓ DevToolsSecurity is enabled.
info AppiumDoctor ✓ The Authorization DB is set up properly.
info AppiumDoctor ✓ Carthage was found at: /opt/homebrew/bin/carthage. Installed version is: 0.38.0

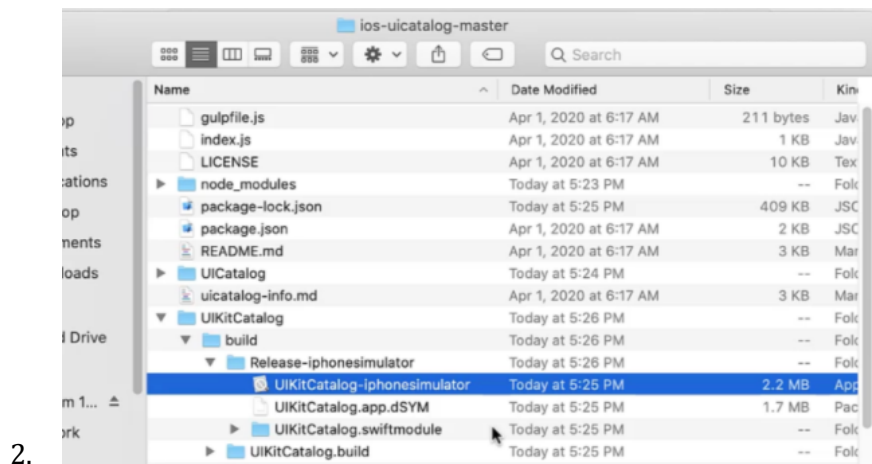
```

- i.
- ii. Then, we need to change the XCode installation path
- iii. Recommended path: ***/Applications/Xcode.app/Contents/Developer***

- c. <http://yangruixuan.github.io/blog/how-to-change-the-path-to-the-active-xcode-installation-for-your-machine/>
 - i. To know the XCode installation path -> **xcode-select -p**
 - ii. Change the path-> **sudo xcode-select --switch /Applications/Xcode.app/Contents/Developer/**

UIKitCatalog App for Simulator

- a. This app is open-source and very helpful if you want to practice automation for different views
- b. Developed by Apple and now, adopted by Appium to perform testing at their end
- c. Go to: <https://github.com/appium/ios-uicatalog>
- d. Download ZIP
- e. Go to the downloaded path
 - i. Open the terminal inside this location -> **UIKitCatalog**
 - ii. **cd /Users/rajatverma/Desktop/Work/Other\ Apps/ios-uicatalog-master/UIKitCatalog**
- f. We need to build this application
 - i. Terminal:
 - 1. **npm install**
 - ii. UIKitCatalog Inside this location, you must get an folder structure
 - iii. **build/Release-iphonesimulator/UIKitCatalogiphonesimulator.app**
 - 1. **UIKitCatalogiphonesimulator.app ->**
 - a. This is the application which we can use for practice Automation



Create Driver Session

Simulator

- a. Open Xcode
- b. Click on Xcode (Top-Left corner) -> Developer Tools -> Simulator



- c.
- d. By default, it will open any device in Simulator
- e. If you want to change it, then, File -> Open Device -> Select the Device

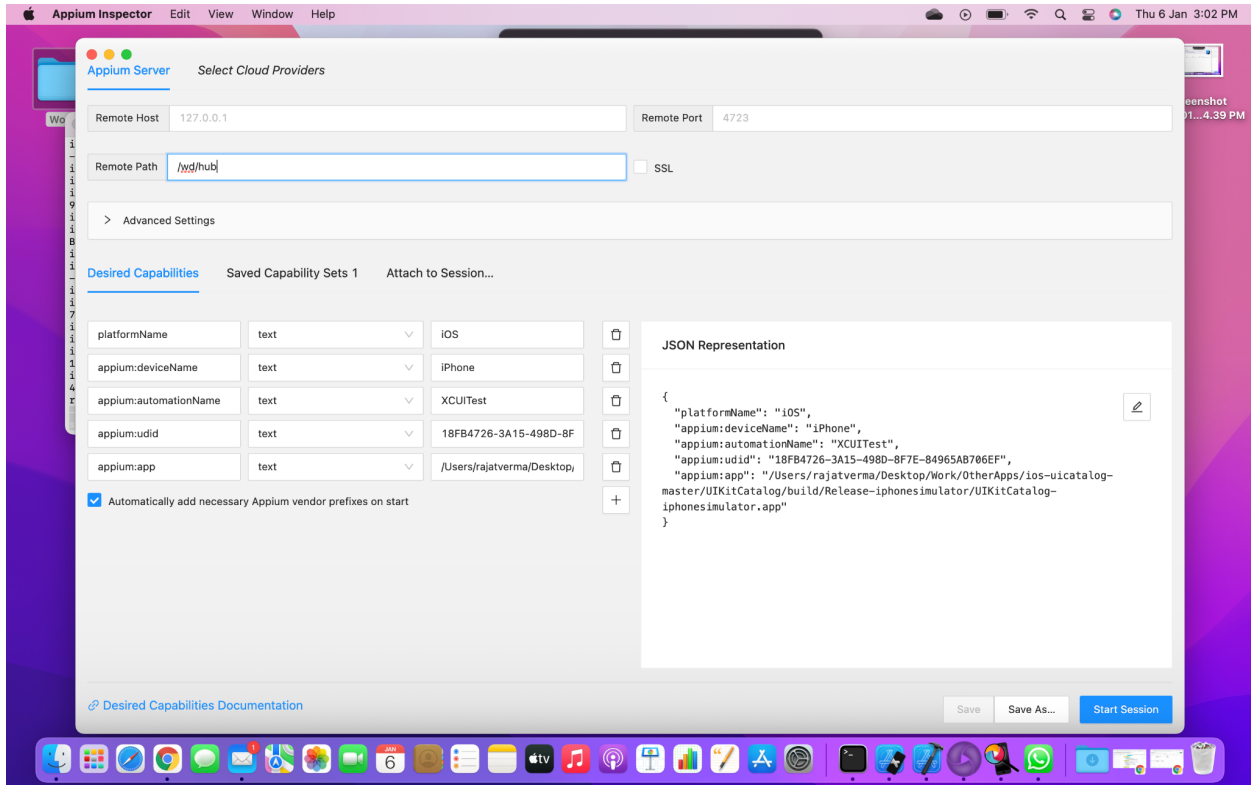


i.

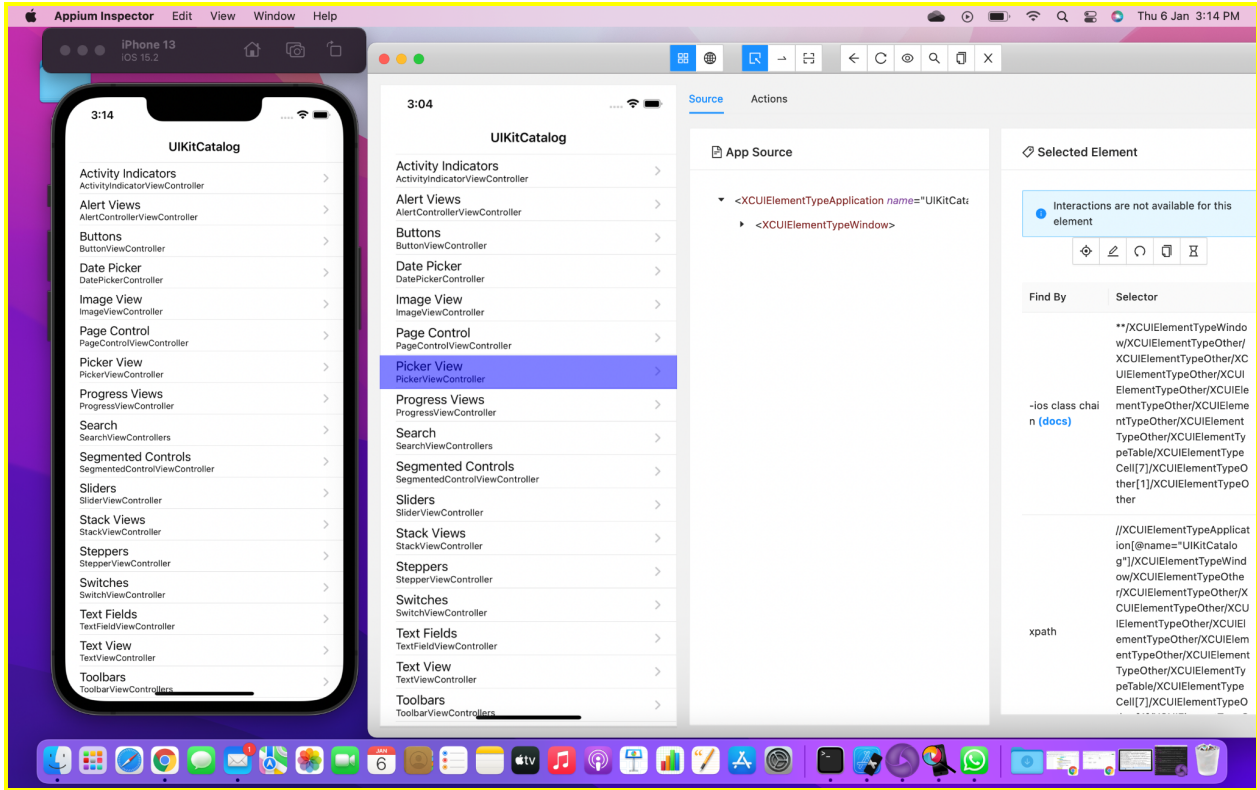
f.

Appium Desktop and Appium Inspector

- a. We are going to use these 2 to establish the connection between application and device
- b. Start Appium server using Appium Server GUI
- c. Start Appium Inspector
 - i. App path: `/Users/rajatverma/Desktop/Work/Other\ Apps/ios-uicatalog-master/UIKitCatalog/build/Release-iphonesimulator/UIKitCatalog-iphonesimulator.app`



- d. To get the device name:
 - i. Simulator -> Settings -> General -> About -> Name
- e. To get the udid (Unique Identifier):
 - i. Terminal ->
 1. List of simulators:
 - a. `xcrun simctl list`
 - b. `xcrun xctrace list devices`
 - ii. XCode:
 1. Window -> Devices and Simulators ->
 2. Select the device
 3. 18FB4726-3A15-498D-8F7E-84965AB706EF



=====Appium setup on Mac - iOS - END=====

=====Appium setup on Mac - Android - START=====

Appium Setup on MAC - Android

- ✓ Emulator
- ✓ Real Device
- ✓ Create Android Virtual Device
- ✓ Enable USB Debugging on Real Device
- ✓ Create new Driver Session

1.

Softwares

Installed previously (Above section)

a.

1. Install homebrew (package manager for macOS and is used to install software packages)

Link: <https://brew.sh/>

Command: `/usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"`

2. Install node and npm (Appium dependencies)

Commands to check if node and npm are installed:

`node -v`

`npm -v`

Command to install node: `brew install node` (This will install npm as well)

Command to check node installation path: `where node`

3. Install Appium server using NPM (Appium CLI)

Command to install Appium: `npm install -g Appium`

Command to check Appium version: `appium -v`

Command to check Appium installation path: `where appium`

OR

3. Install Appium server using **Appium Desktop client**

Download link: <https://appium.io>

Important update:

From Appium v1.22.0 and v2.0, Appium Inspector is no more part of the Appium Desktop Server. It is a separate application.

Java JDK

a. Go to:

<https://www.oracle.com/in/java/technologies/javase/javase8-archive-downloads.html>

b. Download and install

c. Verify whether Java is setup or not? -> Terminal ->

i. java -version

Android Studio

- a. <https://developer.android.com/studio>
- b. Download and Install it
- c. Android Studio -> More Actions -> SDK Manager
 - i. Android SDK Location: `/Users/rajatverma/Library/Android/sdk`

Preferences for New Projects

Appearance & Behavior > System Settings > Android SDK Reset

Manager for the Android SDK and Tools used by the IDE

Android SDK Location: Edit Optimize disk space

SDK Platforms SDK Tools SDK Update Sites

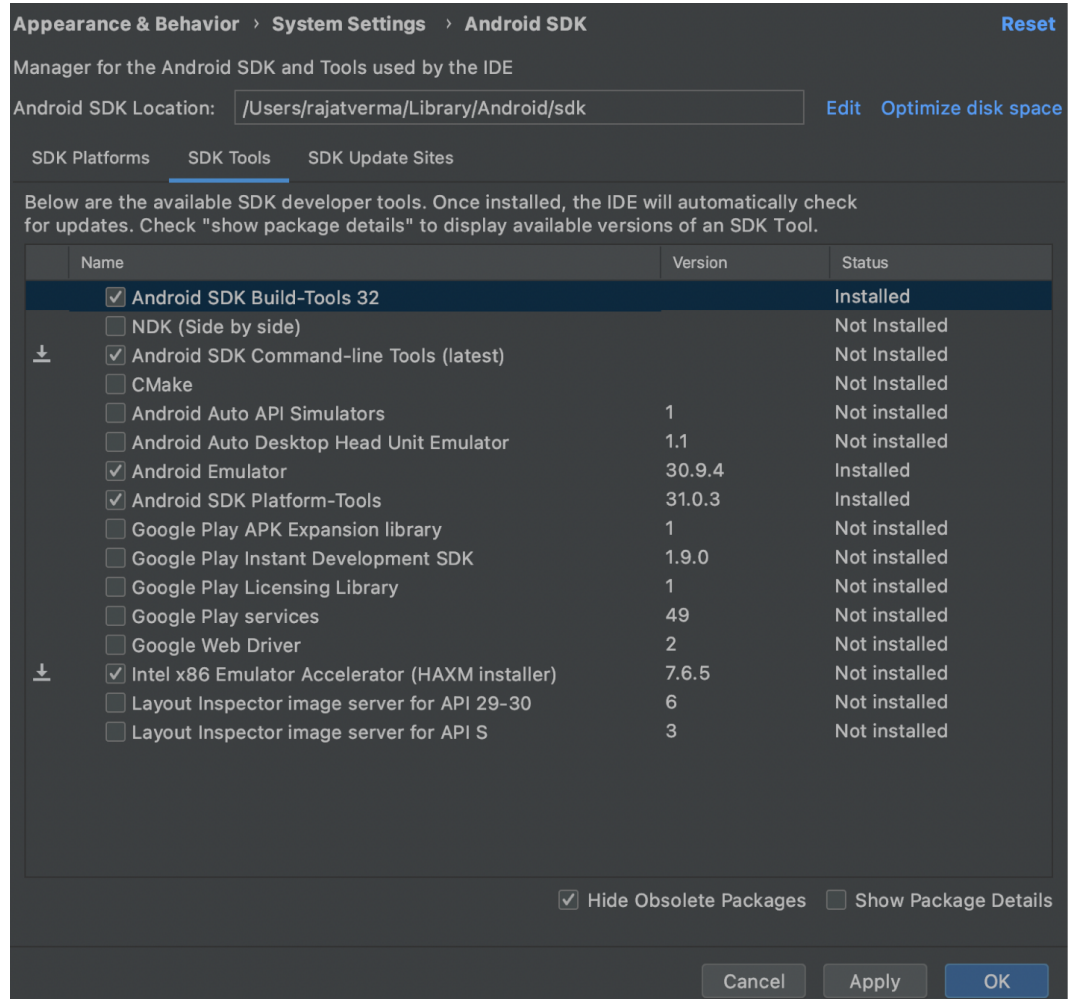
Each Android SDK Platform package includes the Android platform and sources pertaining to an API level by default. Once installed, the IDE will automatically check for updates. Check "show package details" to display individual SDK components.

	Name	API Le...	Revision	Status
▼	Android API 32			
<input checked="" type="checkbox"/>	Android SDK Platform 32	32	1	Installed
<input checked="" type="checkbox"/>	Google APIs ARM 64 v8a System Image	32	2	Installed
<input type="checkbox"/>	Google APIs Intel x86 Atom_64 System Image	32	2	Not installed
<input type="checkbox"/>	Google Play ARM 64 v8a System Image	32	2	Not installed
<input type="checkbox"/>	Google Play Intel x86 Atom_64 System Image	32	2	Not installed
↓	↓			
▼	Android 12.0 (S)			
<input checked="" type="checkbox"/>	Android SDK Platform 31	31	1	Not installed
<input checked="" type="checkbox"/>	Sources for Android 31	31	1	Not installed
<input type="checkbox"/>	Android TV Intel x86 Atom System Image	31	3	Not installed
<input type="checkbox"/>	ARM 64 v8a System Image	31	2	Not installed
<input type="checkbox"/>	Intel x86 Atom_64 System Image	31	2	Not installed
<input type="checkbox"/>	Google TV Intel x86 Atom System Image	31	3	Not installed
<input type="checkbox"/>	Google APIs ARM 64 v8a System Image	31	8	Not installed
<input type="checkbox"/>	Google APIs Intel x86 Atom_64 System Image	31	8	Not installed
<input type="checkbox"/>	Google Play ARM 64 v8a System Image	31	8	Not installed
<input type="checkbox"/>	Google Play Intel x86 Atom_64 System Image	31	8	Not installed
▼	Android 11.0 (R)			
<input type="checkbox"/>	Android SDK Platform 30	30	3	Not installed
<input type="checkbox"/>	Sources for Android 30	30	1	Not installed

Hide Obsolete Packages Show Package Details

Cancel Apply OK

ii.



- iii.
- iv. Click on Apply
- d. To install Intel HAXM:
 - i. Terminal -> **brew install intel-haxm**
 - ii. This is required only for Intel processor
 - iii. I have MacBook Air with M1 chip, so no need for this

Set Environment Variables

- a. Terminal ->
 - i. Navigate to home directory: **cd ~/**
 - ii. Create zprofile file: **touch .zprofile**
 - iii. Open zprofile file: **open -e .zprofile**
 - 1. Add below entries:
 - a. **export JAVA_HOME=\$(/usr/libexec/java_home)**
Important note: If above path doesn't work, try
/Library/Java/JavaVirtualMachines/your_jdk_version/Contents/Home
Here, your_jdk_version can be jdk15.0.2.jdk for example.
 - b. **export ANDROID_HOME=\${HOME}/Library/Android/sdk**

c. export

```
PATH="{JAVA_HOME}/bin:{ANDROID_HOME}/tools:{A  
NDROID_HOME}/platform-tools:{PATH}"
```

2. Close this file to save

iv. **source .zprofile**

b. Verify setup using below commands

i. **echo \$JAVA_HOME**

ii. **echo \$ANDROID_HOME**

iii. **echo \$PATH**

Check Appium setup for Android

a. Terminal ->

i. **appium-doctor --android**

Emulator setup: Create AVD and start it

a. AVD - Android Virtual Device

b. Open Android Studio

i. More actions -> AVD Manager

1. Category -> Phone

2. Name -> Pixel 3 -> Next

3. System Image -> Select Latest

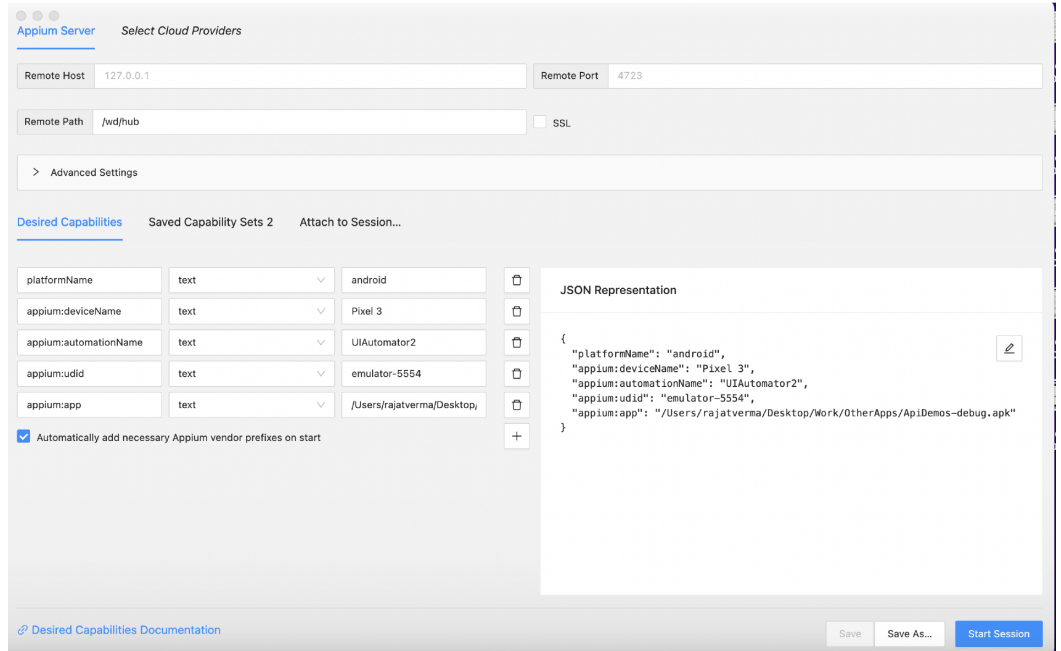
c. AVD name: Pixel 3

d. Go to:

<https://github.com/appium/appium/blob/master/sample-code/apps/ApiDemos-debug.apk>

e. Start Appium server

f. Start Appium Inspector:



- i.
- g. To get the udid (Unique Identifier):
 - i. Terminal -> **adb devices**
- h.

=====Appium setup on Mac - Android - END=====
