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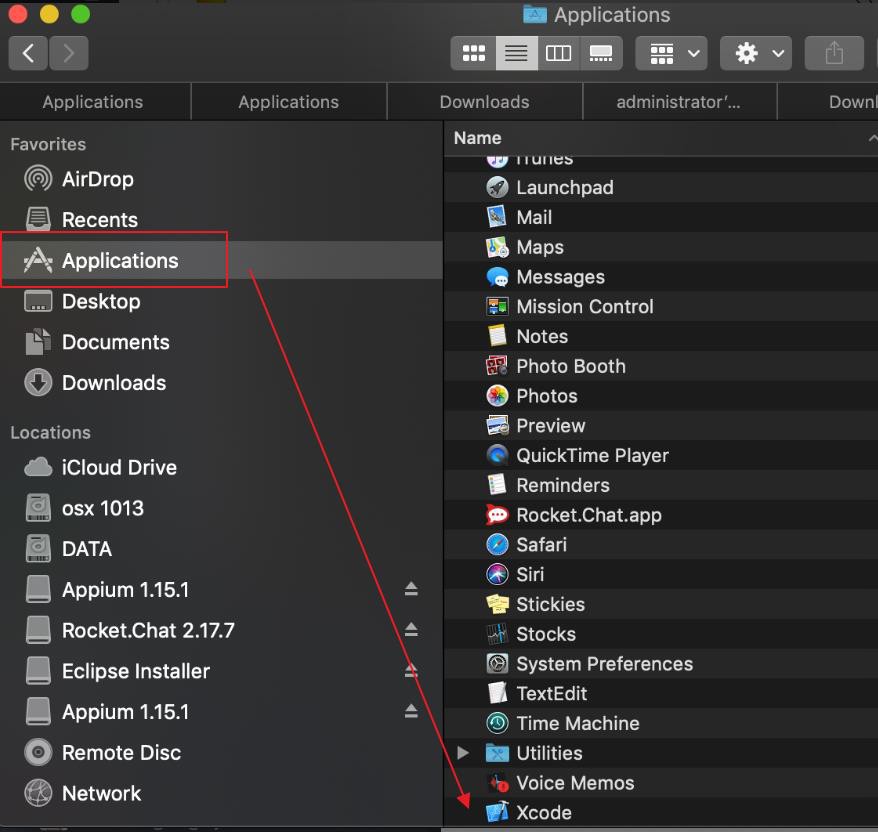
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Setup iOS Appium Environment on MacOS

# Install necessary tools

## Install Xcode

* + - Select Xcode version to install based on your device’s iOS and MacOS version, please refer to this <https://developer.apple.com/support/xcode> (Minimum requirements and supported SDKs section).
    - Make sure that Xcode is located at “Application”. WebDriverAgent can’t run if your Xcode stay outside here.



* + - If you installed Xcode by offline file you can drag and drop Xcode app into “Applications” folder
    - Check Xcode path by command line:

*xcode-select –p*

* + - If result out of “/Applications/Xcode.app/Contents/Developer”. Please set path again by command line:

*sudo xcode-select -switch /Applications/Xcode.app/Contents/Developer*

* 1. **Install brew**
     + Run command line

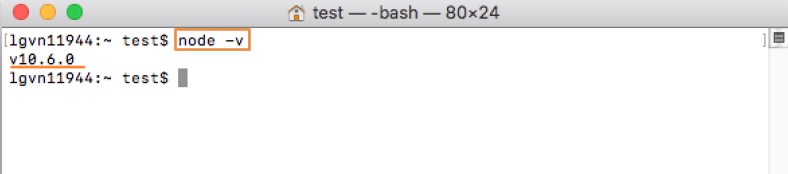
*usr/bin/ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)"*

* + - If there is permission error. Please add full permission for cmd tool by follow step in this link <https://osxdaily.com/2018/10/09/fix-operation-not-permitted-terminal-error-macos/>
    - Or try this command line

*sudo chown -R $(whoami) $(brew --prefix)/\**

## Install node and npm

* + - You can get npm from this: <https://www.npmjs.com/get-npm>
    - After that to make sure that npm is installed successfully, please type this in terminal

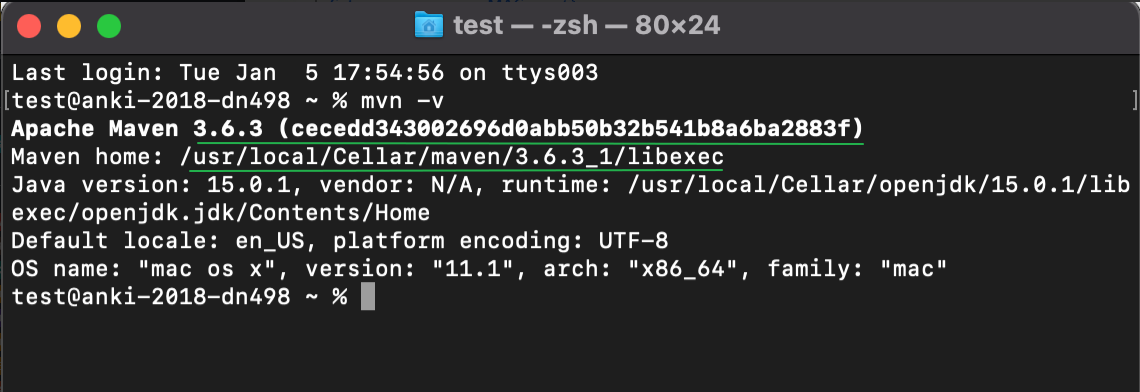
*npm -v*

## Install maven

* + - Run command line

*brew install maven*

* + - Run mvn -v to check that maven is installed successfully



## Install Appium (lastest version)

* + - Run command line

*npm install -g appium*

(refer <http://appium.io/>)

## Install XCUITest

* + - Run command line

*brew install libimobiledevice*

## Install Carthage

* + - Run 2 command lines
      1. *brew install carthage*
      2. *brew install ios-deploy*

## Install ios-webkit-debug-proxy

* + - Run Command line

*brew install ios-webkit-debug-proxy*

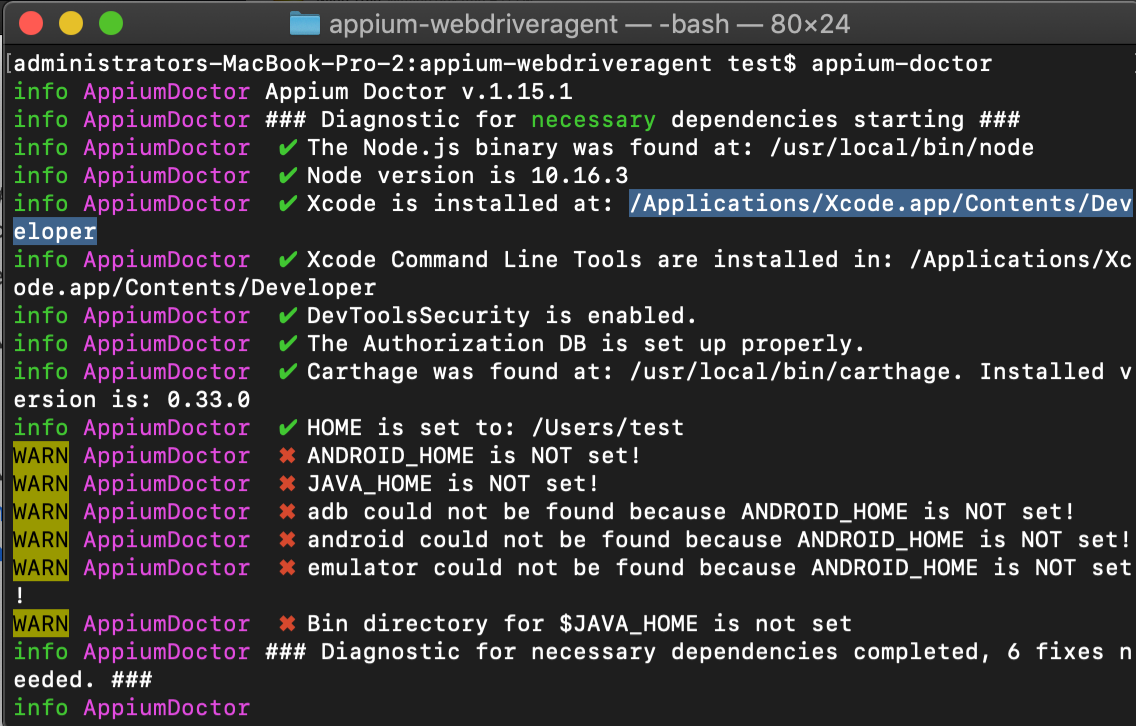
## Install appium-doctor

* + - After that run

*npm install -g appium-doctor*

*Appium-doctor*

* + - If result same as image that mean, every above steps are correct. Make sure that Xocde is installed at: /Application.Xcode.app/Contents/Developer and Xcode Command Line Tools path is the same image too.

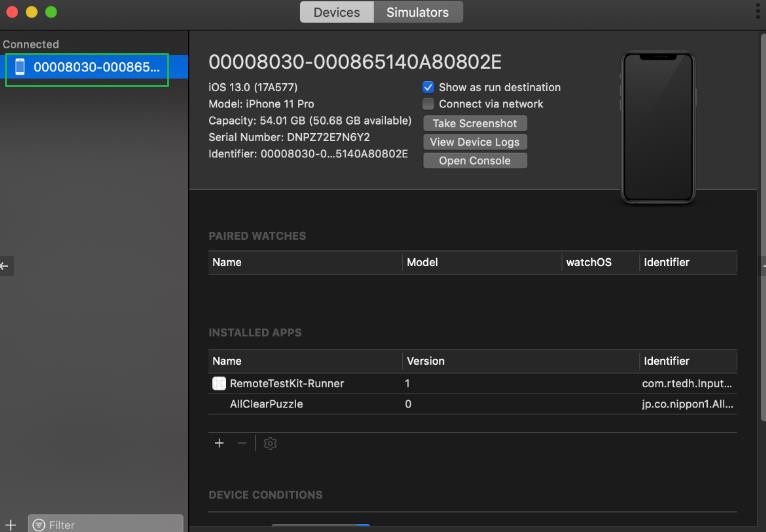


# Connect device to Xcode

* There are two selections: Real device or RTE

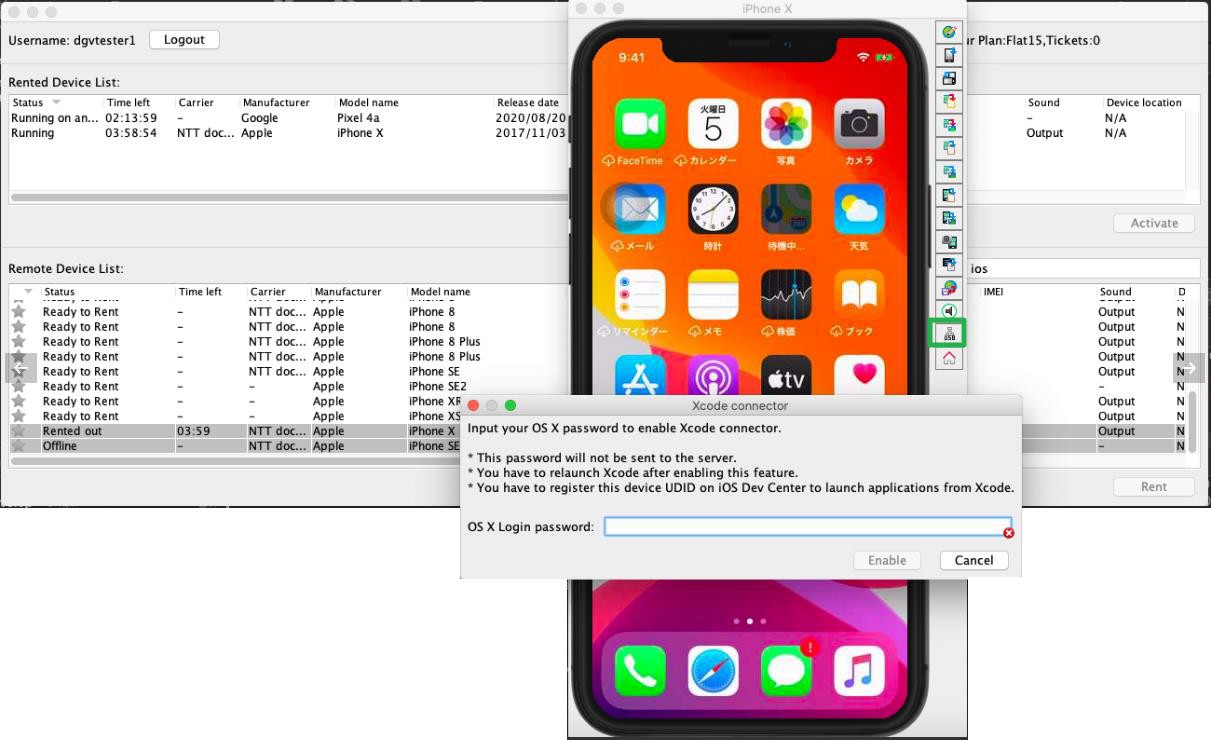
## Real device

* + - Connect your device to Macbook by cab
    - Go to Xcode > Window > Device and simulator > tab Devices
    - If there is your device information that mean your device is connected successfully



## RTE

* + - Rent iphone
    - Click icon Xcode connector
    - Input macbook password and wait for successful message display



* + - Open Xcode (close and reopen if Xcode is running)
    - Go to Xcode > Window > Device and simulator > tab Devices
    - Wait for device information display (about 5 minutes)

# Config WebDriverAgent

* Find location of WebDriverAgent.xcodeproj by this command

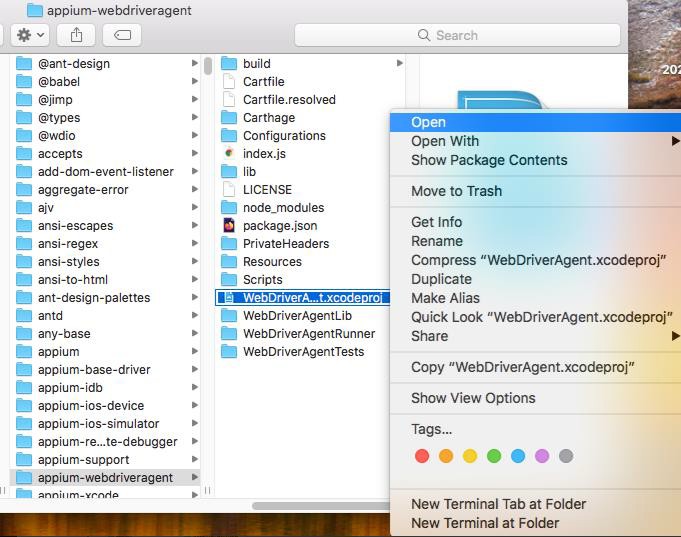
*echo "$(dirname "$(find "$HOME/.appium" -name WebDriverAgent.xcodeproj)")"*

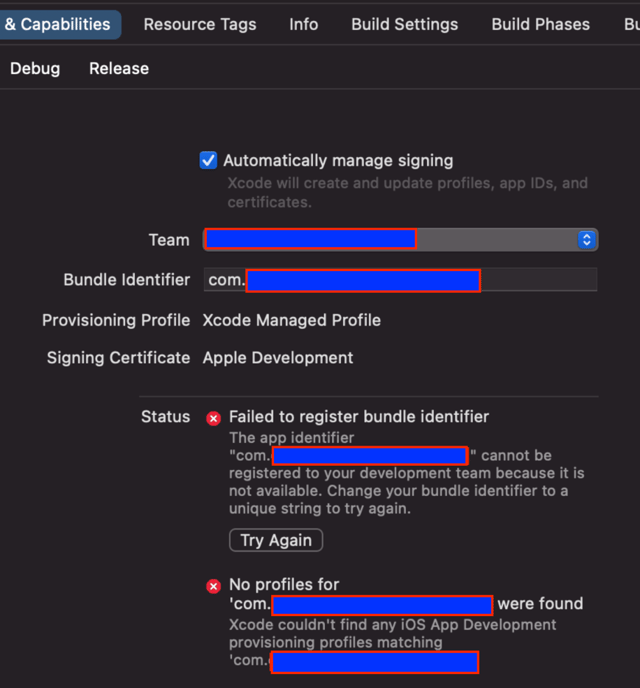
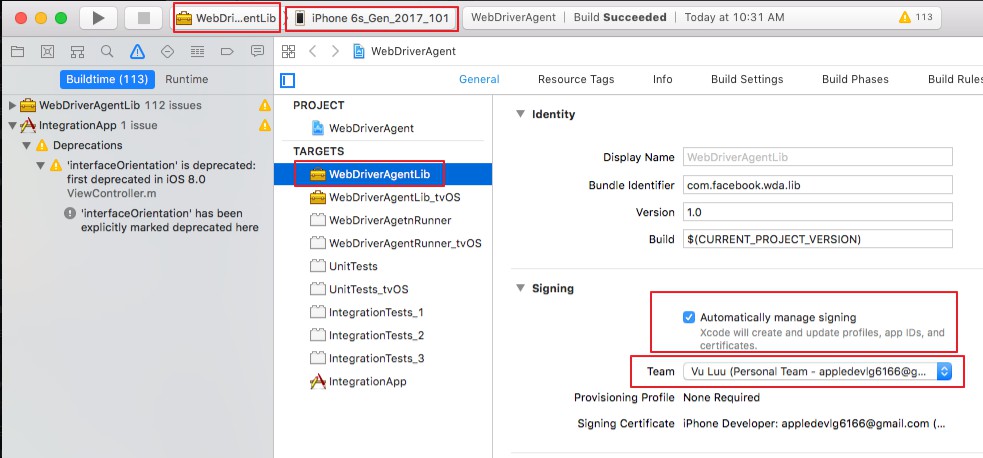
* Navigate to appium by:

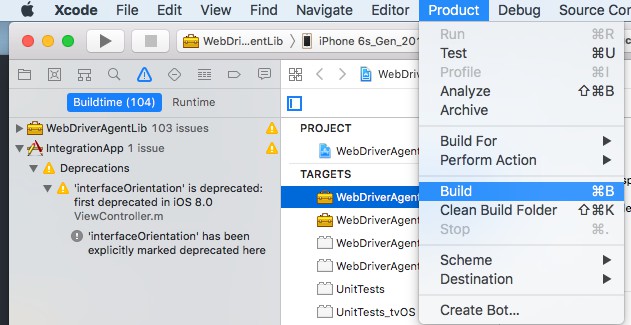
+ Right click on Finder, select “go to folder”

+ Enter the location get from previous steps

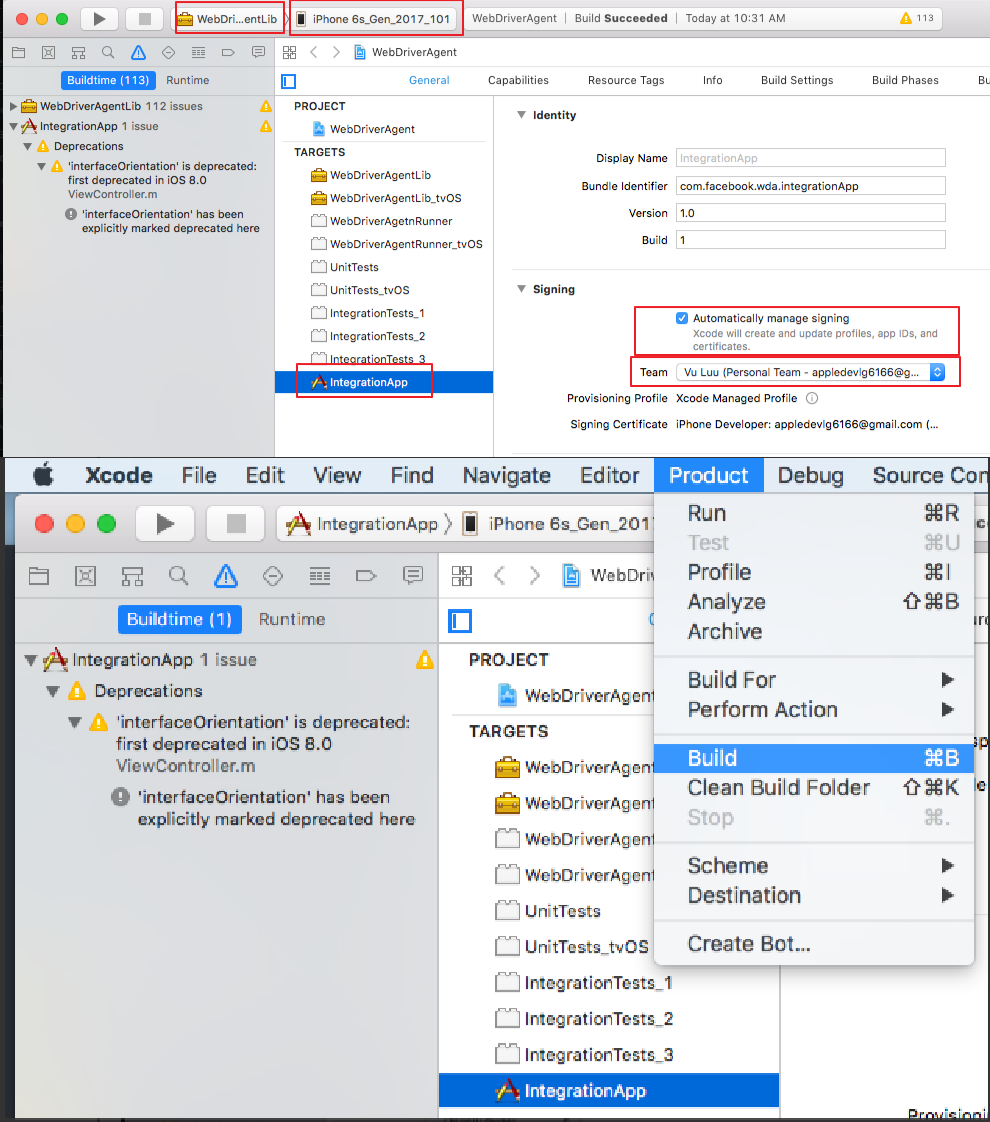
* + Inside folder /appium-webdriveragent/, open “webdriveragent.xcodeproj”



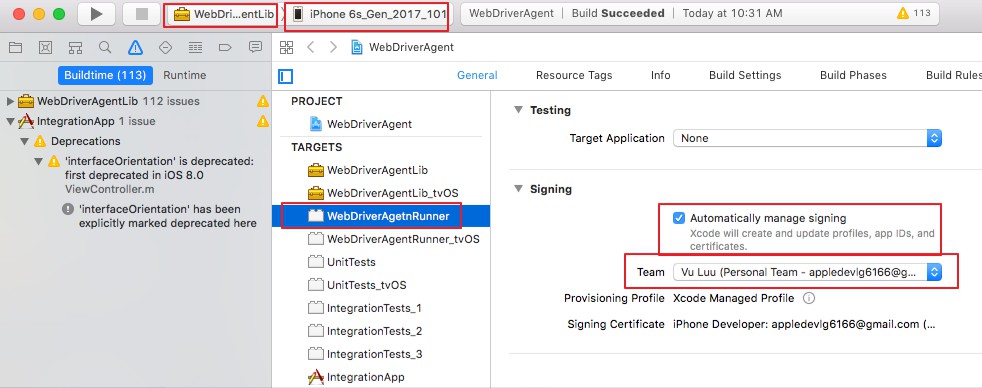
* + Sign in with an apple developer account and select Team
  + If the Bundle Identifier fails, you can change the name of the bundle, because the bundle ID is unique. If someone has already taken the ID, you’ll need to change it.  
    
  + Select WebDriverAgentLib:
    - Select target connected device in “2. Connect device to Xcode”
    - Check Automatically Manage signing checkbox
    - Select a team
    - On menu-bar: select Product-> Build

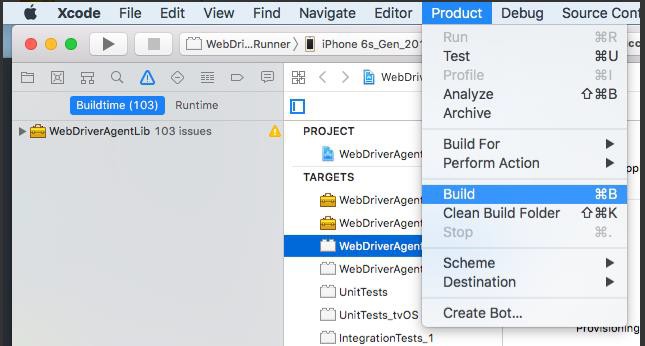


* + Select IntegrationApp:
    - Select target device
    - Check Automatically Manage signing checkbox
    - Select a team
    - On menu-bar: select Product-> Build

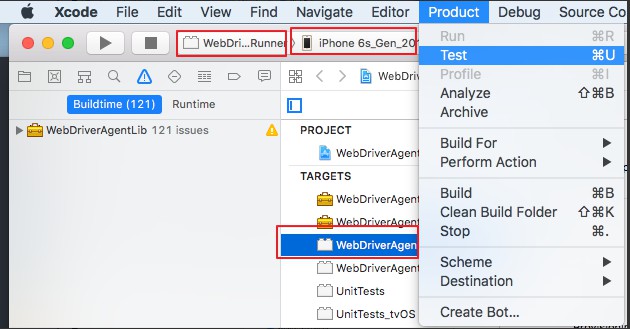


* + Select WebDriverAgentRunner:
    - Select target device
    - Check Automatically Manage signing checkbox
    - Select a team
    - On menu-bar: select Product-> Build

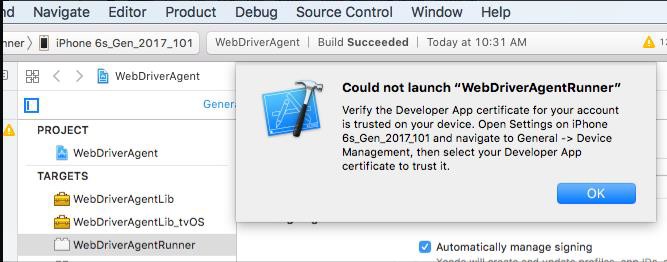




* + Install WebDriverAgent to device:
    - Select Produce -> Scheme and change to WebDriverAgentRunner
    - On menu-bar: select Product -> Test



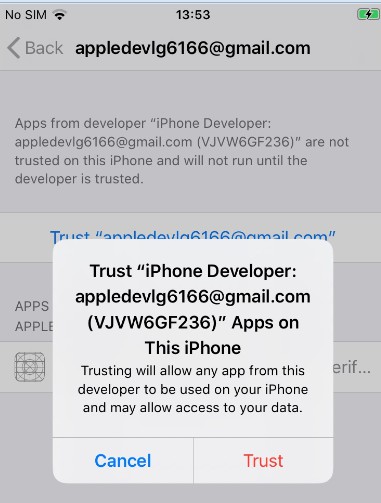
* + After Install successful, an error message like below image will be displayed. **Don’t worry You are doing it right**



* + Check and make sure WebdriverArgentis installed on device



* + Next step you should trust WebdriverAgent: On device navigate to General > Device Management Then select WebdriverAgent and tap Trust button



* + Enable these settings on device:
* Enable Settings > Privacy & Security > Developer Mode
* Enable Settings > Developer > Enable UI Automation
* Enable Setting > Safari > Advanced > Web Inspector
  + Get device uidi:

*xcrun xctrace list devices*

* + Create appium session to make sure that everything is OK.
    - Download Appium Inspector (<https://github.com/appium/appium-inspector/releases>)
    - Capabilities

{

“platformName”: ”iOS”,

“appium:deviceName”: ”iPhone”,

“appium:platformVersion”: “16.6”

“appium:udid”: “<device udid>“,

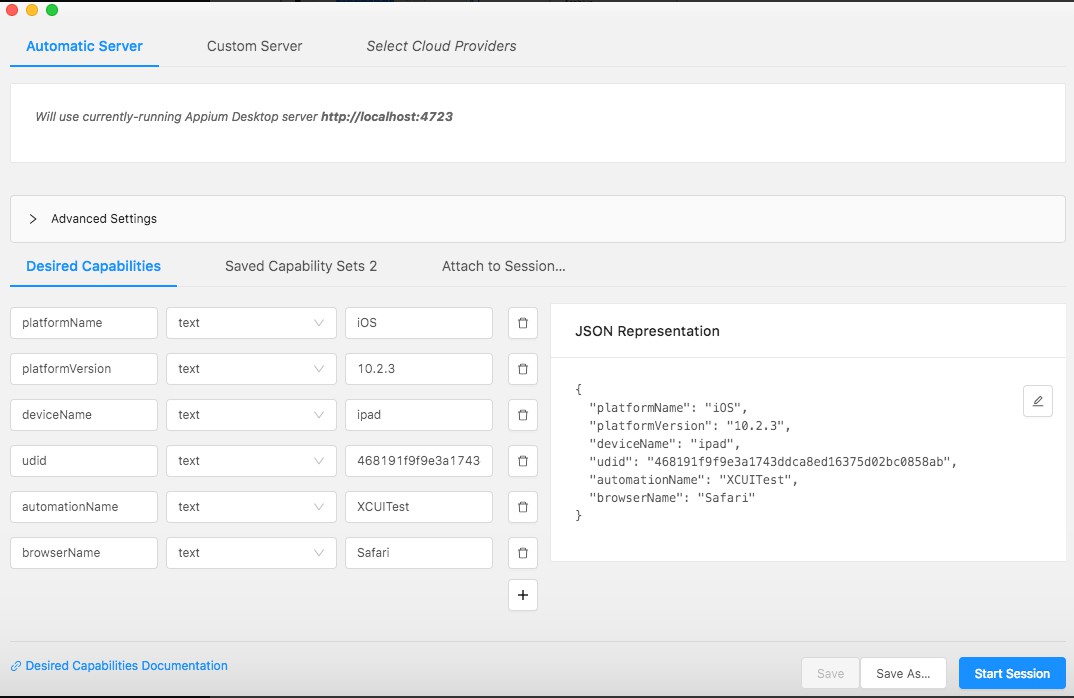
“appium:automationName”: ”XCUITest”,

“browserName”: “Safari”,

}

* + Start appium server using command line

*appium*



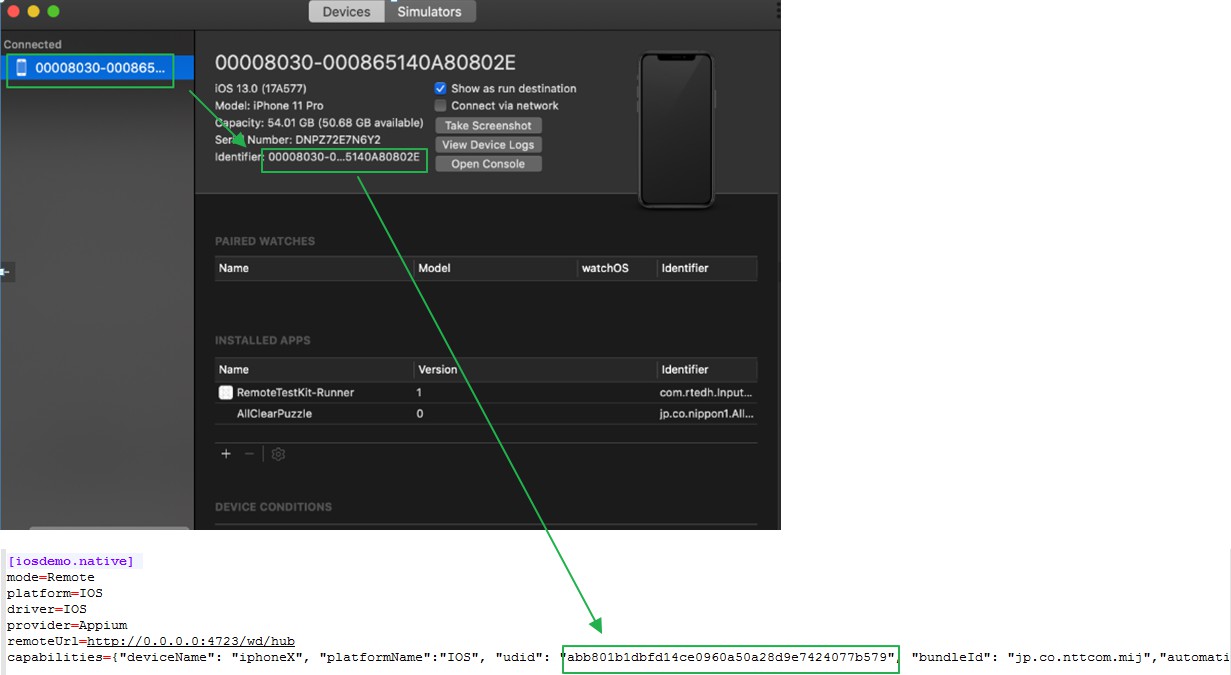
* + If session is created successful, that mean you setup environment successful.

# Run IOS Testsuite

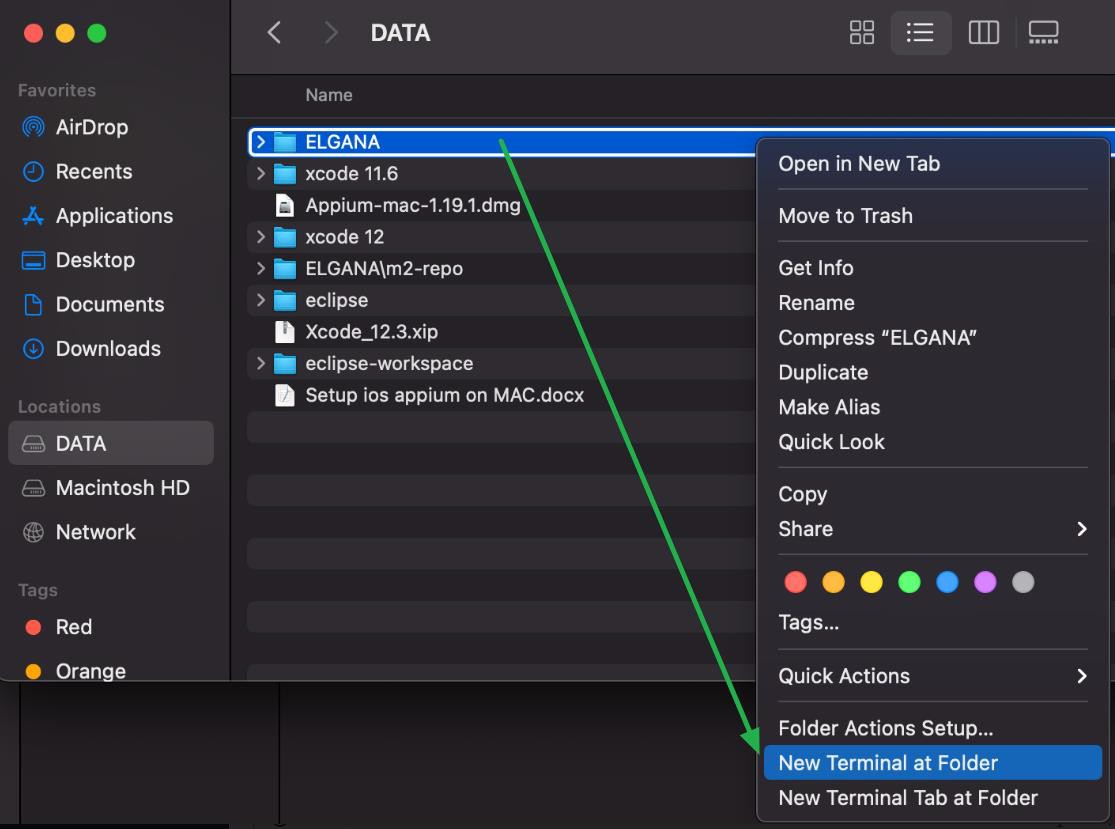
* Update udid

### + Open file [Project path]\src\test\resources\browsers.setting.properties

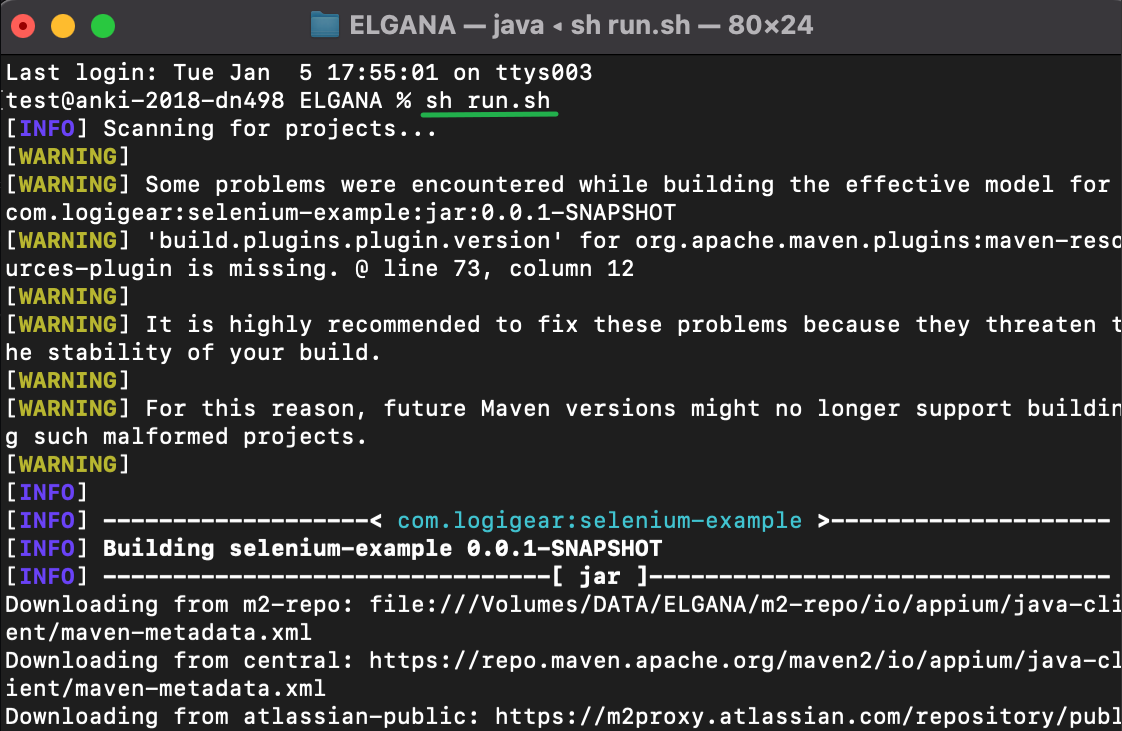
+ Change udid of [iosdemo.native] to your udid that collected from “2. Connect device to Xcode”



* Make sure that WebdriverAgent is installed if not please check "2. Config WebDriverAgent" for more detail. Notice that WebdriverAgent will be expired for 7 days (free apple account) so you should reinstall it in next week.
* Open finder app in macbook
* Navigate to project folder
* Right click to project folder
* Select “New Terminal at folder”



* Run command

sh run.sh

* Go to [project path]/test-output to check report

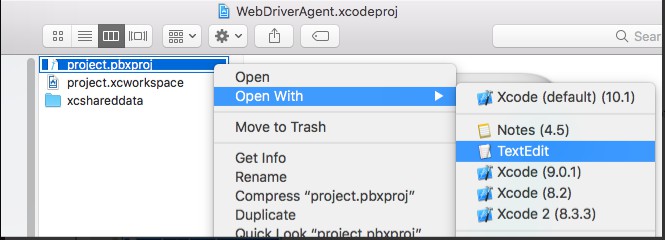
# Common Error

## Sudo command not found

- Run command:

export PATH=/usr/bin:/usr/sbin:/bin:/usr/local/bin:/sbin:/opt/x11/bin:$PATH

## Cant open “webdriveragent.xcodeproj” due to xcode compatibility version

* + - Right click “webdriveragent.xcodeproj” and select “Show package contents”
    - Open project.pbxproj with TextEdit
    - Edit objectVersion following below info For Xcode 10.0

objectVersion :51

For Xcode 9.3:

objectVersion :50

For Xcode 8.0-9.2:

objectVersion: 48

For Xcode 6.3-7.3.1:

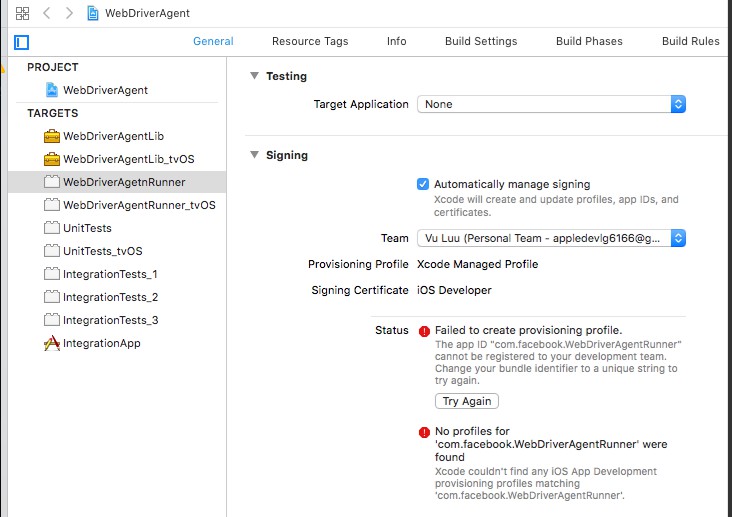
objectVersion: 47

## Could not locate device support files.

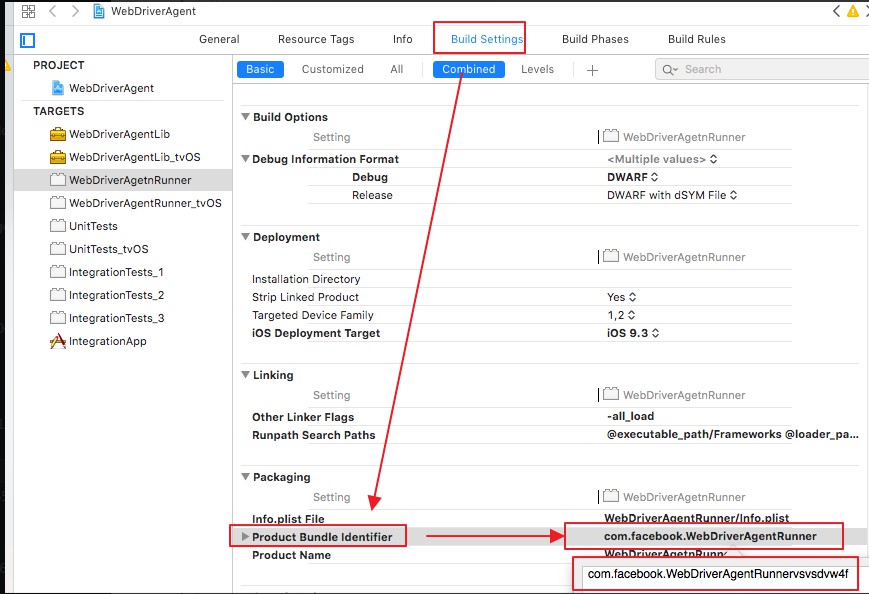
* + - Please follow this link to fix it:

<https://github.com/filsv/iPhoneOSDeviceSupport>

## Failed to created Provisioning Profile



* Go to “Build Settings” tab
* Add random text to “Product Bundle Identifier”



* Return General tab and wait xcode accept. If not try to change “Product Bundle Identifier” again

