



A PAGE TALKS ABOUT

By
reWire
fueled by decode

A Kickstarter Tool Kit

OPENSOURCE

Mobile Apps Automation

appium 2.x

Made it easy !!!!

This is an attempt to simplify
the ecosystem learning and adapt



By
reWire

fueled by decode

- ❖ Prerequisite

- ❖ Node JS

- ❖ Android Environment



- ❖ Appium Ecosystem

- ❖ Server

- ❖ Appium Inspector

- ❖ Drivers

- ❖ Client

- ❖ Kick-Start



- ❖ Demo-Apps

- ❖ Automation Readiness

Prerequisite

Environment

❖ HARDWARE:

- ✓ Intel i5 CPU
- ✓ 8 GB Ram
- ✓ HDD >20 GB Free space

↶ Nice to have

NodeJS: NodeJS is a JavaScript runtime environment used to run the Appium server

NPM: NPM is a package manager for Node.js that facilitates the installation and management of Node modules, including drivers and other dependencies.

REQUIREMENT

❖ SOFTWARE:

- ✓ Node JS ^14.17.0 || ^16.13.0 || >=18.0.0
- ✓ NPM >=8
- ✓ Android SDK <Android OS>
- ✓ JDK <Java Based Projects>
- ✓ Python <Python Based Projects>

OS:

- ✓ Windows 10/Windows 11

Android SDK: The Android SDK is a collection of software tools designed for interacting with the Android operating system. It follows a set of APIs (Application Programming Interfaces) that enable developers to communicate and build applications that are compatible with specific versions of the Android OS.

In essence, it serves as the essential toolkit for developers to create, test, and deploy Android applications, ensuring compatibility and functionality across various Android OS versions.

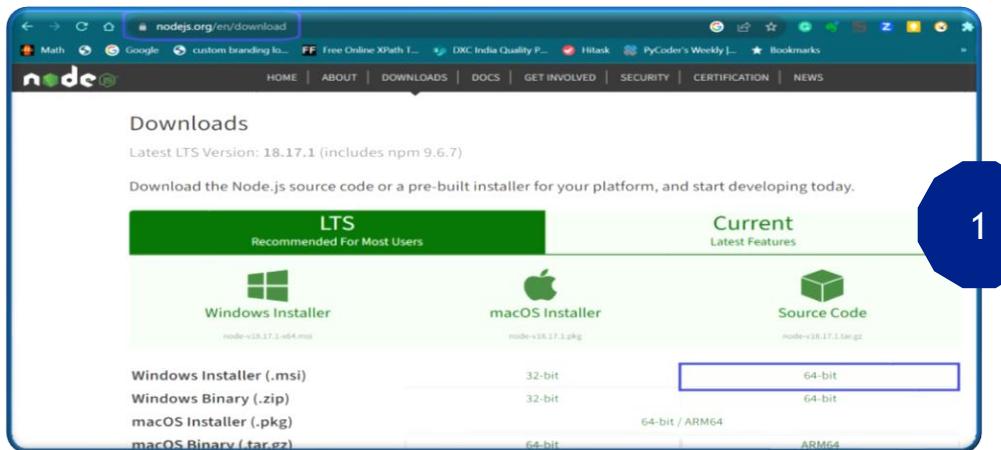
NodeJS

A JavaScript Framework

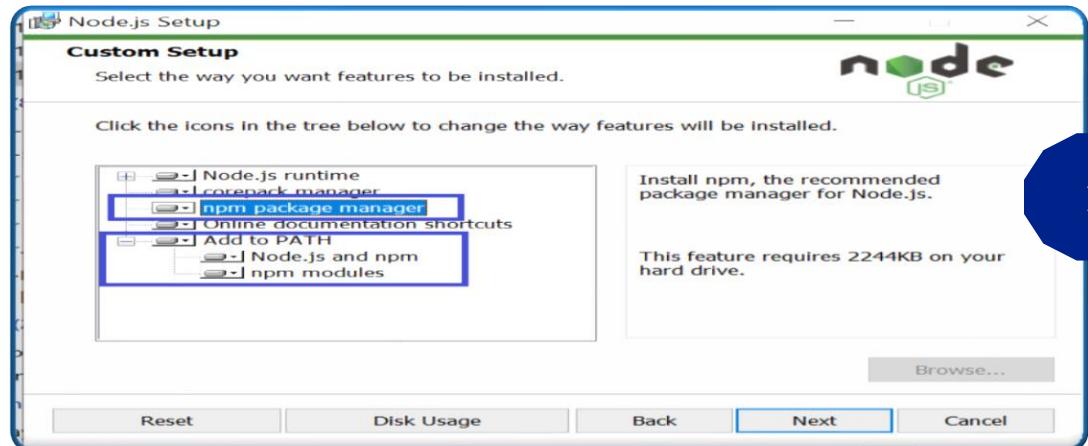
NodeJS Installation

SOFTWARE

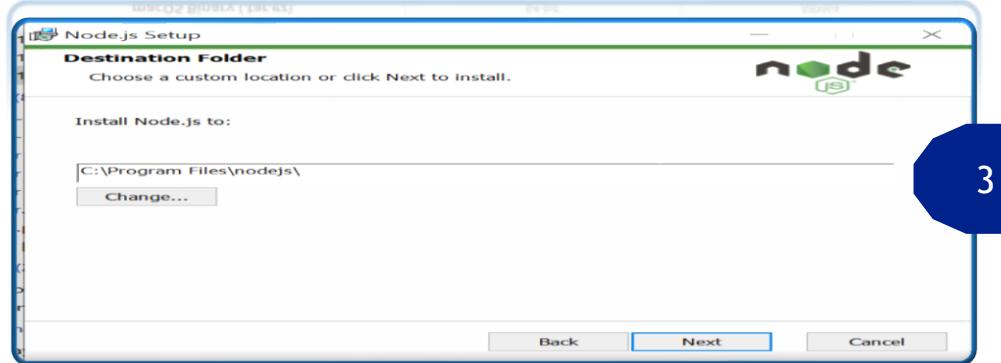
INSTALL NODE JS <https://nodejs.org/en/download>



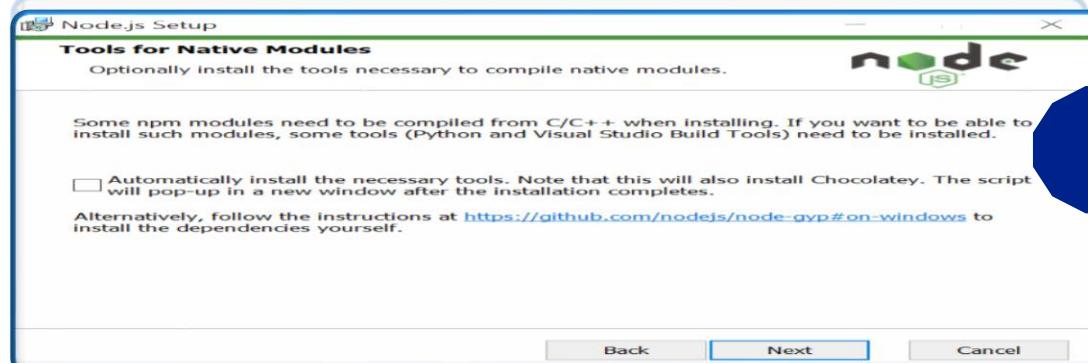
1



2



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Node JS Readiness Check

C:\windows\system32\cmd.exe

```
C:\>node --version  
v18.17.1
```

```
C:\>npm --version  
10.0.0
```

```
C:\>_
```

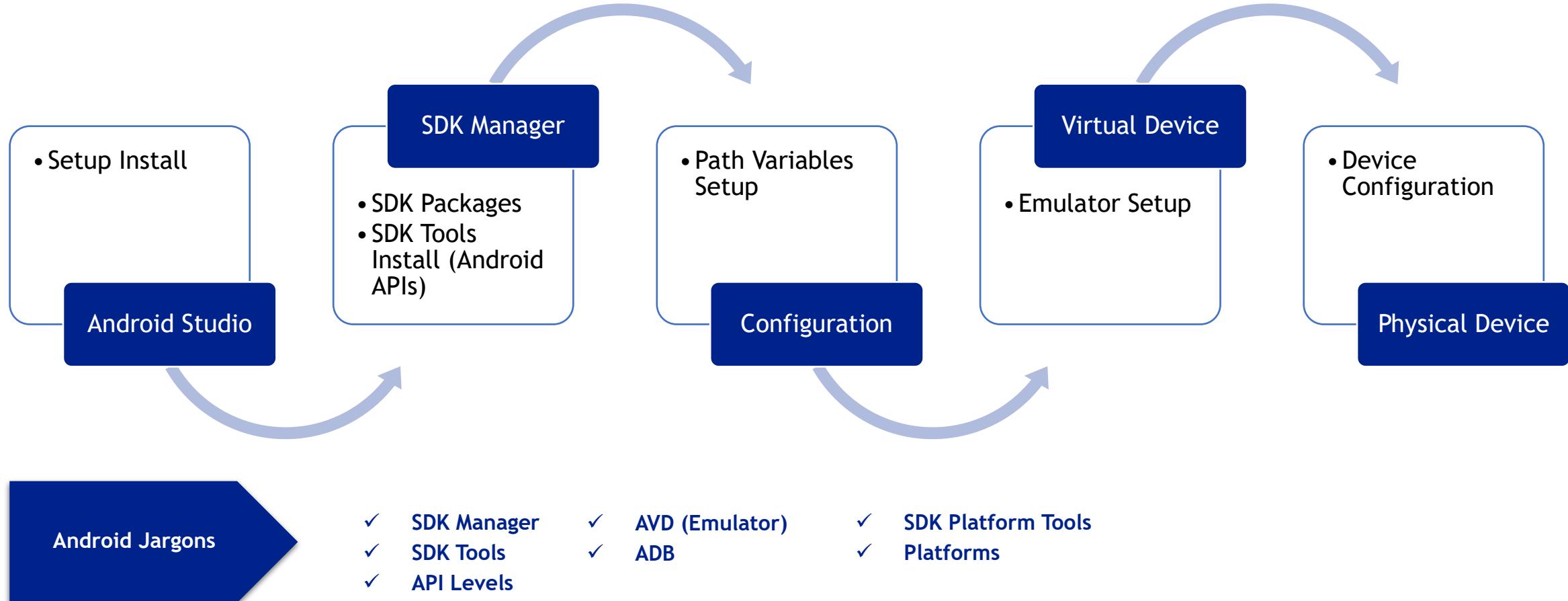
[Command to know Node Versions](#)

Session Ends ➤|

Android Studio

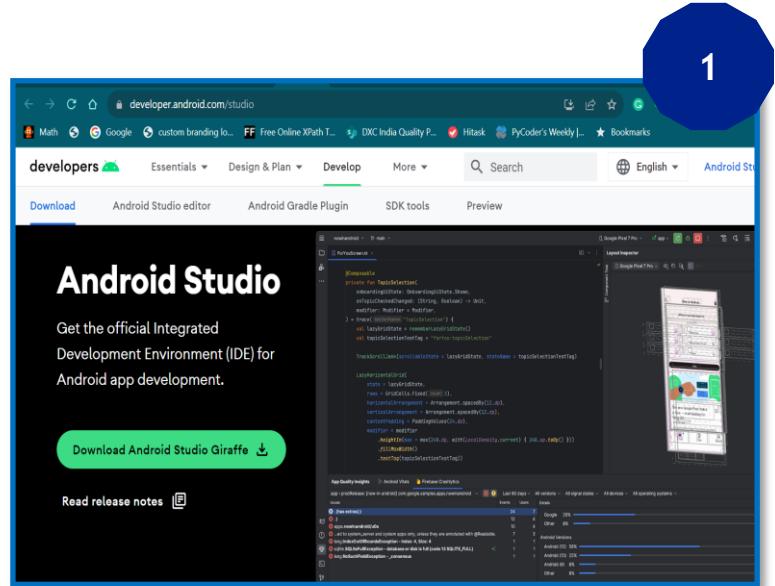
SDK Tools - Emulators / Devices Configuration

Android Setup



Android Studio Installation

<https://developer.android.com/studio>



Download Android Studio Giraffe | 2022.3.1 Patch 2

Before downloading, you must agree to the following terms and conditions.

Terms and Conditions

This is the Android Software Development Kit License Agreement

- 1. Introduction**

1.1 The Android Software Development Kit (referred to in the License Agreement as the "SDK" and specifically including the Android system files, packaged APIs, and Google APIs add-ons) is licensed to you subject to the terms of the License Agreement. The License Agreement forms a legally binding contract between you and Google in relation to your use of the SDK. 1.2 "Android" means the Android software stack for devices, as made available under the Android Open Source Project, which is located at the following URL: <https://source.android.com/>, as updated from time to time. 1.3 A "compatible implementation" means any Android device that (i) complies with the Android Compatibility Definition document, which can be found at the Android compatibility website (<https://source.android.com/compatibility>) and which may be updated from time to time; and (ii) successfully passes the Android Compatibility Test Suite (CTS). 1.4 "Google" means Google LLC, organized under the laws of the State of Delaware, USA, and operating under the laws of the USA with principal place of business at 1600 Amphitheatre Parkway, Mountain View, CA 94043, USA.

- 2. Accepting this License Agreement**

2.1 In order to use the SDK, you must first agree to the License Agreement. You may not use the SDK if you do not accept the License Agreement.

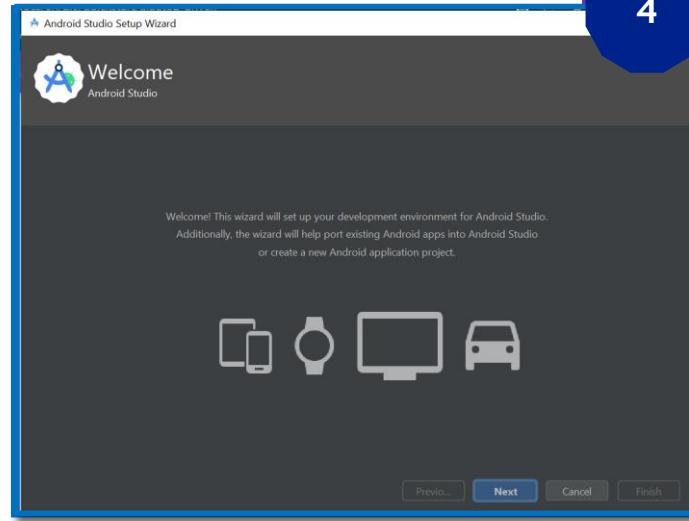
and that those rights or remedies will still be available to Google. 14.3 If any court of law, having the jurisdiction to decide on this matter, determines that any provision of the License Agreement is invalid, then that provision will be removed from the License Agreement without affecting the rest of the License Agreement. The remaining provisions of the License Agreement will continue to be valid and enforceable. 14.4 You acknowledge and agree that each member of the group of companies of which Google is the parent shall be third party beneficiaries to the License Agreement and that such other companies shall be entitled to directly enforce, and rely upon, any provision of the License Agreement that confers a benefit on (or rights in favor of) them. Other than this, no other person or company shall be third party beneficiaries to the License Agreement. 14.5 EXPORT RESTRICTIONS. THE SDK IS SUBJECT TO UNITED STATES EXPORT LAWS AND REGULATIONS. YOU MUST COMPLY WITH ALL DOMESTIC AND INTERNATIONAL EXPORT LAWS AND REGULATIONS THAT APPLY TO THE SDK. THESE LAWS INCLUDE RESTRICTIONS ON DESTINATIONS, END USERS AND END USE. 14.6 The rights granted in the License Agreement may not be assigned or transferred by either you or Google without the prior written approval of the other party. Neither you nor Google shall be permitted to delegate their responsibilities or obligations under the License Agreement without the prior written approval of the other party. 14.7 The License Agreement, and your relationship with Google under the License Agreement, shall be governed by the laws of the State of California without regard to its conflict of laws provisions. You and Google agree to submit to the exclusive jurisdiction of the courts located within the county of Santa Clara, California to resolve any legal matter arising from the License Agreement. Notwithstanding this, you agree that Google shall still be allowed to apply for injunctive remedies (or an equivalent type of urgent legal relief) in any jurisdiction. July 27, 2021

I have read and agree with the above terms and conditions

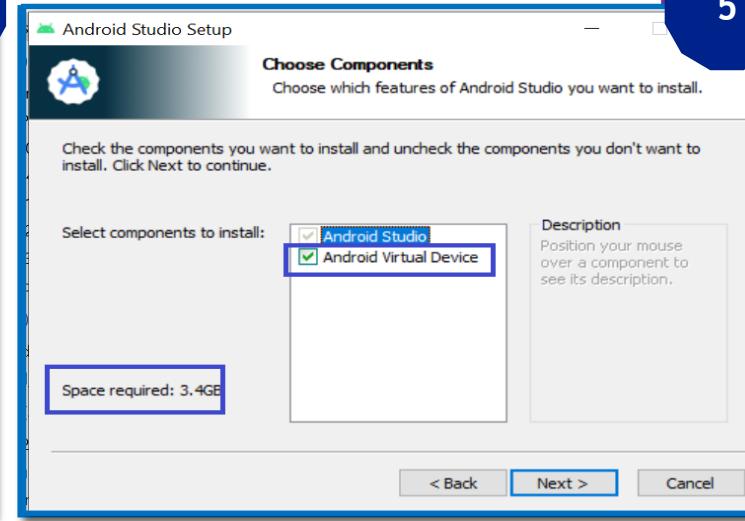
Download Android Studio Giraffe | 2022.3.1 Patch 2 for Windows

android-studio-2022.3.1-patch2-windows.exe

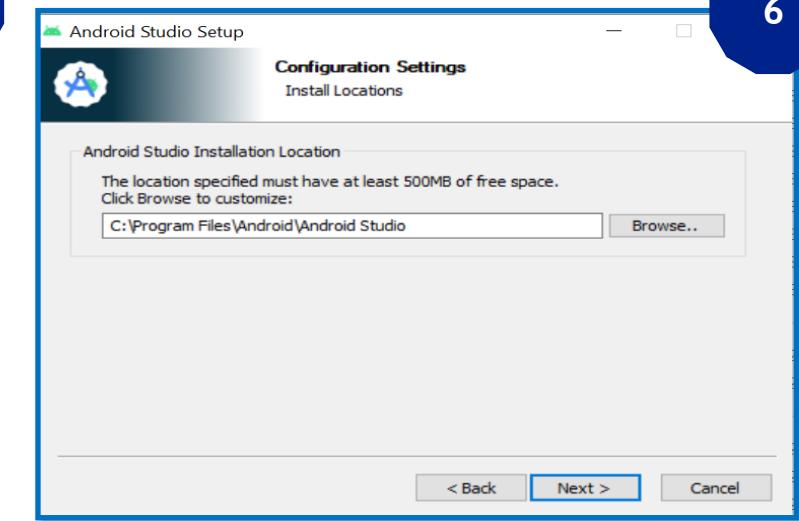
Android Studio Installation Contd ...



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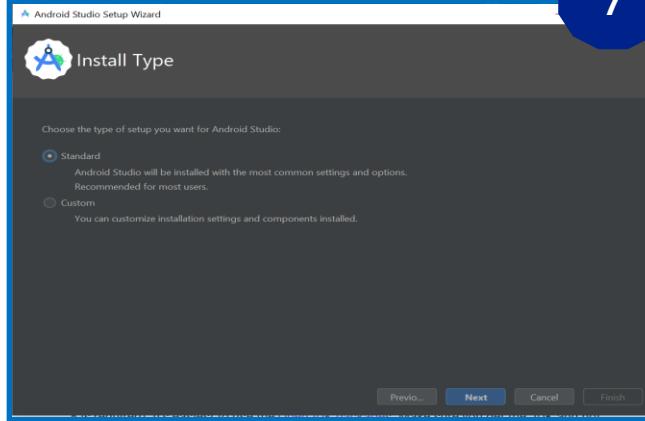


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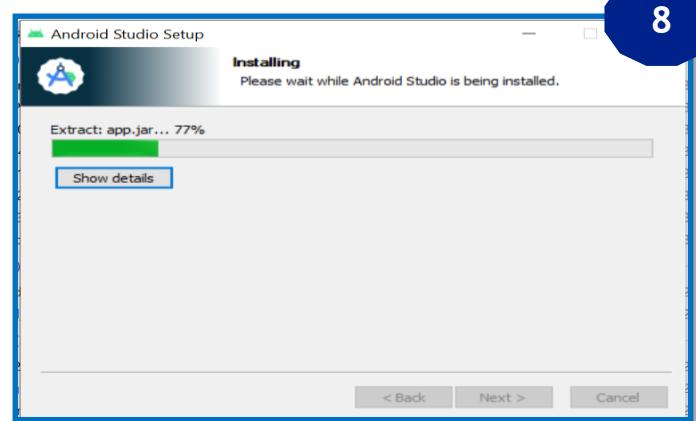


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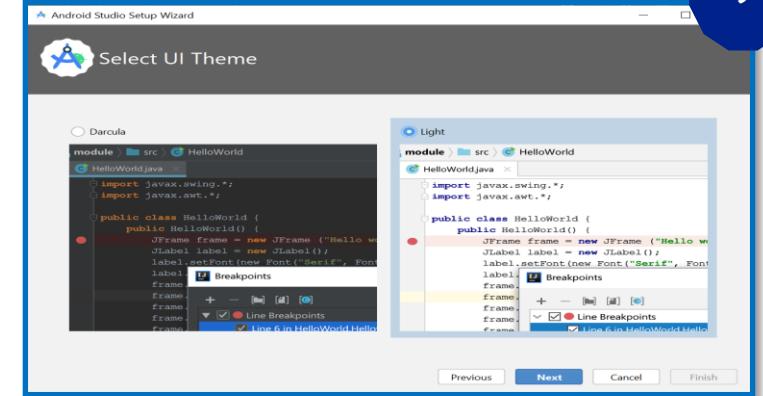
Android Studio Installation Contd ...



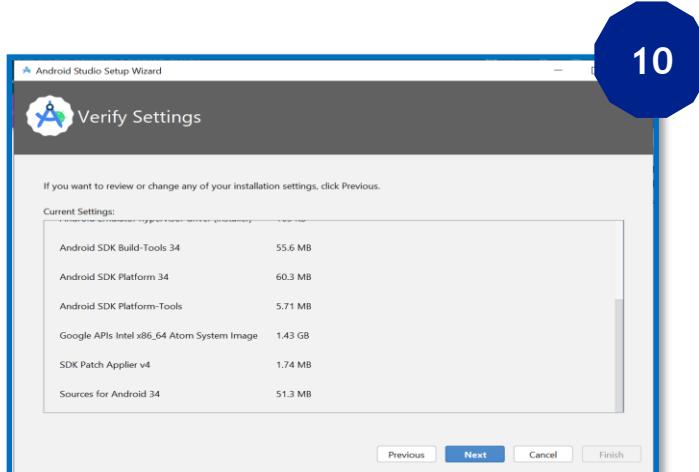
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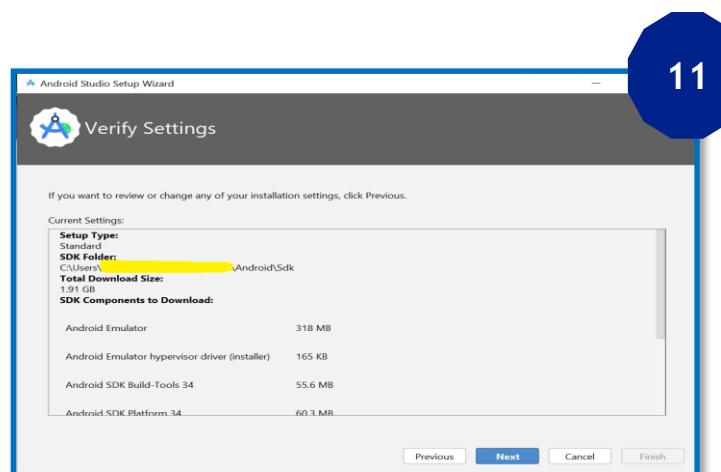
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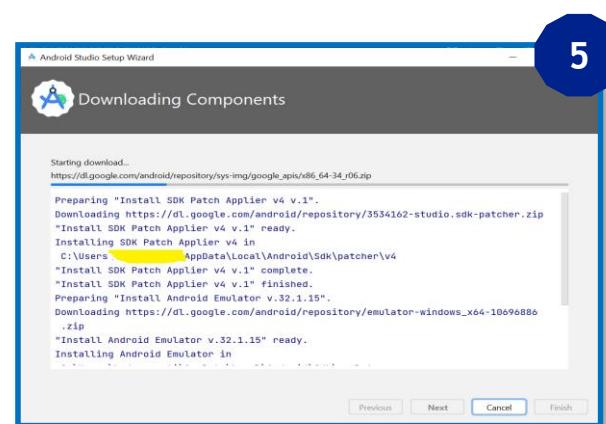
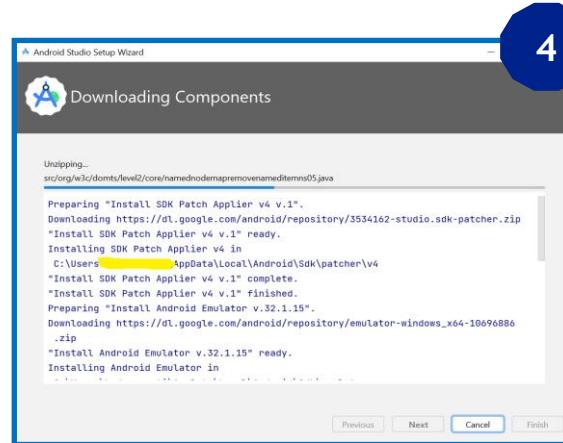
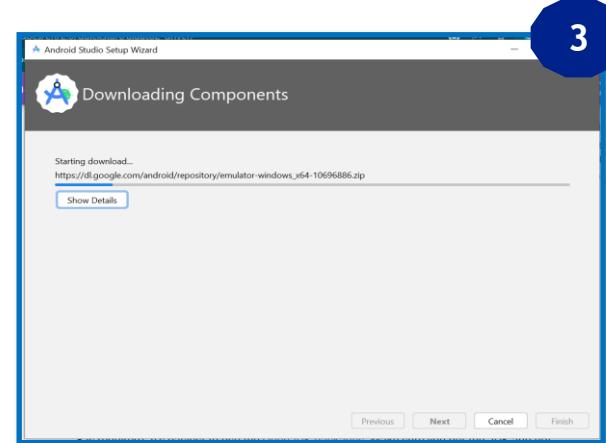
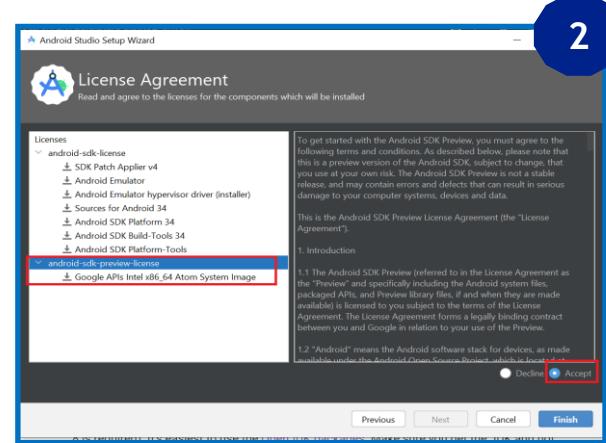
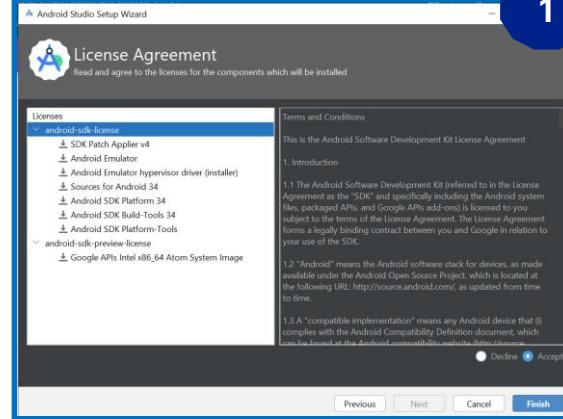


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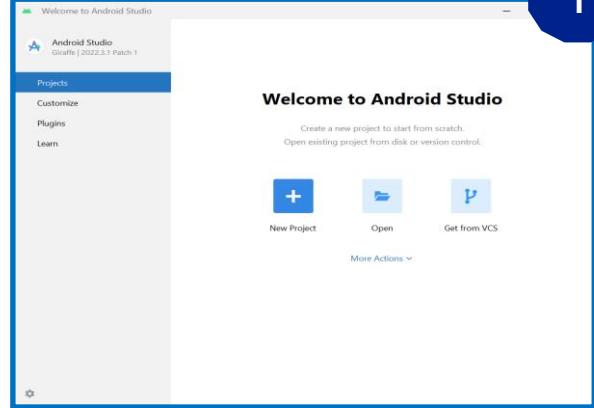
Session Ends ➤|

Android SDK

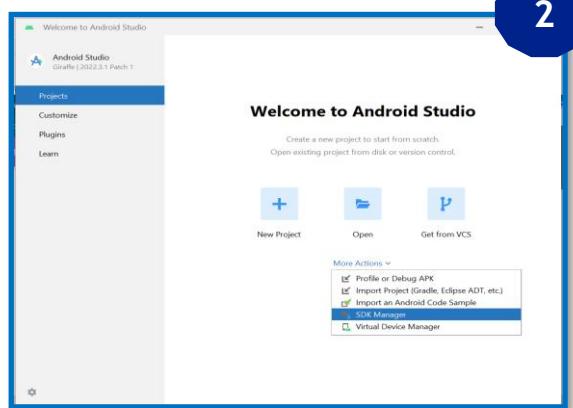
Android SDK Packages Installation



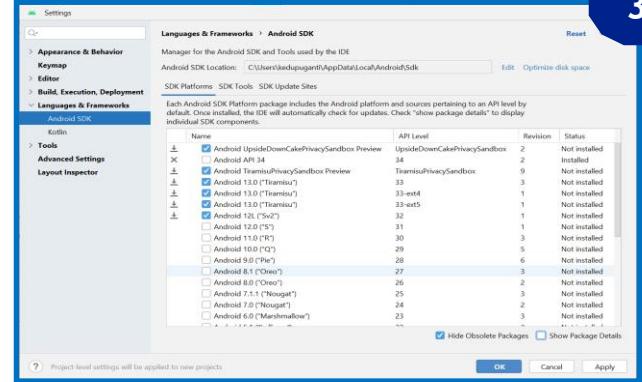
SDK Manager - Android APIs Installation



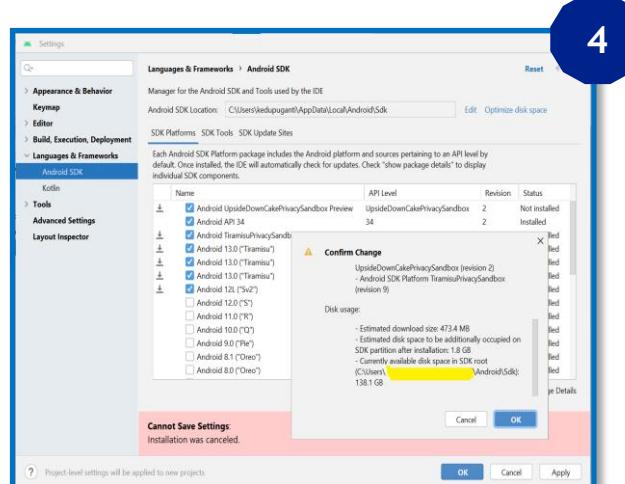
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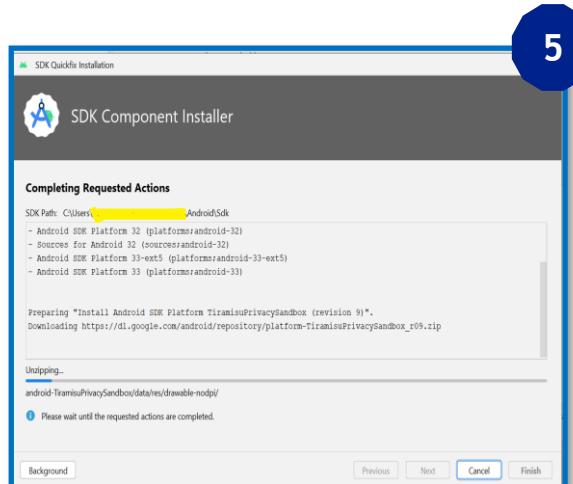
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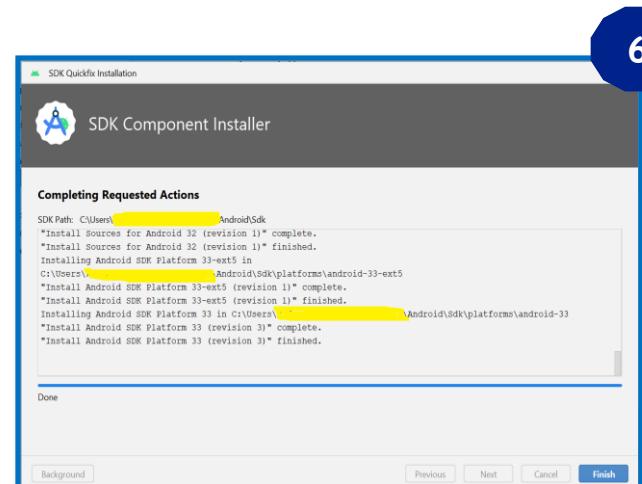
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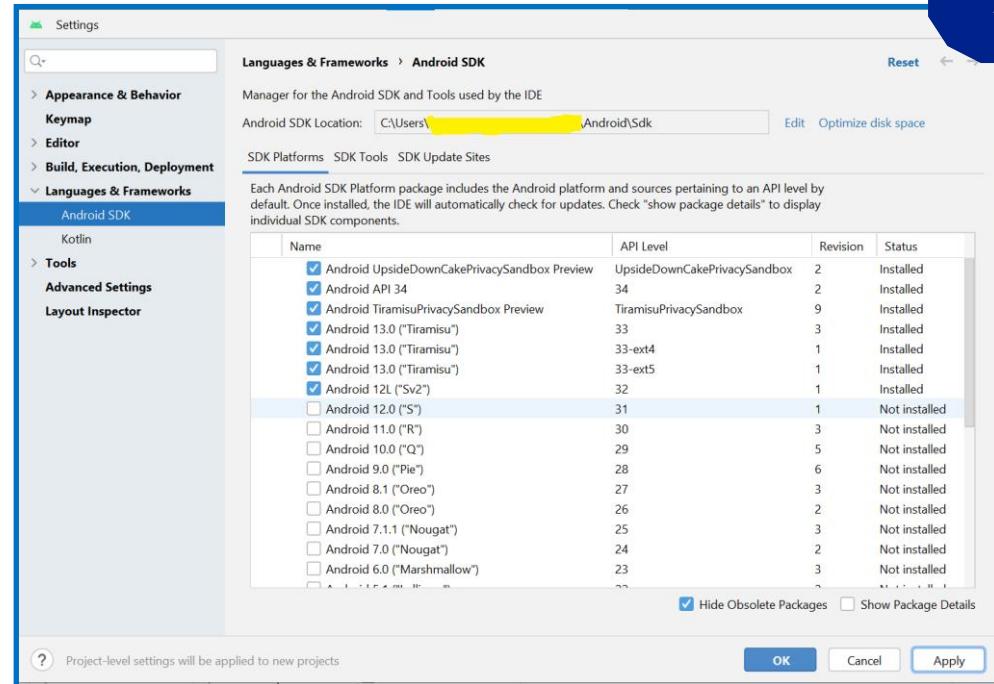


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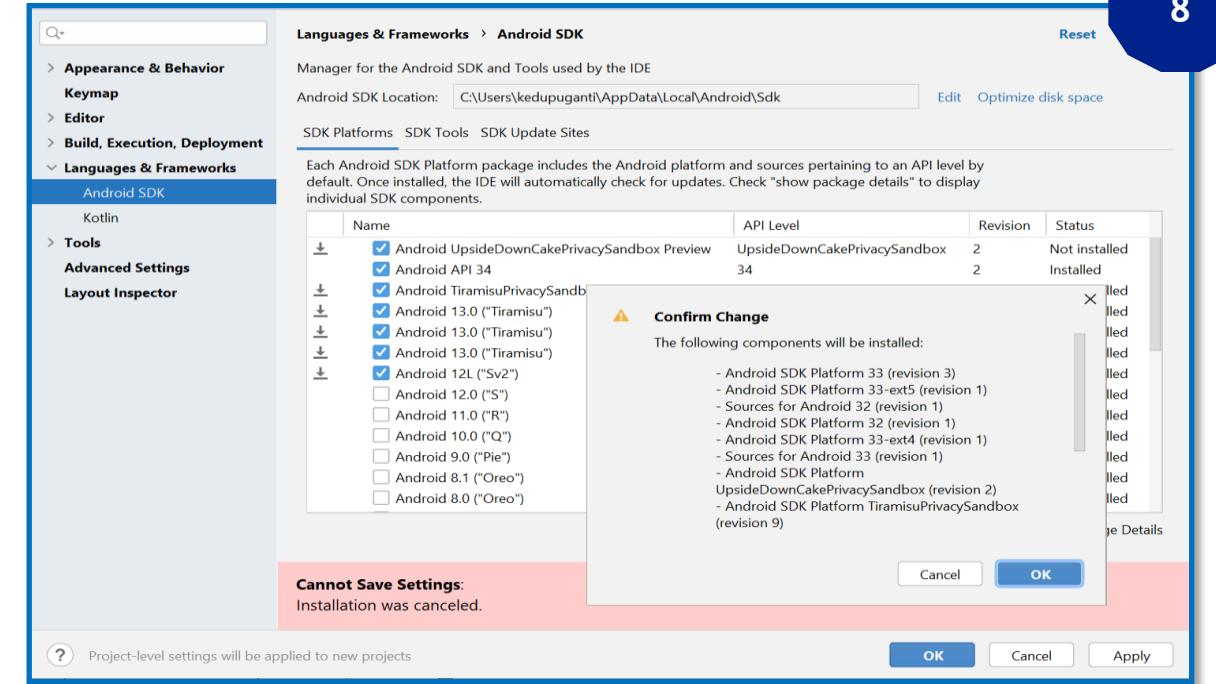


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SDK Manager - Android APIs Installation Contd...



7



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Android API

Android API Levels

Android (Platforms) - API Levels

Android API Levels

Android OS Version should match with API Level to work

OS Version: Android 14
Corresponding API Level: 34

Android 14 (API level 34)

For details about the platform changes, see the [Android 14 documentation](#).

Android 13 (API level 33)

For details about the platform changes, see the [Android 13 documentation](#).

Android 12 (API levels 31, 32)

12L feature drop (API level 32)

For details about the platform changes, see the [12L documentation](#).

– Revision 1 (March 2022)

Released to the stable channel (no longer in preview).

Android 12 (API level 31)

For details about the platform changes, see the [Android 12 documentation](#).

– Revision 1 (August 2021)

Released to the stable channel (no longer in preview) when Android 12 reached the Platform Stability milestone.

On this page

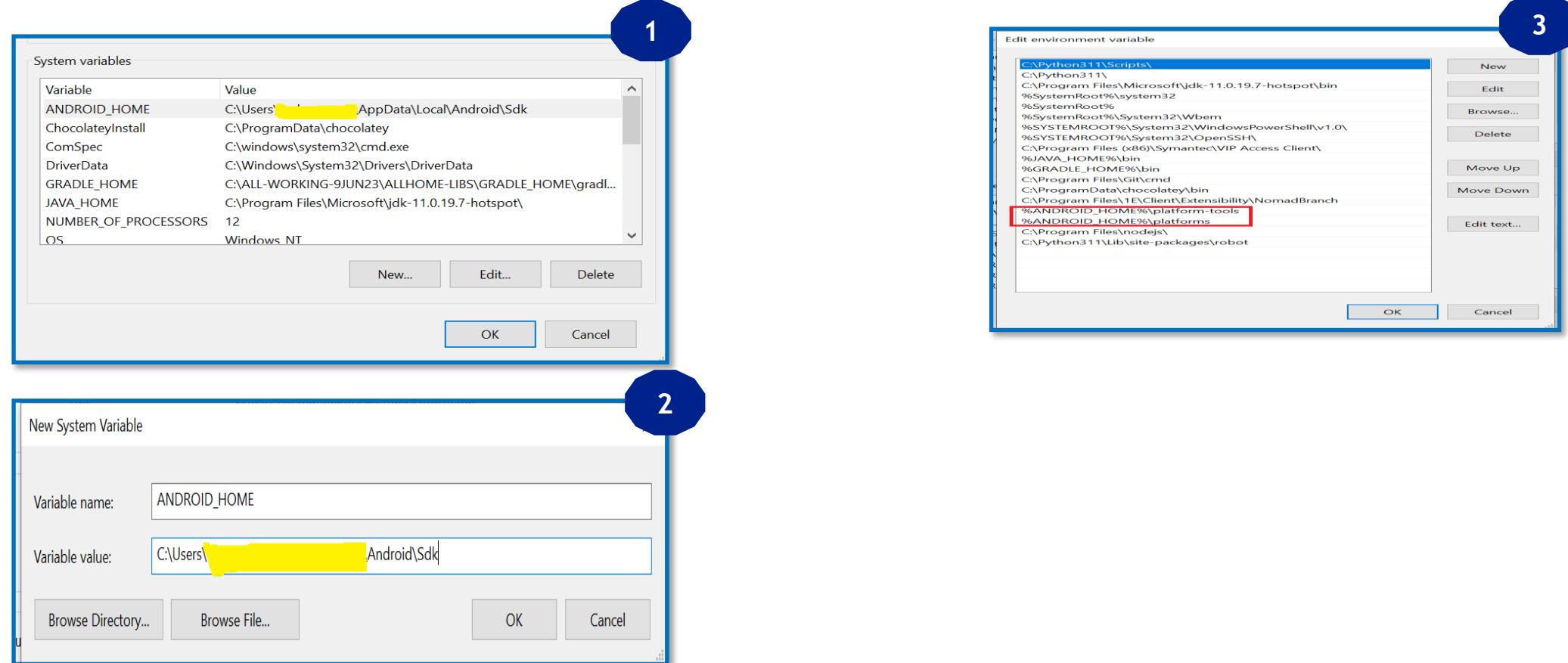
- [Android 14 \(API level 34\)](#)
- [Android 13 \(API level 33\)](#)
- [Android 12 \(API levels 31, 32\)](#)
- [Android 11 \(API level 30\)](#)
- [Android 10 \(API level 29\)](#)
- [Android 9 \(API level 28\)](#)
- [Android 8.1 \(API level 27\)](#)
- [Android 8.0 \(API level 26\)](#)
- [Android 7.1 \(API level 25\)](#)
- [Android 7.0 \(API level 24\)](#)
- [Android 6.0 \(API level 23\)](#)
- [Android 5.1 \(API level 22\)](#)
- [Android 5.0 \(API level 21\)](#)
- [Android 4.4W \(API level 20\)](#)
- [Android 4.4 \(API level 19\)](#)
- [Android 4.3 \(API level 18\)](#)
- [Android 4.2 \(API level 17\)](#)
- [Android 4.1 \(API level 16\)](#)
- [Android 4.0.3 \(API level 15\)](#)
- [Android 4.0 \(API level 14\)](#)

Android Config

Android Path Configuration

SDK Installation Path:

C:\Users\<UserName>\AppData\Local\Android\Sdk





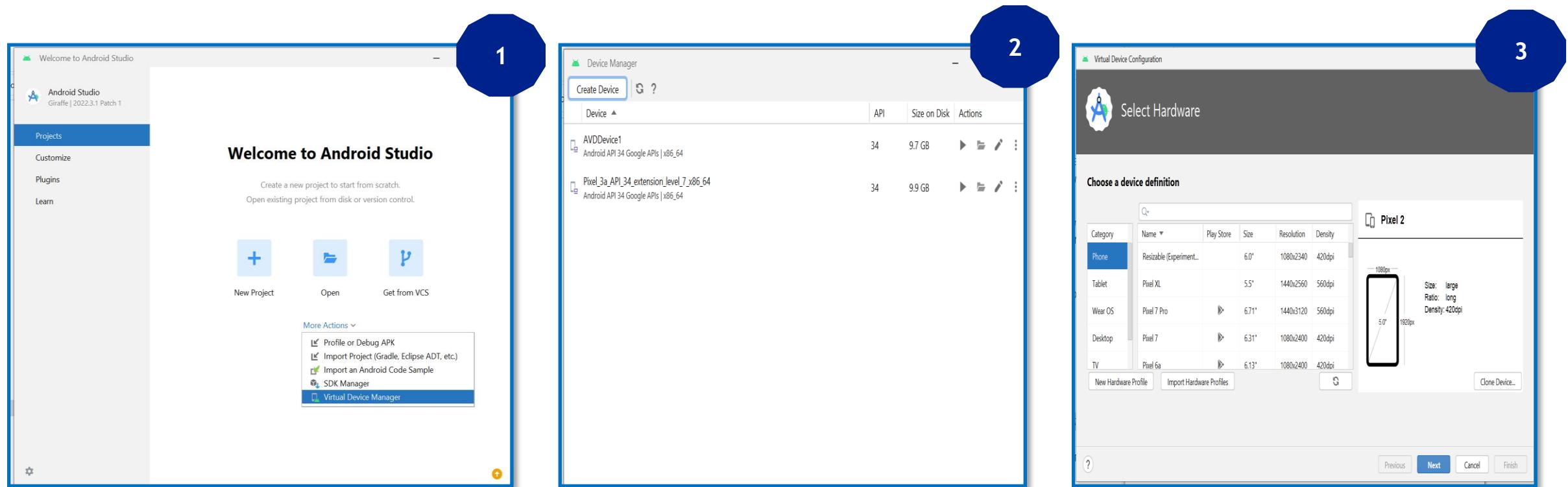
Session Ends



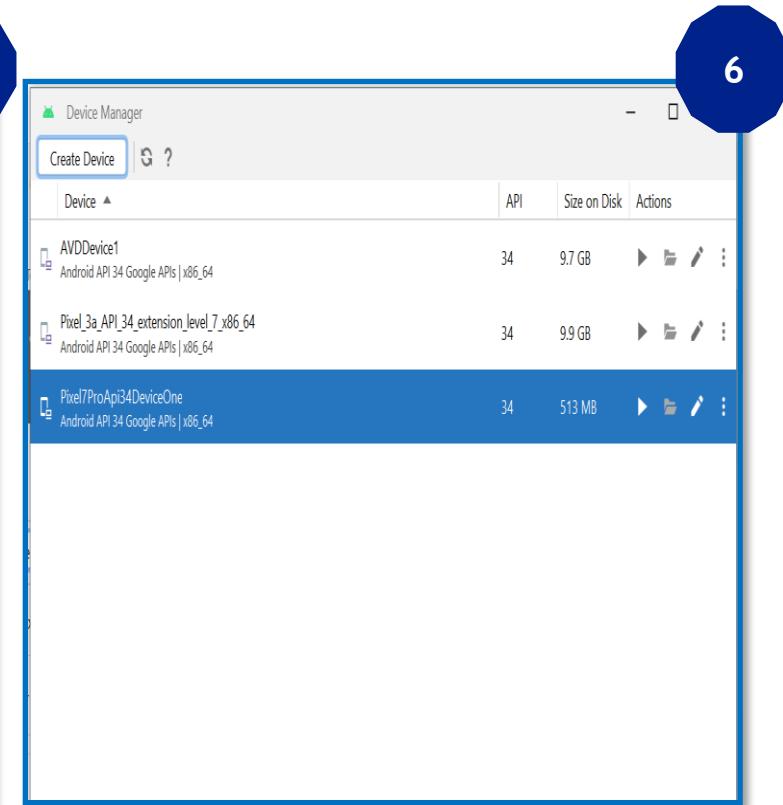
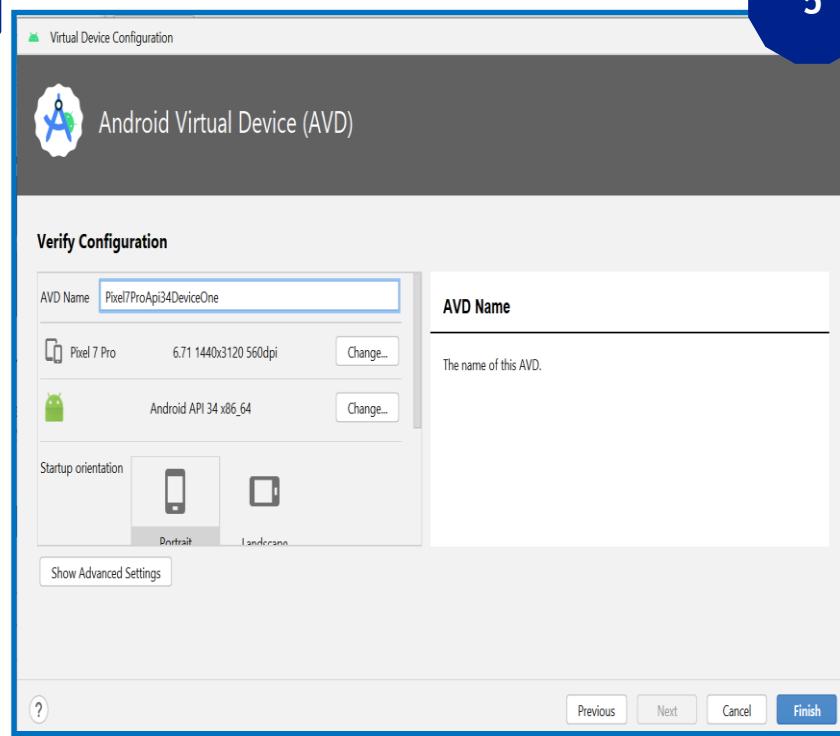
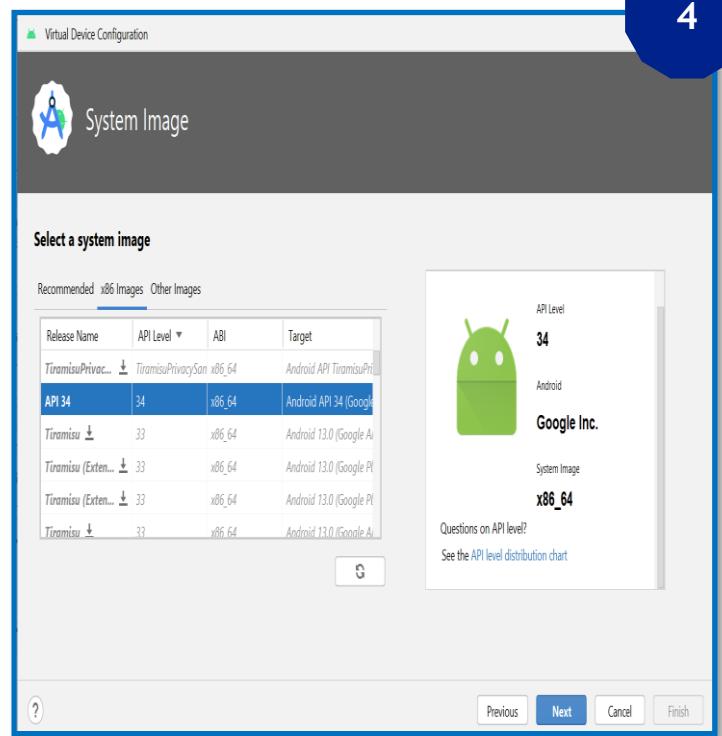
Emulator Creation



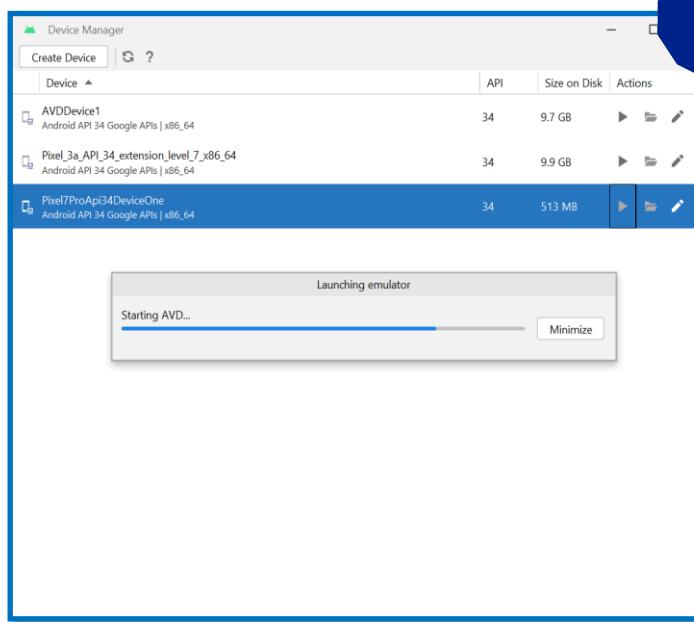
Emulator Configuration (Virtual Device)



Emulator Setup Contd ...



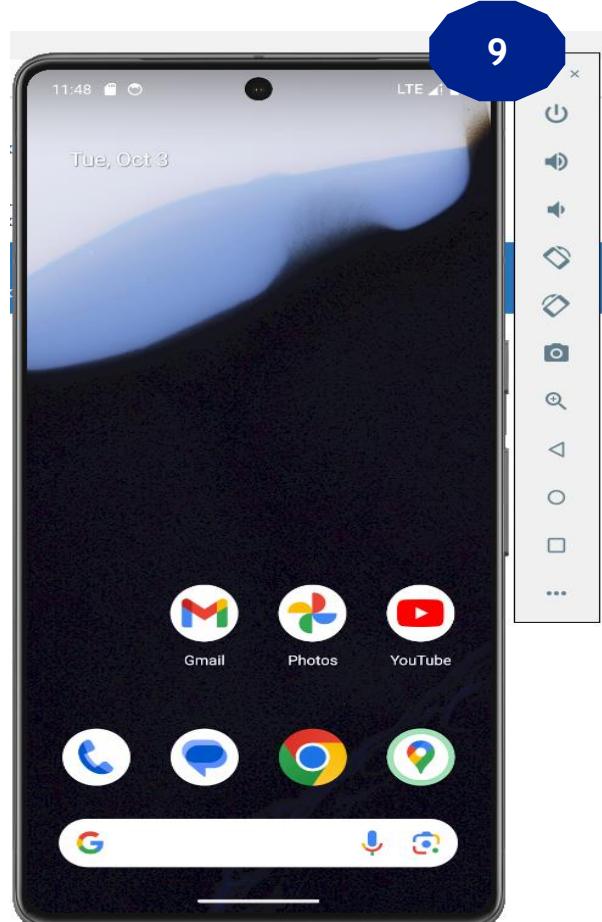
Emulator Setup Contd ...



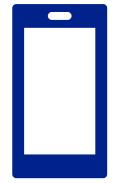
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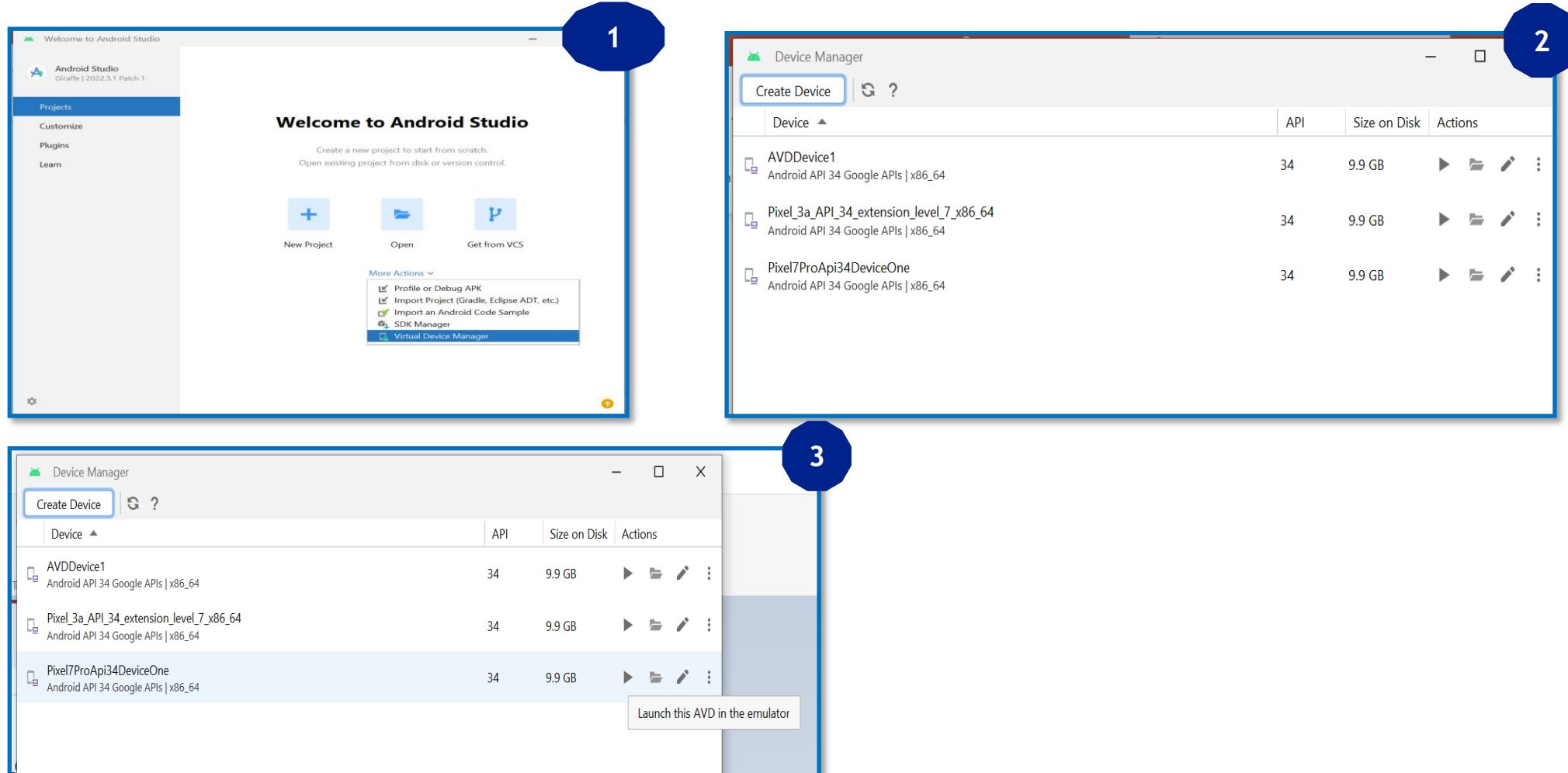


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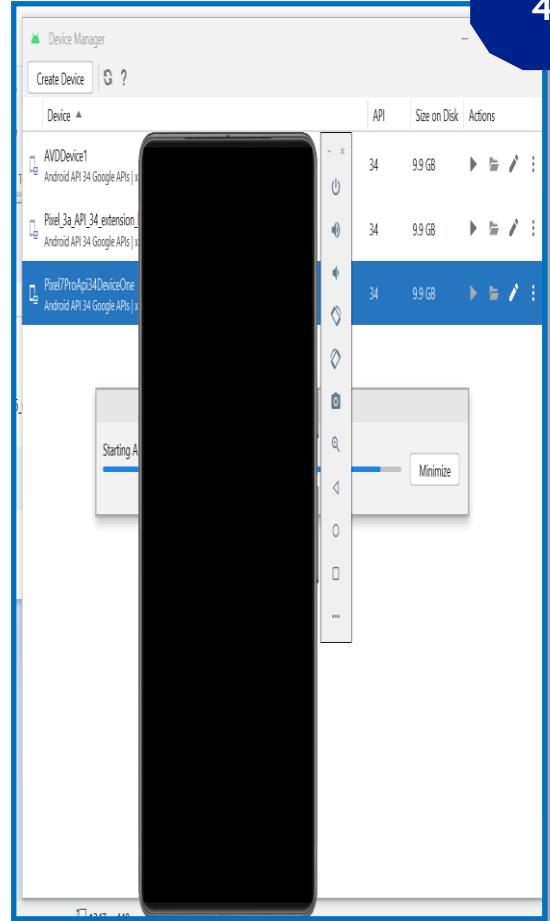


Launch Emulator

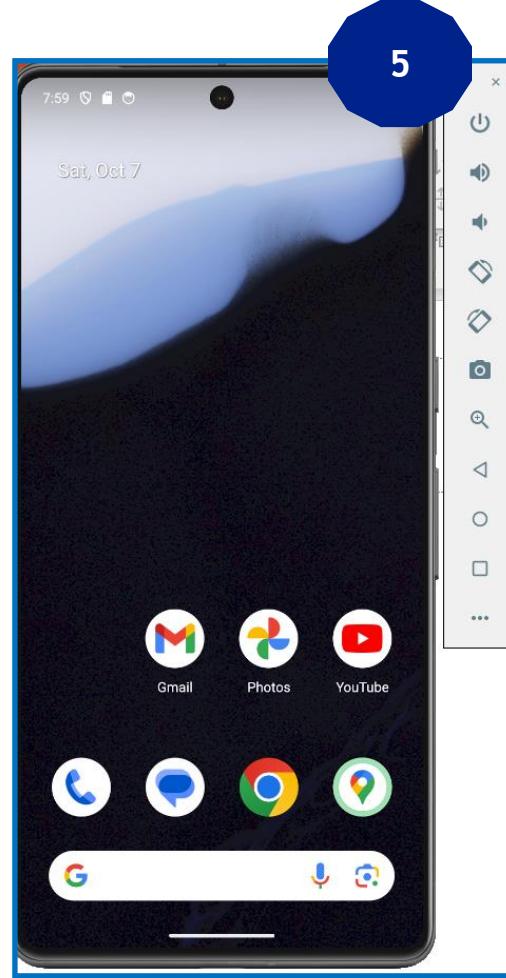
Launch Emulator



Emulator



4



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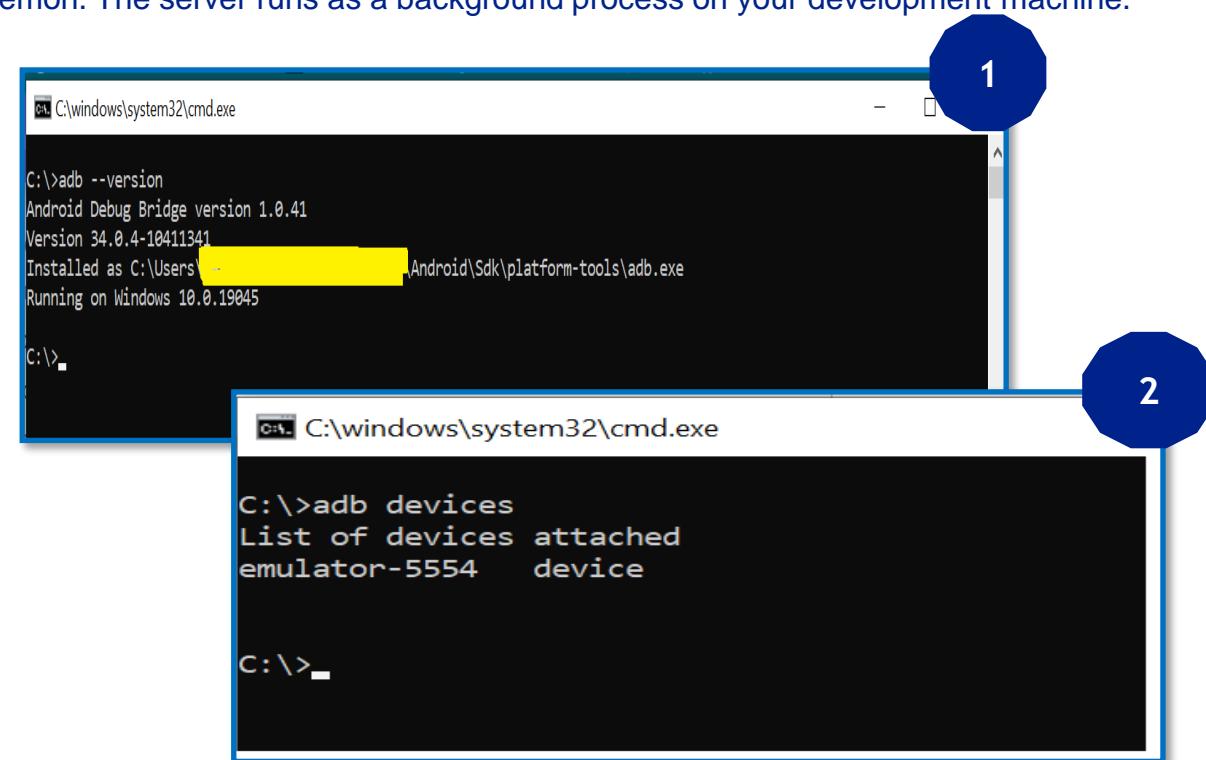
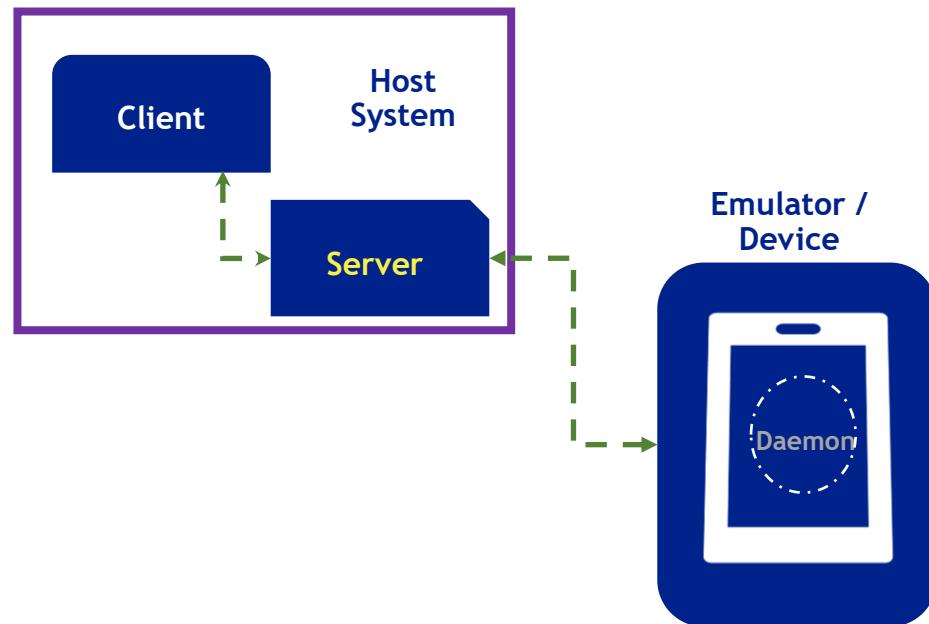
Session Ends ➤|

ADB Configuration

ADB (Android Debug Bridge)

Android Debug Bridge (adb) is a versatile command-line tool that lets you communicate with a device. The adb command facilitates a variety of device actions, such as installing and debugging apps. adb provides access to a Unix shell that you can use to run a variety of commands on a device. It is a client-server program that includes three components:

- ✓ **A client**, which sends commands. The client runs on your development machine. You can invoke a client from a command-line terminal by issuing an **adb command**.
- ✓ **A daemon (adbd)**, which runs commands on a device. The daemon runs as a background process on each device.
- ✓ **A server**, which manages communication between the client and the daemon. The server runs as a background process on your development machine.
- ✓ **adb** is included in the Android SDK Platform Tools package.



1

```
C:\windows\system32\cmd.exe
C:\>adb --version
Android Debug Bridge version 1.0.41
Version 34.0.4-10411341
Installed as C:\Users\[REDACTED]\Android\Sdk\platform-tools\adb.exe
Running on Windows 10.0.19045

C:\>
```

2

```
C:\windows\system32\cmd.exe
C:\>adb devices
List of devices attached
emulator-5554    device

C:\>
```

> **adb start-server** : Start adb server

> **adb kill-server** : Kill adb server

> **adb devices** : show list of devices / emulators that are currently available

> **adb --help** shows command line arguments

Android App (APK File Installation)

Method 1: Drag App and Drop into Emulator

Method 2: Install app into selected device or emulator through **adb** command line

➤ **Install App:**

`adb -s <emulator id> install -r <Apk Path>`

Method 3: Install app into devices in bulk through **.bat** file



installApkFile.txt

Change file extension to **.bat** and run

ADB Commands

```
C:\Users\██████████>adb devices -l
List of devices attached
emulator-5554      device product:sdk_gphone64_x86_64 model:sdk_gphone64_x86_64 device:emu64xa transport_id:1
emulator-5556      device product:sdk_gphone64_x86_64 model:sdk_gphone64_x86_64 device:emu64xa transport_id:2

C:\Users\██████████>adb devices -l
List of devices attached
emulator-5554      device product:sdk_gphone64_x86_64 model:sdk_gphone64_x86_64 device:emu64xa transport_id:1
emulator-5556      device product:sdk_gphone64_x86_64 model:sdk_gphone64_x86_64 device:emu64xa transport_id:2
emulator-5558      device product:sdk_gphone64_x86_64 model:sdk_gphone64_x86_64 device:emu64xa transport_id:3

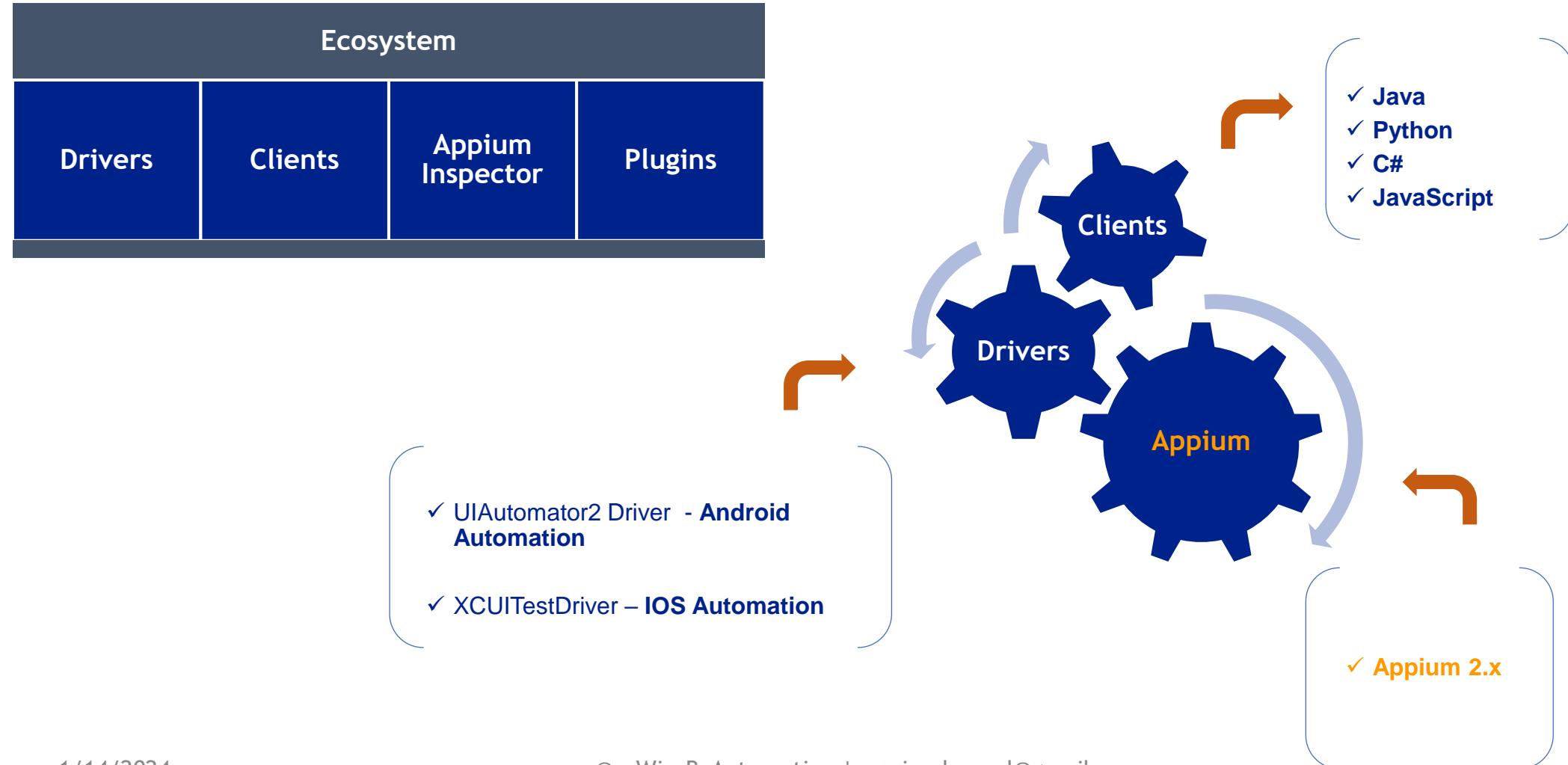
C:\Users\██████████>adb devices
List of devices attached
emulator-5554  device
emulator-5556  device
emulator-5558  device
```

Session Ends ➤|

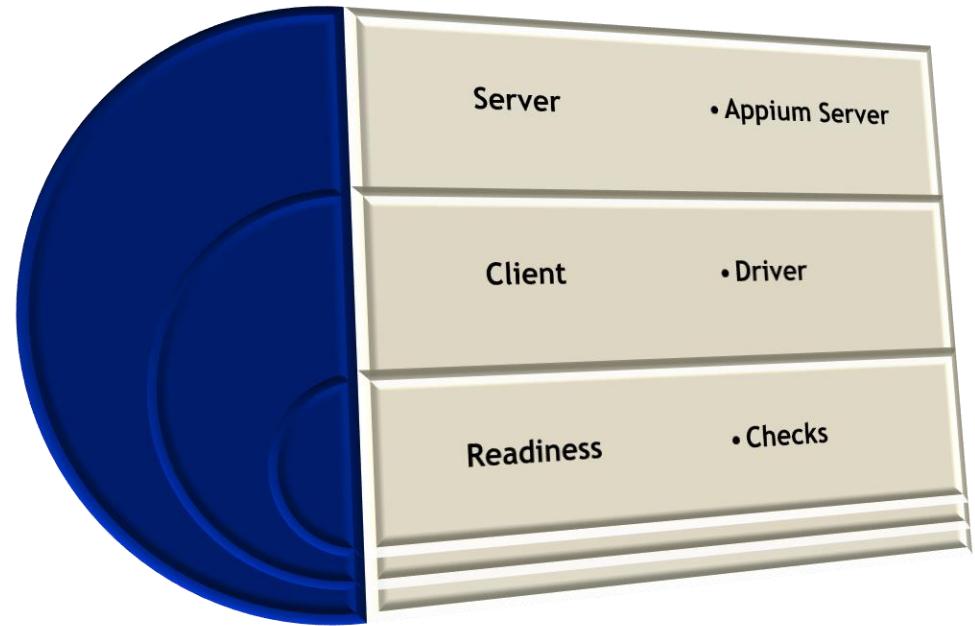


Opensource Mobile Apps Automation Solution

Appium 2.x Ecosystem



Appium Env Configuration





Appium Server

Appium Server

1

```
C:\Windows\system32\cmd.exe
C:\>node --version
v18.17.1
C:\>npm --version
9.6.7

C:\>npm i --location=global appium
npm WARN deprecated typedoc-plugin-resolve-crossmodule-references@0.3.3: Upgrade to typedoc >= 0.24 and remove typedoc-plugin-resolve-crossmodule-references from your dependencies

added 483 packages in 28s
57 packages are looking for funding
  run `npm fund` for details
npm notice
npm notice New major version of npm available! 9.6.7 -> 10.0.0
npm notice Changelog: https://github.com/npm/cli/releases/tag/v10.0.0
npm notice Run npm install -g npm@10.0.0 to update!
npm notice

C:\>
```

2

```
C:\Users\kiran>npm i -g appium
[redacted] / idealTree:chalk: sill placeDep node_modules/appium supports-color@8.1.1 OK for: @appium/support@8.1.1
C:\Windows\system32\cmd.e: X + ▾
```

```
C:\Users\kiran>npm i -g appium
added 474 packages in 14s
60 packages are looking for funding
  run `npm fund` for details
```

Install Appium Server: npm i -g appium

3

```
C:\Windows\system32\cmd.e: X + ▾
C:\Users\kiran>npm i -g appium
added 474 packages in 12s
60 packages are looking for funding
  run `npm fund` for details
C:\Users\kiran>appium --version
2.3.0
C:\Users\kiran>
```

Uninstall Appium

npm -g uninstall appium

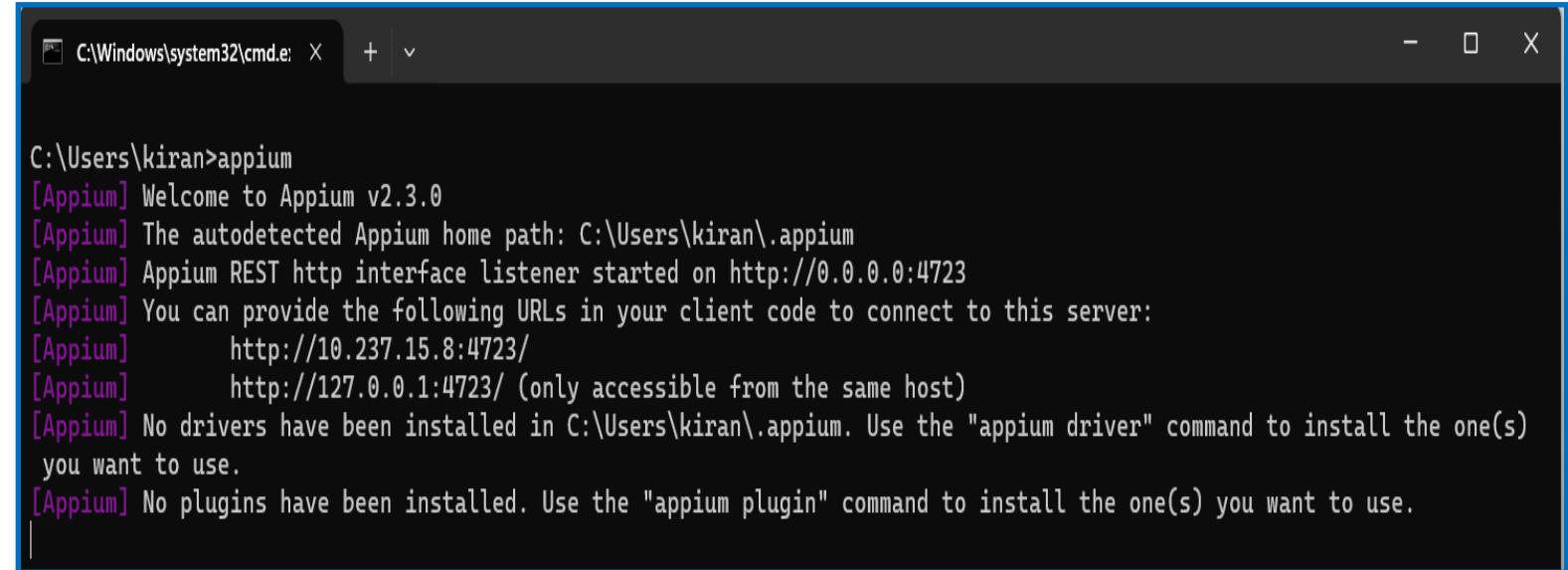
Remove .appium folder from
“C:\user\<username>\”

```
C:\Windows\system32\cmd.e: X + ▾
C:\Users\kiran>npm -g uninstall appium
removed 474 packages in 915ms
C:\Users\kiran>appium --version
'appium' is not recognized as an internal or external command,
operable program or batch file.
C:\Users\kiran>
```

appium --version

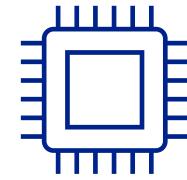
Appium Server Start

- Server
 - Start
 - appium
 - Stop
 - Ctrl + c



```
C:\Windows\system32\cmd.exe C:\Users\kiran>appium
[Appium] Welcome to Appium v2.3.0
[Appium] The autodetected Appium home path: C:\Users\kiran\.appium
[Appium] Appium REST http interface listener started on http://0.0.0.0:4723
[Appium] You can provide the following URLs in your client code to connect to this server:
[Appium]     http://10.237.15.8:4723/
[Appium]     http://127.0.0.1:4723/ (only accessible from the same host)
[Appium] No drivers have been installed in C:\Users\kiran\.appium. Use the "appium driver" command to install the one(s) you want to use.
[Appium] No plugins have been installed. Use the "appium plugin" command to install the one(s) you want to use.
```

Session Ends ➤|



Drivers

Android: UiAutomator2

Any Error popups like ChromeDriver Setup etc

Command: appium driver install uiautomator2

You can proceed with npm command line

IOS: xcuitest

npm install appium --chromedriver-skip-install --drivers=uiautomator2

Command: appium driver install xcuitest

Start Appium Server to check available drivers after installation

Command: appium

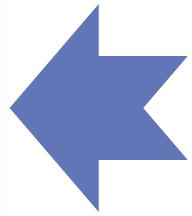
```
C:\Users\kiran>appium driver list
✓ Listing available drivers
- uiautomator2@2.35.0 [installed (npm)]
- xcuitest [not installed]
- mac2 [not installed]
- espresso [not installed]
- safari [not installed]
- gecko [not installed]
- chromium [not installed]
```

```
PS C:\> npm
Microsoft Windows [Version 10.0.19045.3448]
(c) Microsoft Corporation. All rights reserved.

C:\Users\████████>appium
[Appium] Welcome to Appium v2.1.3
[Appium] Attempting to load driver xcuitest...
[debug] [Appium] Requiring driver at C:\Users\████████.appium\node_modules\appium-xcuitest-driver
[Appium] Attempting to load driver uiautomator2...
[debug] [Appium] Requiring driver at C:\Users\████████.appium\node_modules\appium-uiautomator2-driver
[Appium] Appium REST http interface listener started on http://0.0.0.0:4723
[Appium] You can provide the following URLs in your client code to connect to this server:
[Appium]   http://172.24.37.20:4723/
[Appium]   http://10.237.15.12:4723/
[Appium]   http://127.0.0.1:4723/ (only accessible from the same host)
[Appium] Available drivers:
[Appium]   - xcuitest@4.35.0 (automationName 'XCUITest')
[Appium]   - uiautomator2@2.29.10 (automationName 'UiAutomator2')
[Appium] No plugins have been installed. Use the "appium plugin" command to install the one(s) you want to use.
```

Drivers By Appium Team

Driver	Installation Key	Platform(s)	Mode(s)
Chromium	chromium	macOS, Windows, Linux	Web
Espresso	espresso	Android	Native
Gecko	gecko	macOS, Windows, Linux, Android	Web
Mac2	mac2	macOS	Native
Safari	safari	macOS, iOS	Web
UiAutomator2	uiautomator2	Android	Native, Hybrid, Web
XCUITest	xcuitest	iOS	Native, Hybrid, Web



Developed and
Maintained by Appium
Team

Drivers By Other Team

Driver	Installation Key	Platform(s)	Mode(s)	Supported By
Flutter	<code>--source=npm appium-flutter-driver</code>	iOS, Android	Native	Community
LG WebOS	<code>--source=npm appium-lg-webos-driver</code>	LG TV	Web	HeadSpin
Linux	<code>--source=npm @stdspa/appium-linux-driver</code>	Linux	Native	@fantonglang
Roku	<code>--source=npm @headspinio/appium-roku-driver</code>	Roku	Native	HeadSpin
Tizen	<code>--source=npm appium-tizen-driver</code>	Android	Native	Community / Samsung
TizenTV	<code>--source=npm appium-tizen-tv-driver</code>	Samsung TV	Web	HeadSpin
Windows	<code>--source=npm appium-windows-driver</code>	Windows	Native	Community / Microsoft
Youi	<code>--source=npm appium-youiengine-driver</code>	iOS, Android, macOS, Linux, tvOS	Native	Community / You.i

Developed and Maintained by
Other Teams

Clients By Appium Team

Client	Language	Supported By
Appium Java client	Java	Appium Team
Appium Python client	Python	Appium Team
Appium Ruby Core client (Recommended) Appium Ruby client	Ruby	Appium Team
WebDriverIO Nightwatch	Node.js	Community
Appium .NET client	C#	Appium Team*
RobotFramework	DSL	Community

Developed and Maintained by
Appium Team

Session Ends ➤|



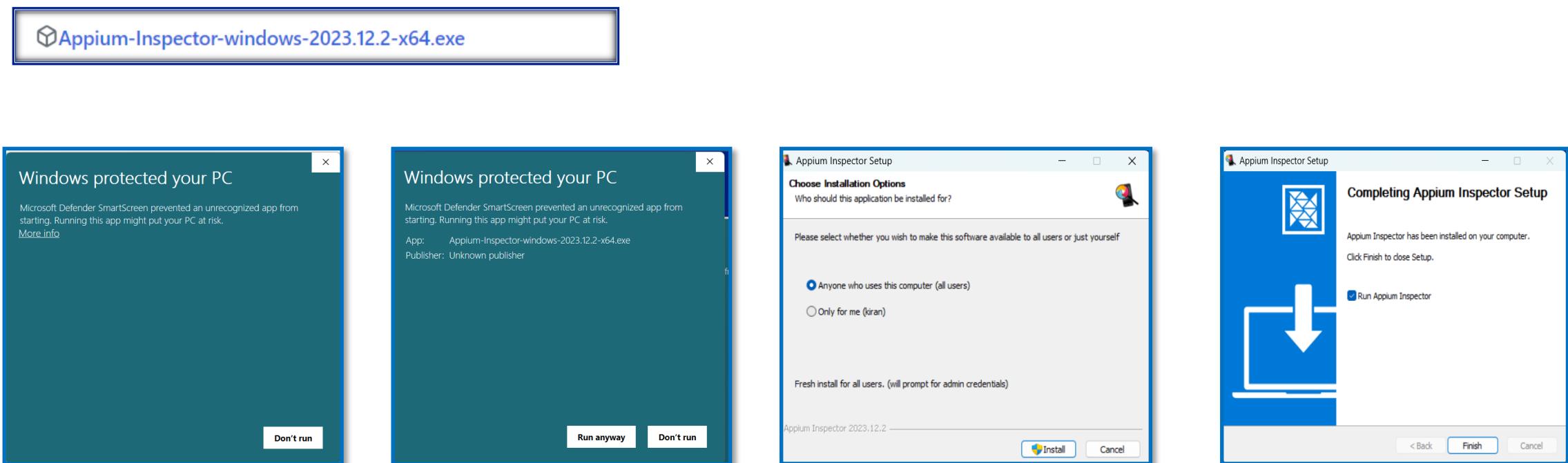
Appium Inspector

Appium Inspector

Windows Exe:

Refer releases in the below location and choose the Windows Installer file to download and install

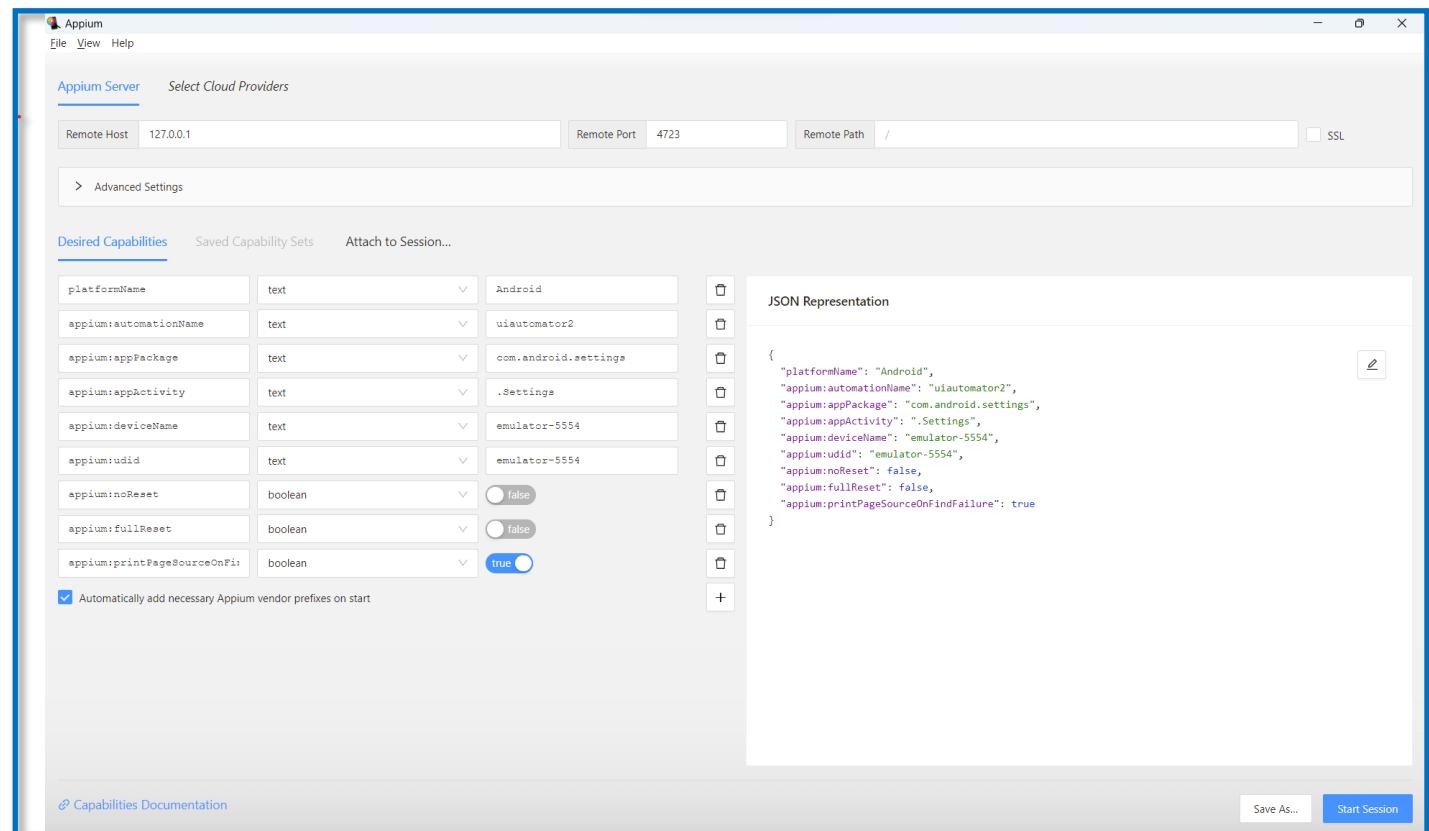
<https://github.com/appium/appium-inspector/releases>



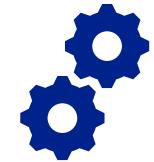
Appium Inspector

Capabilities:

```
{
  "platformName": "Android",
  "appium:automationName": "uiautomator2",
  "appium:appPackage": "com.android.settings",
  "appium:appActivity": ".Settings",
  "appium:deviceName": "emulator-5554",
  "appium:udid": "emulator-5554",
  "appium:noReset": false,
  "appium:fullReset": false,
  "appium:printPageSourceOnFindFailure": true
}
```



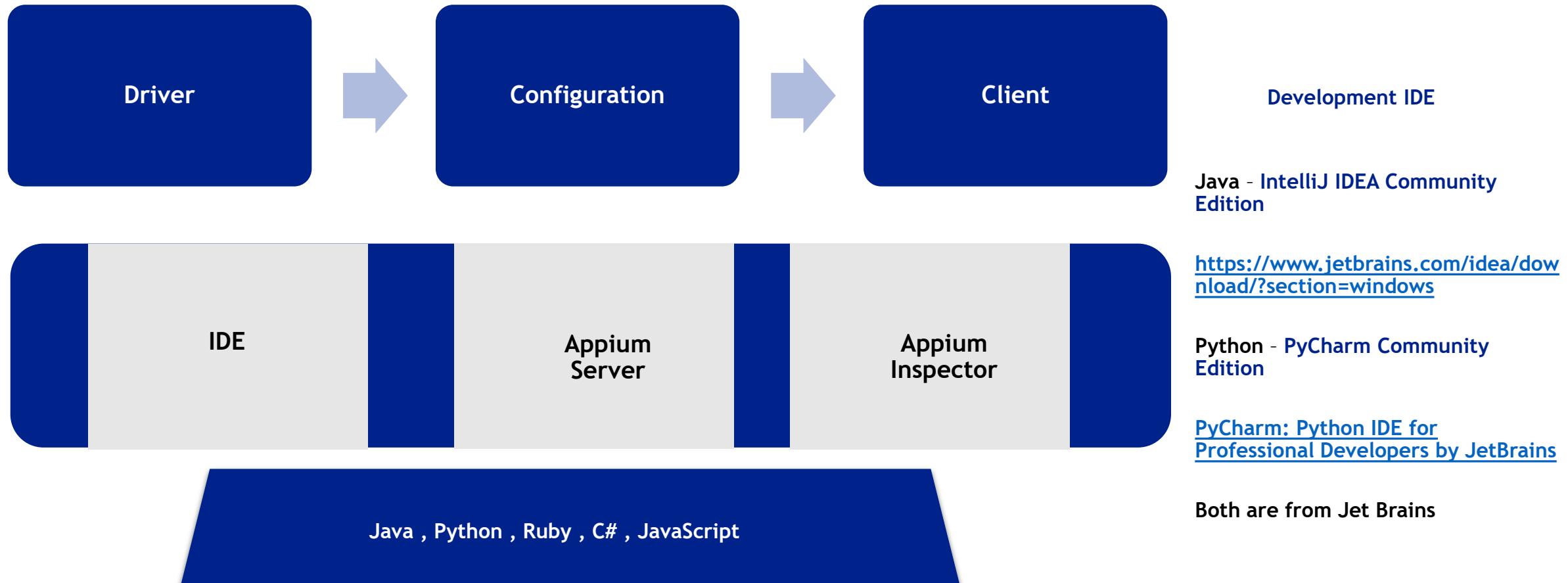
Session Ends ➤|



Android Automation

Final Checks To Automation Readiness

Android Automation



Development IDE

Development IDE

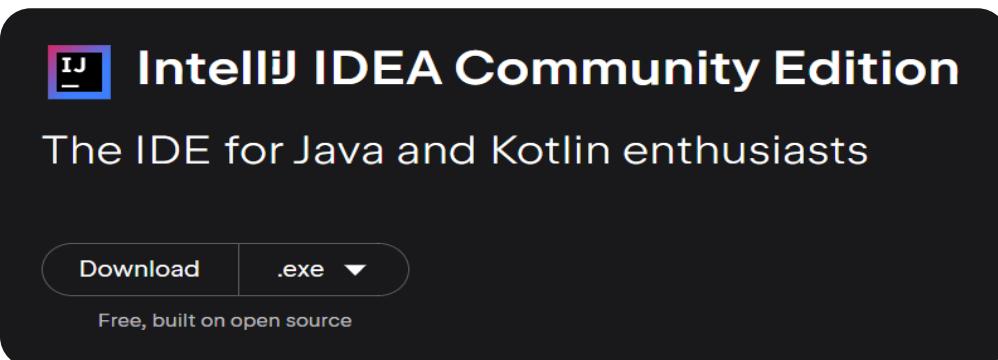
Java - IntelliJ IDEA Community Edition

<https://www.jetbrains.com/idea/download/?section=windows>

Python - PyCharm Community Edition

[PyCharm: Python IDE for Professional Developers by JetBrains](#)

Both are from Jet Brains



The page features the IntelliJ IDEA logo and the text "IntelliJ IDEA Community Edition". Below it is the tagline "The IDE for Java and Kotlin enthusiasts". A "Download" button is present, along with a ".exe" dropdown menu and the text "Free, built on open source".



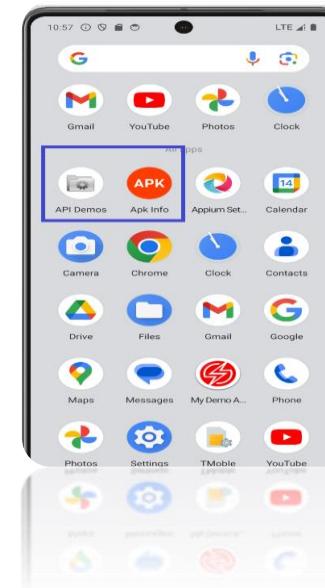
The page features the PyCharm logo and the text "PyCharm Community Edition". Below it is the tagline "The IDE for Pure Python Development". A "Download" button is present, along with a ".exe" dropdown menu and the text "Free, built on open source".

- ❑ **Android File:** .apk (Android Package Kit)
- ❑ **Android Package view**
 - ❑ Package Name
 - ❑ Main Activity
- ❑ App can be installed through two ways in Emulator
 - ✓ Drag and Drop
 - ✓ Using adb command line <Refer Previous Session>

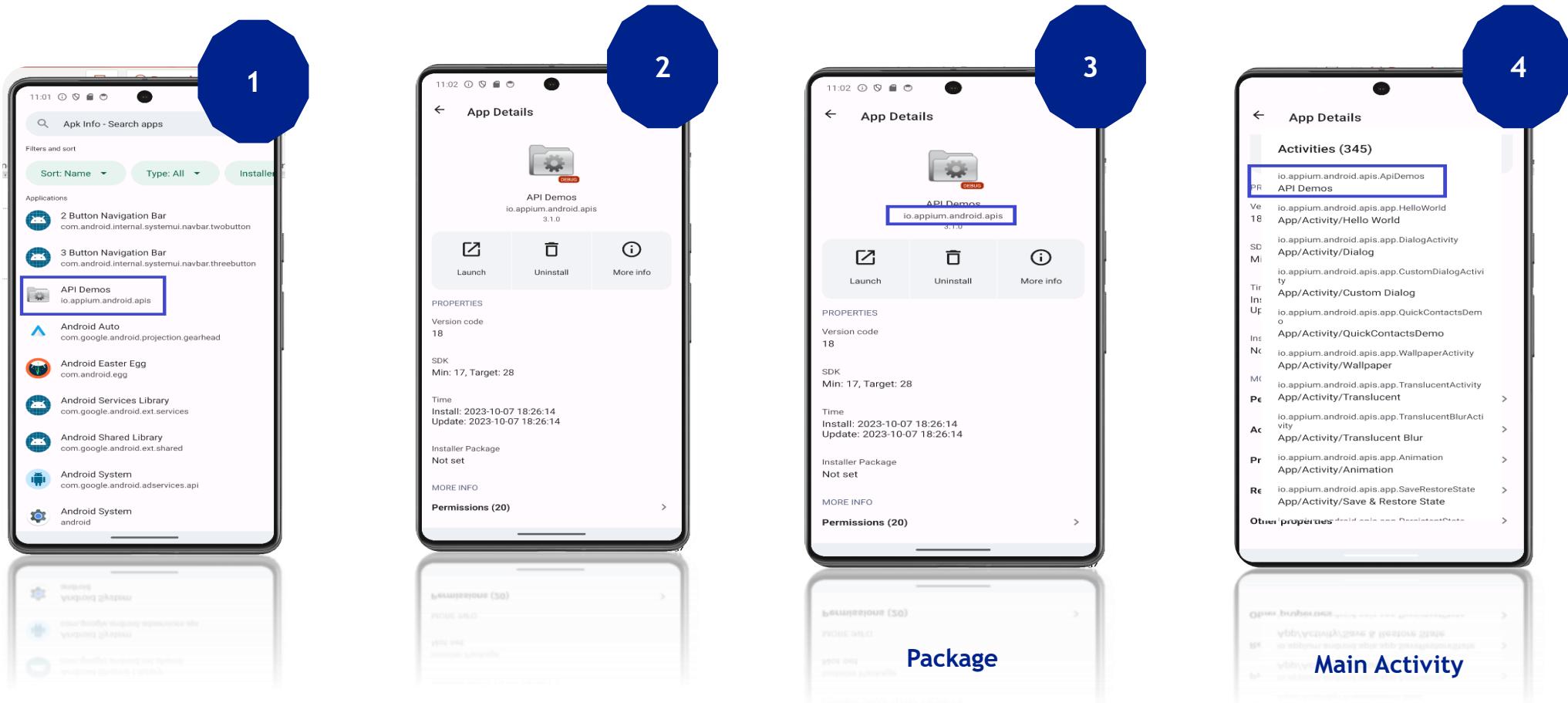


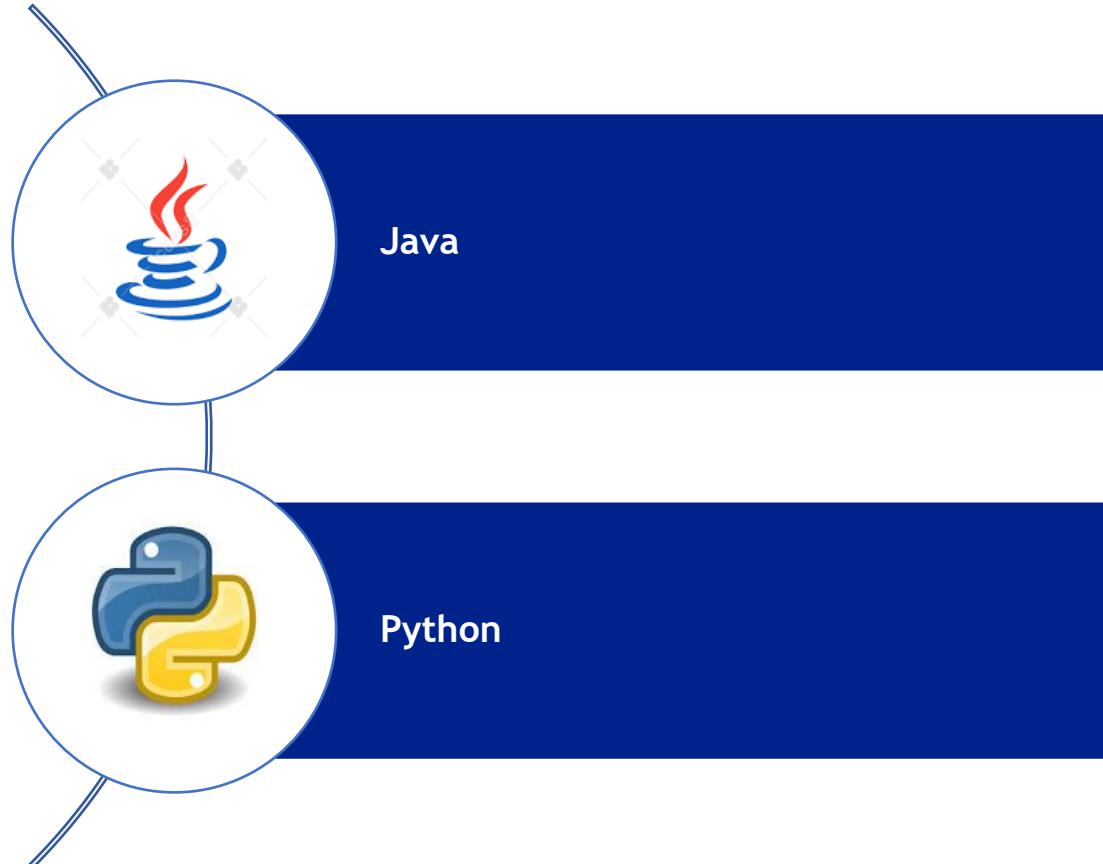
Util App “Apk Info” app to install in the same device

- ❑ Open Apk Info app
- ❑ All apps' details are listed
- ❑ Select Target App
 - ✓ See Package Name
 - ✓ See Main Activity



App Package and Main Activity





Refer any Tutorials for Client Setup

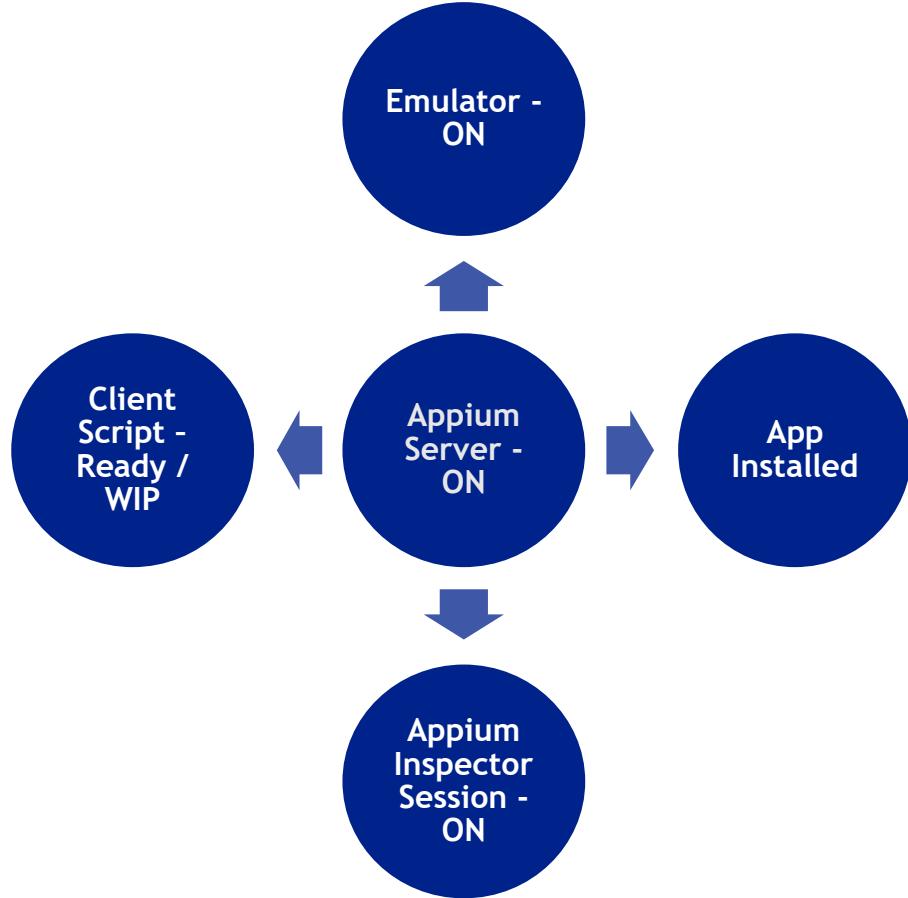
Open JDK

<https://learn.microsoft.com/en-us/java/openjdk/download#openjdk-11>



<https://www.python.org/>

Automation Readiness



Appium Server: Receive inputs from clients and provide response

Emulator: Execute actions on AUT

App: AUT installed on Emulator

Appium Inspector: Helps to identify locators of Mobile Element

Client / Script: Send Instructions to Appium Server



Session Ends ➤|



Java + Gradle <Build Tool>

Java 11 with Gradle 7.6.1

```
Gradle 7.6.1
-----
Build time: 2023-02-24 13:54:42 UTC
Revision: 3905fe8ac072bbd925c70ddbdddf4463341f4b4

Kotlin: 1.7.10
Groovy: 3.0.13
Ant: Apache Ant(TM) version 1.10.11 compiled on July 10 2021
JVM: 11.0.19 (Microsoft 11.0.19+7-LTS)
OS: Windows 10 10.0 amd64
```

Ensure Java and Gradle Compatibility

<https://docs.gradle.org/current/userguide/compatibility.html>



Gradle Releases:

<https://gradle.org/releases/>

CONFIGURATION

Download Binary

- ✓ Set GRADLE_HOME
- ✓ Set System Path as %GRADLE_HOME%/bin



Java Project Check

Ready Java with Gradle Project Configuration

Steps:

- ✓ Ensure to Install App
 - ✓ Mandatory Capabilities in UiAutomator2 Options
 - ✓ Android Driver Initialization
 - ✓ Operations
 - ✓ Quit
- > [Using Demo Apps](#)
- > [Appium Check Script](#)

Mandatory:

Appium server is on at host address with port no - <http://127.0.0.1:4723>



appiumcheckScript.txt

Session Ends ➤|



Python Project

Python Project

IDE:

PyCharm (Community Addition)

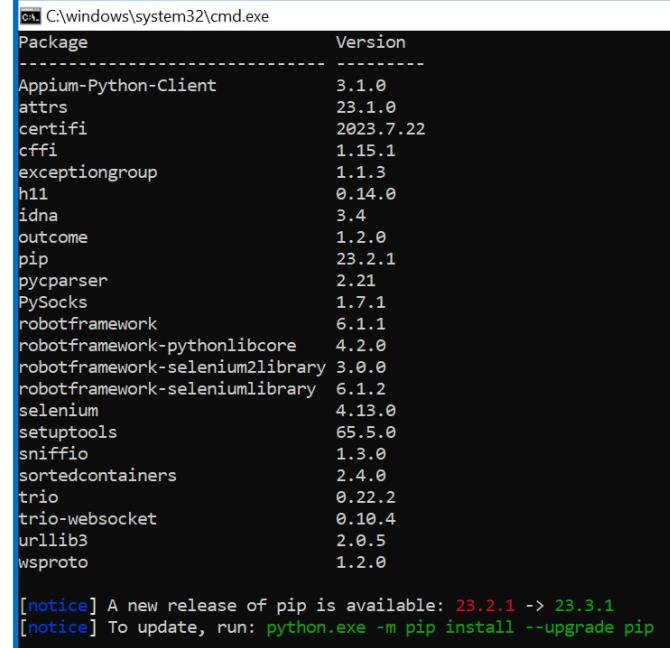
Python Client Installation

pip install Appium-Python-Client



appiumcheckScript-Python.txt

Script



```
C:\windows\system32\cmd.exe
Package           Version
-----
Appium-Python-Client 3.1.0
attrs              23.1.0
certifi            2023.7.22
cffi               1.15.1
exceptiongroup    1.1.3
h11                0.14.0
idna               3.4
outcome            1.2.0
pip                23.2.1
pycparser          2.21
PySocks             1.7.1
robotframework     6.1.1
robotframework-pythonlibcore 4.2.0
robotframework-selenium2library 3.0.0
robotframework-seleniumlibrary 6.1.2
selenium           4.13.0
setuptools         65.5.0
sniffio            1.3.0
sortedcontainers   2.4.0
trio               0.22.2
trio-websocket    0.10.4
urllib3            2.0.5
wsproto            1.2.0

[notice] A new release of pip is available: 23.2.1 -> 23.3.1
[notice] To update, run: python.exe -m pip install --upgrade pip
```

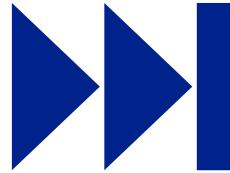
Command: pip list

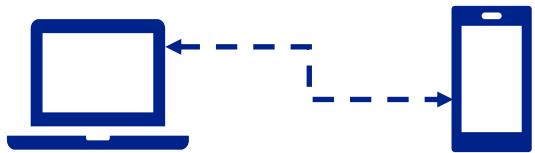


Command To Know Installed Packages in the system



Session Ends

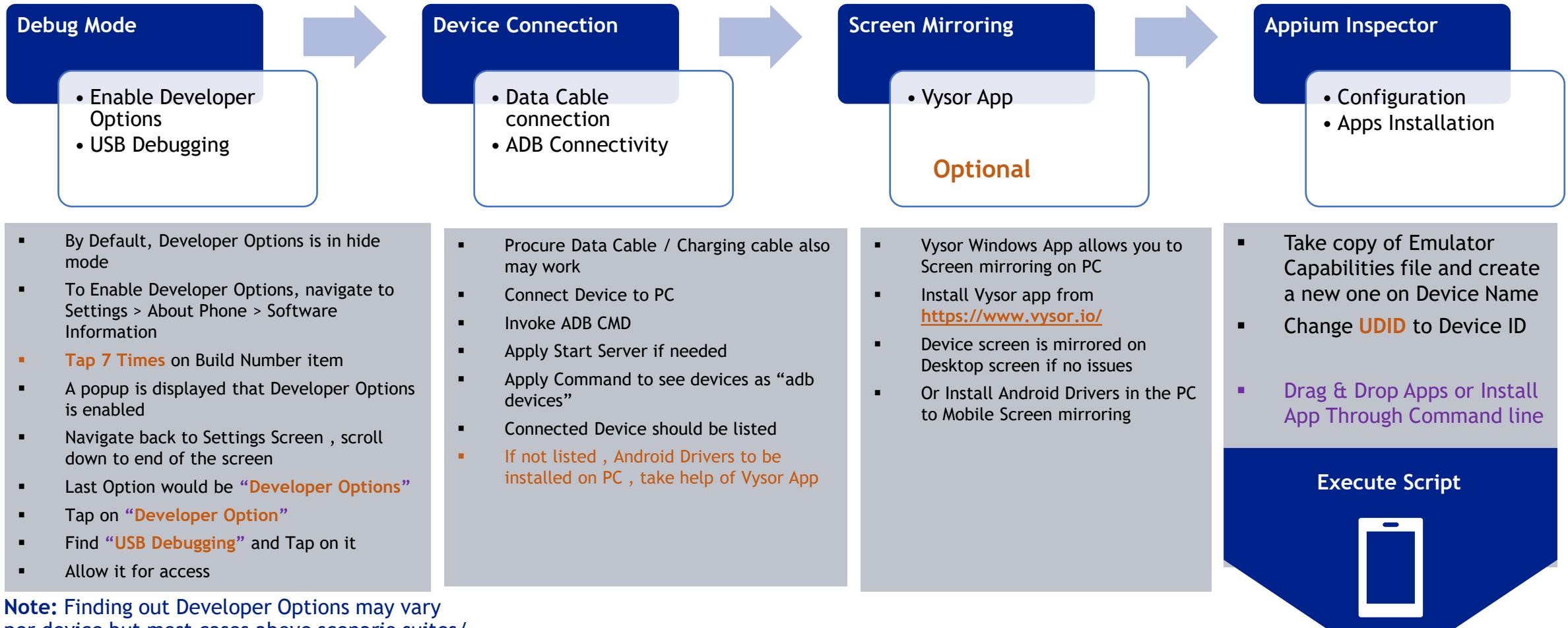




Android Device

Paly at Own Device

Android Device Configuration



- By Default, Developer Options is in hide mode
- To Enable Developer Options, navigate to Settings > About Phone > Software Information
- **Tap 7 Times** on Build Number item
- A popup is displayed that Developer Options is enabled
- Navigate back to Settings Screen , scroll down to end of the screen
- Last Option would be “**Developer Options**”
- Tap on “**Developer Option**”
- Find “**USB Debugging**” and Tap on it
- Allow it for access

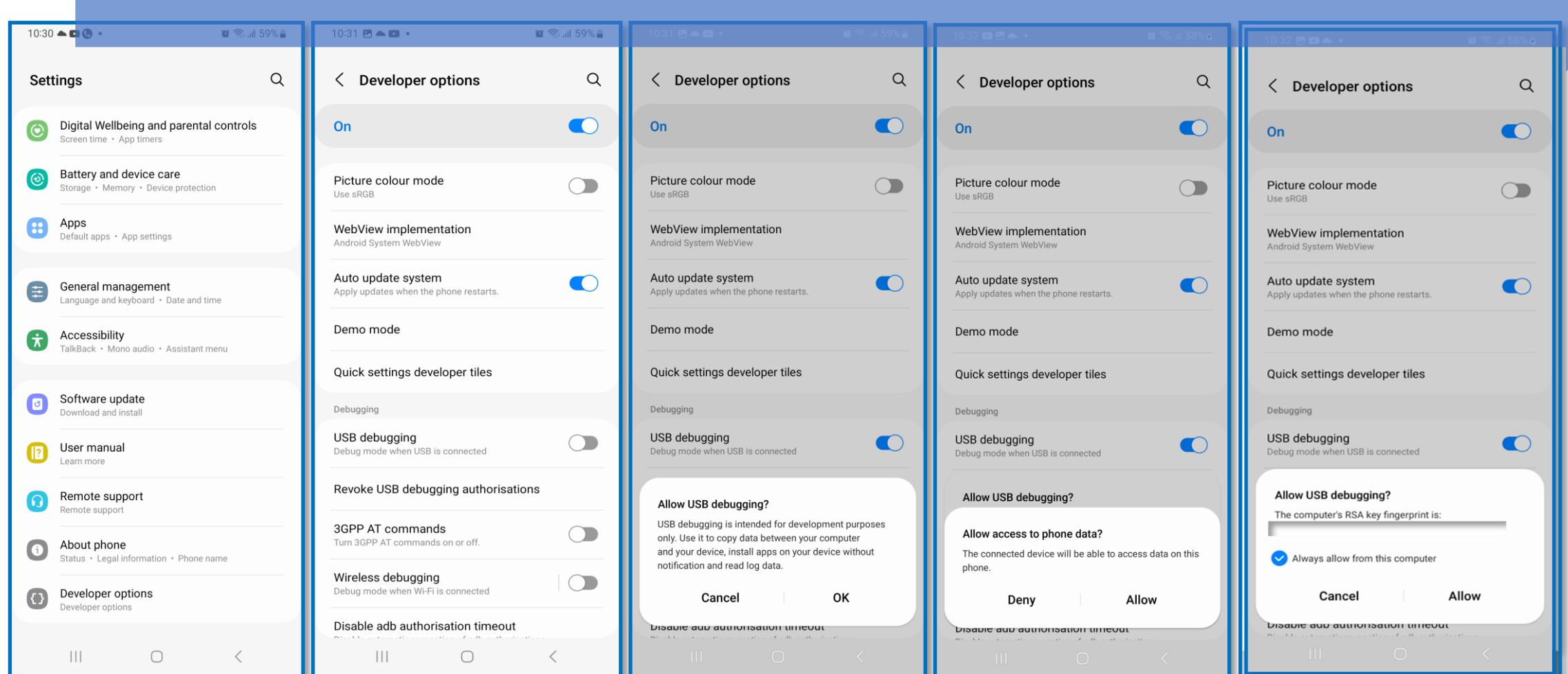
- Procure Data Cable / Charging cable also may work
- Connect Device to PC
- Invoke ADB CMD
- Apply Start Server if needed
- Apply Command to see devices as “adb devices”
- Connected Device should be listed
- If not listed , Android Drivers to be installed on PC , take help of **Vysor App**

- Vysor Windows App allows you to Screen mirroring on PC
- Install Vysor app from <https://www.vysor.io/>
- Device screen is mirrored on Desktop screen if no issues
- Or Install Android Drivers in the PC to Mobile Screen mirroring

- Take copy of Emulator Capabilities file and create a new one on Device Name
- Change **UDID** to Device ID
- **Drag & Drop Apps or Install App Through Command line**

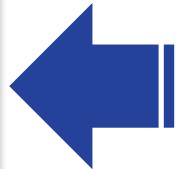
Note: Finding out Developer Options may vary per device but most cases above scenario suites/ Google it if need based on Device model

Developer Options



ADB Devices

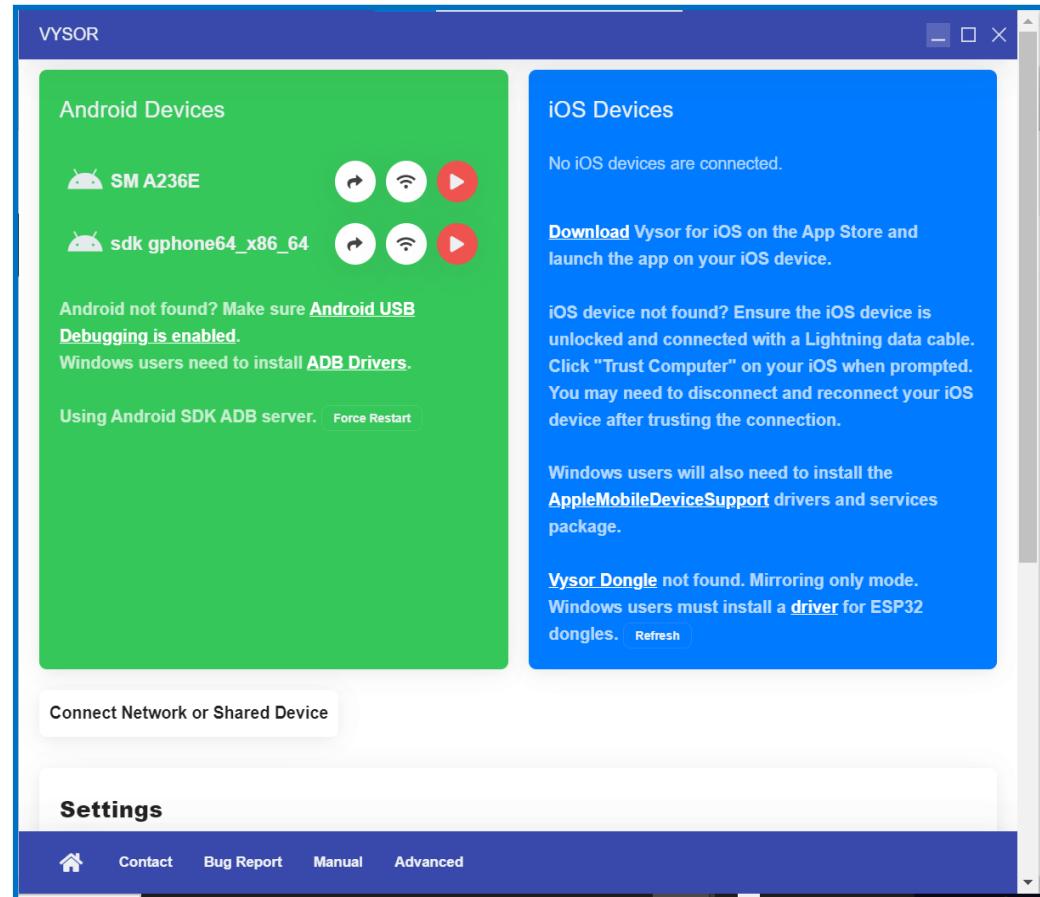
```
C:\ Select C:\windows\system32\cmd.exe  
  
C:\Users\[REDACTED]\>adb devices  
List of devices attached  
[REDACTED] device  
emulator-5554 device
```



```
C:\windows\system32\cmd.exe  
  
C:\Users\[REDACTED]\>adb devices  
List of devices attached  
[REDACTED] device  
emulator-5554 device  
  
C:\Users\[REDACTED]\>adb devices -l  
List of devices attached  
[REDACTED] device product:a23xqndxx model:SM_A236E device:a23xq transport_id:3  
emulator-5554 device product:sdk_gphone64_x86_64 model:sdk_gphone64_x86_64 device:emu64xa transport_id:1
```

- ✓ Connect Device to PC using Data Cable
- ✓ Allow 1 min to sync up with PC

```
C:\Users\[REDACTED]\AppData\Local\Android\Sdk\platform-tools>adb -s [REDACTED] install -r C:\DEMOAPPS\ApiDemos-debug.apk  
Performing Streamed Install  
Success  
  
C:\Users\[REDACTED]\AppData\Local\Android\Sdk\platform-tools>adb -s [REDACTED] install -r C:\DEMOAPPS\apkinfo_v2.4.8.apk  
Performing Streamed Install  
adb: failed to install C:\DEMOAPPS\apkinfo_v2.4.8.apk: Failure [INSTALL_FAILED_VERSION_DOWNGRADE: Downgrade detected: Update version code 248 is older than current 250]  
  
C:\Users\[REDACTED]\AppData\Local\Android\Sdk\platform-tools>adb -s [REDACTED] install -r C:\DEMOAPPS\MyDemo.apk  
Performing Streamed Install  
Success
```



USB Debugging Trouble Shoot: [Vysor Support](#)

ADB Drivers: [Universal ADB Drivers \(clockworkmod.com\)](#)

App:

- ✓ Install App Through Command line
- ✓ Install via Drag and Drop

Capabilities Set as per Device ID:**Options:**

```
{  
  "platformName": "Android",  
  "appium:automationName": "uiautomator2",  
  "appium:appPackage": "com.android.settings",  
  "appium:appActivity": ".Settings",  
  "appium:language": "en",  
  "appium:locale": "US",  
  "appium:deviceName": "S23",  
  "appium:udid": "XXXXXXXXXX"  
}
```

```
public static void main(String[] args) throws MalformedURLException {  
  
    UiAutomator2Options options = new UiAutomator2Options();  
    options.setAutomationName("UiAutomator2");  
    options.setUdid("XXXXXXXXXXXX");  
    options.setAppPackage("io.appium.android.apis");  
    options.setAppActivity("io.appium.android.apis.ApiDemos");  
    options.setPlatformName("Android");  
    options.setPlatformVersion("14");  
  
    AppiumDriver driver = new AndroidDriver(new URL("http://127.0.0.1:4723"), options);  
    WebElement element = driver.findElement(AppiumBy.accessibilityId("App"));  
    System.out.println(element.getText());  
    element.click();  
    element = driver.findElement(AppiumBy.accessibilityId("Alarm"));  
    System.out.println(element.getText());  
    driver.navigate().back();  
    driver.quit();  
  
}
```

Session Ends ➤|

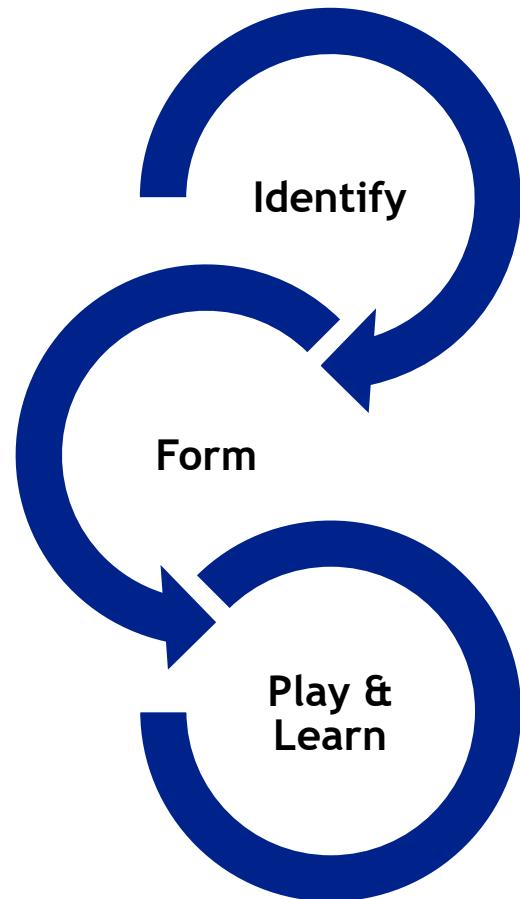
appium 2.x

@Setup By Playlist 1 Conclusion



appium™

@Setup By Playlist 1 Conclude



Demo Apps	Refer Link
ADB Install App Bat File	Refer Link
Appium - Java check	Refer Link
Appium - Python check	Refer Link
Appium2.x @ Setup Playlist Guide	Refer Link
Appium 2.x -@Setup Playlist (YouTube Channel)	Refer Link



THANK YOU



reWire
fueled by decode