

APPIUM INSTALLATION PROCESS

JAVA INSTALLATION LATEST JDK VERSION SHOULD INSTALLED IN THE LOCAL SYSTEM

To check which version do we have in our local machine- Go to command prompt and type this command: **java -version**

Example:

```
C:\Users\LENOVO>java -version
```

```
java version "17.0.8" 2023-07-18 LTS
```

```
Java (TM) SE Runtime Environment (build 17.0.8+9-LTS-211)
```

```
Java HotSpot(TM) 64-Bit Server VM (build 17.0.8+9-LTS-211, mixed mode, sharing)
```

Note:

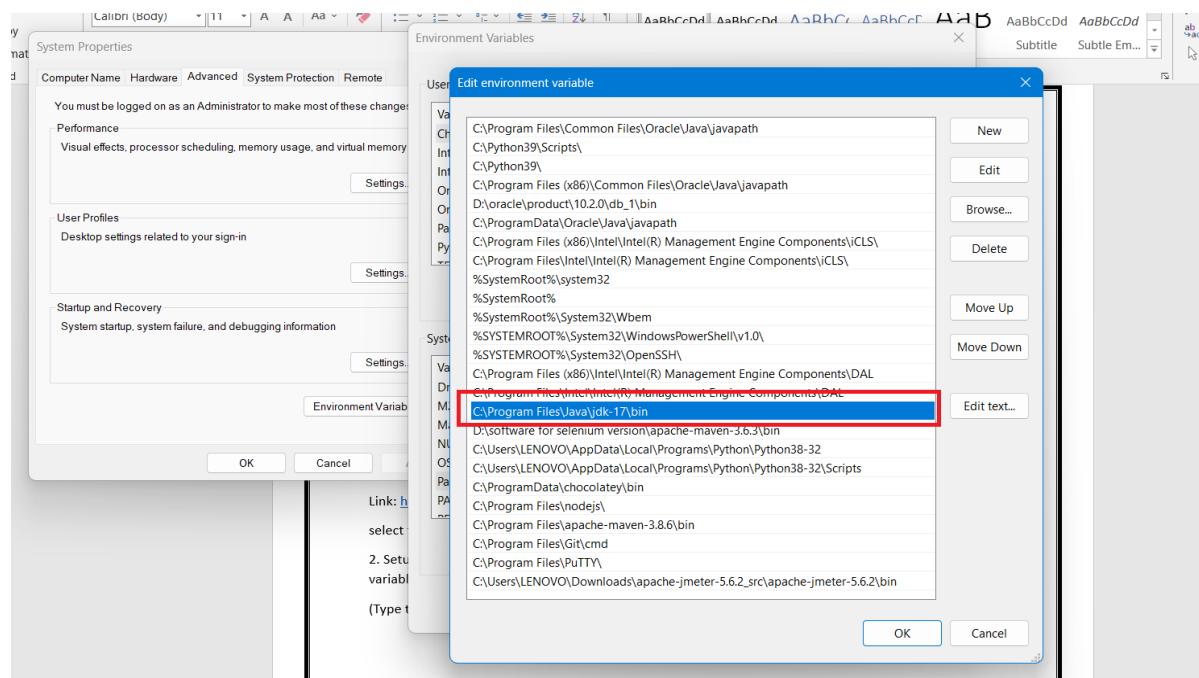
Alternate In-order to download the latest/required JDK versions go to this

Link: <https://www.oracle.com/in/java/technologies/downloads/>

(Select the JDK version- Go to the desired OS and select the JDK installer- download it.)

Setup and configure the JDK bin folder path into the edit environment variables-under system variable-under path parameter- paste the JDK bin folder path- save and apply to complete.

(Type this command again **java -version** to see the java is installed or not.)



HOW TO SETUP AND CONFIGURE ECLIPSE IDE ON THE WINDOWS PLATFORM

prerequisite:

1.Installation of Java (JDK version)

Link to access- <https://www.oracle.com/in/java/technologies/downloads/>

(Download as per the suitable platform OS)

2.After downloaded the MSI installer file for JDK version.

3.Install the setup properly by setting the path of the JDK.

4.Go to the desired location where java JDK is installed in the local machine.

5.switch to the exact path- C:\Program Files\Java\jdk-11\bin

6.copy the entire path- go to edit the system environment variables-under system properties- go to environment variable- go to the system variables(on your local machine)-select path parameter and copy paste the entire above location from step-5 then rest ok-ok-ok for completion.

7.validating the java JDK is installed for the correct version or not by using java -version(command) in the CLI mode.

example-

C:\Users\Dipti Ranjan Dash>java -version

java version "18" 2022-03-22

Java(TM) SE Runtime Environment (build 18+36-2087)

Java HotSpot(TM) 64-Bit Server VM (build 18+36-2087, mixed mode, sharing)

Note:

we can change the JDK version as per the requirement anytime in between the local machine doing so by following the above step-6.

The only thing to remember is we have to set the correct JDK version path in the local edit environment system variables.

Setup and configuration for eclipse IDE:

1.Installation-

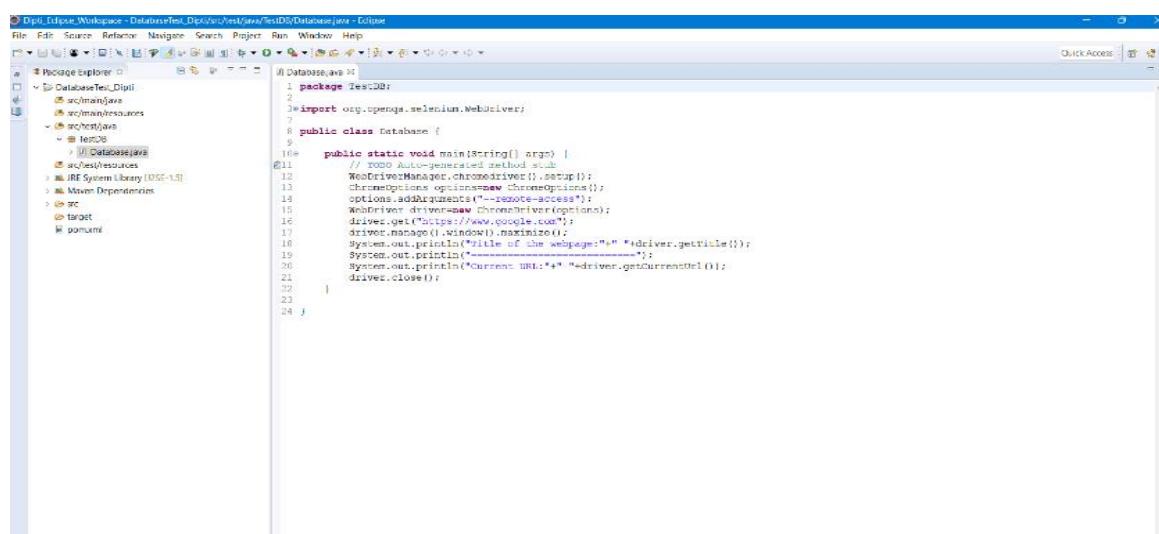
Direct Link to access(eclipse)- <https://eclipseide.org/>

steps to install eclipse- <https://www.eclipse.org/downloads/packages/installer>

2.Downloading and installing the eclipse ide into the local system.

3.Open the eclipse ide with desired workspace location.

4.setup is completed and ready to rock.

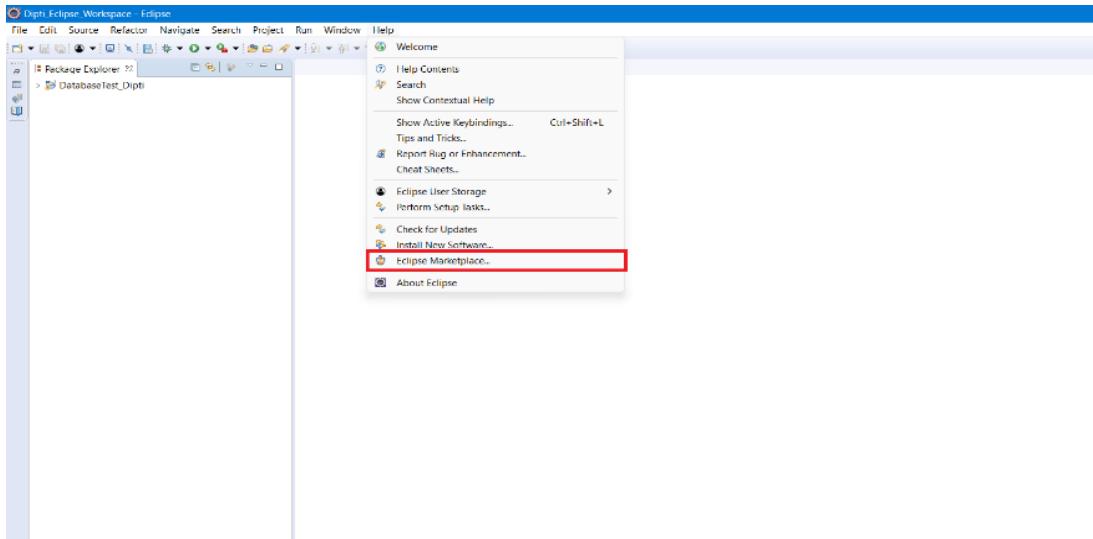


A screenshot of the Eclipse IDE interface. The title bar reads "Dipti Eclipse Workspace - DatabaseTest_Dipti/eclipse/TestDB/Database.java - Editor". The menu bar includes File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, Help. The toolbar has various icons for file operations. The left sidebar shows the "Package Explorer" with a tree view of the project structure. The main area displays the Java code for "Database.java".

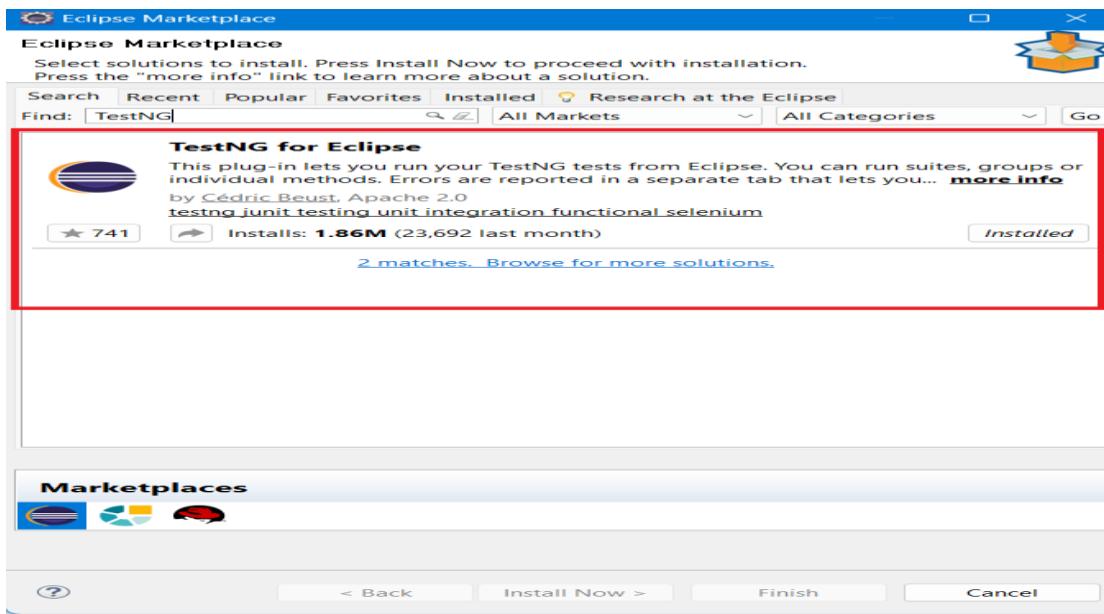
```
1 package TestDB;
2
3 import org.openqa.selenium.WebDriver;
4
5 public class Database {
6
7     public static void main(String[] args) {
8         // TODO Auto-generated method stub
9         WebDriverManager.chromedriver().setup();
10        ChromeOptions options = new ChromeOptions();
11        options.addArguments("remote-allow-origins=*");
12        WebDriver driver = new ChromeDriver(options);
13        driver.get("https://www.google.com");
14        driver.manage().window().maximize();
15        System.out.println("Title of the webpage:" + driver.getTitle());
16        System.out.println("Current URL:" + driver.getCurrentUrl());
17        driver.close();
18    }
19 }
20
21
22
23
24 }
```

TESTNG PLUGIN INSTALLATION- ECLIPSE IDE MARKETPLACE

1. Open eclipse IDE- Navigate to eclipse marketplace



2. If it is already installed then awesome you are ready to rock and begin the automation mobile testing. (If not installed then go to the marketplace and search for TestNG and download the plugin by accepting the licenses and all required information and accept all untrusted certificates and restart the IDE)



MAVEN PLUGIN SETUP AND CONFIGURATION

1.setup and install Maven plugin to create maven project in eclipse IDE.

Link- <https://maven.apache.org/download.cgi>

Files

Maven is distributed in several formats for your convenience. Simply pick a ready-made binary distribution archive and follow the [installation instructions](#). Use a source archive if you intend to build Maven yourself.

In order to guard against corrupted downloads/installations, it is highly recommended to [verify the signature](#) of the release bundles against the public [KEYS](#) used by the Apache Maven developers.

Link	Checksums	Signature
Binary tar.gz archive	apache-maven-3.9.5-bin.tar.gz	apache-maven-3.9.5-bin.tar.gz.asc
Binary zip archive	apache-maven-3.9.5-bin.zip	apache-maven-3.9.5-bin.zip.asc
Source tar.gz archive	apache-maven-3.9.5-src.tar.gz	apache-maven-3.9.5-src.tar.gz.asc
Source zip archive	apache-maven-3.9.5-src.zip	apache-maven-3.9.5-src.zip.asc

▪ 3.9.5 [Release Notes](#) and [Release Reference Documentation](#)

▪ latest source code from source repository

▪ Distributed under the Apache License, version 2.0

▪ other:

▪ [Apache Maven Website As Documentation Archive](#)

Extract the folder and go to the bin folder copy the entire path and paste it into the edit environment variables-under system variable-under path parameter- paste the maven path bin folder- save and apply to complete.

(To check installed or not go to command prompt type: **mvn -version**)

```
C:\Users\LENOVO>mvn -version
Apache Maven 3.8.6 (84538c9988a25aec085021c365c560670ad80f63)
Maven home: C:\Program Files\apache-maven-3.8.6
Java version: 17.0.8, vendor: Oracle Corporation, runtime: C:\Program Files\Java\jdk-17
Default locale: en_US, platform encoding: Cp1252
OS name: "windows 11", version: "10.0", arch: "amd64", family: "windows"

C:\Users\LENOVO>
```

INSTALLATION OF ANDROID STUDIO

Download the android studio:

Link to access: <https://developer.android.com/studio>

The screenshot shows the 'Android Studio downloads' section of the developer website. A red box highlights the 'Download' button in the top navigation bar. Another red box highlights the table where the Windows 64-bit package is listed.

Platform	Android Studio package	Size	SHA-256 checksum
Windows (64-bit)	android-studio-2022.3.1.20-windows.exe Recommended	1.1 GB	495d55bdd8bc1b8c6a41fcc5a31f8db0fbcd199a82fc4b0847d32f99fbef1b6
Windows (64-bit)	android-studio-2022.3.1.20-windows.zip No .exe installer	1.1 GB	c3ff4df64b1714867ee4301e5cbd9ea73a15b438512f16bd530066b587cb5c9
Mac (64-bit)	android-studio-2022.3.1.20-mac.dmg	1.2 GB	2c3c4ff44b015ff43ab350ed6218d24755835967bd3e3f1be6984d5334d0250f8

Accept the terms and license agreement and all.

The screenshot shows the '14. General Legal Terms' section of the license agreement. A red box highlights the checkbox for accepting the terms and conditions. Another red box highlights the green 'Download Android Studio Giraffe | 2022.3.1 Patch 2 for Windows' button.

13.1 Google may make changes to the License Agreement as it distributes new versions of the SDK. When these changes are made, Google will make a new version of the License Agreement available on the website where the SDK is made available.

14. General Legal Terms

14.1 The License Agreement constitutes the whole legal agreement between you and Google and governs your use of the SDK (excluding any services which Google may provide to you under a separate written agreement), and completely replaces any prior agreements between you and Google in relation to the SDK. 14.2 You agree that if Google does not exercise or enforce any legal right or remedy which is contained in the License Agreement (or which Google has the benefit of under any applicable law), this will not be taken to be a formal waiver of Google's rights 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, rules 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. 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

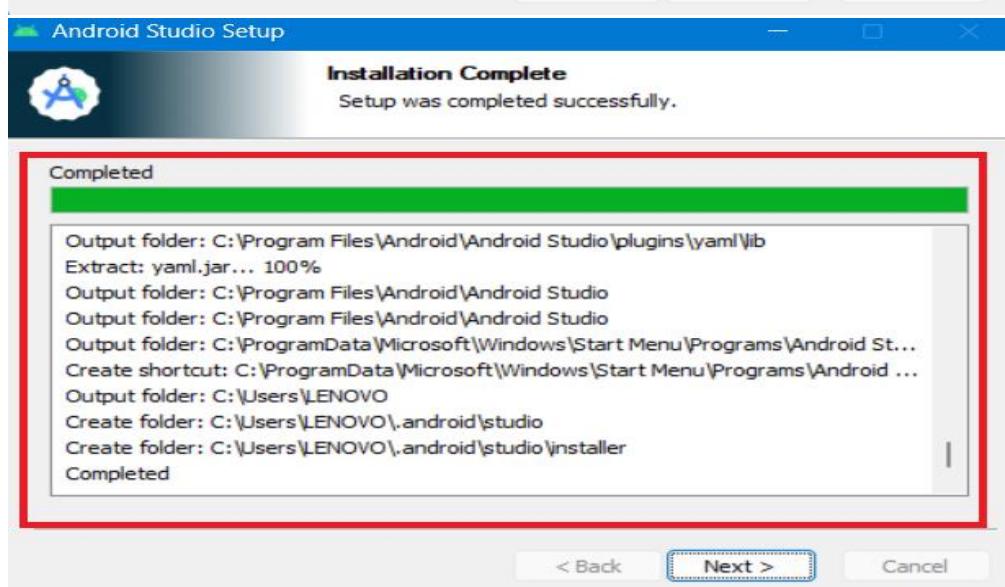
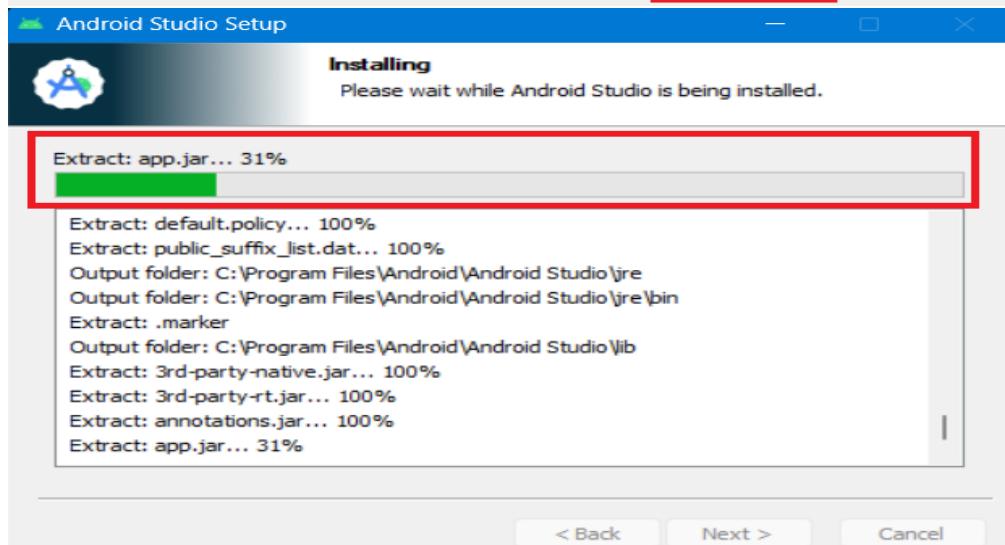
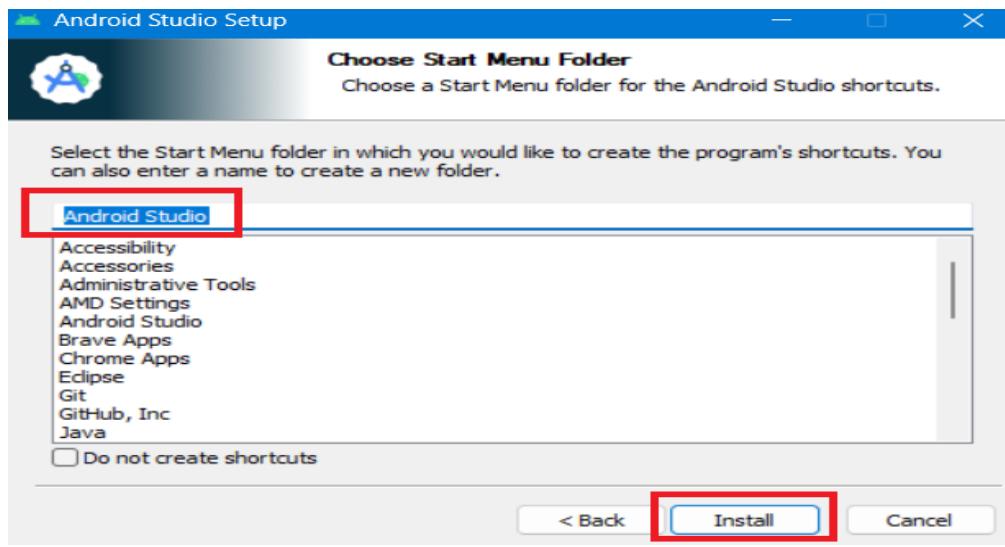
I have read and agree with the above terms and conditions

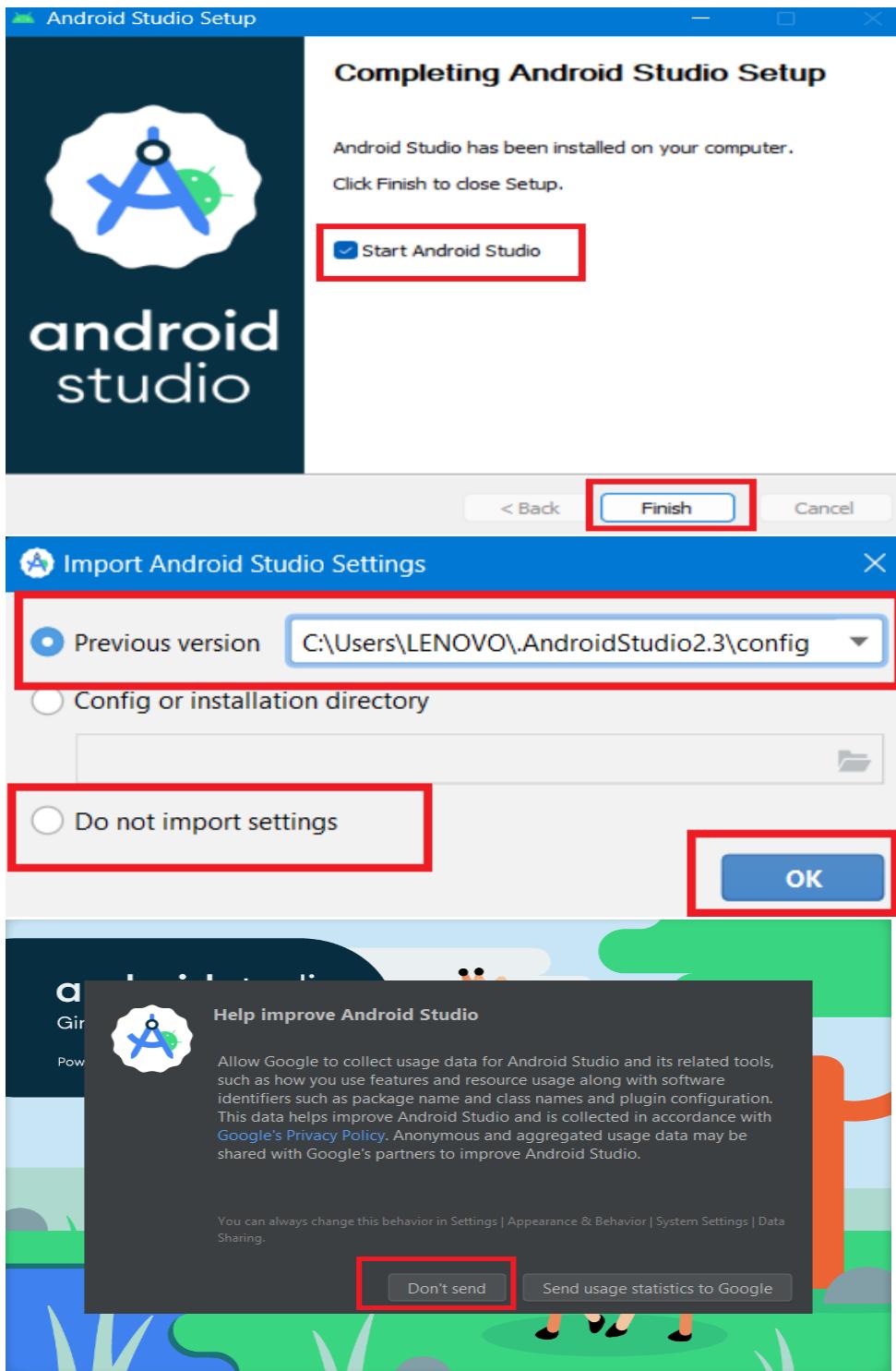
Download Android Studio Giraffe | 2022.3.1 Patch 2 for Windows

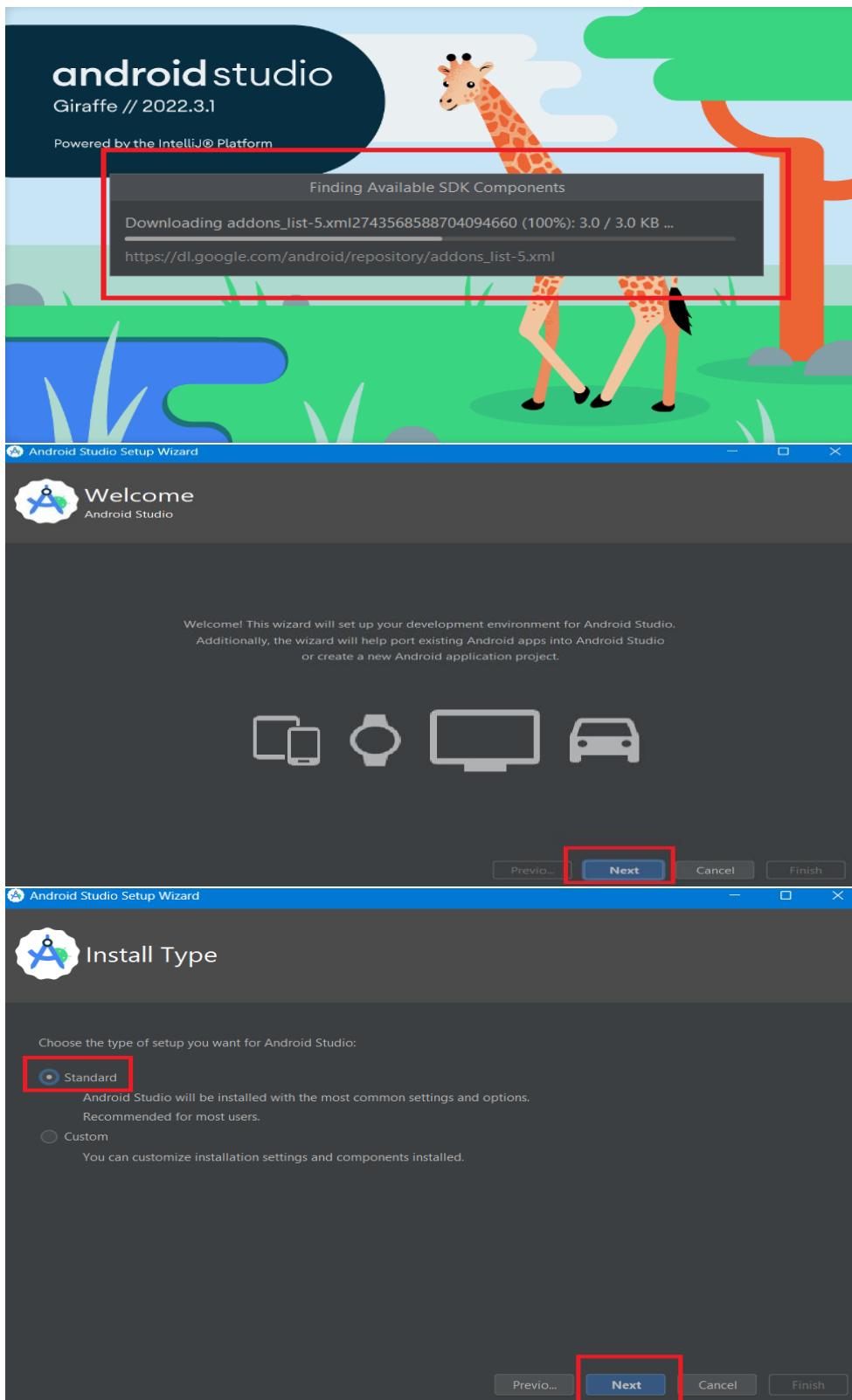
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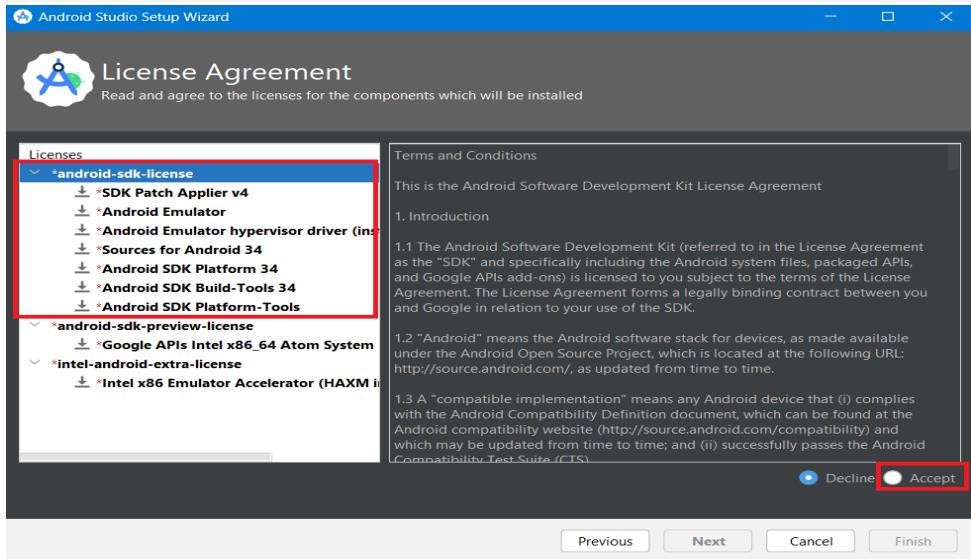
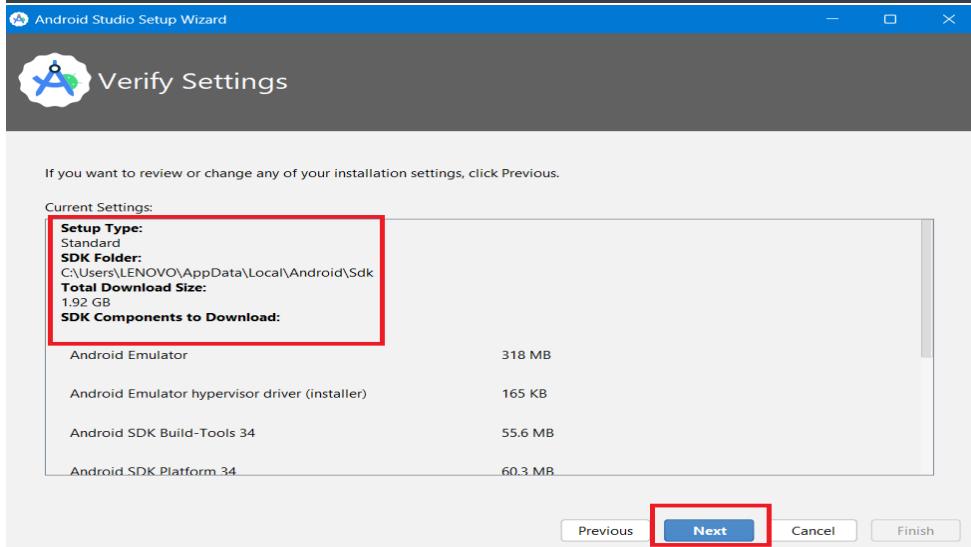
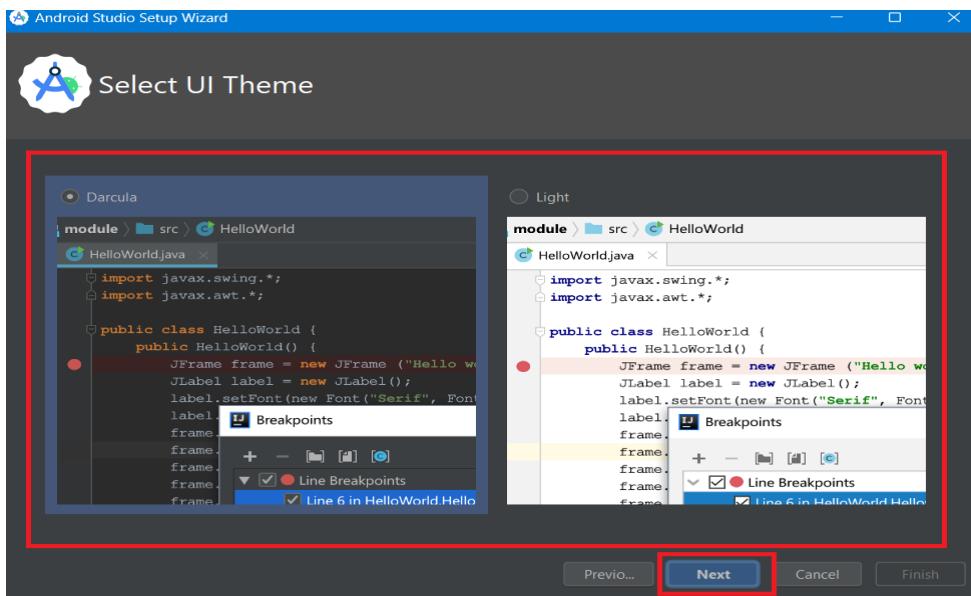
Installing Steps: (Android Studio)



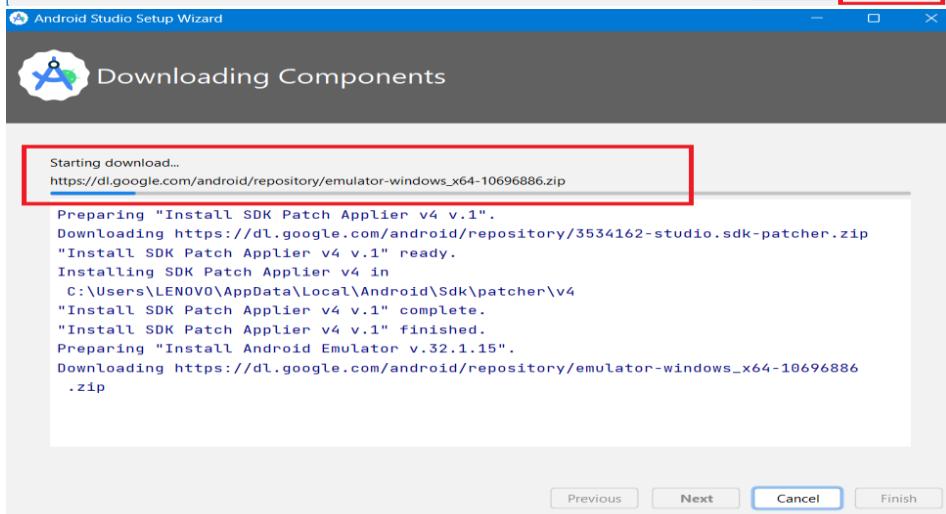
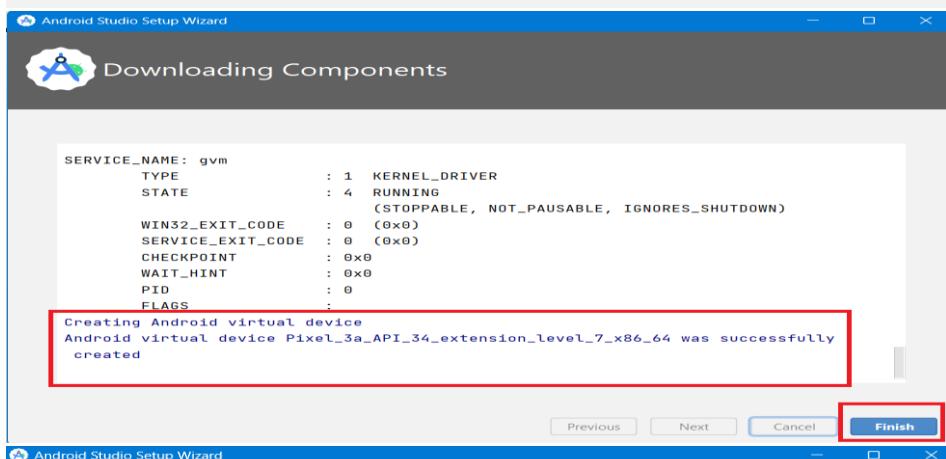
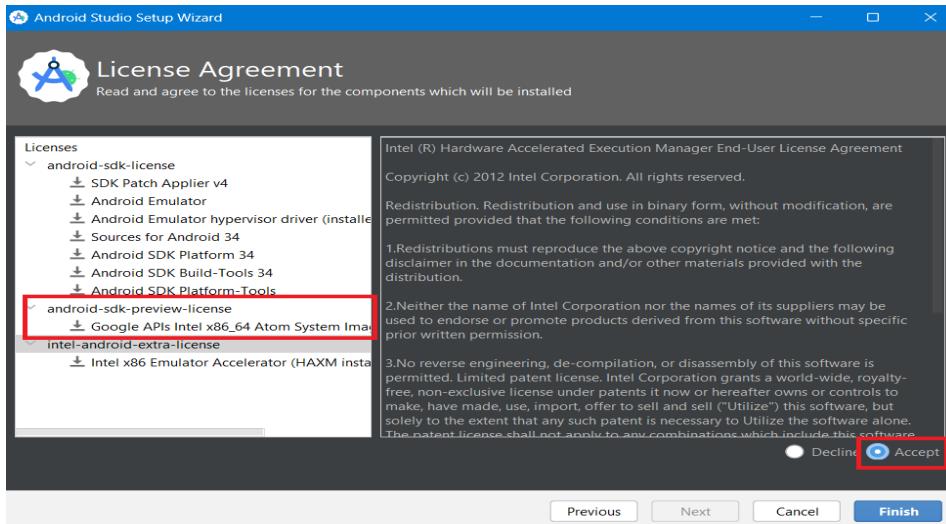


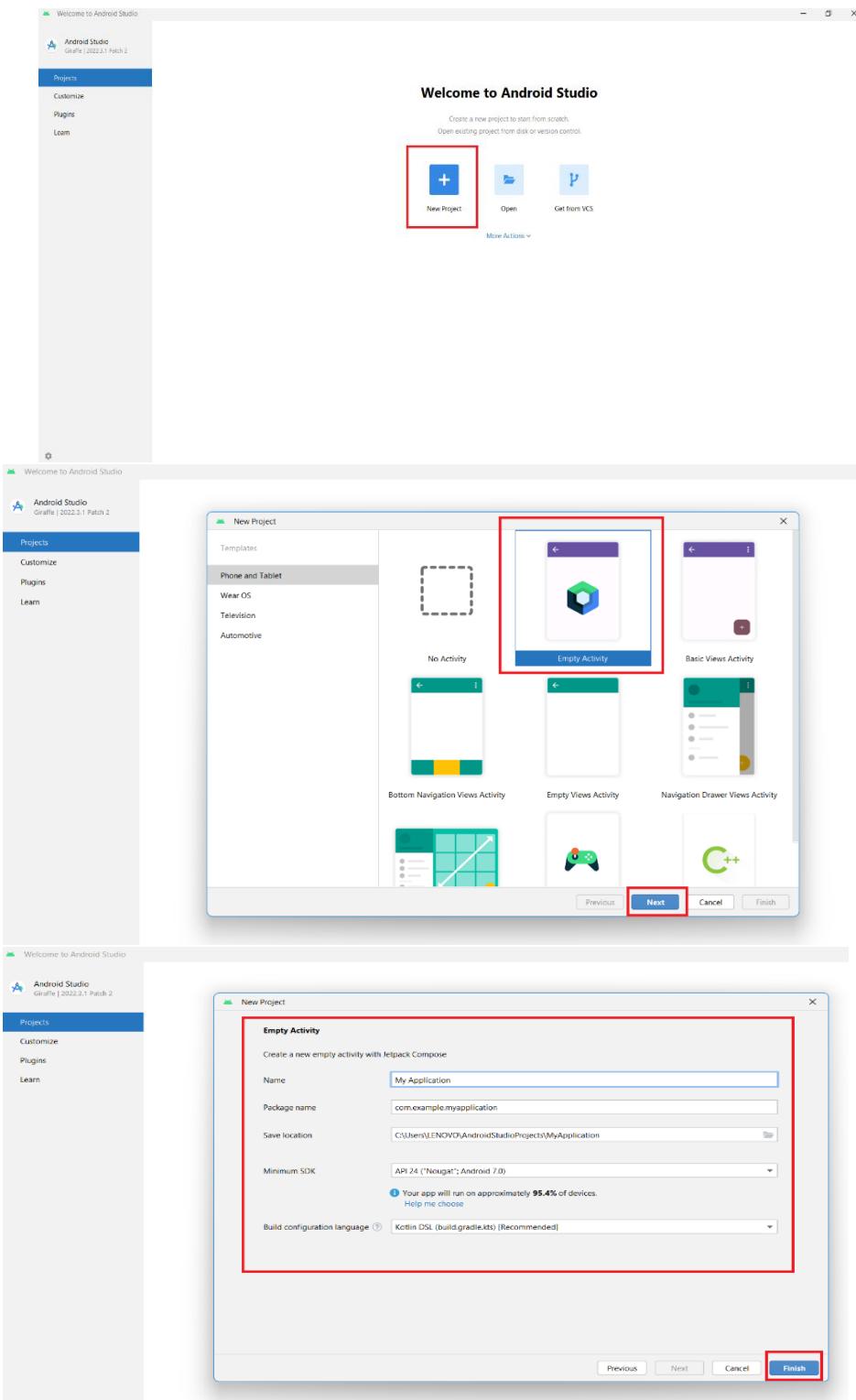


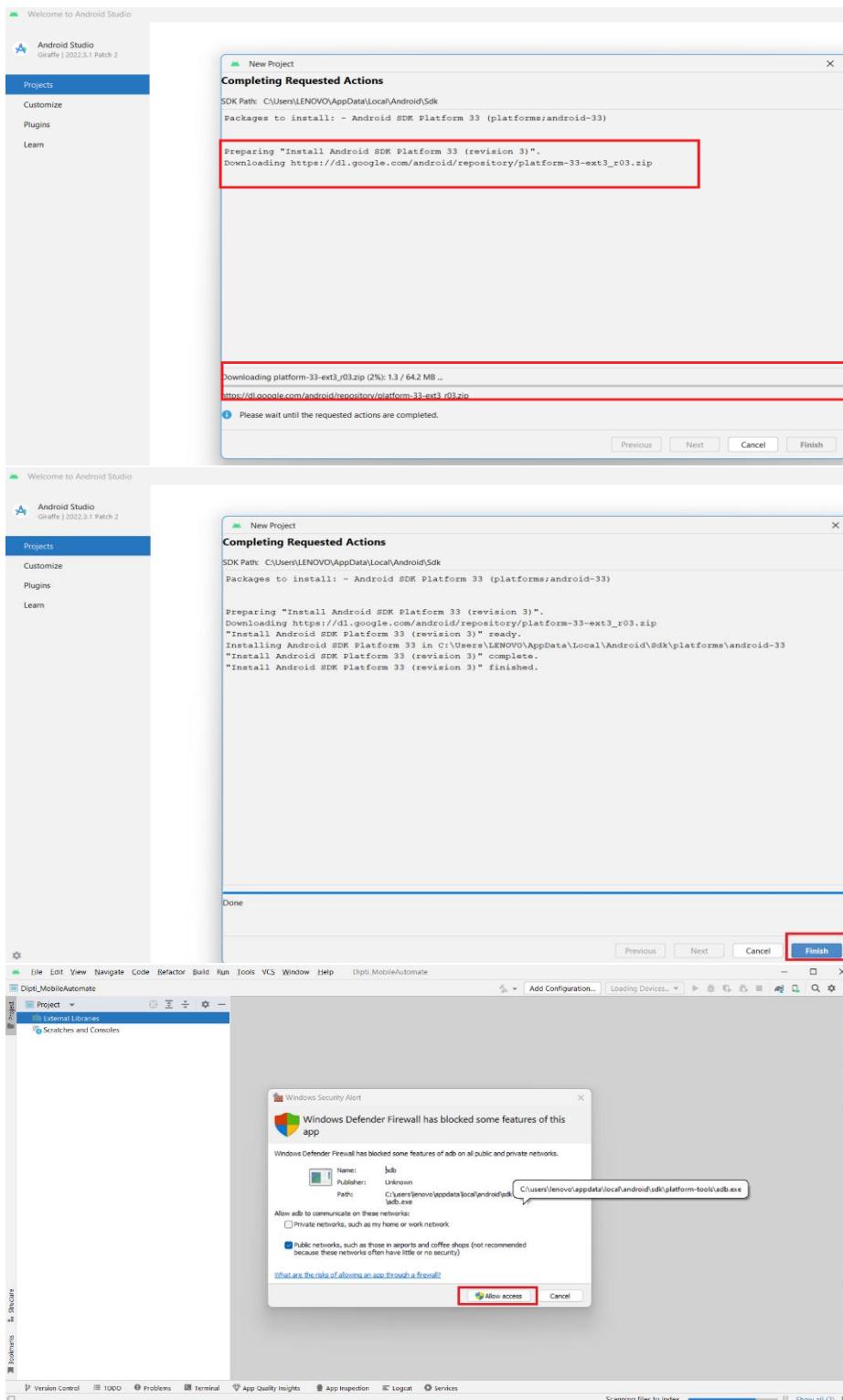




Prepared By: Dipti Ranjan Dash





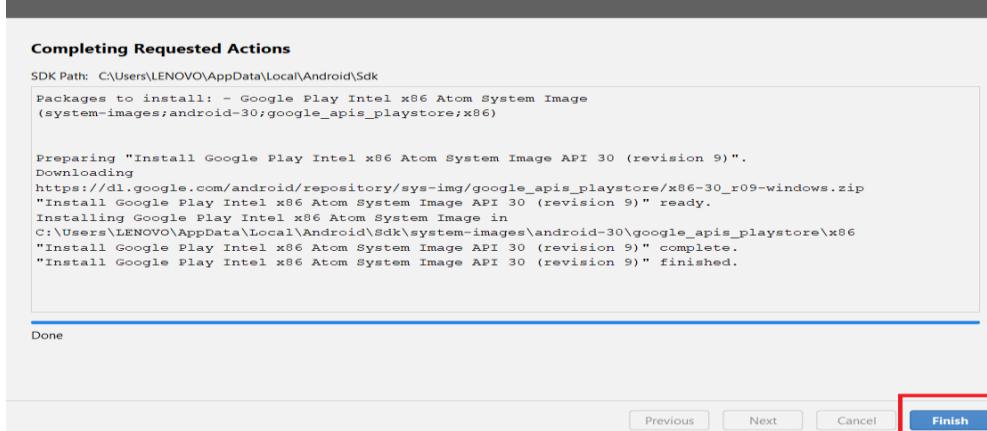
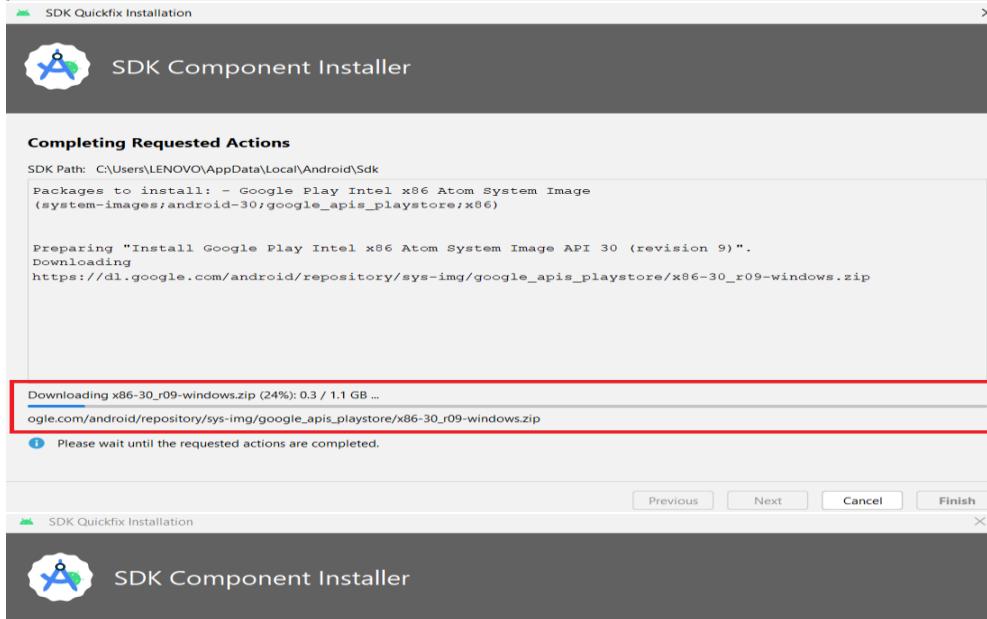
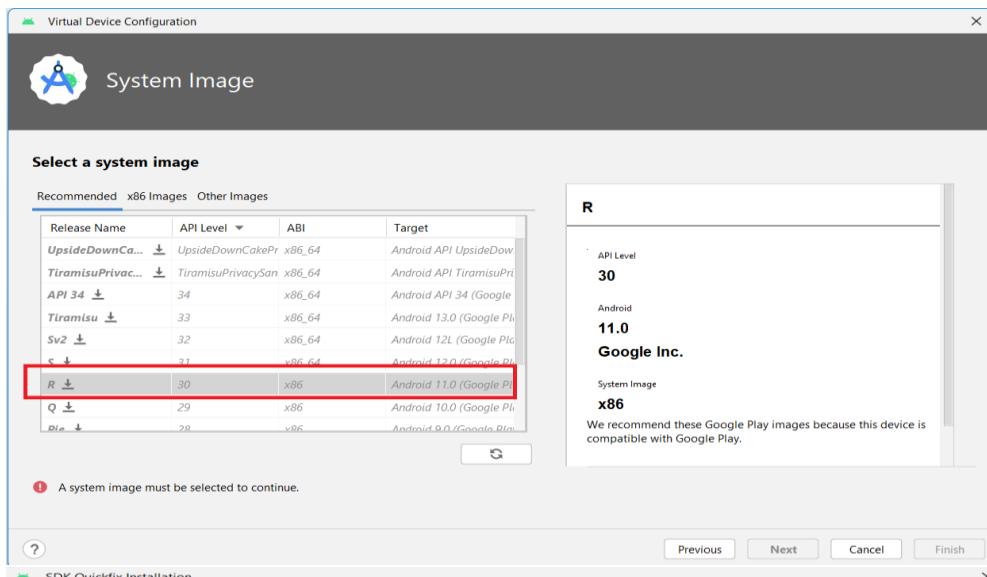


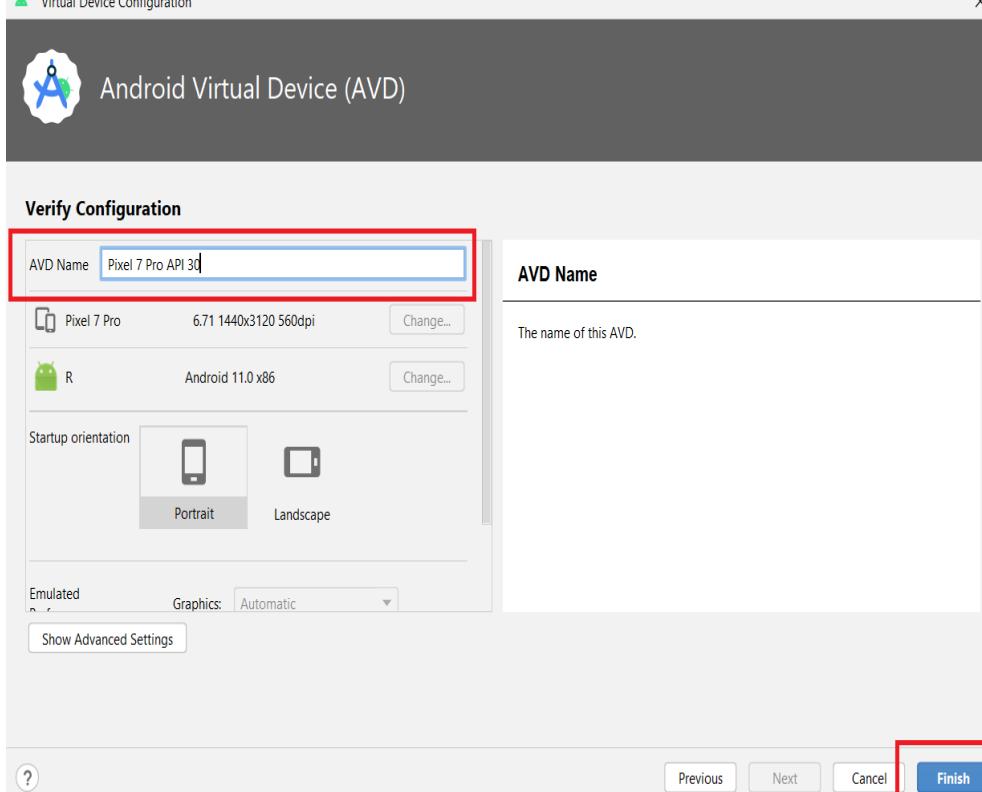
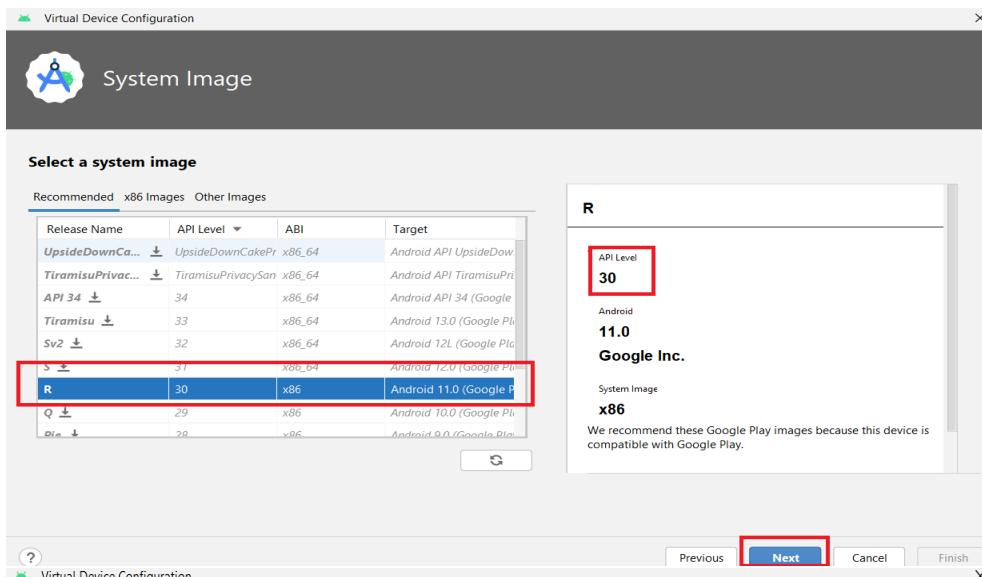
Prepared By: Dipti Ranjan Dash

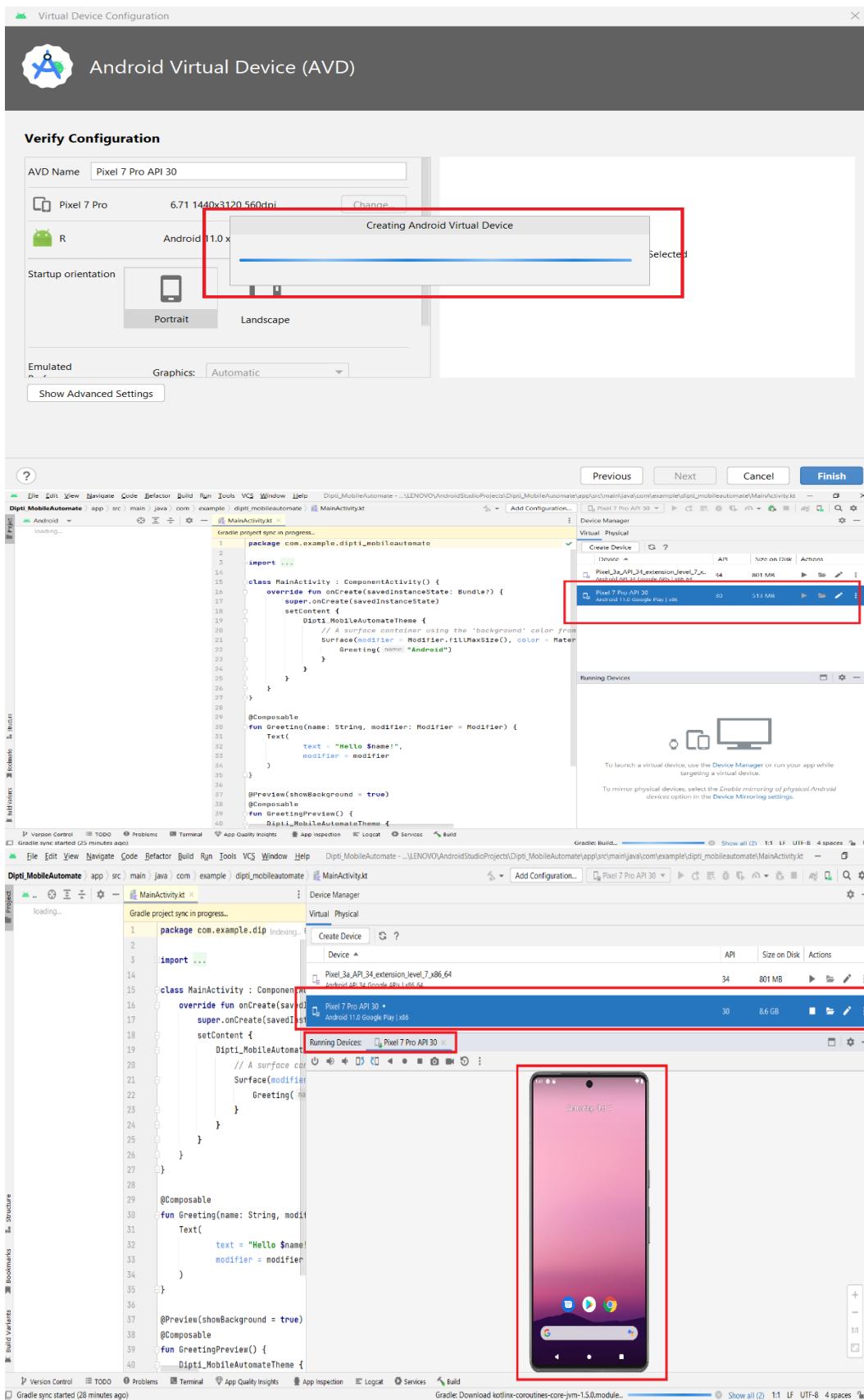
The screenshot shows the Android Studio interface with several windows open:

- Top Window:** "What's New in Giraffe" panel. It describes the "Live Edit" feature, which allows real-time updates to composables in emulators and physical devices. A screenshot shows the code editor with UI changes reflected in the preview.
- Middle Window:** Project structure for "Dipti_MobileAutomate" showing the file "MainActivity.kt". The code defines a Main Activity and a Greeting Composable.
- Bottom Window:** "Virtual Device Configuration" dialog. It shows a list of devices under "Choose a device definition". The "Pixel 7 Pro" device is selected and highlighted with a red box. The right panel displays its details: Size: large, Ratio: long, Density: 420dpi, with dimensions 1080px by 1920px.

Prepared By: Dipti Ranjan Dash







Prepared By: Dipti Ranjan Dash

Note:(Challenges May Faced)

1.SDK may not be able to download remember always keep the SDK directory file simple and normal

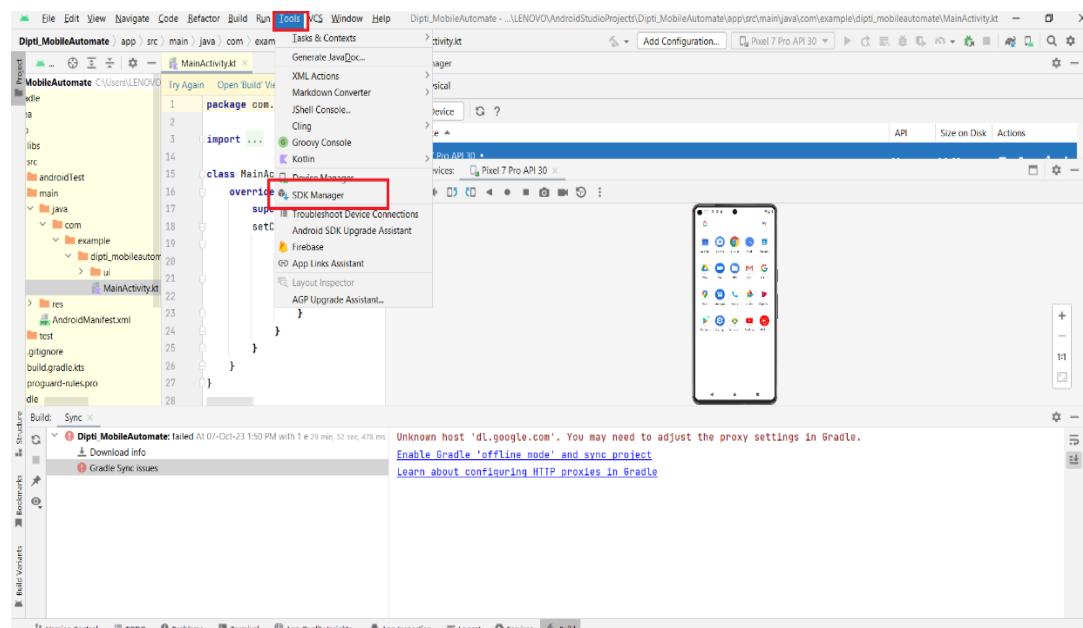
Do not apply any spaces or gap to store the SDK/NDK packages (Manually)

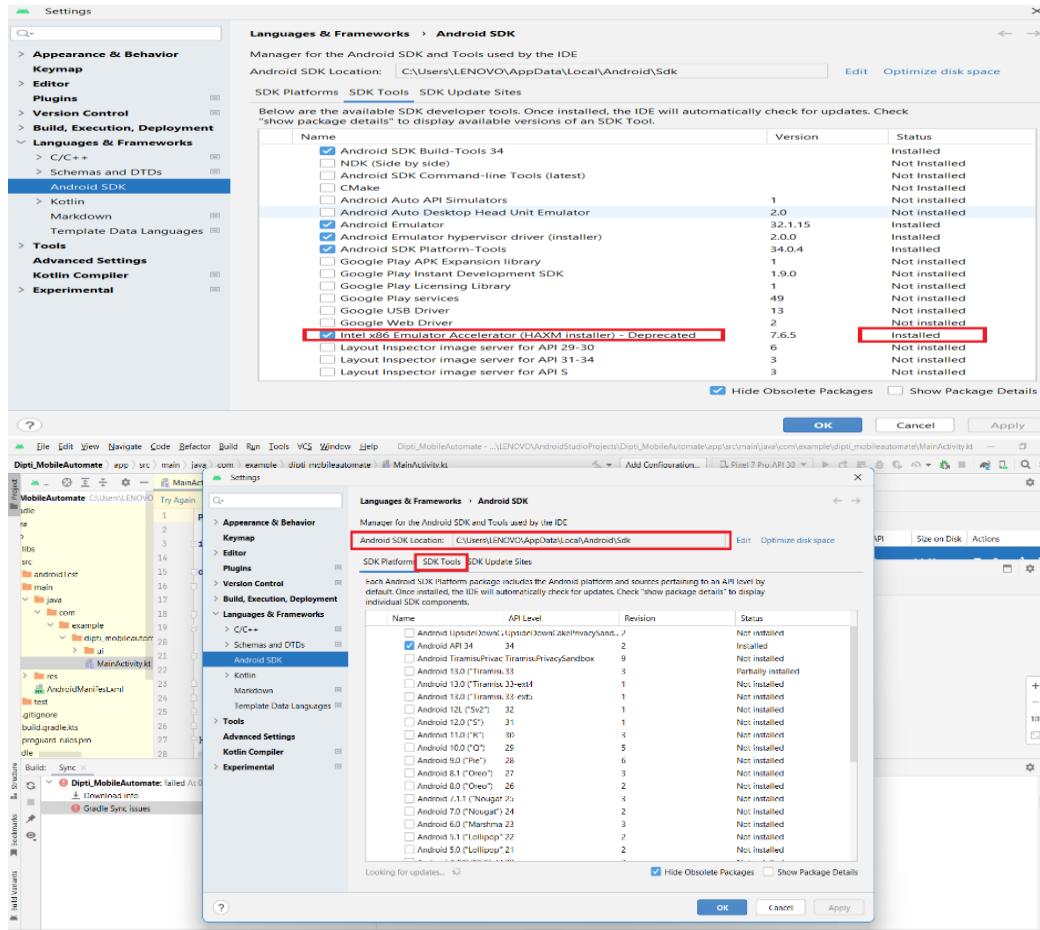
Example: d:/android/diptiandroid (correct)

Example: d:/android/dipti android (In-correct)

2.Always check the internet connections must be good and it should not disconnect in-between downloading the packages otherwise bit difficult for installing and setup/configuring.

Difficulties Faced for HAXM installer then do this: (Step to download and solve Manually)





If HAXM is not installed then select the checkbox and click on Apply below button it will provide some information just install it and restart the android studio IDE. Check again with SDK Manager it is installed or not.

(Here maybe you can face a lot of issues so remember to properly install the application without any error messages otherwise it will give error for multiple time at the time of fixing)

Appium Inspector:

To download and use the Appium inspector tool

Link to access- <https://github.com/appium/appium-inspector/releases/tag/v2023.8.4>

Download this for windows: Appium-Inspector-windows-2023.8.4.exe

2023.8.4 Latest

What's Changed

- fix: when attach session fails, actually short circuit due to error by @jlipps in #1058

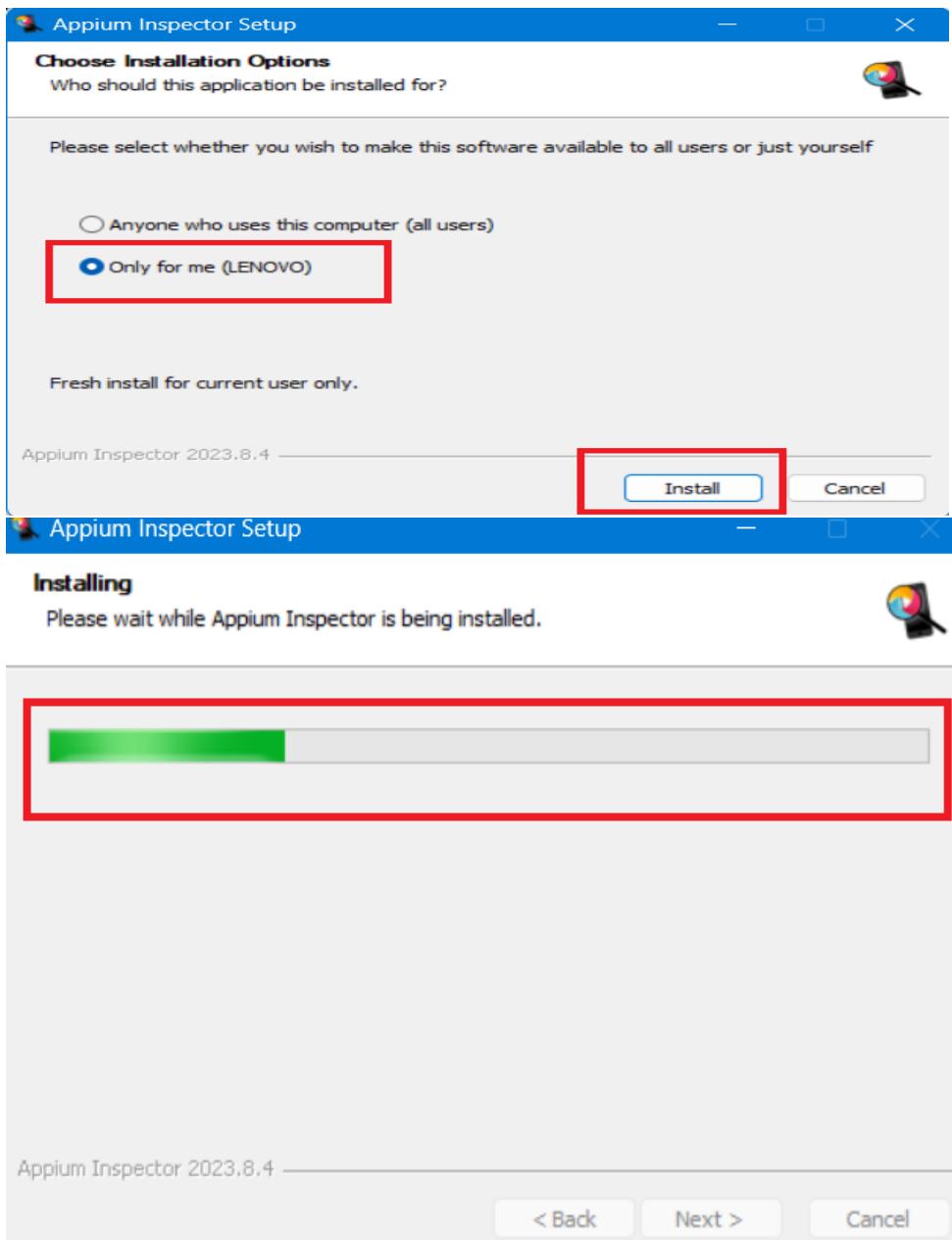
Full Changelog: [v2023.8.2...v2023.8.4](#)

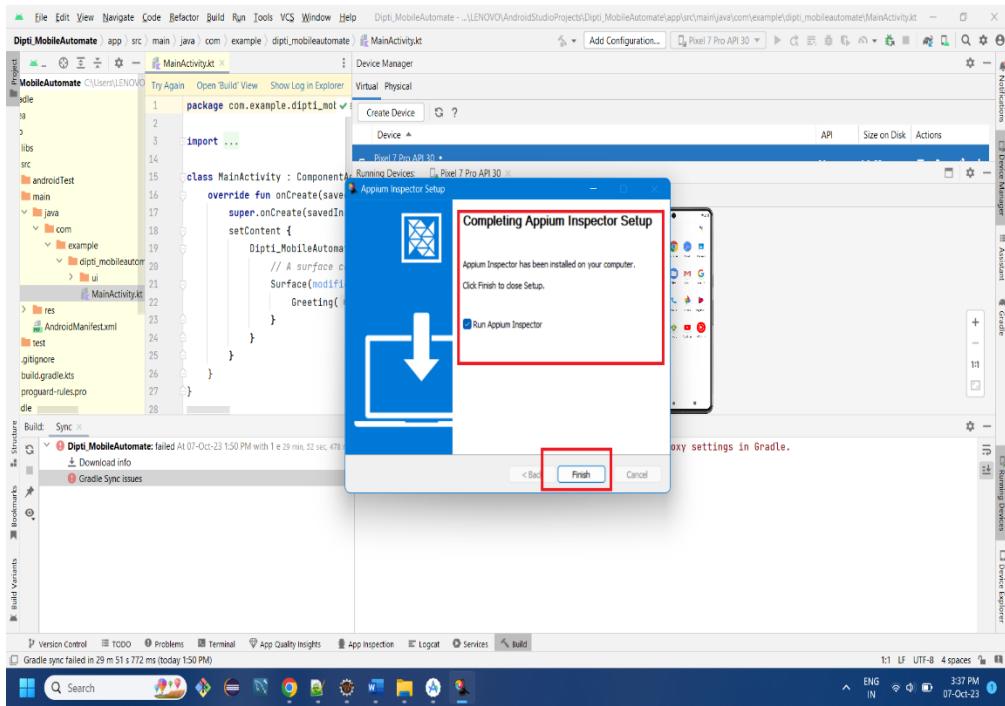
Contributors

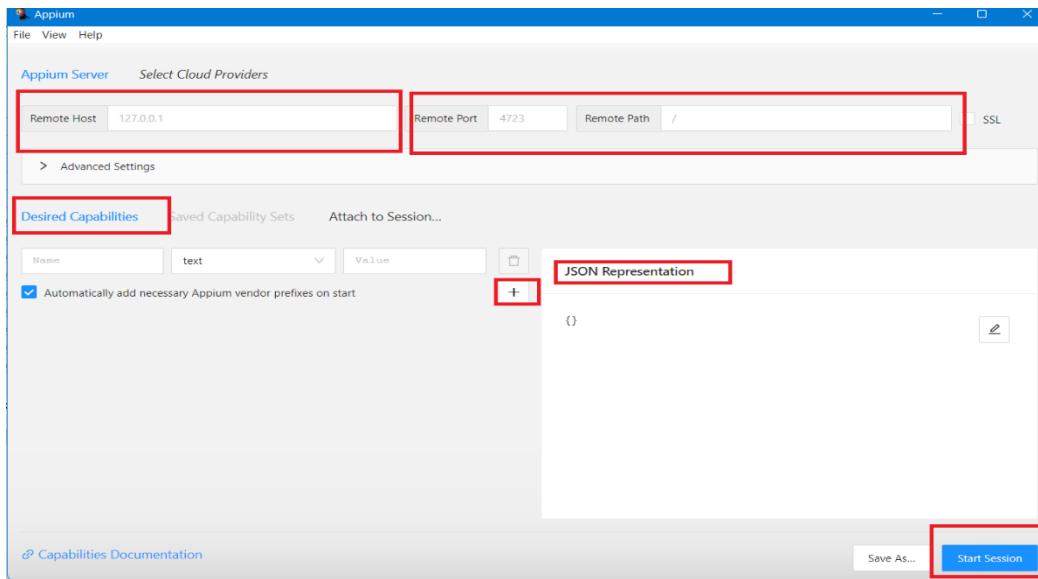
 jlipps

▼ Assets 12

 Appium-Inspector-2023.8.4-universal-mac.zip	181 MB	Aug 24	
 Appium-Inspector-linux-2023.8.4.AppImage	120 MB	Aug 24	
 Appium-Inspector-mac-2023.8.4.dmg	109 MB	Aug 24	
 Appium-Inspector-mac-2023.8.4.dmg.blockmap	204 KB	Aug 24	
 Appium-Inspector-windows-2023.8.4.exe	168 MB	Aug 24	
 Appium-Inspector-windows-2023.8.4.exe.blockmap	176 KB	Aug 24	
 Appium-Inspector-windows-2023.8.4.zip	117 MB	Aug 24	
 Appium-Inspector-2023.8.4-universal-mac.zip.blockmap	195 KB	Aug 24	
 latest-linux.yml	405 Bytes	Aug 24	
 latest-mac.yml	550 Bytes	Aug 24	
 Source code (zip)		Aug 24	
 Source code (tar.gz)		Aug 24	







Appium Server Installation

Before configuring we have to configure the node js and npm in our local machine to use Appium server.

Link to access: <https://nodejs.org/en>

A screenshot of the Node.js website. The top navigation bar includes links for HOME, ABOUT, DOWNLOADS, DOCS, GET INVOLVED, SECURITY, CERTIFICATION, and NEWS. The main content area features a heading 'Node.js® is an open-source, cross-platform JavaScript runtime environment.' Below this is a 'Download for Windows (x64)' section. It offers two main options: '18.18.0 LTS' (which is highlighted with a red border) and '20.8.0 Current'. Underneath each option are links for 'Recommended For Most Users' and 'Latest Features'. At the bottom of the section are links for 'Other Downloads| Changelog| API Docs' and 'Other Downloads| Changelog| API Docs'.

Once downloaded open the setup and follow the installation steps carefully.

After successfully installation: open command prompt and type:

node -v/npm -v to check whether it is installed or not.

```
C:\Users\LENOVO>node -v
v16.13.1

C:\Users\LENOVO>npm -v
8.3.0

C:\Users\LENOVO>npm install -g appium
npm WARN EBADENGINE Unsupported engine {
npm WARN EBADENGINE   package: 'lru-cache@10.0.1',
npm WARN EBADENGINE   required: { node: '14 || >=16.14' },
npm WARN EBADENGINE   current: { node: 'v16.13.1', npm: '8.3.0' }
npm WARN EBADENGINE }
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, and audited 484 packages in 1m

57 packages are looking for funding
  run 'npm fund' for details

found 0 vulnerabilities
npm notice New major version of npm available! 8.3.0 => 10.2.0
npm notice Changelog: https://github.com/npm/cli/releases/tag/v10.2.0
npm notice Run npm install -g npm@10.2.0 to update!
npm notice
```

Use npm to install Appium globally on your system:

Use this command: **npm install -g appium**

To check Appium drivers:

appium driver list

```
C:\Users\LENOVO>appium driver list
✓ Listing available drivers
- uiautomator2 [not installed]
- xcuitest [not installed]
- mac2 [not installed]
- espresso [not installed]
- safari [not installed]
- gecko [not installed]
- chromium [not installed]
```

C:\Users\LENOVO>

Install the appium driver command:

appium driver install xcuitest

appium driver install uiautomator2

```
C:\Users\LENOVO>appium driver install uiautomator2
✓ Installing 'uiautomator2' using NPM install spec 'appium-uiautomator2-driver'
i Driver uiautomator2@2.29.10 successfully installed
- automationName: UiAutomator2
- platformNames: ["Android"]

C:\Users\LENOVO>appium driver install xcuitest
✓ Installing 'xcuitest' using NPM install spec 'appium-xcuitest-driver'
i Driver xcuitest@5.6.0 successfully installed
- automationName: XCUICTest
- platformNames: ["iOS", "tvOS"]

C:\Users\LENOVO>appium driver list
✓ Listing available drivers
- uiautomator2@2.29.10 [installed (npm)]
- xcuitest@5.6.0 [installed (npm)]
- mac2 [not installed]
- espresso [not installed]
- safari [not installed]
- gecko [not installed]
- chromium [not installed]
```

Android device:

```
automationName: UiAutomator2
```

```
platformNames: ["Android"]
```

iOS/TVOS:

```
automationName: XCUITest
```

```
platformNames: ["iOS", "tvOS"]
```

Start the Appium server and check it is working or not: **appium**

```
C:\Users\LENOVO>appium
[Appium] Welcome to Appium v2.1.3
[Appium] Attempting to load driver uiautomator2...
[debug] [Appium] Requiring driver at C:\Users\LENOVO\.appium\node_modules\appium-uiautomator2-driver
[Appium] Attempting to load driver xcuitest...
[debug] [Appium] Requiring driver at C:\Users\LENOVO\.appium\node_modules\appium-xcuitest-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://192.168.1.4:4723/
[Appium]     http://127.0.0.1:4723/ (only accessible from the same host)
[Appium] Available drivers:
[Appium] - uiautomator2@2.29.10 (automationName 'UiAutomator2')
[Appium] - xcuitest@5.6.0 (automationName 'XCUITest')
[Appium] No plugins have been installed. Use the "appium plugin" command to install the one(s) you want to use.
```

```
C:\Users\LENOVO>appium
```

```
[Appium] Welcome to Appium v2.1.3
```

```
[Appium] Attempting to load driver uiautomator2...
```

```
[debug] [Appium] Requiring driver at C:\Users\LENOVO\.appium\node_modules\appium-uiautomator2-driver
```

```
[Appium] Attempting to load driver xcuitest...
```

```
[debug] [Appium] Requiring driver at C:\Users\LENOVO\.appium\node_modules\appium-xcuitest-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://192.168.1.4:4723/
```

```
[Appium]     http://127.0.0.1:4723/ (only accessible from the same host)
```

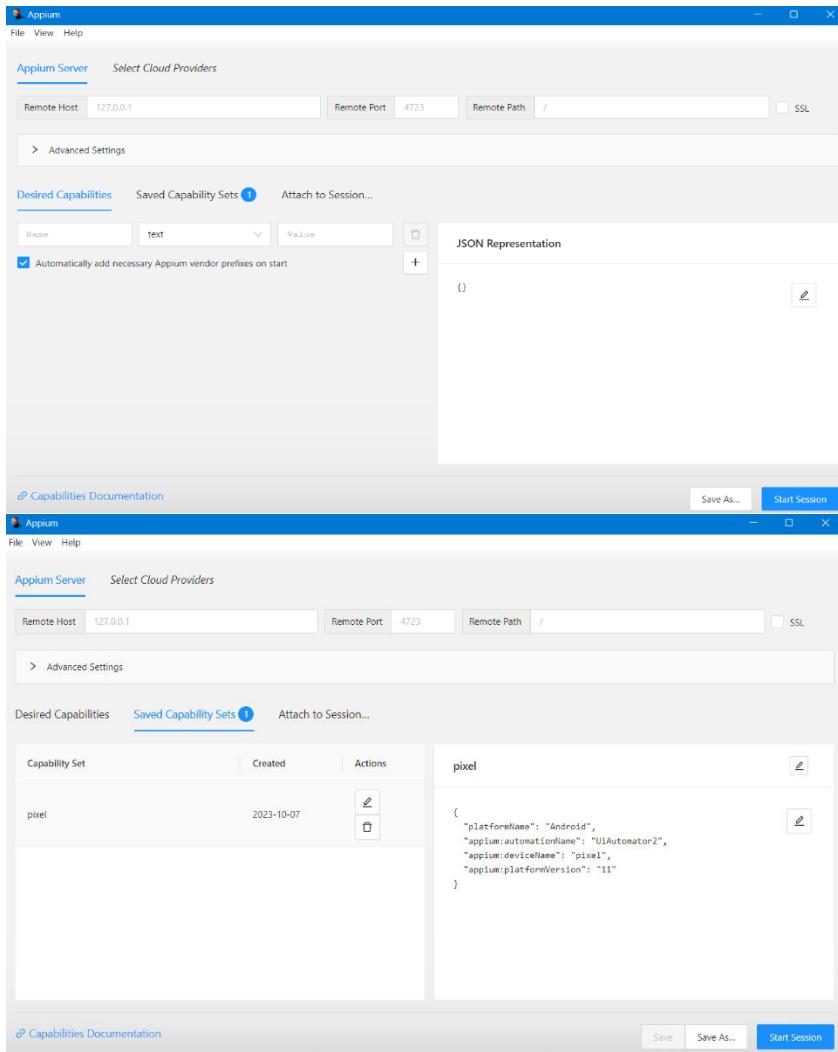
```
[Appium] Available drivers:
```

```
[Appium] - uiautomator2@2.29.10 (automationName 'UiAutomator2')
```

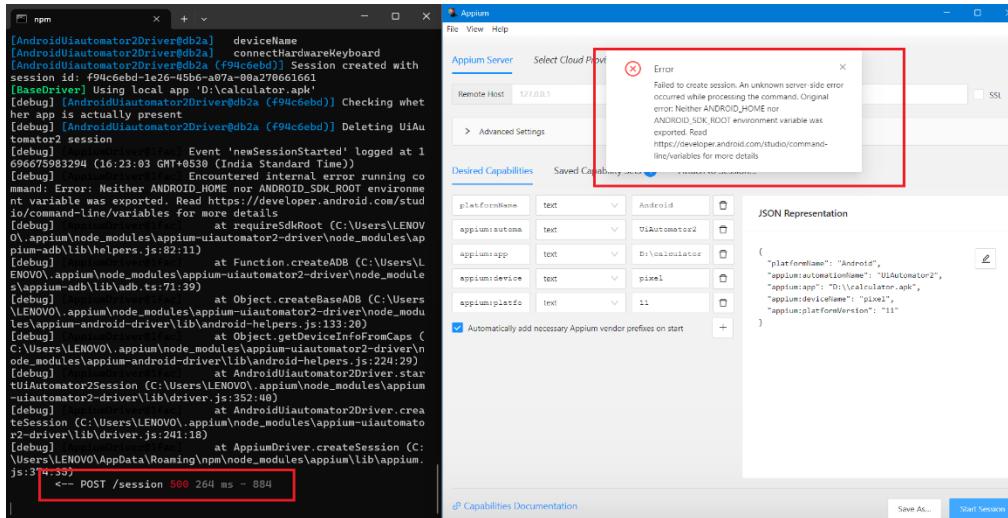
```
[Appium] - xcuitest@5.6.0 (automationName 'XCUITest')
```

```
[Appium] No plugins have been installed. Use the "appium plugin" command to install the one(s) you want to use.
```

Open Appium inspector- put all the dependency parameter capabilities code.



Click on start session if throwing any error related to this:

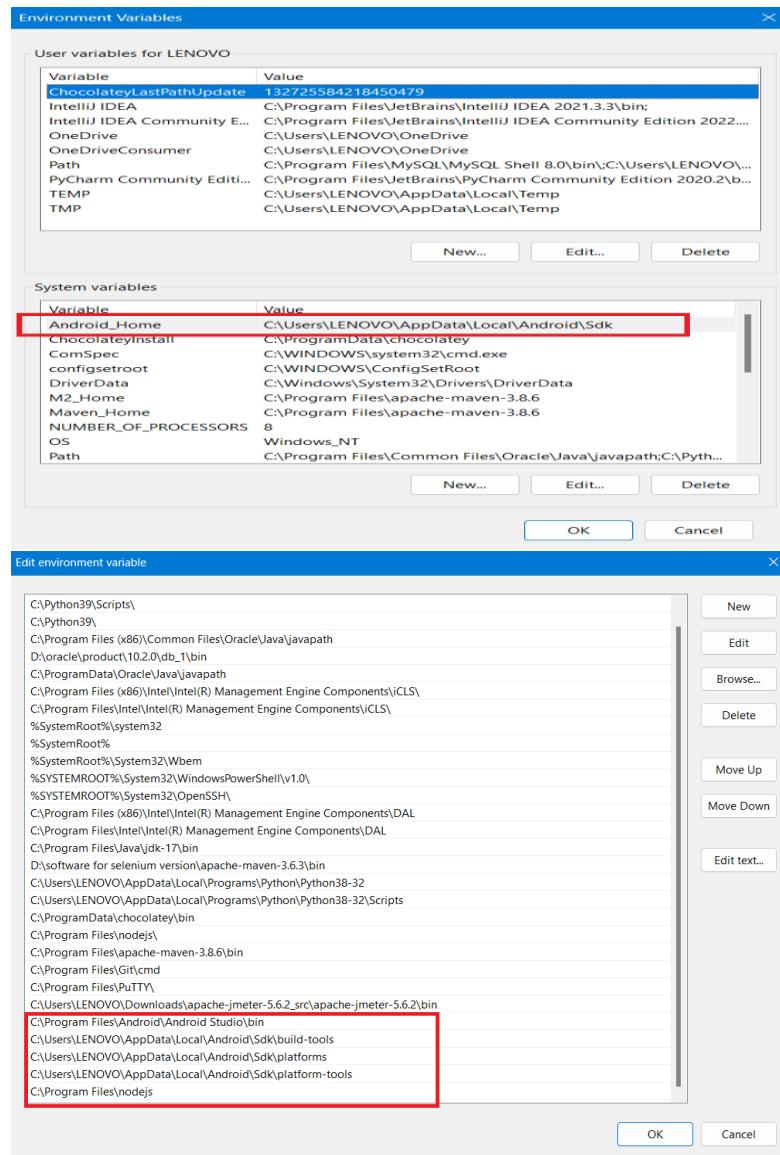


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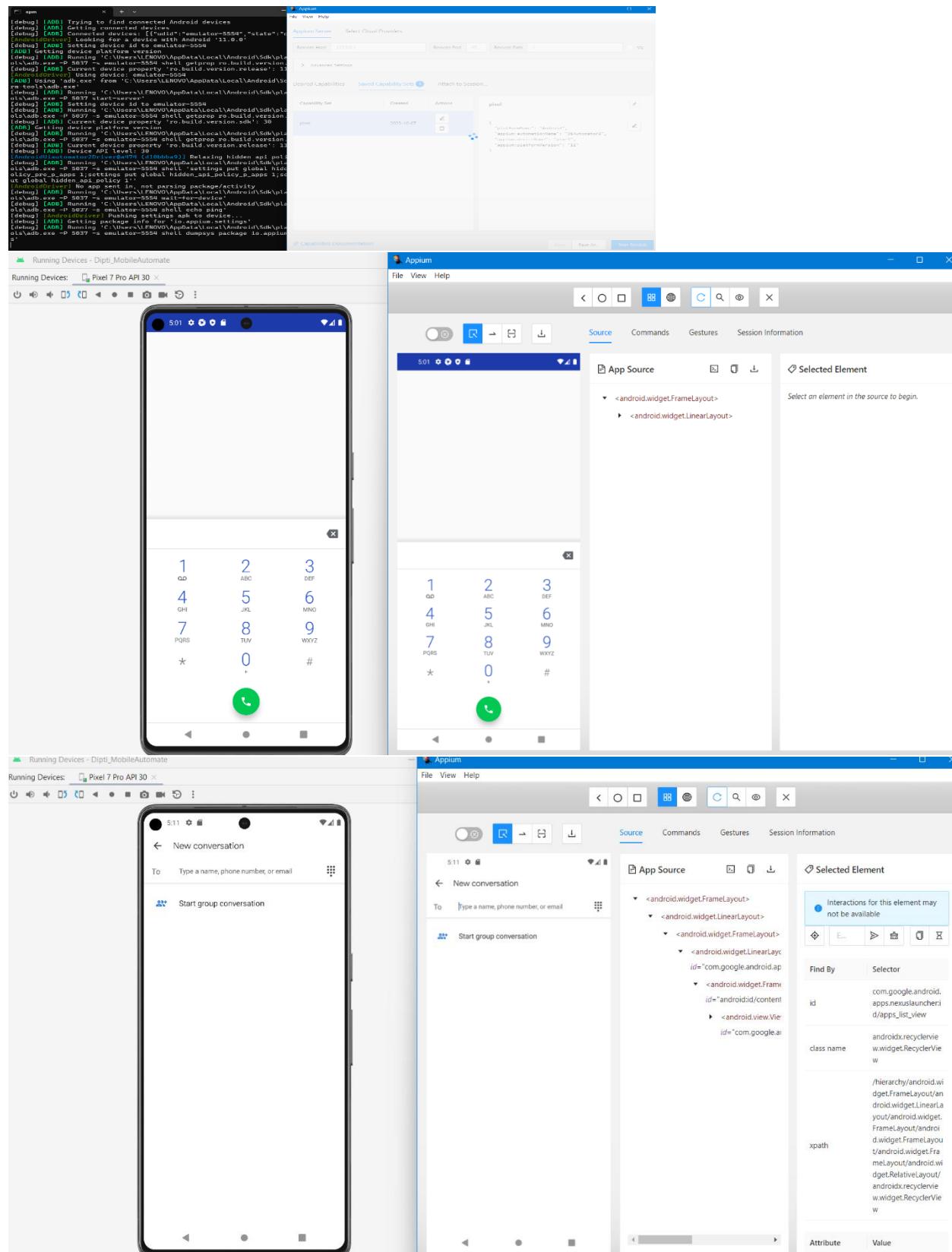
Solution to solve:(set proper sdk path in both Android_Home and path parameter)

(example: sdk path **C:\Users\LENOVO\AppData\Local\Android\Sdk**)

Go to the view format and select the hidden items tab on to view the above exact sdk path in your local machine)



Successfully Execution:



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Last conclusion steps:

- 1.JDK install with latest version
- 2.Eclipse IDE installation
- 3.TestNG Plugin
- 4.Maven Plugin
- 5.Android studio + SDK + NDK
- 6.Appium installation through CLI (Appium commands)
- 7.Appium Inspector

How to run Appium server and Appium inspector activate:

- 1.Open CMD and type Appium (Server will append running stage)
- 2.Inspector Appium (click on start session)
(It will connect to the server and then start performing and writing Appium automation scripts)

The End.....

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