



# Mobile Testing

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# Prerequisite

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- Download and install JDK
- Download and Install Android Studio
- Download SDK in Android Studio
- Enable Hyper V in program feature
- Set Environmental Variable
- Create a new device in Android Studio
- Launch Emulator from Android Studio
- Download and install Appium
- Download and launch Eclipse

# Prerequisite

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- Download TestNg plugin
- Create Maven Project
- Add dependency in POM
- Set DesireCapability and URL
- Write app code
- Start Appium Server
- Run the code
- App to be launch in Emulator

# Download Java Jdk

- Download Java Jdk from the website <https://www.oracle.com/in/java/technologies/downloads/#jdk20-windows>
- Open the downloaded file and complete the setup process

Java downloads

Tools and resources

Java archive

JDK 20 binaries are free to use in production and free to redistribute, at no cost, under the [Oracle No-Fee Terms and Conditions](#).

JDK 20 will receive updates under these terms, until September 2023 when it will be superseded by JDK 21.

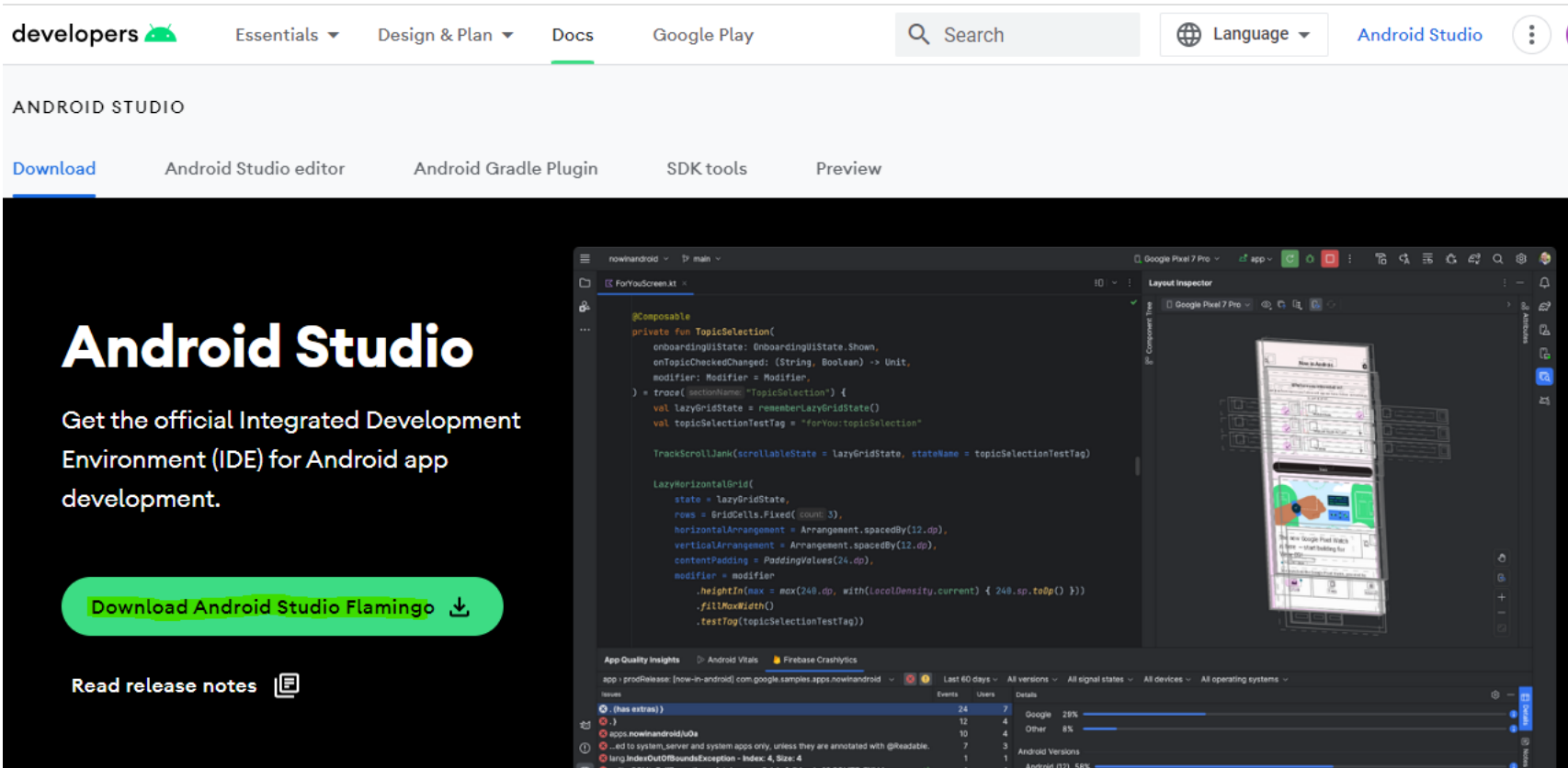
Linux

macOS

Windows

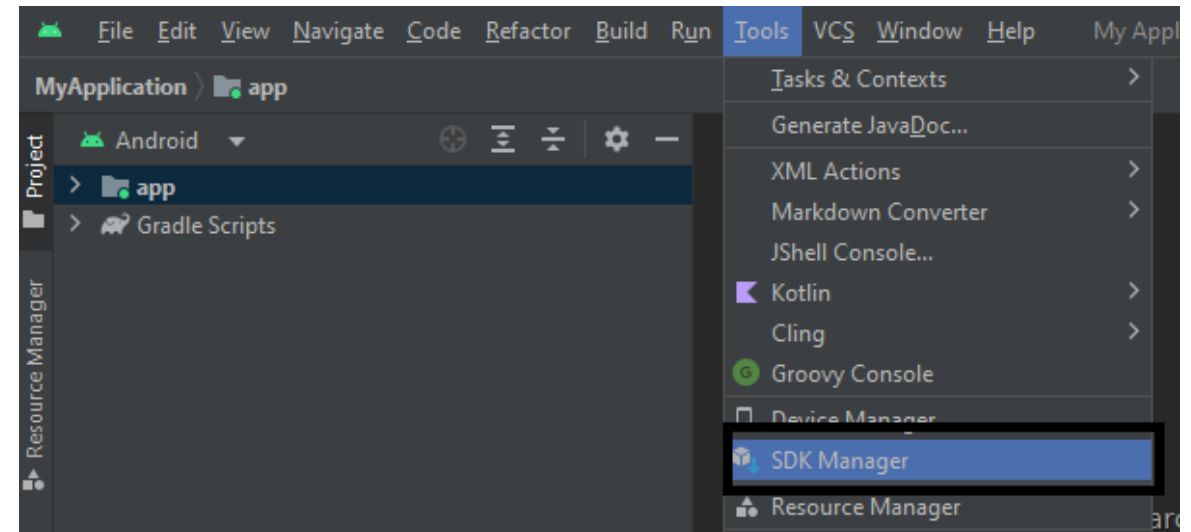
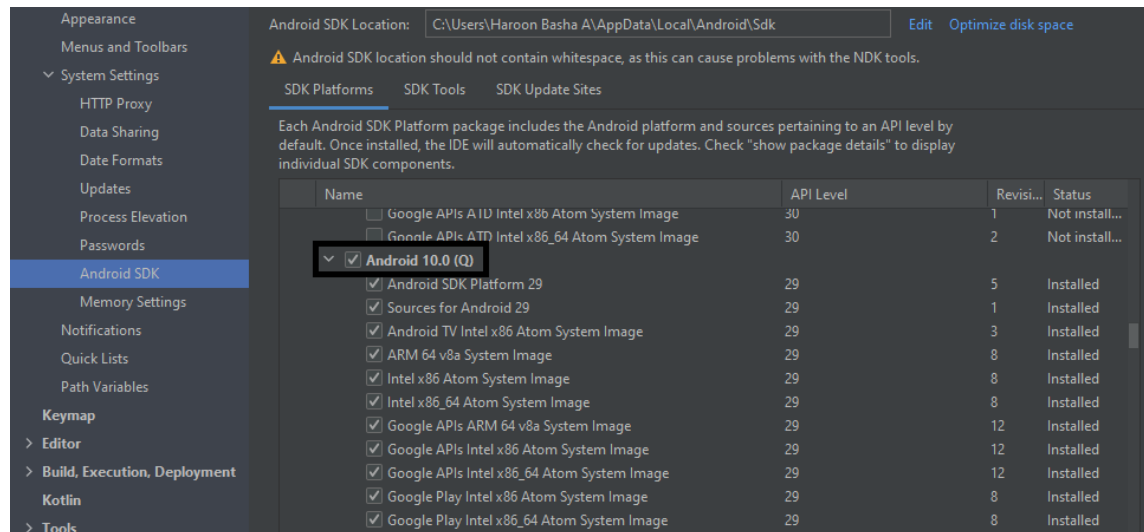
Product/file description	File size	Download
x64 Compressed Archive	180.81 MB	<a href="https://download.oracle.com/java/20/latest/jdk-20_windows-x64_bin.zip">https://download.oracle.com/java/20/latest/jdk-20_windows-x64_bin.zip</a> (sha256)
x64 Installer	159.95 MB	<a href="https://download.oracle.com/java/20/latest/jdk-20_windows-x64_bin.exe">https://download.oracle.com/java/20/latest/jdk-20_windows-x64_bin.exe</a> (sha256)
x64 MSI Installer	158.74 MB	<a href="https://download.oracle.com/java/20/latest/jdk-20_windows-x64_bin.msi">https://download.oracle.com/java/20/latest/jdk-20_windows-x64_bin.msi</a> (sha256)

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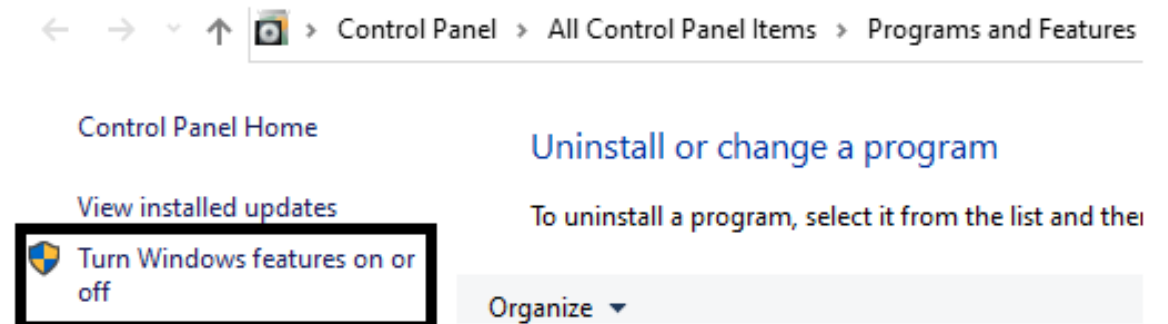
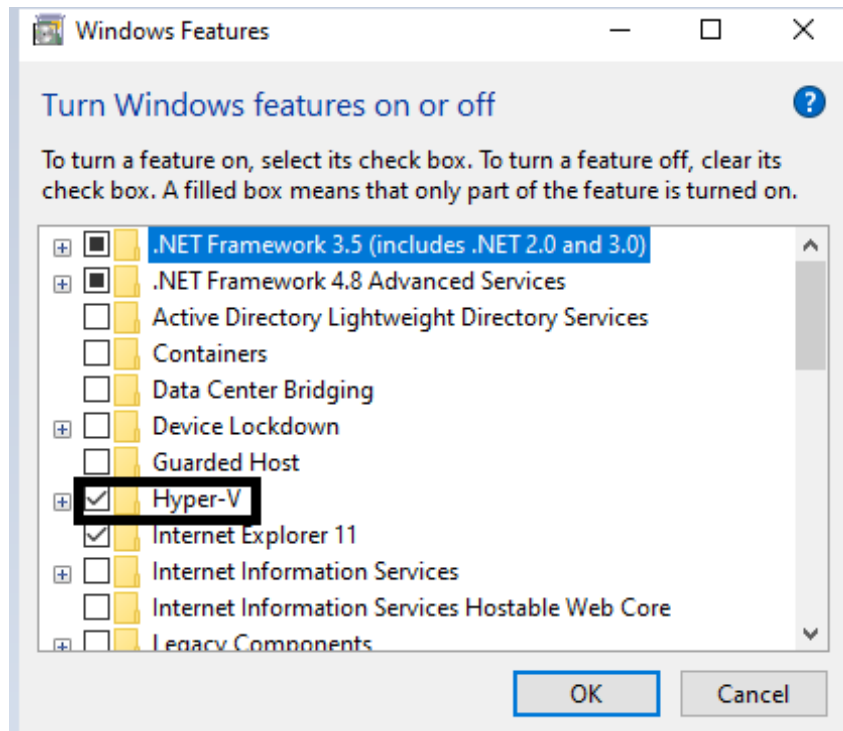
# Download Android SDK

- Open Android Studio, Select SDK Manager from Tools option
- Select “Android Version” and click “Ok” button



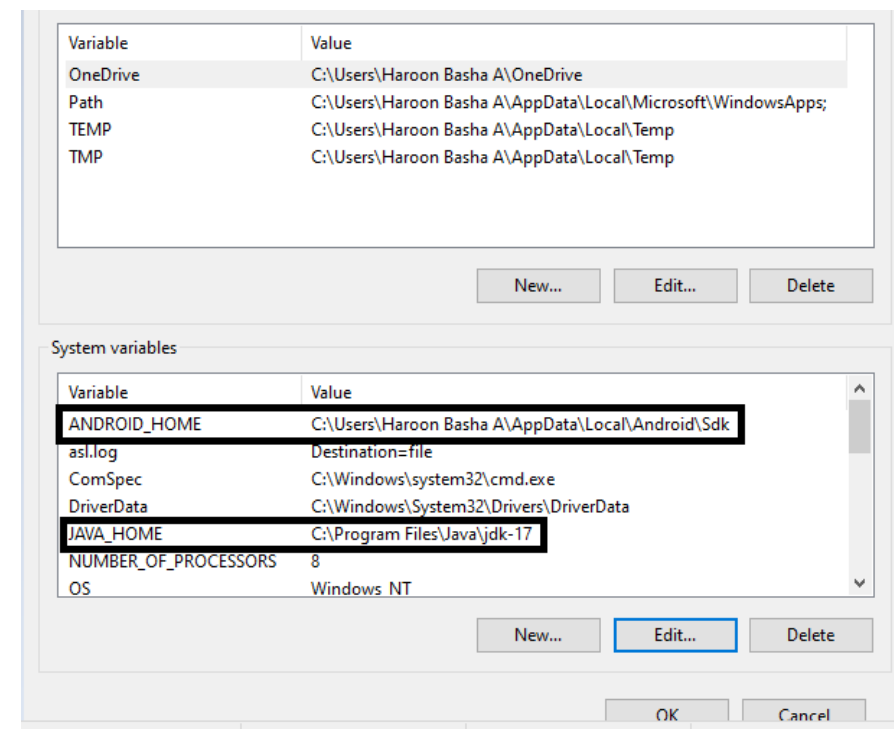
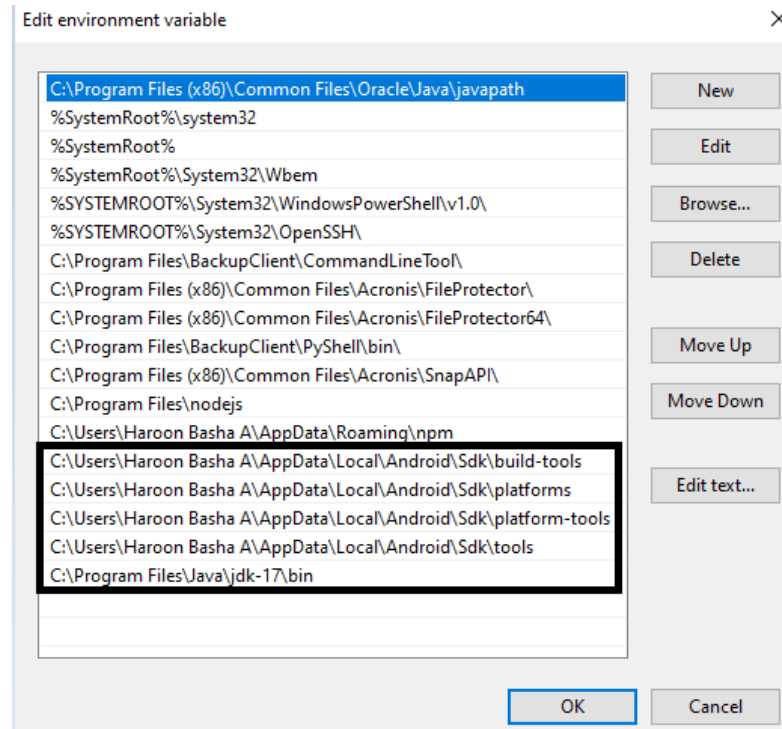
# Enable Hyper V

- Open Programs and feature, Click “Turn Windows feature on or off
- Click checkbox for Hyper V folder



# Set Environment Variable

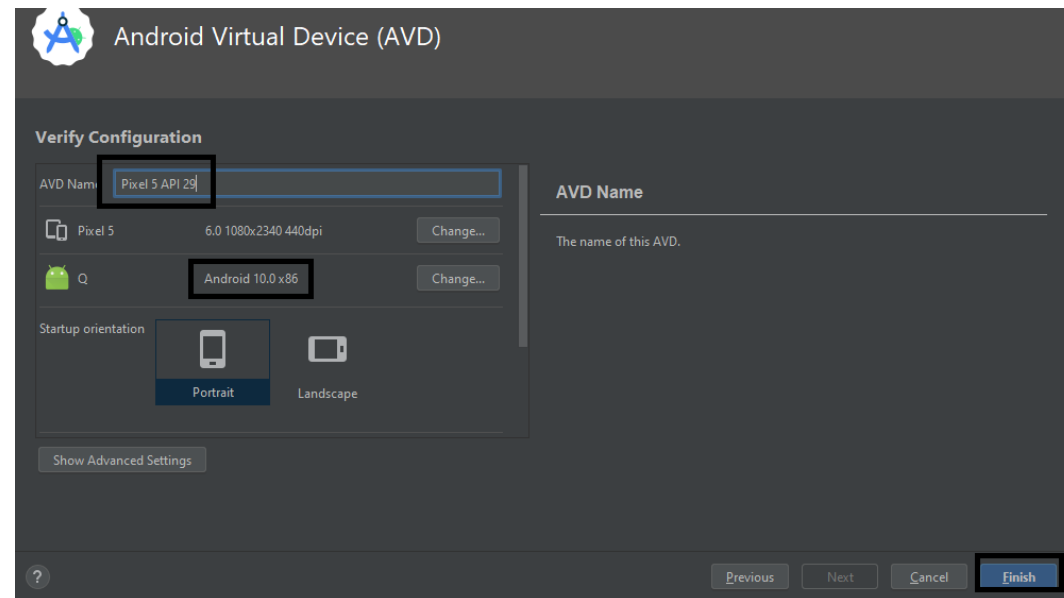
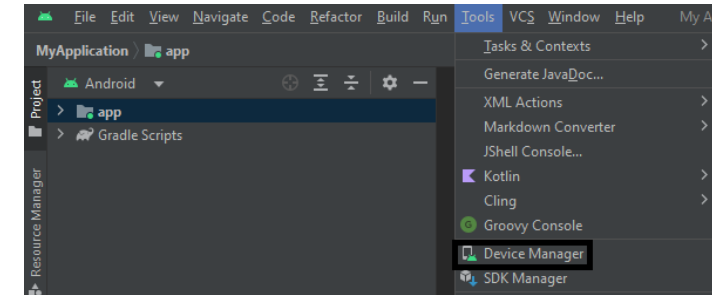
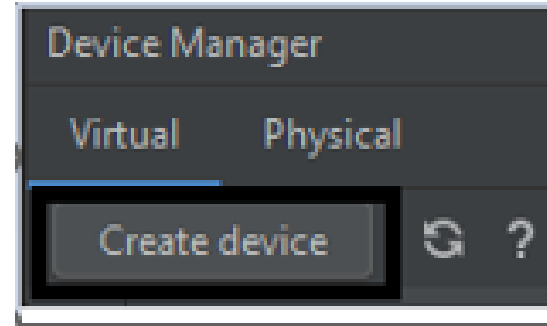
- Open Environmental Variable, Click New and give Java\_Home and Android\_Home path as per below image.
- Click “Path” in System variable, Click “Edit” button. Click “New” button and assign path for build-tools, platforms, platform-tools, tools and java bin as per below image





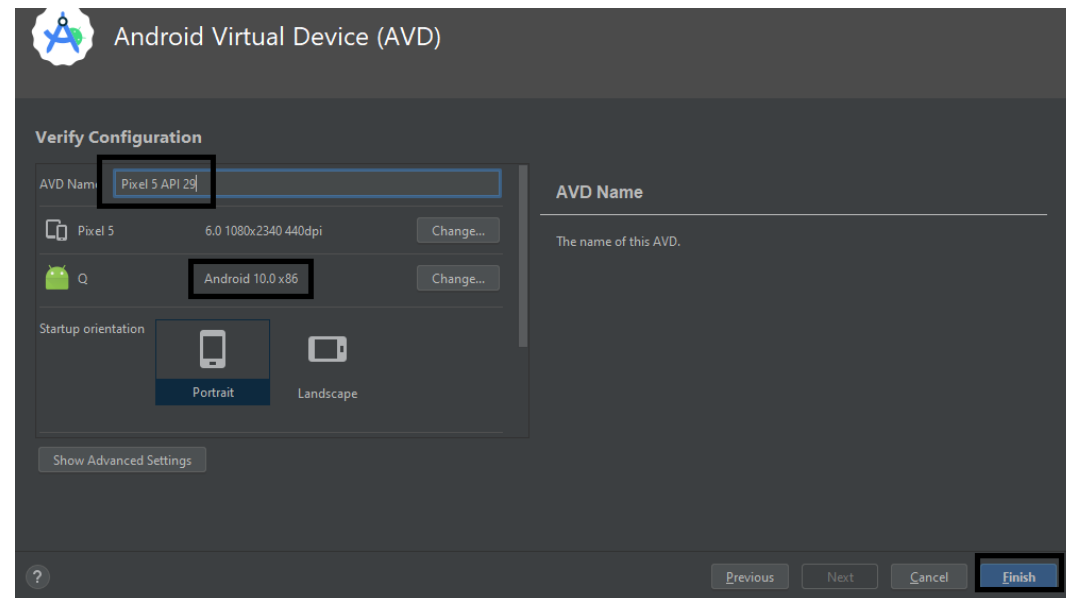
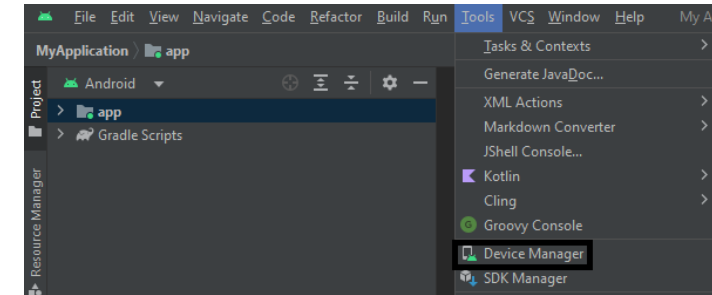
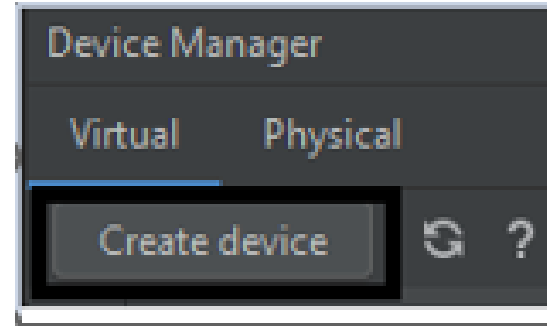
# Create a new device in Android Studio

- Click “Device Manager” from Tools option, Click “Create device”.
- Select any device, Click any platform version and click “Finish” button








# Create a new device in Android Studio

- Click “Device Manager” from Tools option, Click “Create device”.
- Select any device, Click any platform version and click “Finish” button



# Download Android SDK

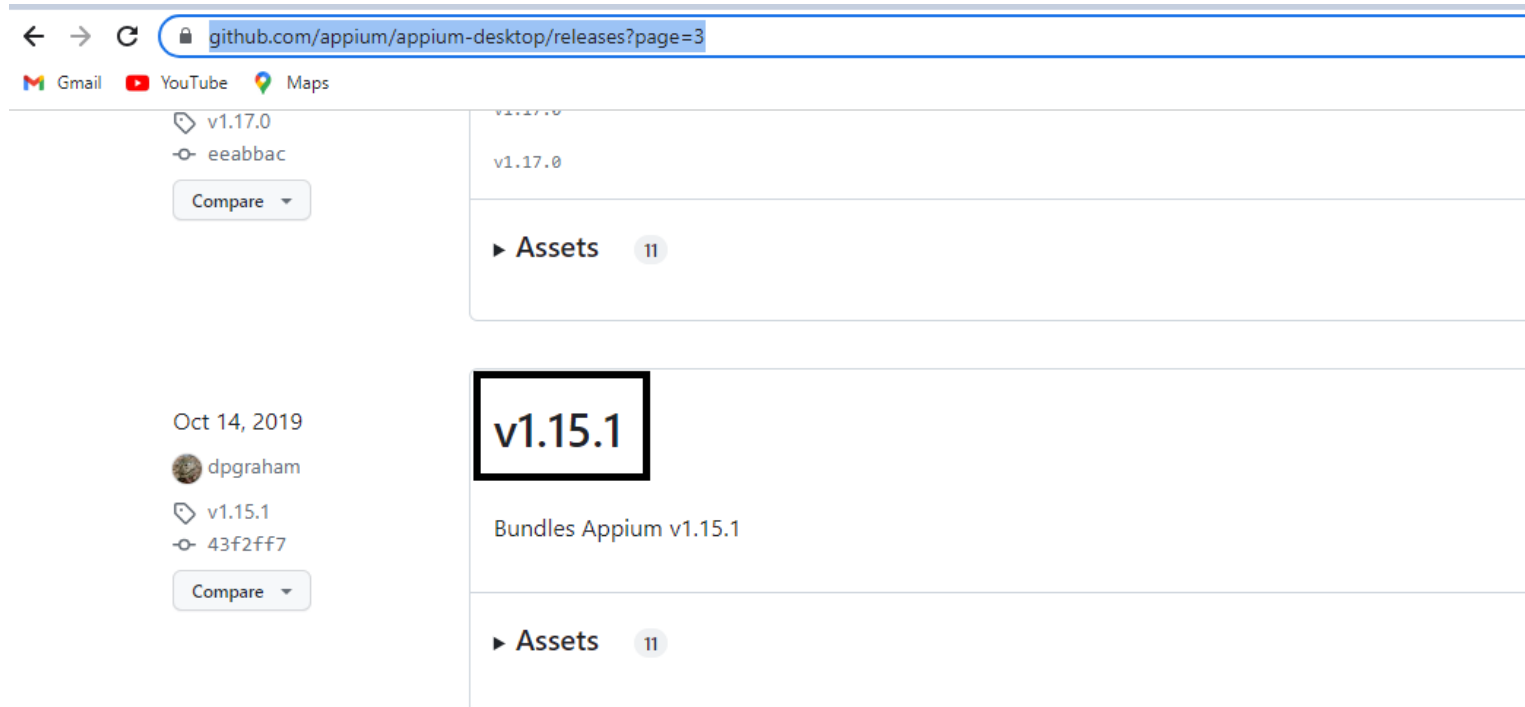
- Click “Start” button and emulator will launch

Device ▲	API	Size ...	Actions
 Pixel 6 API 29 • Android 10.0 Google APIs   x86	29	10 GB	   



# Download and install Appium

- Open the link <https://github.com/appium/appium-desktop/releases?page=3>
- Select “Appium 15.1” and download
- Open the downloaded file and finish the setup



# Download and launch Eclipse

- Open the link and download eclipse
- Finish the installation setup

← → ↻ [eclipse.org/downloads/](https://eclipse.org/downloads/)

[Gmail](#) [YouTube](#) [Maps](#)

The Eclipse Installer 2023-06 R now includes a JRE for macOS, Windows and Linux.



Get **Eclipse IDE 2023-06**

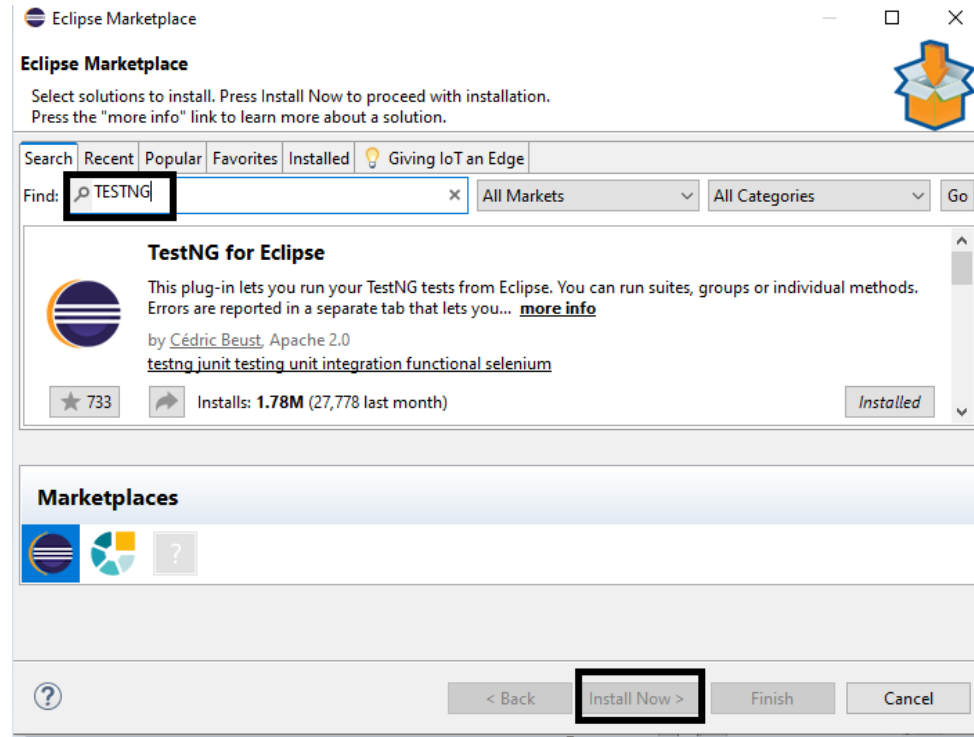
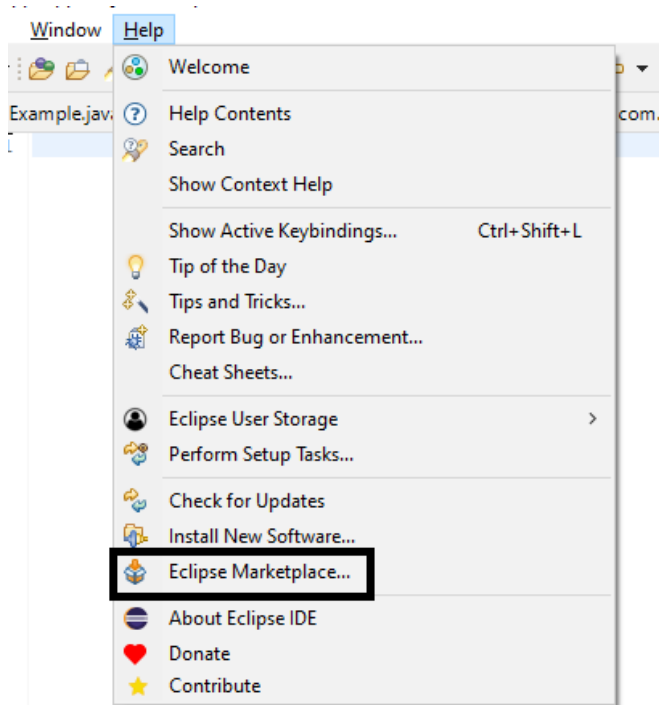
Install your favorite desktop IDE packages.

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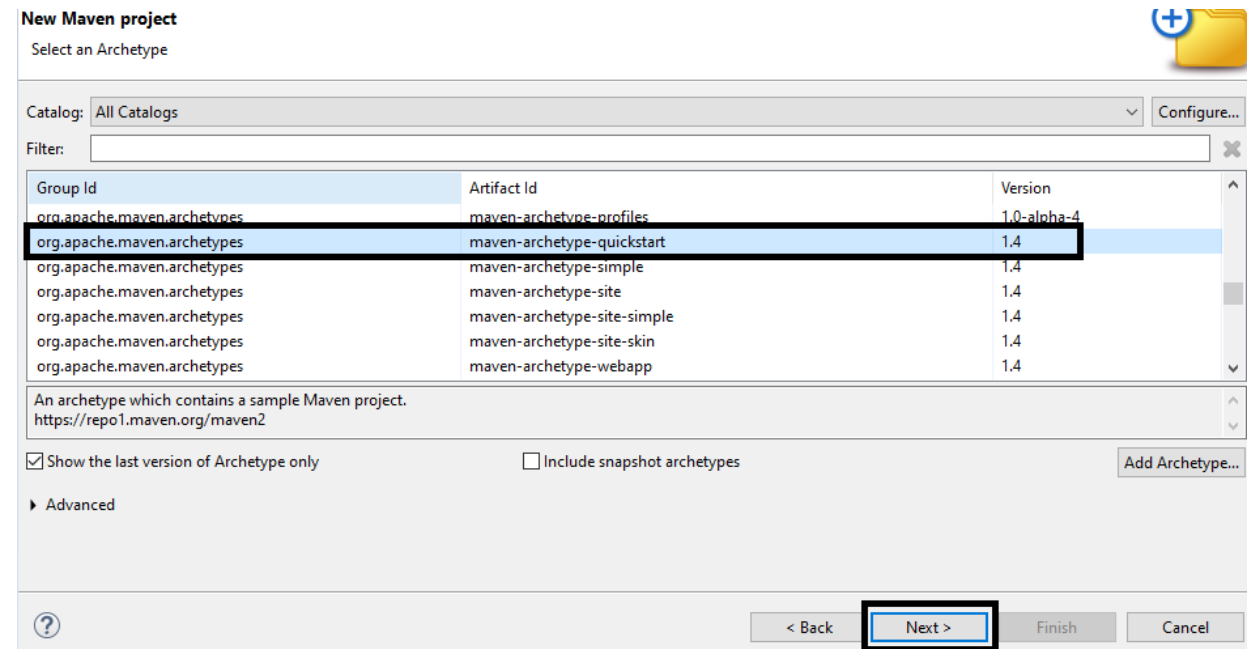
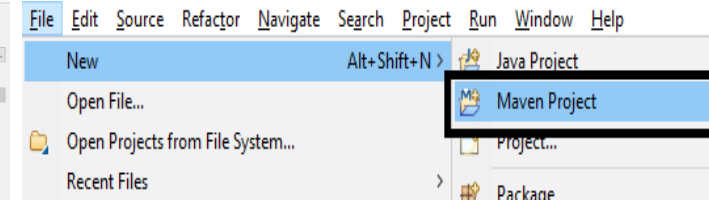
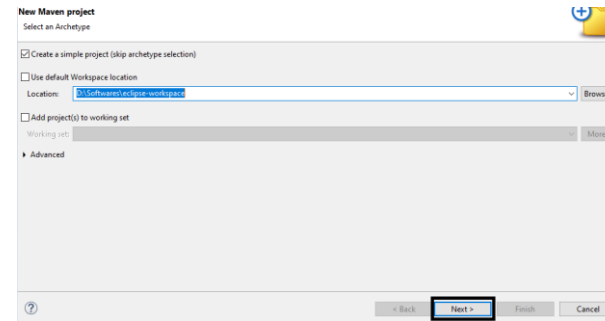
# Download TestNg plugin

- Click “Eclipse Marketplace” from Help menu.
- Type “TestNg” in find field and click “Enter” button.
- Click “Install Now” and finish the setup.



# Create Maven Project

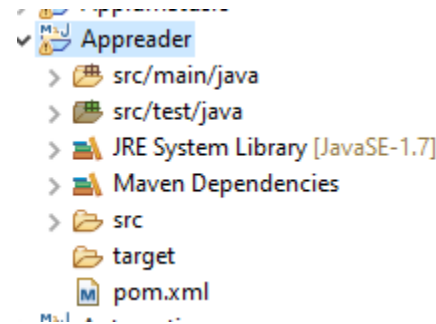
- Click “Maven Project” from New, Click “Next” button
- Select Maven-archetype-quickstart-1.4 and click “Next” button.
- Enter “app” in group and artifact id, Click “Finish” button



# Create Maven Project

- It will stuck at 33%, Click Y and enter to finish the setup.
- New Maven project will be created.

```
C:\Users\Haroon Basha A\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.7.v20230
[INFO] >>> archetype:3.2.1:generate (default-cli) > generate-sources @ standalone-
[INFO] <<< archetype:3.2.1:generate (default-cli) < generate-sources @ standalone-
[INFO] --- archetype:3.2.1:generate (default-cli) @ standalone-pom ---
[WARNING] Parameter 'localRepository' is deprecated core expression; Avoid use of .
[INFO] Generating project in Interactive mode
[INFO] Archetype repository not defined. Using the one from [org.apache.maven.arch
[INFO] Using property: groupId = appreader
[INFO] Using property: artifactId = appreader
[INFO] Using property: version = 0.0.1-SNAPSHOT
[INFO] Using property: package = appreader.appreader
Confirm properties configuration:
groupId: appreader
artifactId: appreader
version: 0.0.1-SNAPSHOT
package: appreader.appreader
Y: : Y
```





# Add dependency in POM

- Add Junit, Appium, Selenium, TestNg dependencies in POM.xml file

```
<dependencies>
<dependency>
<groupId>org.seleniumhq.selenium</groupId>
<artifactId>selenium-java</artifactId>
<version>3.141.59</version>
<scope>compile</scope>
</dependency>
<dependency>
<groupId>io.github.bonigarcia</groupId>
<artifactId>webdrivermanager</artifactId>
<version>5.2.3</version>
<scope>compile</scope>
</dependency>
<dependency>
<groupId>junit</groupId>
<artifactId>junit</artifactId>
<version>4.11</version>
<scope>test</scope>
</dependency>
<dependency>
<groupId>io.appium</groupId>
<artifactId>java-client</artifactId>
<version>7.6.0</version>
<scope>compile</scope>
</dependency>
<dependency>
<groupId>org.apache.poi</groupId>
<artifactId>poi-ooxml</artifactId>
<version>5.2.3</version>
<scope>compile</scope>
</dependency>
```

```
<dependency>
<groupId>org.testng</groupId>
<artifactId>testng</artifactId>
<version>7.7.1</version>
<scope>test</scope>
</dependency>
```

# DesireCapability and URL

- Set DesireCapability and URL

```
AppiumDriver<MobileElement> driver;

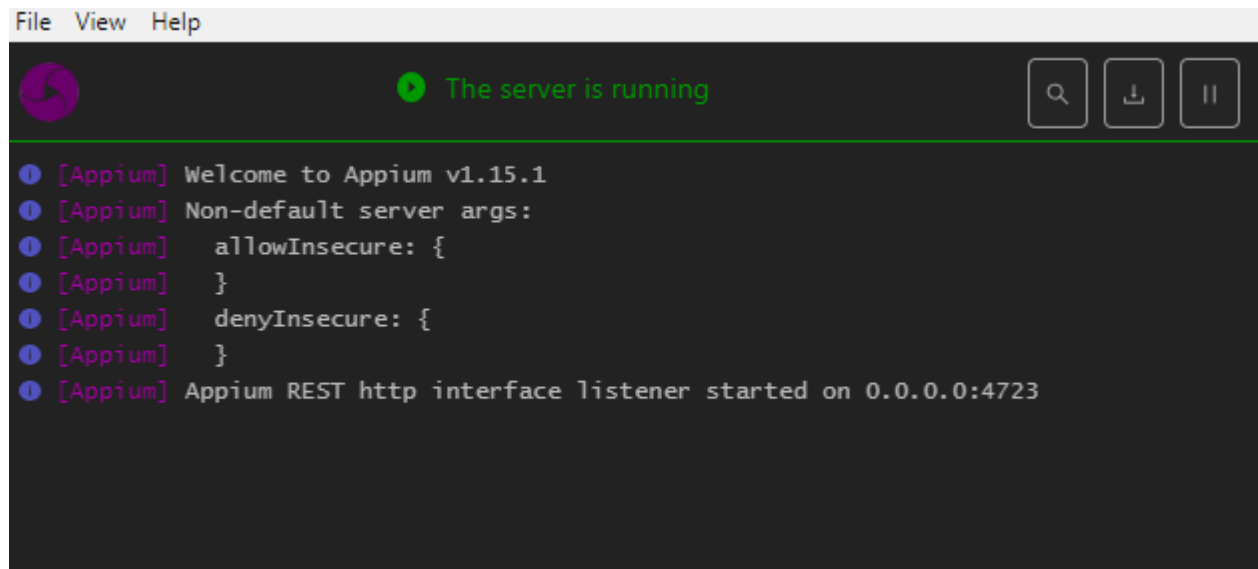
DesiredCapabilities caps = new DesiredCapabilities();
caps.setCapability(MobileCapabilityType.PLATFORM_NAME, "Android");
caps.setCapability(MobileCapabilityType.DEVICE_NAME, "Pixel6");
caps.setCapability(MobileCapabilityType.APP, "D:\\\\ContactManager.apk"); // Replac

try {
    // Create Appium driver with the desired capabilities
    driver = new AndroidDriver<>(new URL("http://localhost:4723/wd/hub"), caps);

    // Add your test steps here
```

# Appium Server

- Start Appium Server



The screenshot shows the Appium Desktop application window. The title bar includes 'File', 'View', and 'Help' menus. The main interface has a dark theme. At the top, there is a status bar with a green play button icon and the text 'The server is running'. To the right of the status bar are three buttons: a magnifying glass (search), a download icon, and a pause icon. Below the status bar, there is a log area with several lines of text, each preceded by a blue circular icon with a white 'i' (information). The log text is as follows:

```
[Appium] Welcome to Appium v1.15.1
[Appium] Non-default server args:
[Appium]   allowInsecure: {
[Appium]   }
[Appium]   denyInsecure: {
[Appium]   }
[Appium] Appium REST http interface listener started on 0.0.0.0:4723
```



## Run the code

- Run the code



## Run the code

- Run the code

# App to launch in Emulator

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App to be launch in Emulator.

