Setup Selenium Java Project - Java, Maven, IntelliJ IDEA (Quick Guide Setup)

Prepared by :-

Kushal Parikh

Driving Quality Through Automation

Checkout my topmate - https://topmate.io/kushalparikh11

● Setting up Java & Maven Environment Variables

■ ⌨Install & Configure Java

✅ **Step 1:** Check if Java is installed using Command Line CMD:
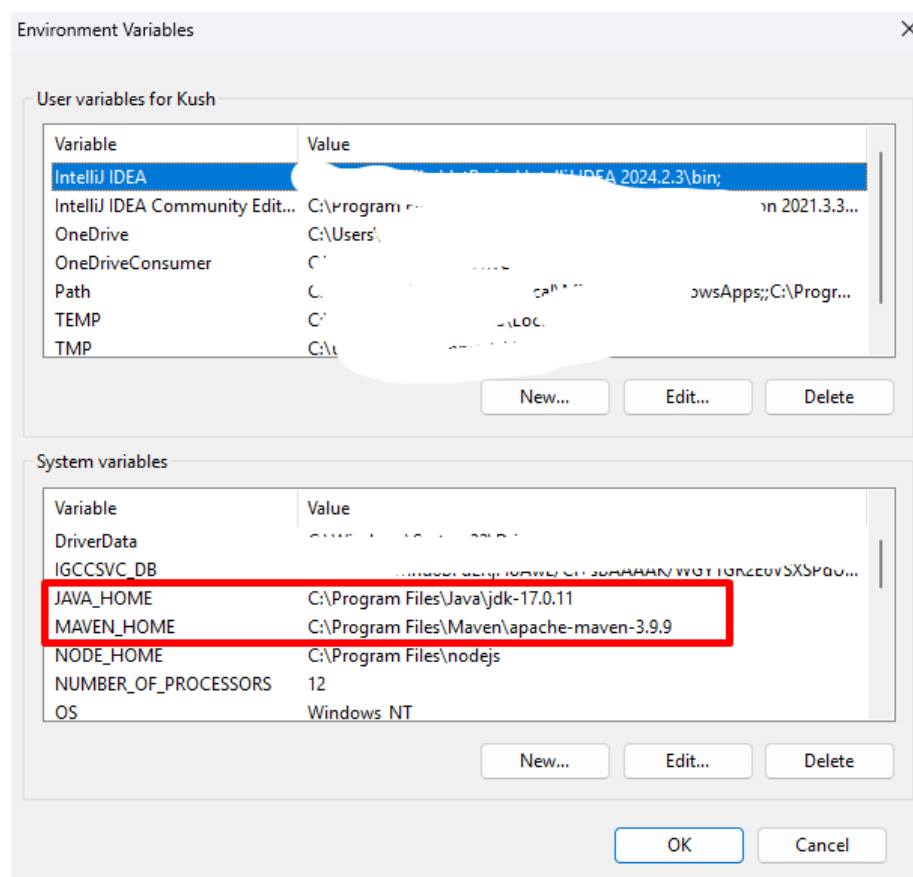
```
java -version
```

✅ **Step 2:** If not installed, download and install Java:

- **Windows/Mac/Linux:** Download JDK
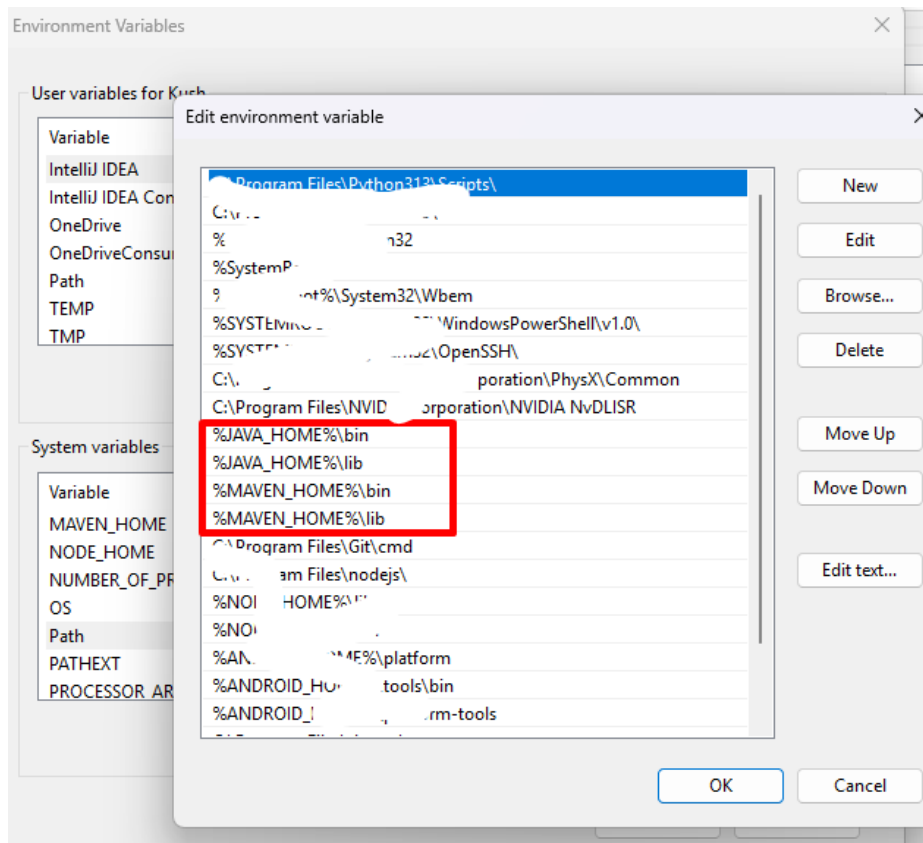 ✅ **Step 3:** Set environment variables:
- **Windows:**
  1. Go to **System Properties → Advanced → Environment Variables**
  2. Add `JAVA_HOME` = `C:\Program Files\Java\jdk-XX`

  3. Add `JAVA_HOME\bin` to `Path`

Follow me on LinkedIn - https://www.linkedin.com/in/kushalparikh11/

Mac/Linux: Add to `~/.bashrc` or `~/.zshrc`:

```
export JAVA_HOME=/Library/Java/JavaVirtualMachines/jdk-
XX.jdk/Contents/Home
export PATH=$JAVA_HOME/bin:$PATH
```

-

✅ **Step 4:** Verify setup - Open Command Line CMD

```
java -version
```

Checkout my topmate - https://topmate.io/kushalparikh11

■ 2⃣ Install & Configure IntelliJ IDEA

✅ **Step 1:** Download and install **IntelliJ IDEA** (Community Edition is free).
✅ **Step 2:** Install **Maven Plugin** (comes pre-installed in IntelliJ).

■ 3⃣ Install & Configure Maven

✅ **Step 1:** Check if Maven is installed:

```
mvn -version
```



```
Command Prompt                    ×    +   ∨

Microsoft Windows [Version 10.0.26100.3194]
(c) Microsoft Corporation. All rights reserved.

C:\Users\kush>mvn -version
Apache Maven 3.9.9 (8e8579a9e76f7d015ee5ec7bfcdc97d260186937)
Maven home: C:\Program Files\Maven\apache-maven-3.9.9
Java version: 17.0.11, vendor: Oracle Corporation, runtime: C:\Program Files\Java\jdk-17.0.11
Default locale: en_IN, platform encoding: Cp1252
OS name: "windows 11", version: "10.0", arch: "amd64", family: "windows"

C:\Users\kush>
```

✅ **Step 2:** If not installed, download & install:
🔗 **Download Apache Maven**
✅ **Step 3:** Set environment variables:

- **Windows:**
    1. Add `MAVEN_HOME` = `C:\apache-maven-XX`
    2. Add `MAVEN_HOME\bin` to `Path`

    ```
    Note - Already shown maven variables in above screenshots for
    Java environments
    ```
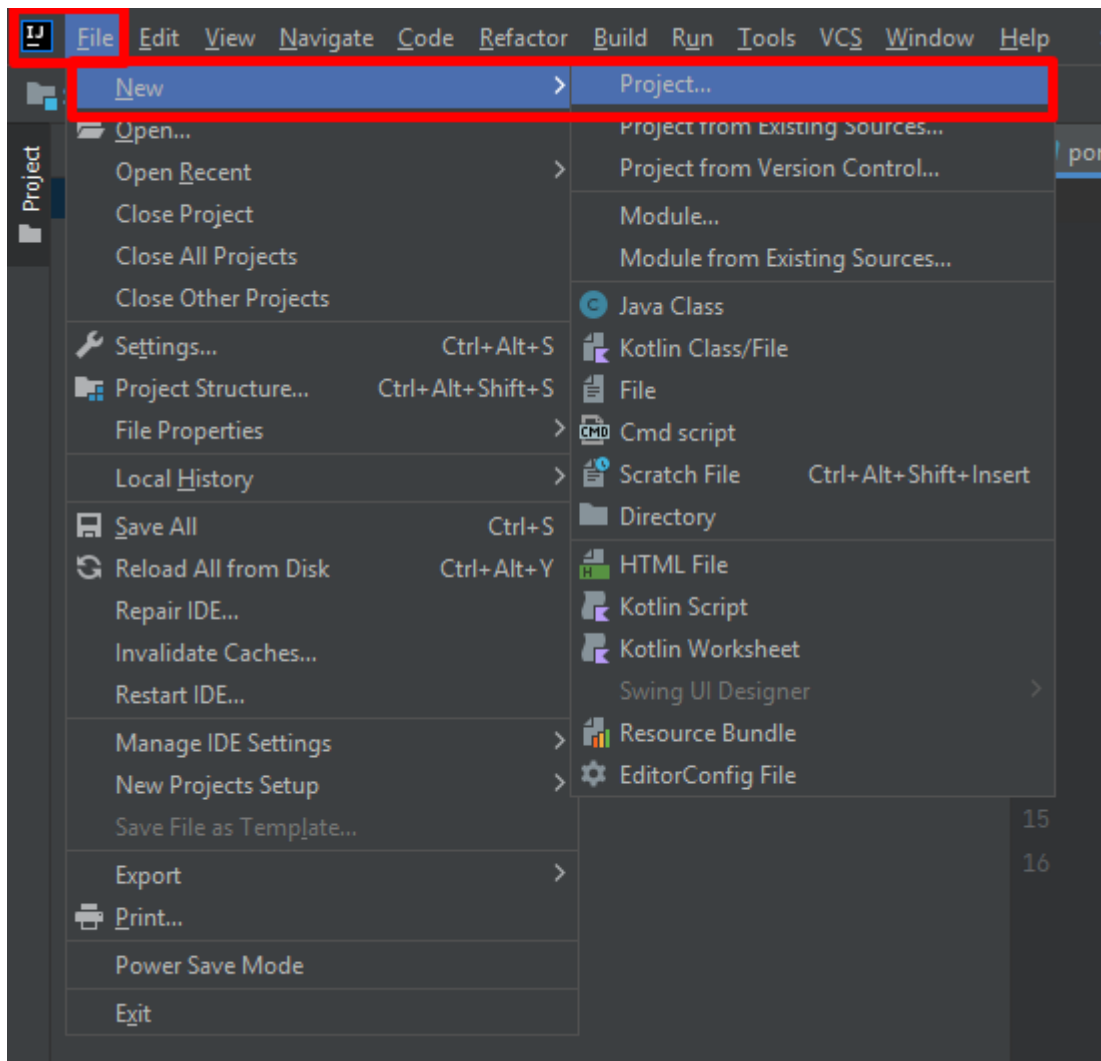
✅ **Step 4:** Verify setup:

```
mvn -version
```

Follow me on LinkedIn - https://www.linkedin.com/in/kushalparikh11/

■

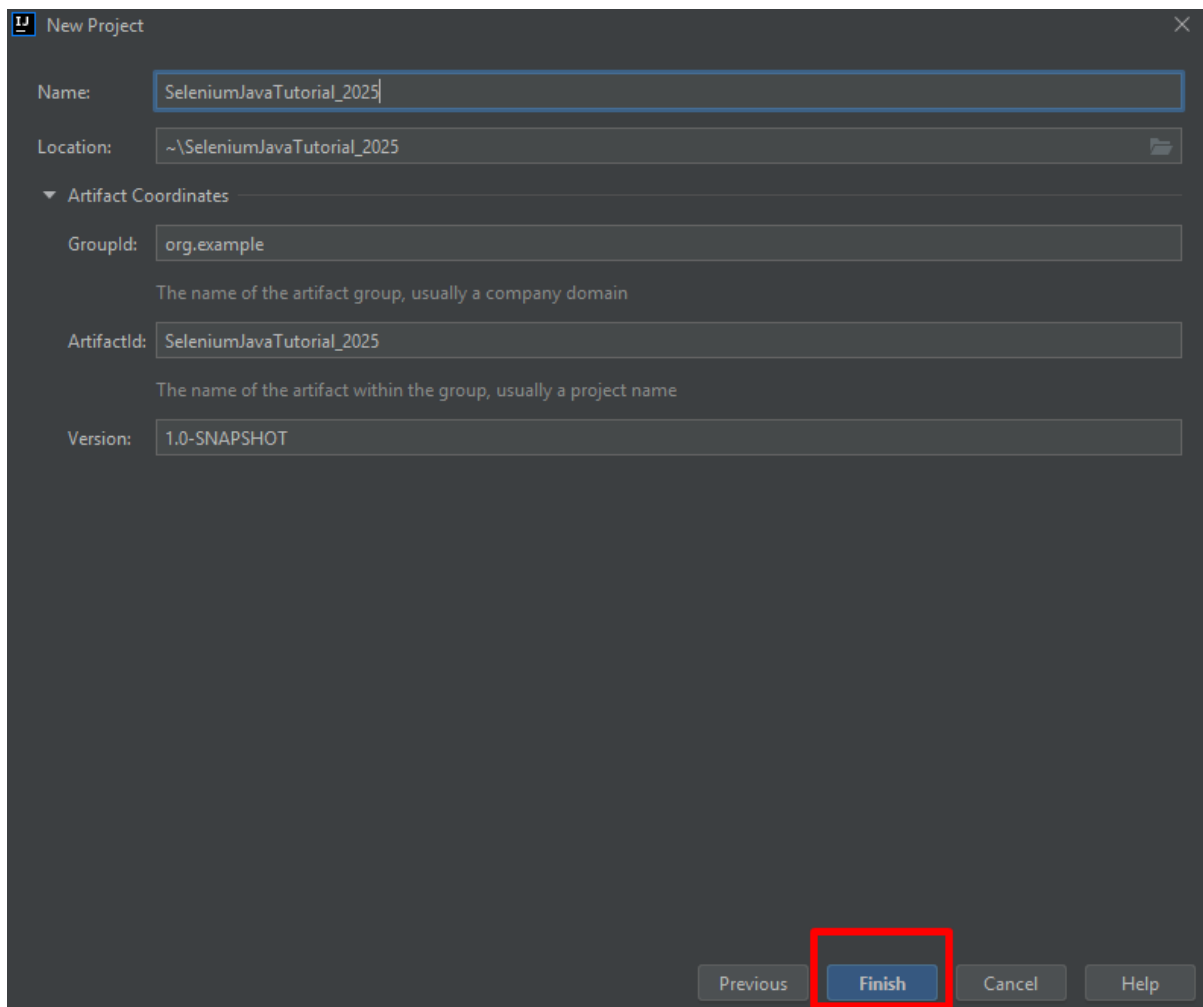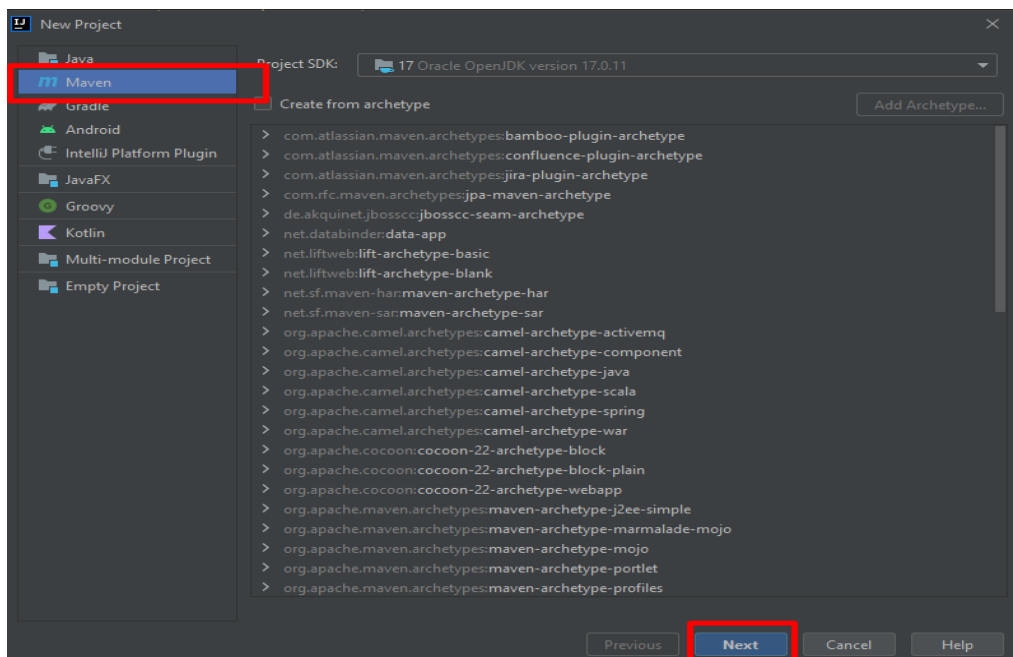● **Selenium Java Project Setup - Create Project**

■ ⬜**Create a Maven Project in IntelliJ IDEA**

✅ **Step 1:** Open **IntelliJ IDEA** → **New Project**

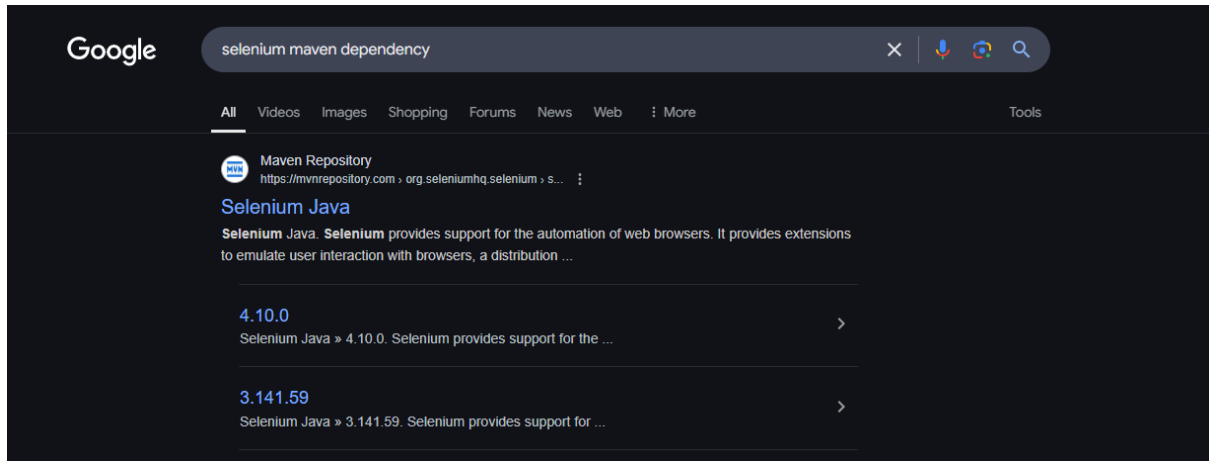✅ **Step 2:** Select **Maven**, Enter your project name & click on Finish button

Checkout my topmate - https://topmate.io/kushalparikh11

■ 2️⃣ **Add Dependencies in** `pom.xml`

✅ **Step 1:** Open `pom.xml` and add Selenium dependency from below link : -

Link - https://mvnrepository.com/artifact/org.seleniumhq.selenium/selenium-java


```
<dependencies>
    <dependency>
    <groupId>org.seleniumhq.selenium</groupId>
    <artifactId>selenium-java</artifactId>
    <version>4.28.1</version>
</dependency>
</dependencies>
```

Checkout my topmate -
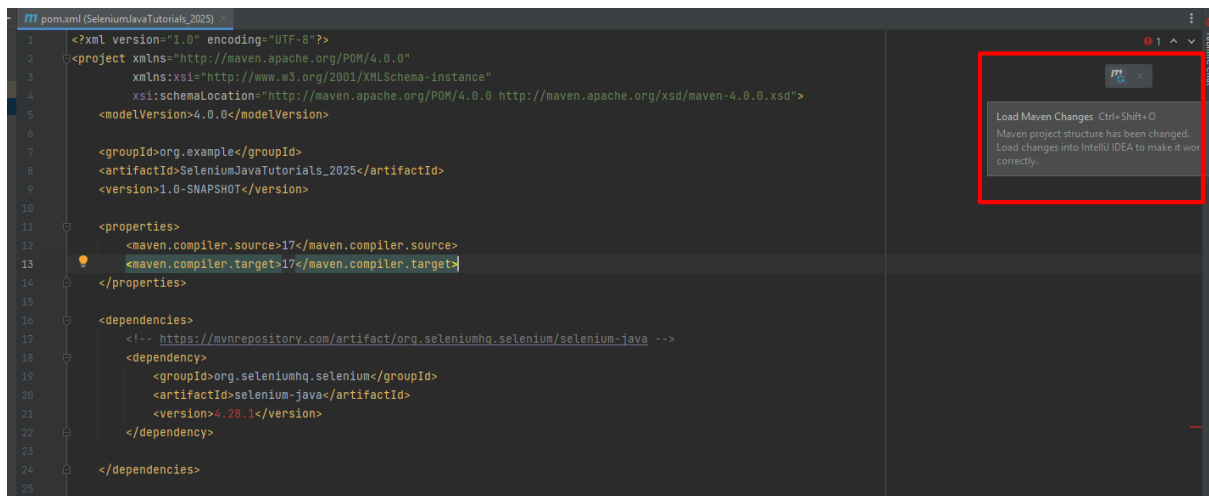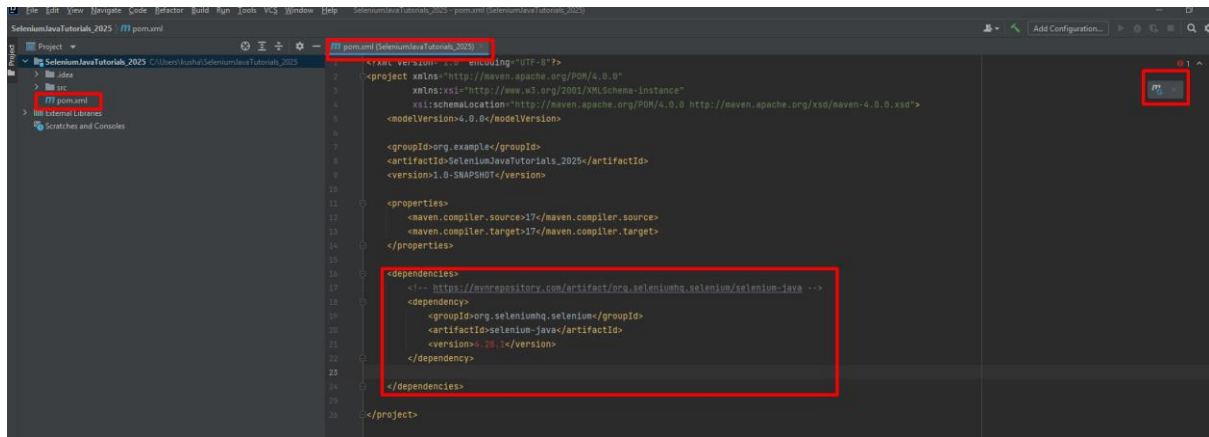
Click on Maven Load Icon to load the changes !

✅ **Step 2:** Update project dependencies:

```
mvn clean install
```


Follow me on LinkedIn - https://www.linkedin.com/in/kushalparikh11/
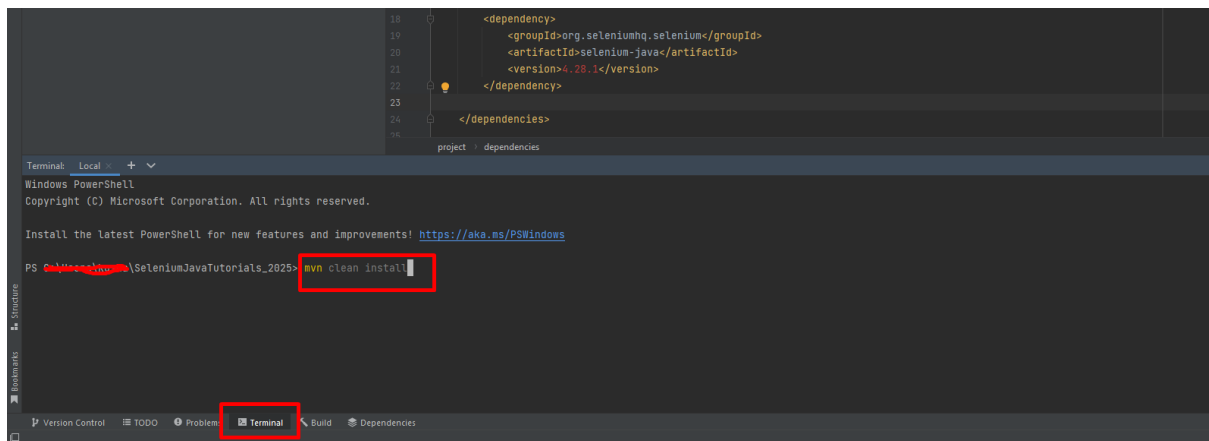
■ 🔟Create Your First Selenium Test

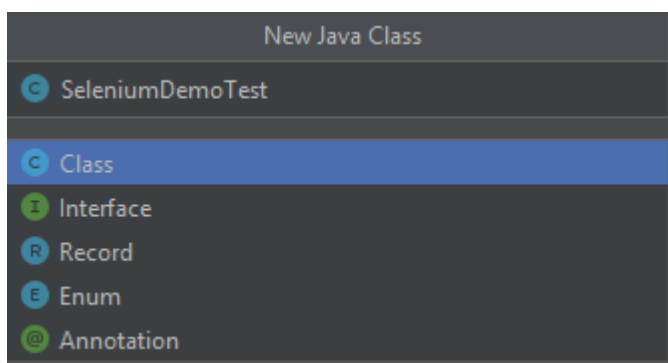✅ **Step 1:** In `src/test/java`, create a new Java class - **SeleniumDemoTest.java**
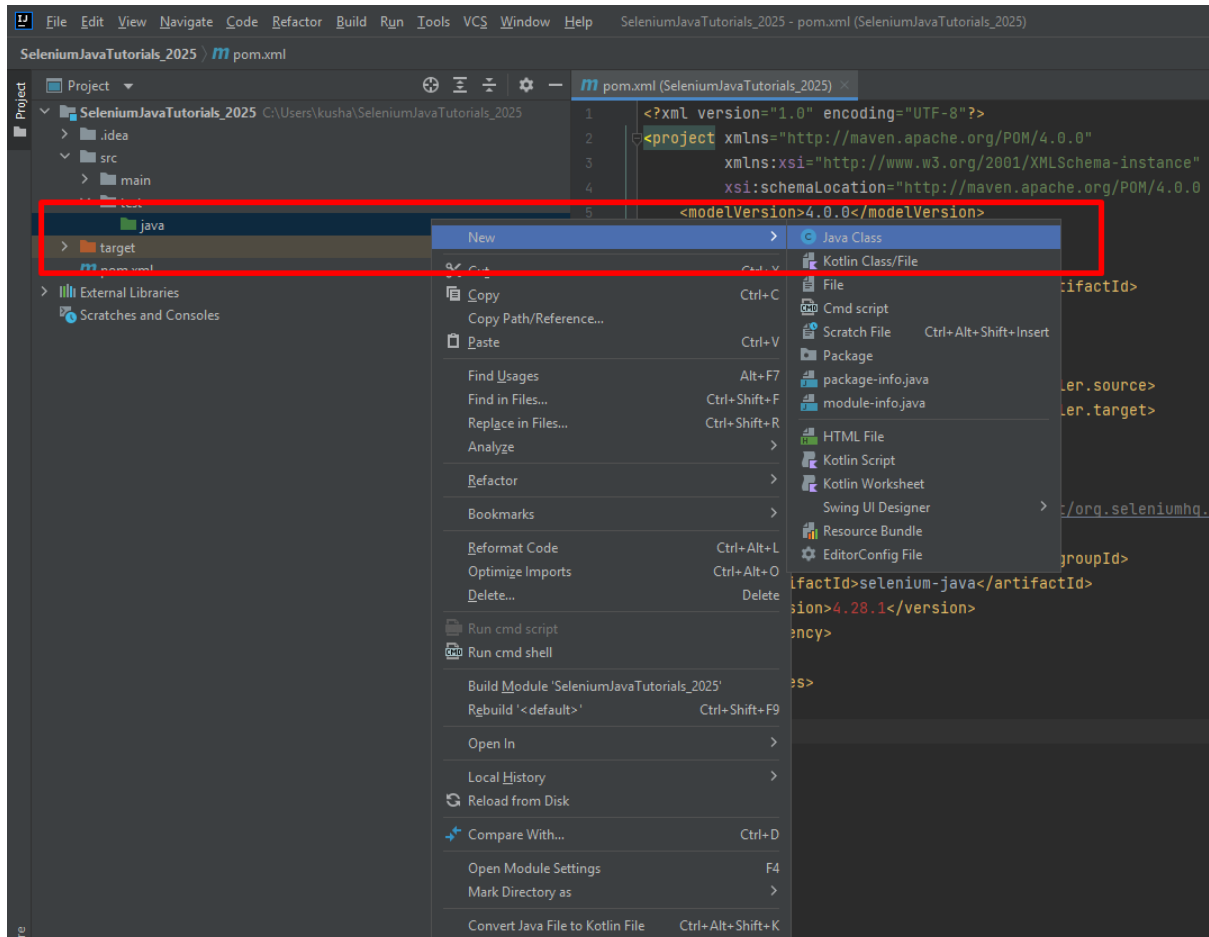
✅ **Step 2:** Add the following Selenium test script:

```
import org.openqa.selenium.WebDriver;
```

Checkout my topmate - https://topmate.io/kushalparikh11

```java
import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class SeleniumDemoTest {

  public static void main(String[] args){
     // Initialize WebDriver
     WebDriver driver = new ChromeDriver();

     // Maximize browser window
     driver.manage().window().maximize();
     // Open Google
     driver.get("https://www.google.com");

     // Print Page Title
     System.out.println("Page Title: " + driver.getTitle());

     // Close the browser
     driver.quit();

  }
}
```

Follow me on LinkedIn - https://www.linkedin.com/in/kushalparikh11/

eleniumJavaTutorials_2025 > src > test > java > SeleniumDemoTest

```java
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;


public class SeleniumDemoTest {

    public static void main(String[] args){
        // Initialize WebDriver
        WebDriver driver = new ChromeDriver();

        // Maximize browser window
        driver.manage().window().maximize();
        // Open Google
        driver.get("https://www.google.com");

        // Print Page Title
        System.out.println("Page Title: " + driver.getTitle());

        // Close the browser
        driver.quit();

    }
}
```
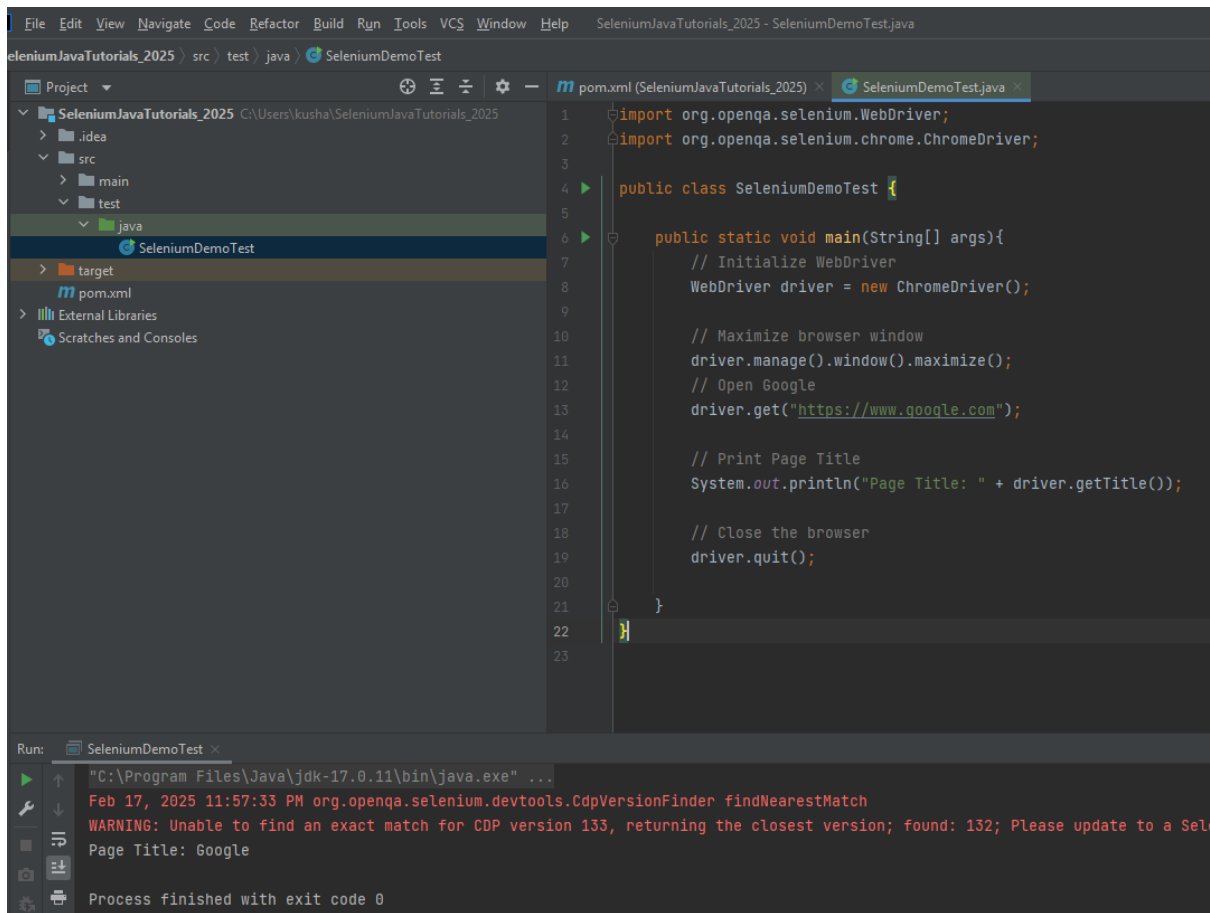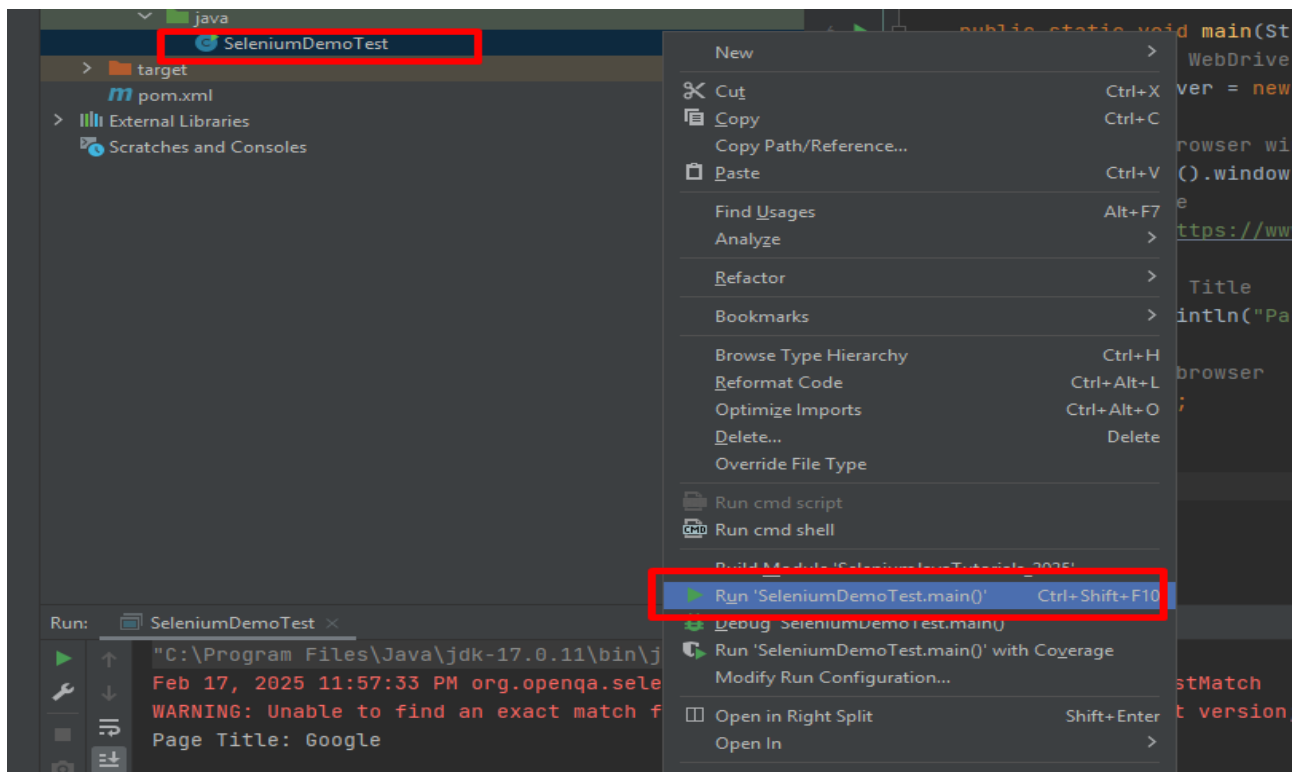
Run: SeleniumDemoTest

```
"C:\Program Files\Java\jdk-17.0.11\bin\java.exe" ...
Feb 17, 2025 11:57:33 PM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 133, returning the closest version; found: 132; Please update to a Sel
Page Title: Google

Process finished with exit code 0
```

---

5 Run the Selenium Test

✅ **Step 1:** Right-click on `SeleniumDemoTest.java`

Checkout my topmate - https://topmate.io/kushalparikh11

✅ **Step 2:** The browser should launch and open **Google**.

■ 🎯 **Your Selenium Java Maven Project is Ready!** 🚀

Now you have a fully configured **Selenium Java Test Automation Setup** using **Java, Maven & IntelliJ IDEA!** 🎉

Follow me on LinkedIn - https://www.linkedin.com/in/kushalparikh11/