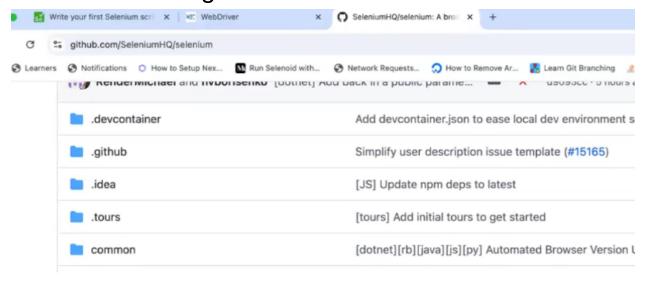
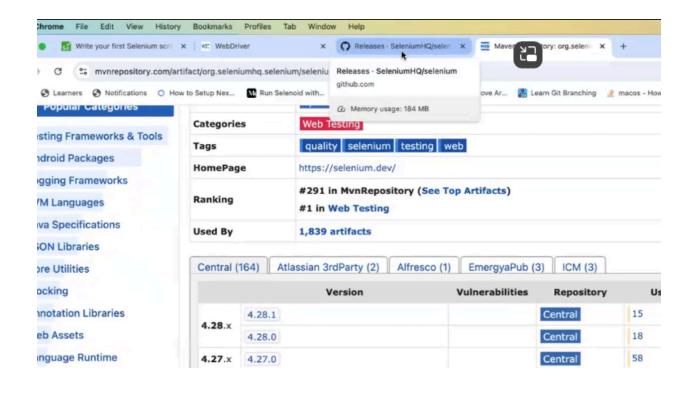
```
Selenium :
   web automation tool
4 pros:
5 1. open source / free:
6 2. community driven
7 3. different support browser: chrome, firefox, edge, safari, brave, IE
8 4. different language bindings: Java, C#, Python, Ruby, JS, PHP, Go, Kotlin
9 5. different OS/Platforms: Windows, Linux, MacOS
10 6. can be integrted with any other 3rd party libs:
  se+testNG+poi+cucumber+report+log4j
12 7. w3cwebdriver protocol:
13 8. dev ops: CI CD + PL + Cloud + Docker
17 cons:
18 1. supports only for web automation, no support for API, Desktop/Windows/Mobile
19 2. can not generate test report: testng, Junit , Cucumber, Reports
20 3. hardware testing: NA
21 4. Performance testing: not recommended
22 5. Security testing: not recommended
23 6. OTP, Email, Captcha, Bar Code, QR Code
```

Official selenium github-



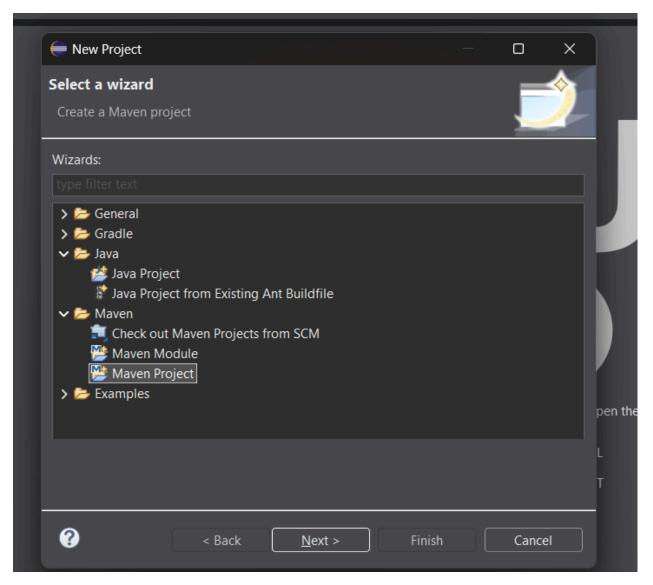
Selenium maven dependency-



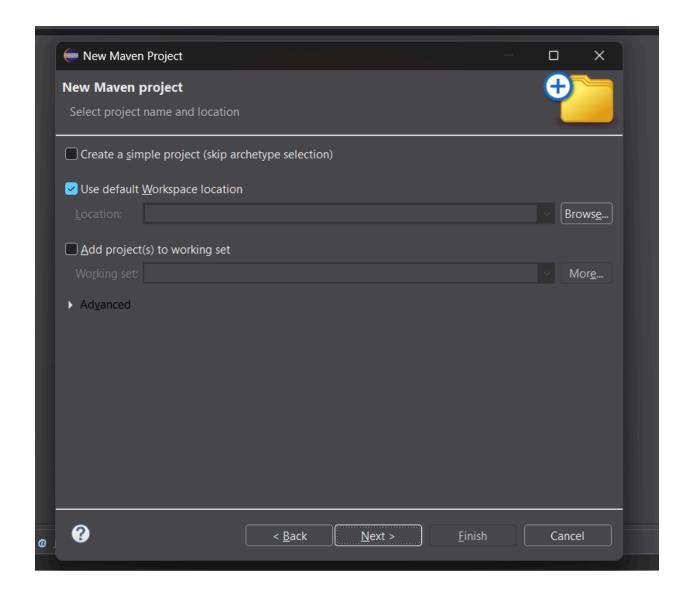
```
selenium components:
1. IDE: Record n play: not recommended
2. Selenium RC: Selenium 1: Deperecated
3. Selenium WebDriver: Selenium 1(RC) + WebDriver=> Selenium WebDriver (Selenium 2.x)--> Selenium 3.x --> Selenium 4.x
4. Selenium Grid: to run scripts/tests on cloud, machine, server, remote machine, docker, cloud vendors: LT, Browserstack
3. [OS/browser]: [windows/ch] + [mac + chrome] + [mac+safari]+ [linux+chrome]
```

```
31
32
33 -----
34 Selenium: Library (api+methods), framework, tool
35
36 setup:
37 se+java:
38 Maven Project:
39 add the dependency of selenium 4.x: 4.28.1
40
41
```

Create maven project-



Click next

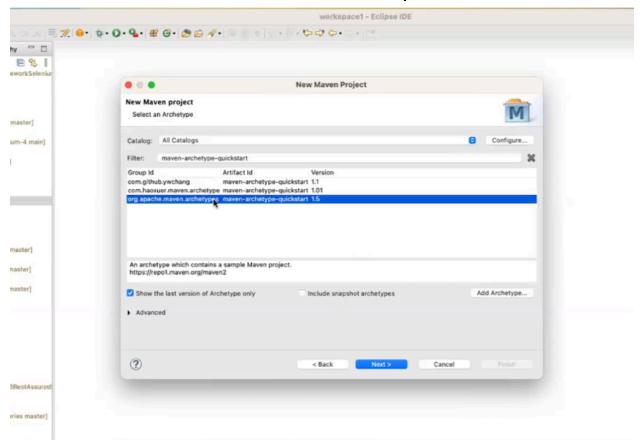


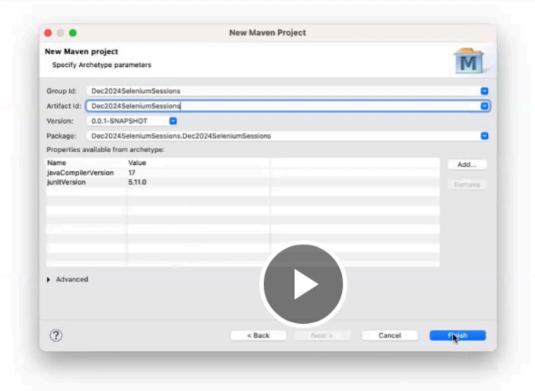
If artifact doesnt come, do it manually from cmd from the path of project—

C:\Users\karan\Desktop\seleniumByNaveen>mvn archetype:generate -DgroupId=seleniumbatch -DartifactId=seleniumbatch -DarchetypeArtifactId=maven-archetype-quickstart -DarchetypeVersion=1.5 -DinteractiveMode=false
[INFO] Scanning for projects...

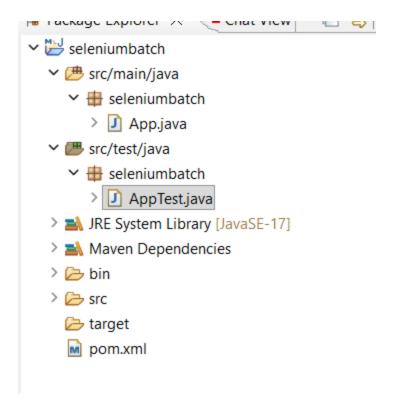
You should get build success.

If the below window doesnt come up-





Console 22 📳 Problems (ii) Javadoc 🚇 Declaration 🛒 Progress 👫 Results of running suite 💠 Debug 👯 Expressions 🧬 Terminal 1



Open pom-

Remove dependency management from start to end-

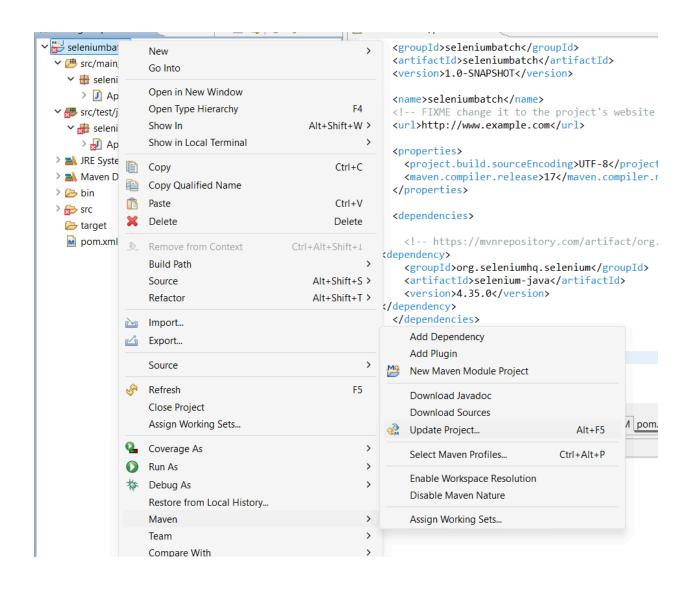
```
18
19⊜
     <dependencyManagement>
20⊜
     <dependencies>
21⊜
       <dependency>
          <groupId>org.junit</groupId>
22
23
          <artifactId>junit-bom</artifactId>
24
          <version>5.11.0
25
          <type>pom</type>
26
          <scope>import</scope>
27
        </dependency>
28
       </dependencies>
     </dependencyManagement> 1
29
30
```

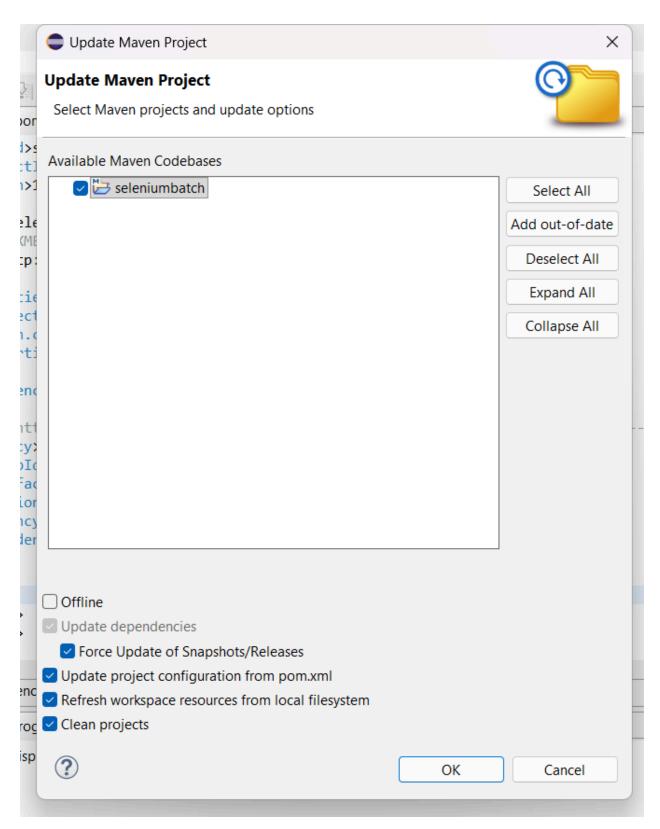
Remove all dependency inside dependency tag-

Add selenium in dependencies-

Remove everything inside build-

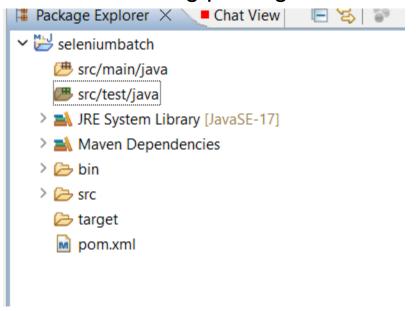
Update project





When pom changes always update this area.

Delete all existing package and files-



Open browser Src main java

```
🖊 launchbrowser.java 🗙
  1 package seleniumbatch;
  3 import org.openqa.selenium.chrome.ChromeDriver;
  5 public class launchbrowser {
  6
        public static void main(String[] args) {
            //launch browser: chrome
  9
            //blank chrome opened.
 10
            ChromeDriver driver = new ChromeDriver();
11
 12
 13
        }
 14
 15 }
 16
```

```
workspace1 - Dec2024SeleniumSessions/src/m
                                                           eleniumsessions/LaunchBrowser.java - Eclipse IDE
               1 package seleniumsessions;
3 import org.openqa.selenium.chrome.ChromeDriver;
5 public class LaunchBrowser {
6
      public static void main(String[] args) {
7€
8
9
           //launch browser: chrome
10
           ChromeDriver driver = new ChromeDriver();
11
12
13
      }
14
1.5
```

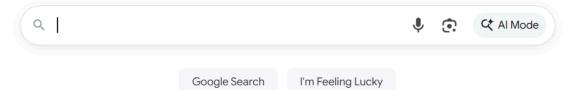
Open url

```
//enter the url:
driver.get("https://www.google.com");

google.com/?zx=1757903358879&no_sw_cr=1
```

Google

Gmail Images



Get title

```
//get the title of the page:
String actTitle = driver.getTitle();
System.out.println("page title: "+ actTitle);

Problems Console X Progress
<terminated> launchbrowser [Java Application] (
Sep 15, 2025 8:00:27 AM o
WARNING: Unable to find a
page title: Google
```

Assert

```
19
20
          //checkpoint/validation point/assertion: act vs exp result:
21⊜
          if(actTitle.equals("Google")) {
22
              System.out.println("title is correct: PASS");
23
          }
24⊝
          else {
25
              System.out.println("title is not correct: FAIL");
26
  Problems 📮 Console 🗙
                          Progress
  <terminated> launchbrowser [Java Application] C:\Users\kara
  Sep 15, 2025 8:01:13 AM org.op\epsilon
  WARNING: Unable to find an exac
   page title: Google
   title is correct: PASS
```

Close browser

```
29
30    //close the browser:
31    driver.quit();
32
```

Without https error-

Www not mandatory

It works fine.

Line 28-

```
3 import org.openga.selenium.chrome.ChromeDriver;
5 public class LaunchBrowser {
      public static void main(String[] args) {
7⊕
8
9
           //launch browser: chrome
           ChromeDriver driver = new ChromeDriver();
10
11
12
           //enter the url:
13
           driver.get("https://www.google.com");
14
15
           //get the title of the page:
           String actTitle = driver.getTitle();
16
           System.out.println("page title: "+ actTitle);
17
18
           //checkpoint/validation point/assertion: act vs exp result:
19
           if(actTitle.equals("Google")) {
20
               System.out.println("title is correct: PASS");
21
22
23
           else {
24
               System.out.println("title is not correct: FAIL");
25
26
27
           //Automation steps + Checkpoint ==> Automation Testing
28
29
           //close the browser:
30
31
           driver.quit();
32
33
```

Launch ff Edge browser-

```
launchbrowser.java
                Iaunchbrowser2.java
                                Iaunchbrowser3.java
                                                🕖 launchbrowser4.java 🗡
  1 package seleniumbatch;
⅓ 3⊖ import org.openga.selenium.chrome.ChromeDriver;
  4 import org.openqa.selenium.edge.EdgeDriver;
  5 import org.openqa.selenium.firefox.FirefoxDriver;
  7 public class launchbrowser4 {
  90
         public static void main(String[] args) {
 10
             //launch browser: chrome
 11
 12
             //blank chrome opened.
 13 //
             ChromeDriver driver = new ChromeDriver();
 14
             //to launch ff
 15
             FirefoxDriver driver = new FirefoxDriver();
 16
             //to launch edge.
17
             EdgeDriver driver1=new EdgeDriver();
 18
```