

How To Set-Up Selenium, Java, Eclipse, Drivers & TestNG

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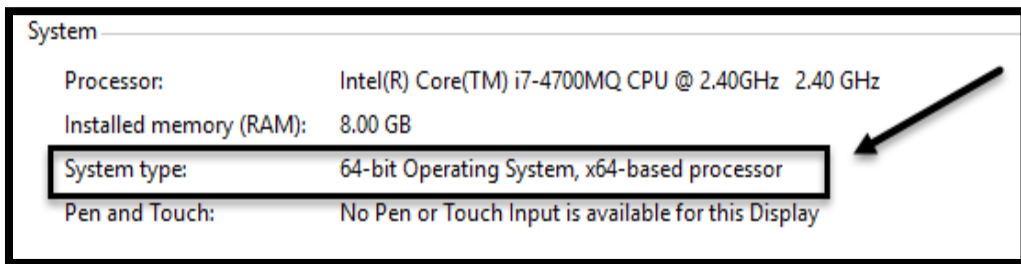
Installations

The following is a list of installations to get started with Selenium WebDriver using Java:

- [Verify The System Type](#)
- [Install Java Development Kit \(JDK\)](#)
- [Install Eclipse IDE](#)
- [Configure Selenium WebDriver](#)
- [Download Browser Drivers](#)
- [Install TestNG](#)

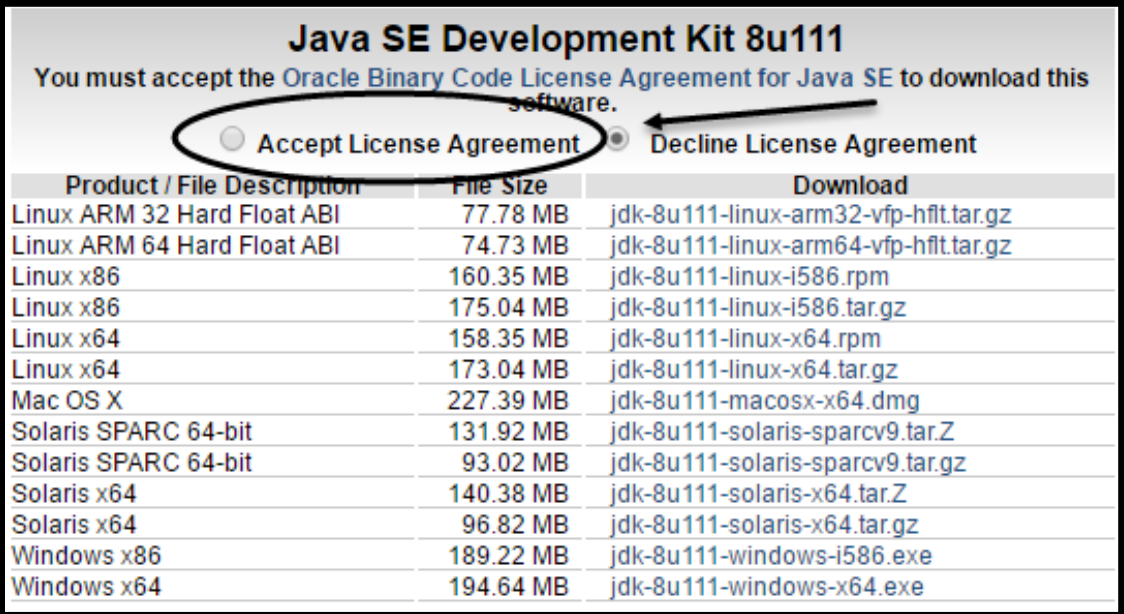
Verify The System Type

1. Go to Start menu
2. Select System
3. System type = “i.e., 64-bit Operating System - Windows 64”



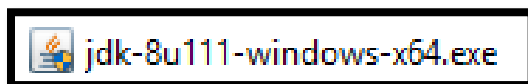
Install Java Development Kit (JDK)

1. Go to <http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>
2. Click Accept License Agreement in the Java SE Development Kit 8u111 section
Note: Version 8u111 may not be the most recent version



Product / File Description	File Size	Download
Linux ARM 32 Hard Float ABI	77.78 MB	jdk-8u111-linux-arm32-vfp-hflt.tar.gz
Linux ARM 64 Hard Float ABI	74.73 MB	jdk-8u111-linux-arm64-vfp-hflt.tar.gz
Linux x86	160.35 MB	jdk-8u111-linux-i586.rpm
Linux x86	175.04 MB	jdk-8u111-linux-i586.tar.gz
Linux x64	158.35 MB	jdk-8u111-linux-x64.rpm
Linux x64	173.04 MB	jdk-8u111-linux-x64.tar.gz
Mac OS X	227.39 MB	jdk-8u111-macosx-x64.dmg
Solaris SPARC 64-bit	131.92 MB	jdk-8u111-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	93.02 MB	jdk-8u111-solaris-sparcv9.tar.gz
Solaris x64	140.38 MB	jdk-8u111-solaris-x64.tar.Z
Solaris x64	96.82 MB	jdk-8u111-solaris-x64.tar.gz
Windows x86	189.22 MB	jdk-8u111-windows-i586.exe
Windows x64	194.64 MB	jdk-8u111-windows-x64.exe

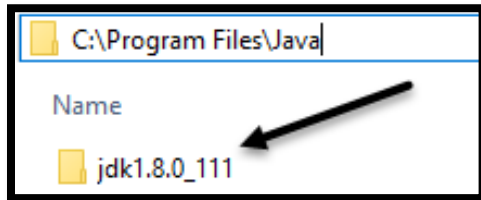
3. Click the Download link for the appropriate System Type “i.e., Windows x64”
4. Go to the Download folder
5. Open the downloaded executable file



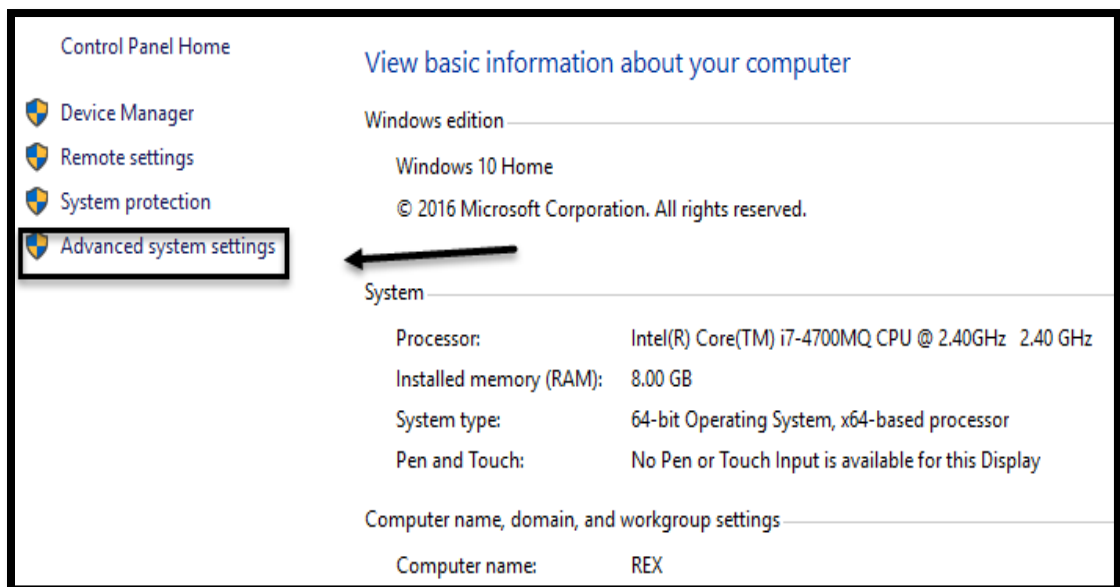
6. Click the Next button to Set Up Java SE Development Kit
7. Click the Next button for Custom Set Up
8. Click the Next button to Install to a specific location
“i.e., C:\Program Files\Java”

Note: Steps 9 – 20 are optional but beneficial. Eclipse automatically searches for the path “i.e., C:\Program Files\Java\jdk1.8.0_111\bin” that is placed in the Environment Variables modal.

9. Go to the jdk 8 “i.e., jdk1.8.0_111” location and Open the jdk folder

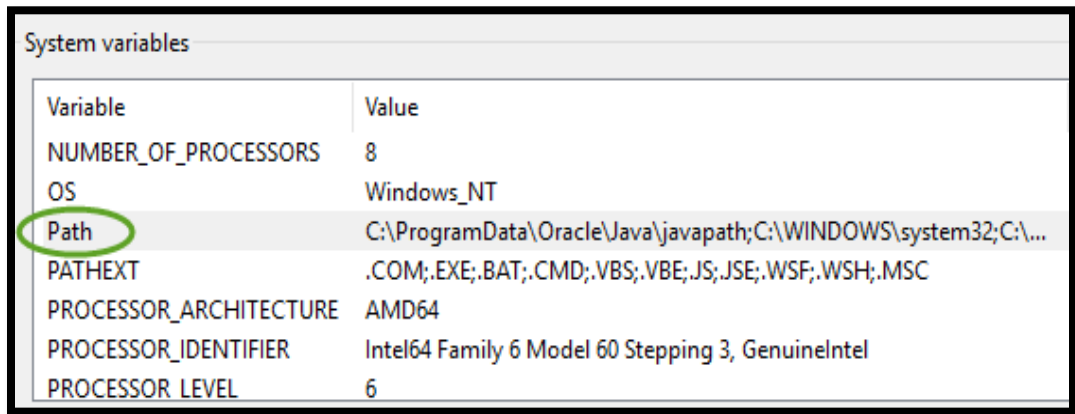


10. Open the bin folder
11. Copy the bin folder’s location “i.e., C:\Program Files\Java\jdk1.8.0_111\bin”
Note: Shortcut to Copy = Shift + Right Click > Copy As Path
12. Access the Advanced system settings via System



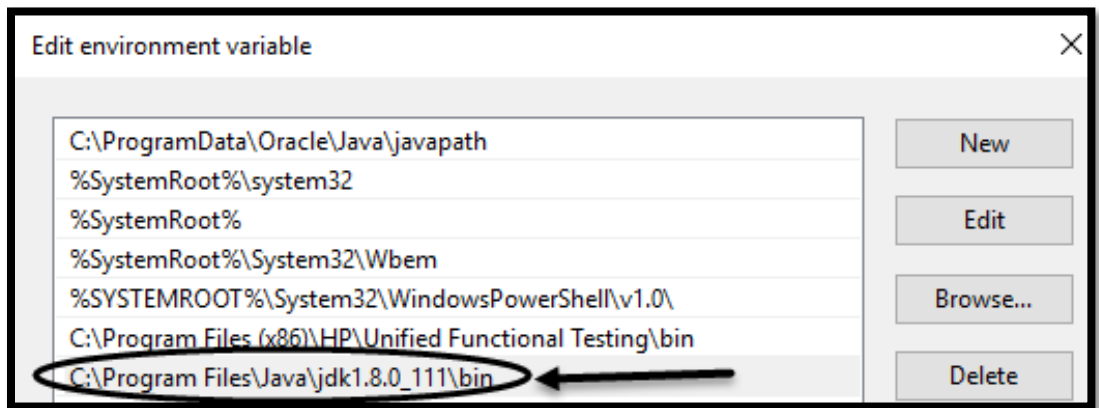
13. Click the Advanced tab
14. Click Environment Variables

15. Go to Path within System variables section



16. Click Edit > New

17. Paste the bin folder's location "i.e., C:\Program Files\Java\jdk1.8.0_111\bin"



18. Click OK

19. Click OK

20. Click OK

Install Eclipse IDE

1. Go to <https://eclipse.org/downloads/>
2. Click the Download button “i.e., DOWNLOAD 64 BIT”
3. Click the Download button or Select another mirror
4. Go to Download folder
Note: Proceed to **Step 6c** if zip file is not available
5. Right click the Eclipse zip file and Extract All files
6. Open the eclipse.exe file to launch Eclipse IDE
 - a. Go the extracted folder
 - b. Open eclipse folder
 - c. Right click eclipse.exe and Select Open
7. Select an Eclipse IDE “i.e., Eclipse IDE for Java EE Developers”



8. Click Install > Accept Now
9. Click the Remember Accepted Licenses Checkbox
10. Click the Accept button
11. Click the Launch
12. Load Eclipse IDE

Configure Selenium WebDriver

1. Go to <http://docs.seleniumhq.org/download/>
2. Download Selenium Standalone Server

Selenium Standalone Server

The Selenium Server is needed in order to run Remote Selenium WebDriver. Selenium 3.X is no longer capable of running Selenium RC directly, rather it does it through emulation and the WebDriverBackedSelenium interface.

Download version 3.11.0

[To run Selenium tests exported from IDE, use the Selenium Html Runner.](#)


To use the Selenium Server in a Grid configuration [see the wiki page.](#)

3. Download client driver for Java

Note: It's possible for the Client Version and Release Date to be different.

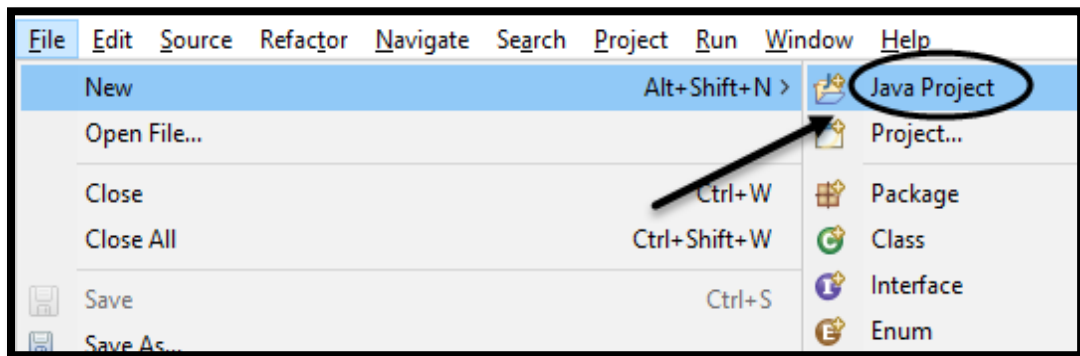
Language	Client Version	Release Date			
Java	3.11.0	2018-03-11	<u>Download</u>	Change log	Javadoc
C#	3.9.1	2018-02-06	<u>Download</u>	Change log	API docs
Ruby	3.9.0	2018-02-06	<u>Download</u>	Change log	API docs
Python	3.9.0	2018-02-05	<u>Download</u>	Change log	API docs
Javascript (Node)	3.6.0	2017-10-06	<u>Download</u>	Change log	API docs

4. Go to Download folder
5. Right click the zip file “i.e., selenium-java-3.11.0.zip” and Extract All “jar files”

 selenium-java-3.11.0.zip

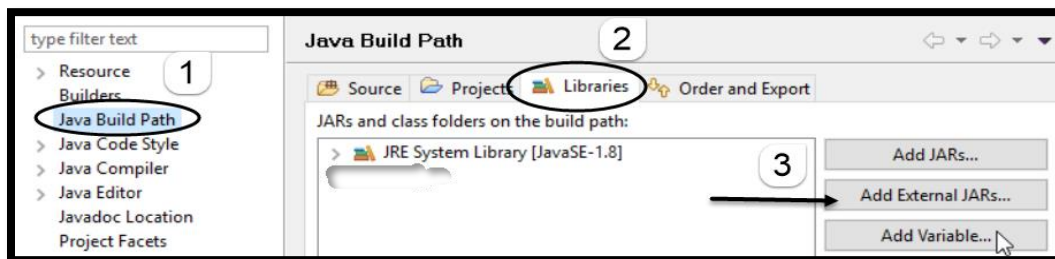
6. Open Eclipse IDE
7. Create New Project:
Navigate to File > New > Java Project > Project Name “i.e., Social Media” > Finish

Note: Click Other then search for Java Project if it's not available after selecting New

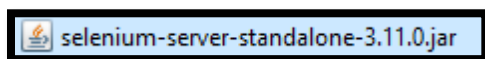


8. Click File > Properties

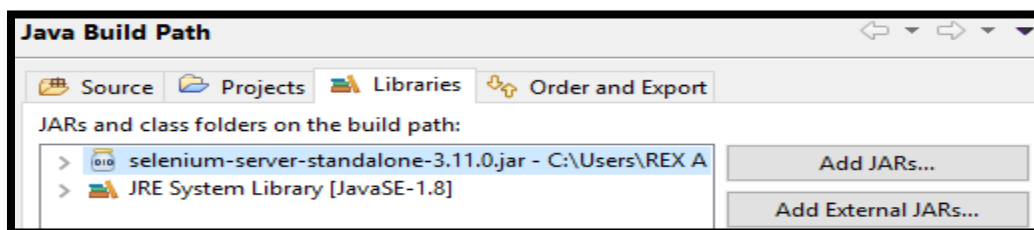
9. Select Java Build Path > Libraries > Add External JARs



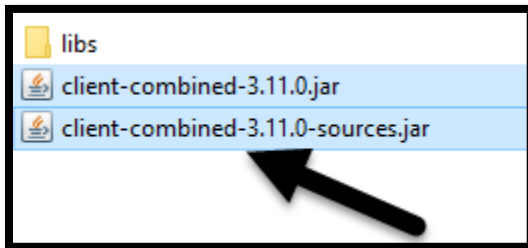
10. Go to the Download folder and Select the “selenium-server-standalone-3.11.0.jar”



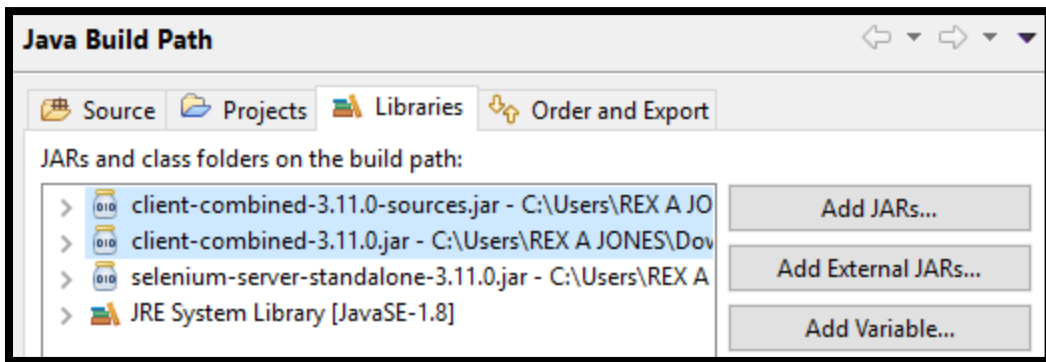
11. Click Open



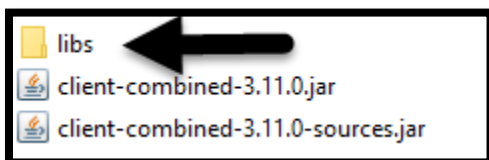
12. Click Add External JARs
13. Open the extracted folder selenium-java-3.11.0
14. Select the extracted jar file(s)
“client-combined-3.11.0.jar” and “client-combined-3.11.0-sources.jar”



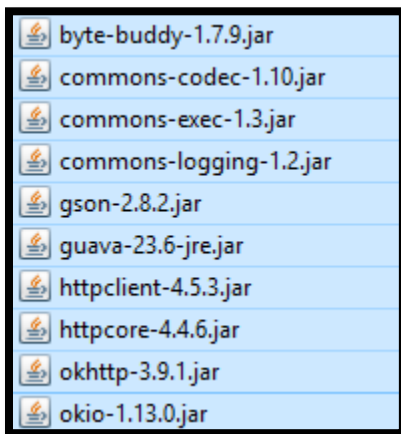
15. Click Open



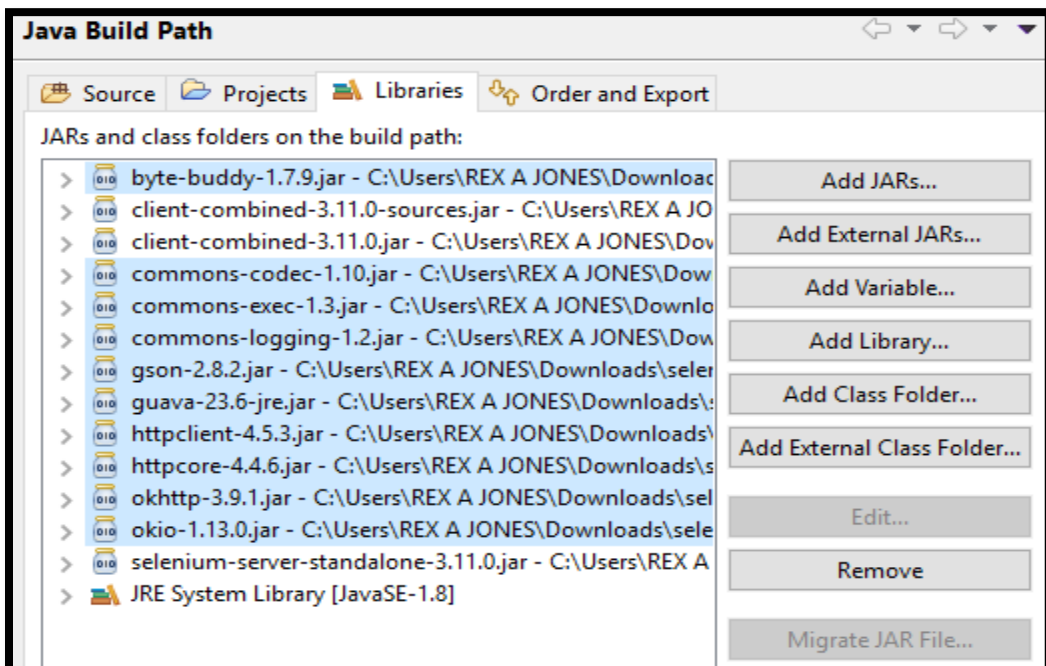
16. Click Add External JARs
17. Select libs in the extracted folder selenium-java-3.11.0



18. Select all of the jar files in libs folder



19. All of the jar files are added to the Java Build Path Library > Click OK



20. Click Apply

21. Click OK

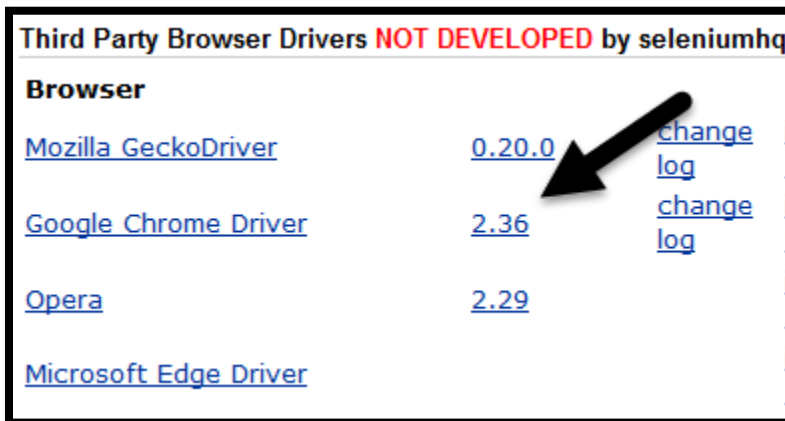
Download Browser Drivers

- [Google Chrome](#)
- [Internet Explorer](#)
- [Firefox](#)

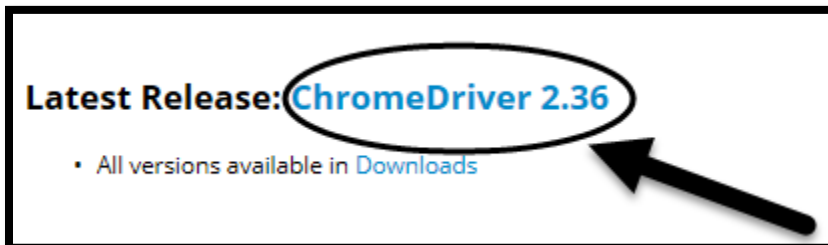
Google Chrome

1. Go to <http://docs.seleniumhq.org/download/>
2. Click the link “2.36” for Google Chrome Driver

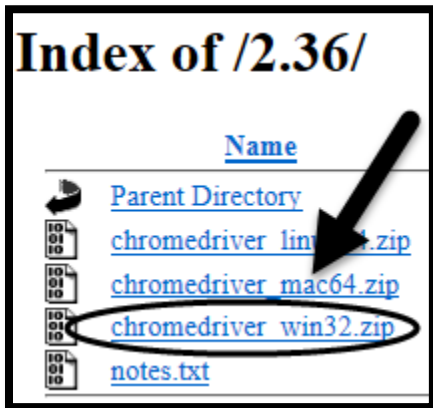
Note: The website for Selenium may not show the most recent driver. For example, the following screenshots shows 2.36 but the most recent release is 2.37.



3. Click the link for the most recent release “i.e., 2.36” via <https://sites.google.com/a/chromium.org/chromedriver/>



4. Click the link for the most recent release again “i.e., 2.36” via <https://sites.google.com/a/chromium.org/chromedriver/downloads>
5. Download the system’s zip file “i.e., chromedriver_win32.zip”

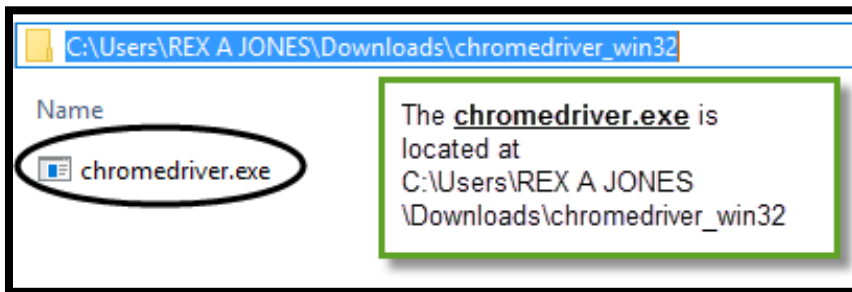


Note: Zip file for Windows 64 is not available. Therefore, the zip file for Windows 32 “chromedriver_win32.zip” should be downloaded

6. Go to Download folder
7. Right click the zip file “i.e., chromedriver_win32.zip” and Extract All



8. Open the extracted folder “i.e., chromedriver_win32”
9. chromedriver.exe has been downloaded



Note: The chromedriver.exe is located at
C:\Users\REX A JONES\Downloads\chromedriver_win32. Add the following
statement to run a successful Test Script via System.setProperty():

```
System.setProperty("webdriver.chrome.driver", "C:\\Users\\REX A JONES\\Downloads\\chromedriver_win32\\chromedriver.exe");
```

Internet Explorer

1. Go to <http://docs.seleniumhq.org/download/>
2. Go to The Internet Explorer Driver Server section

The Internet Explorer Driver Server

This is required if you want to make use of the latest and greatest features of the WebDriver InternetExplorerDriver. Please make sure that this is available on your \$PATH (or %PATH% on Windows) in order for the IE Driver to work as expected.

Download version 2.53.1 for (recommended) [32 bit Windows IE](#) or [64 bit Windows IE](#)
[CHANGELOG](#)

3. Download Internet Explorer Driver
4. Follow the same steps (6 - 9) from [Google Chrome's](#) section after downloading IEDriverServer:

Note: The security and Firewall exception must be set up / added before running Test Scripts in Internet Explorer.

5. Go to Tools in Internet Explorer
6. Select Internet Options
7. Select Security

8. Confirm the Security Level for all zones (Internet, Local Intranet, Trusted Sites and Restricted Access) are the same
 - a. Uncheck or Check the checkbox for Enable Protected Mode
 - b. Click Apply
 - c. Click OK
 - d. Click OK
9. Add Firewall exception by double clicking the IEDriverServer.exe file in its path
“i.e., C:\Users\REX A JONES\Downloads\IEDriverServer”
10. Click Allow Access

Firefox

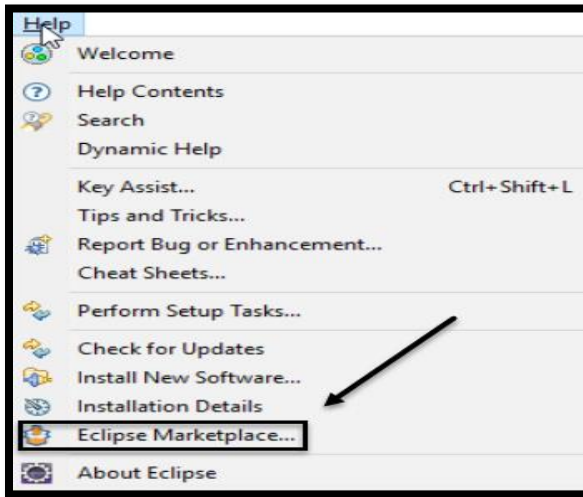
1. Go to <http://docs.seleniumhq.org/download/>
2. Click the link for Mozilla GeckoDriver in Third Party Browser Drivers section

Third Party Browser Drivers NOT DEVELOPED by seleniumhq		
Browser		
Mozilla GeckoDriver	0.20.0	change log
Google Chrome Driver	2.36	change log
Opera	2.29	
Microsoft Edge Driver		

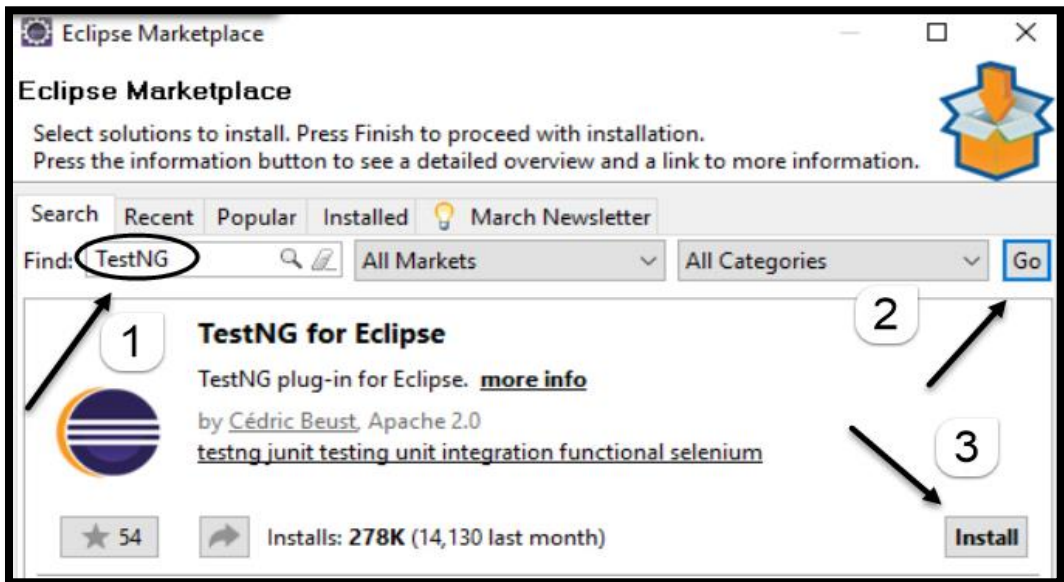
3. Download the GeckoDriver “i.e., win64”
4. Follow the same steps (6 - 9) from [Google Chrome's](#) section after downloading GeckoDriver:

Install TestNG

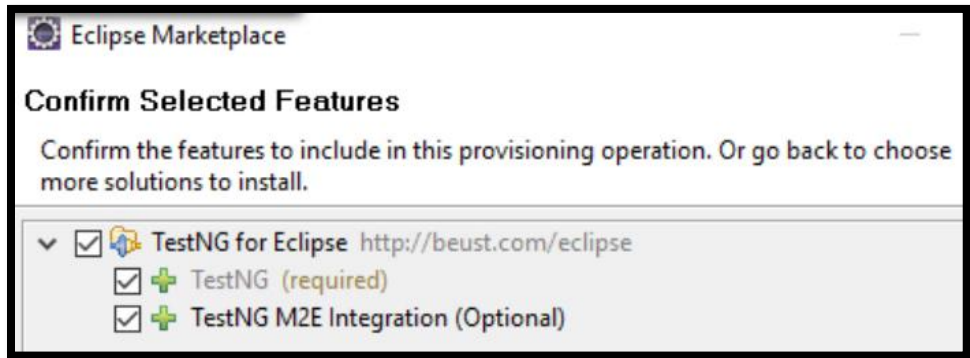
1. Open Eclipse
2. Load a Project “i.e., Hello World”
3. Click Help > Eclipse Marketplace



4. Search for TestNG, Click the Go button, then Click the Install button



5. Click the Confirm button to confirm the following features:
 - a. TestNG (required)
 - b. TestNG M2E Integration (Optional)



6. Click the radio button “I accept the terms of the license agreement”
7. Click the Finish button
8. Click OK if a Security Warning appears in a modal
9. Click Yes to restart Eclipse
10. Verify TestNG has been added
 - a. Re-open Eclipse after restart
 - b. Click Window
 - c. Click Preferences

