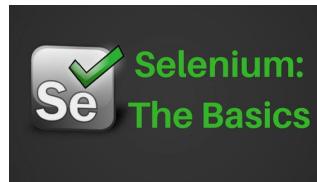


Lesson 1e: Install Selenium and try examples



Objectives:

- Install Java, Selenium Webdriver, and Eclipse
- Try the first example using Selenium Webdriver

Step 1: Java - Download and Install JDK 1.8 on Windows



In order to be able to compile Java code, we need the Java Development Kit (JDK) package that comes with a Java compiler. The JDK package also comes with a Java runtime environment (JRE) that is needed to run compiled Java code.

Here is the direct link to [download the jdk 8u172 installer for Windows 32 or 64 bit](https://www.oracle.com/java/technologies/downloads/#java8-windows).

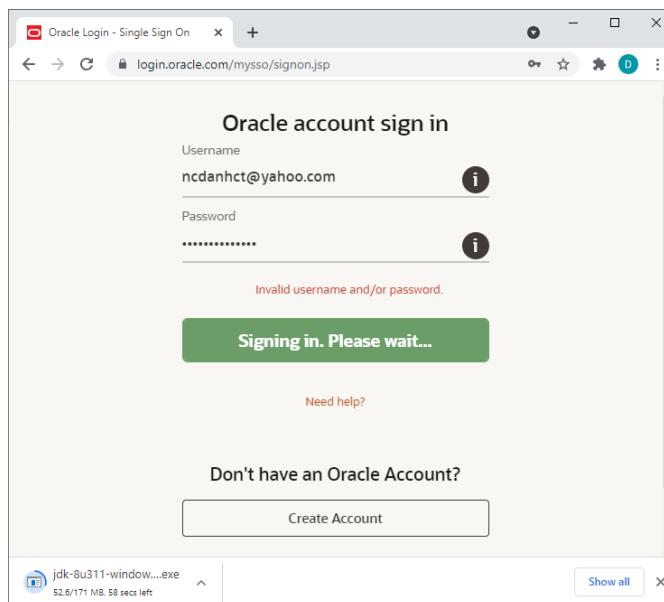
<https://www.oracle.com/java/technologies/downloads/#java8-windows>

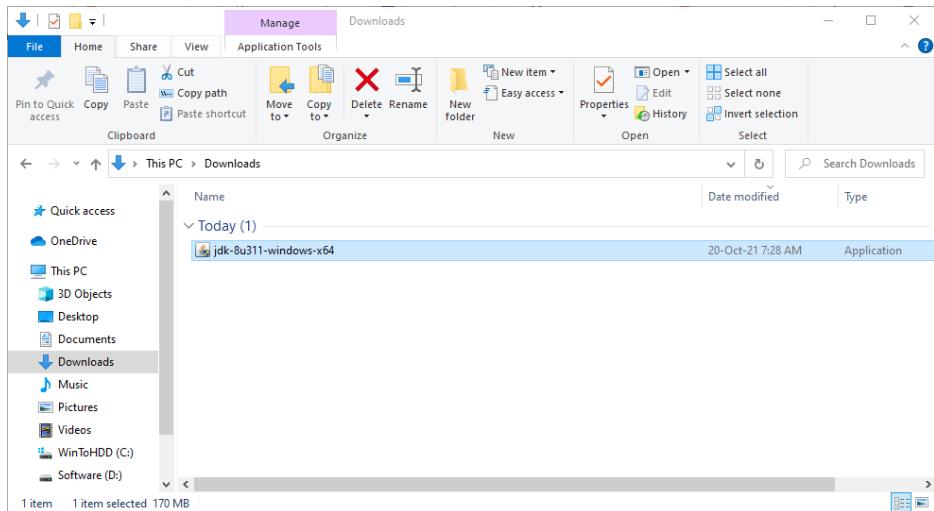
A screenshot of a web browser displaying the Oracle Java Downloads page. The URL in the address bar is "oracle.com/java/technologies/downloads/#java8-windows". The page header includes the Oracle logo and navigation links for Products, Industries, Resources, Support, Events, and Developer. A "View Accounts" and "Contact Sales" button are also present. Below the header, there are links for "Java 11" and "Java 8". A yellow box highlights the "Java SE Development Kit 8u311" section. A note states: "Java SE subscribers will receive JDK 8 updates until at least December of 2030." Another note says: "The Oracle JDK 8 license changed in April 2019." A detailed note about the license agreement follows. The "Windows" tab is selected under the "JDK 8u311 checksum" section. A table lists two download options: "x86 Installer" (157.37 MB) and "x64 Installer" (170.57 MB). The "x64 Installer" row has a blue arrow pointing to the "Download" link with the handwritten note "← download".

Product/file description	File size	Download
x86 Installer	157.37 MB	jdk-8u311-windows-i586.exe
x64 Installer	170.57 MB	jdk-8u311-windows-x64.exe

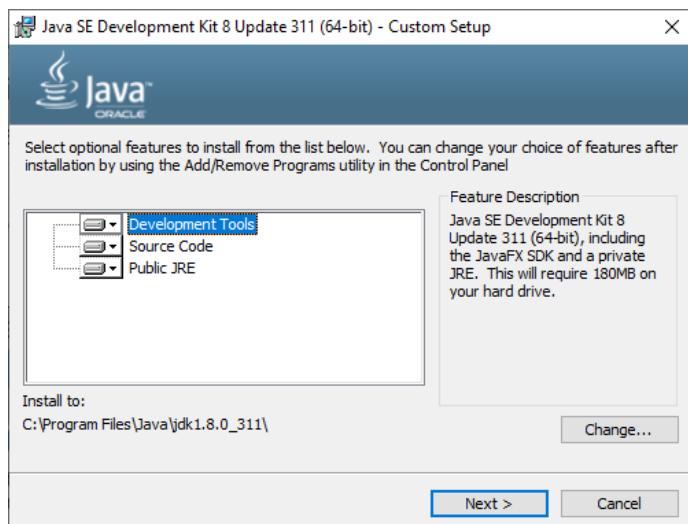
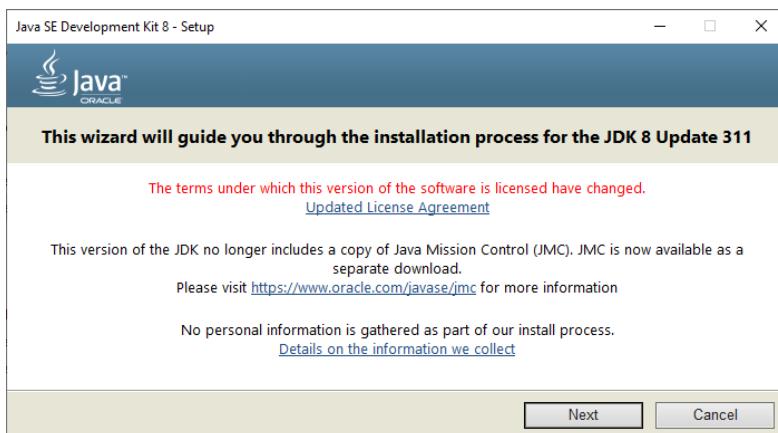
The screenshot shows the Oracle Java Downloads page for Java 8. It features a navigation bar with links for Java 11 and Java 8. Below the navigation is a section titled "Java SE Development Kit 8u311". A note states that Java SE subscribers will receive JDK 8 updates until at least December of 2030. A warning about the Oracle Technology Network License is present, noting that it is for personal use and development use only. A checkbox for accepting the license is checked, and a "Download jdk-8u311-windows-x64.exe" button is visible. Below the download button is a table showing two installer options: "x86 Installer" (157.57 MB) and "x64 Installer" (170.57 MB). At the bottom left is a "Documentation Download" button.

You may need to have an account to download. Sign in using your Oracle account (or create a new one) and the download should start. Once the download is complete, locate the `jdk-8u172-windows-x64.exe` file and double-click to run the installer.

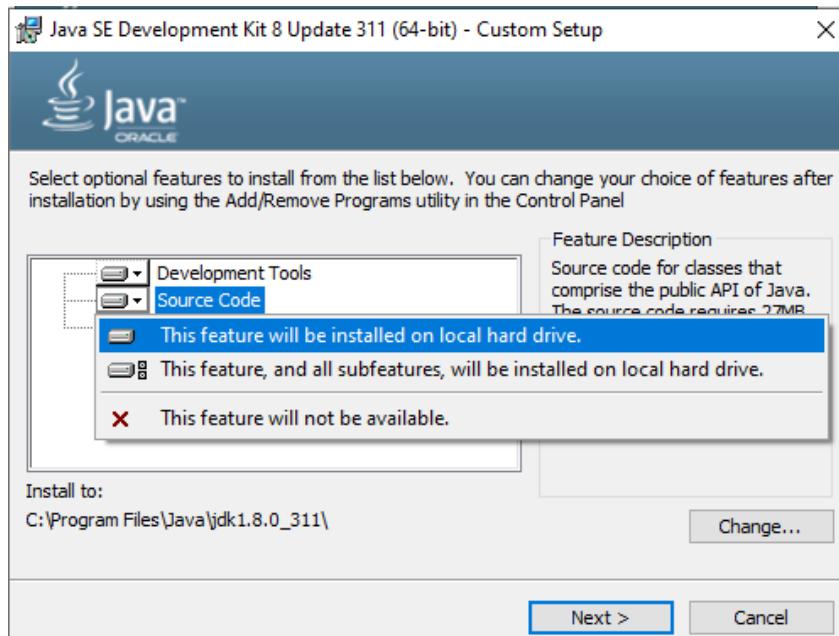
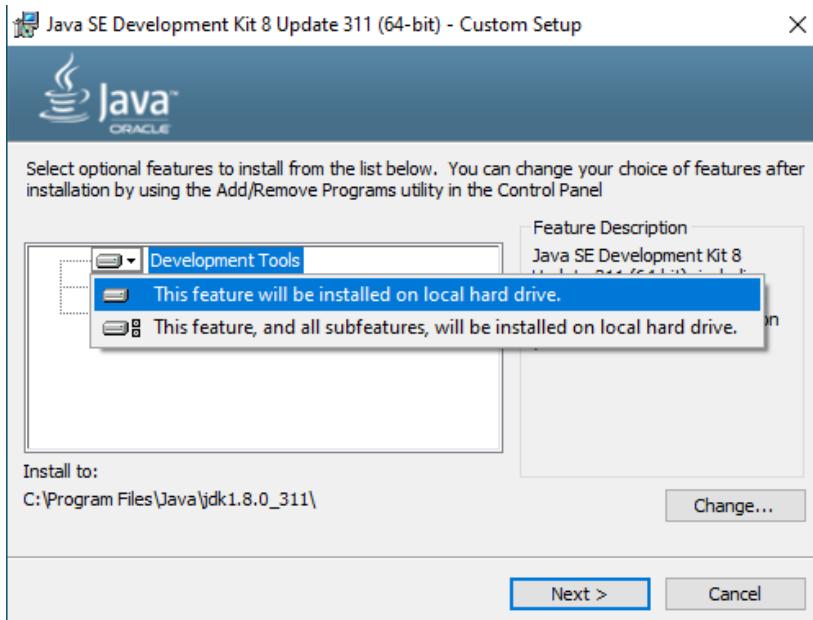




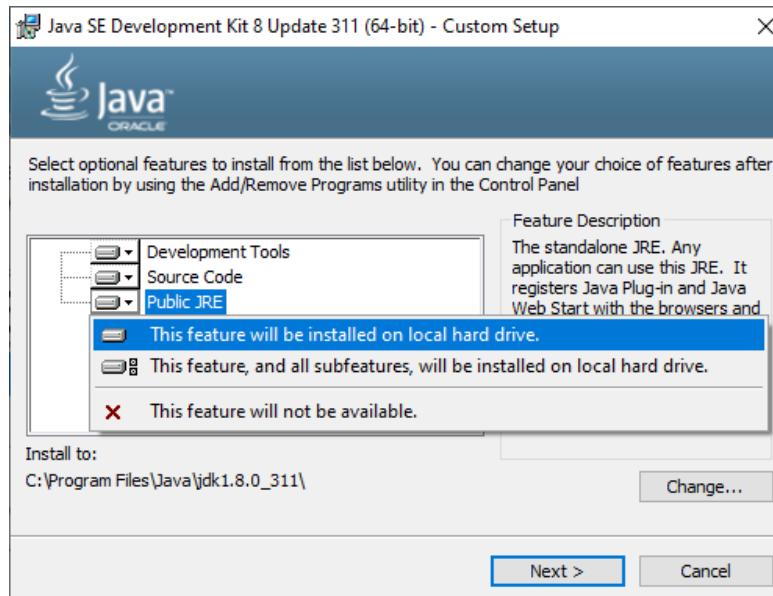
Click **Next** and on the following screen optionally change the installation location by clicking on the **Change...** button. In this example the default install location of `'C:\Program Files\Java\jdk1.8.0_311'` was kept.



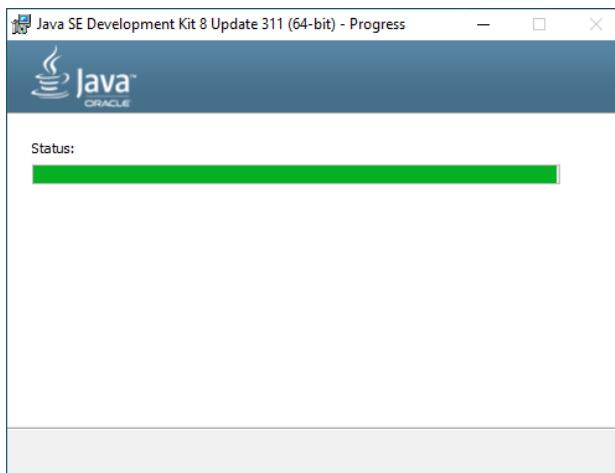
Select the **Development Tools** and **Source Code** dropdown and click on **This feature will be available.** as shown below.



We will install the public JRE as the JDK Development tools include a private JRE that can run developed code. Select the **Public JRE** dropdown and click on **This feature will be available.** as shown below.



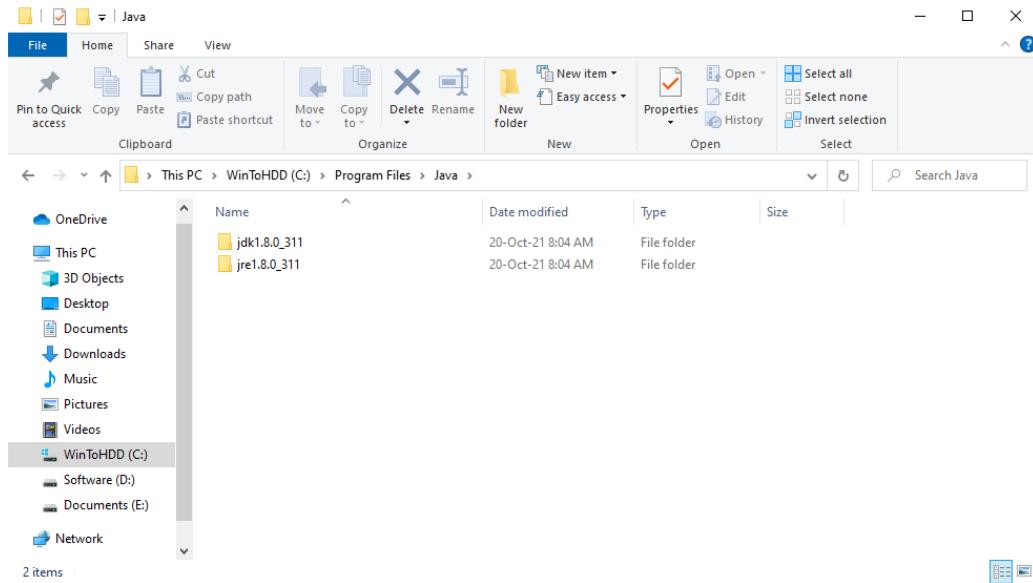
Click **Next**.



Click **Next** and then **Close** to finish installing Java.



A new folder is created with two subfolders:



C:\Program Files\Java

- jdk1.8.0_311
- jre1.8.0_311

JDK Configuration

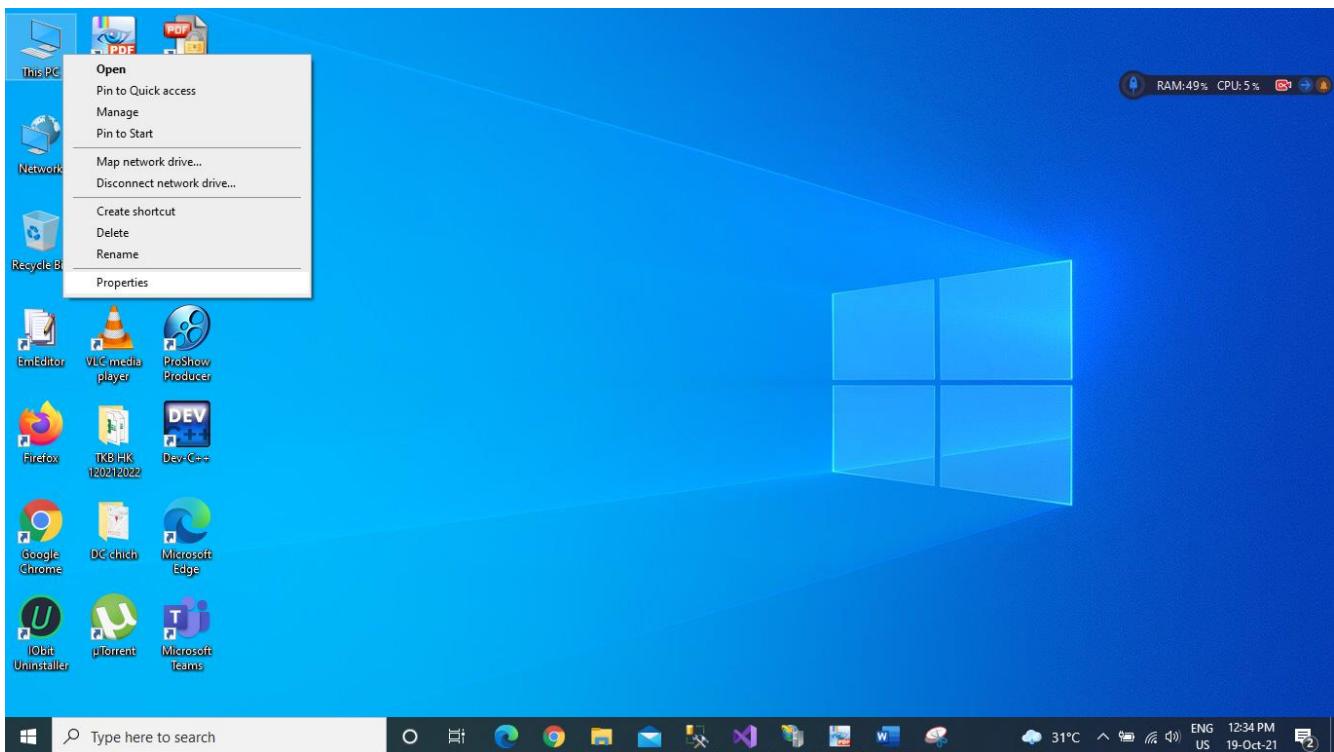
Create system variable by name “JAVA_HOME” points to C:\Program Files\Java\jdk1.8.0_311.

Set environment Variables: PATH, CLASSPATH:

- The PATH variable provides the location of executables like javac, java, etc.
- The CLASSPATH variable provides the location of the Library file.

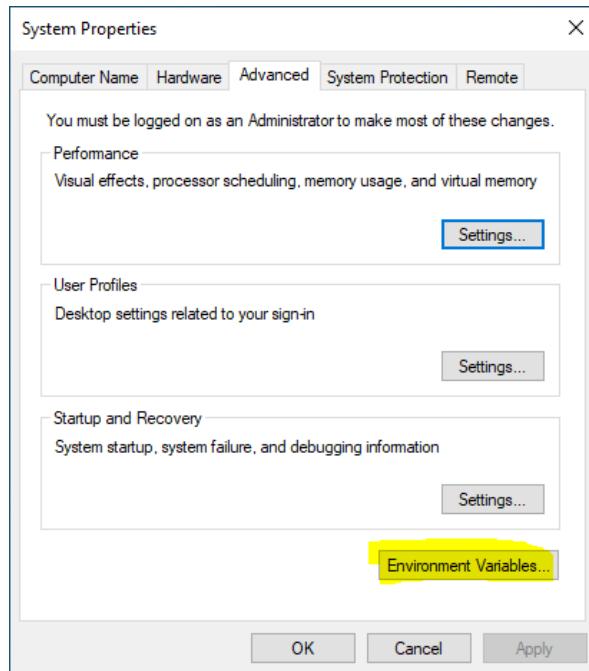
Let's look at the steps to set PATH, CLASSPATH and JAVA_HOME as below.

1) This PC => Properties => Advanced system settings



The image shows the Windows Settings application window. On the left, the 'System' section is visible with links to Display, Sound, Notifications & actions, Focus assist, Power & sleep, Battery, Storage, and Tablet. On the right, the 'About' page is displayed, featuring a search bar and a message stating: 'This page has a few new settings. Some settings from Control Panel have moved here, and you can copy your PC info so it's easier to share.' Below this, there are links to BitLocker settings, Device Manager, Remote desktop, System protection, Advanced system settings (which is highlighted with a yellow box and a handwritten blue arrow pointing to it), Rename this PC (advanced), Get help, and Give feedback.

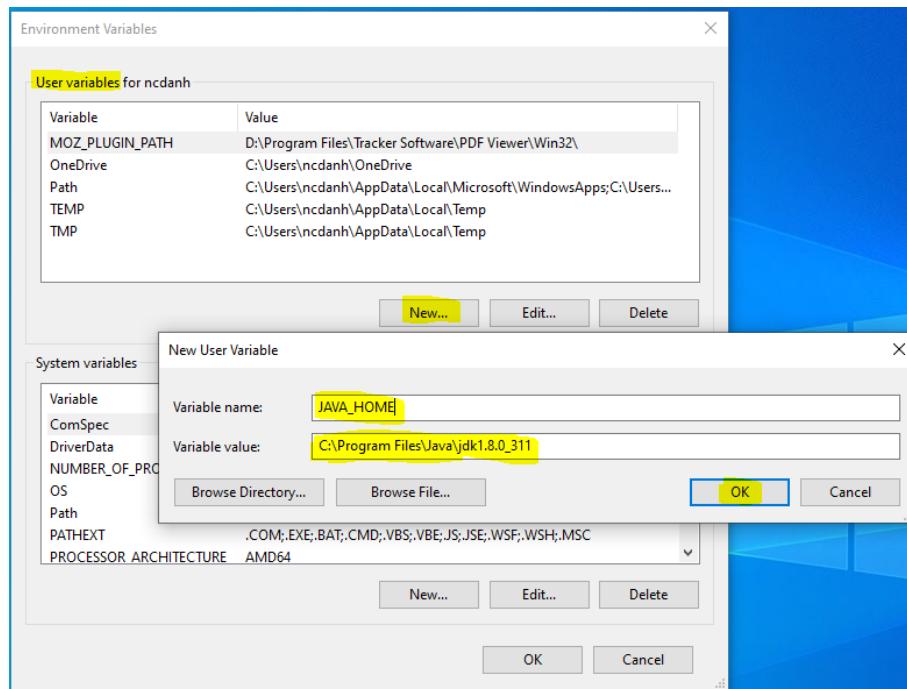
2) Click Environment Variables

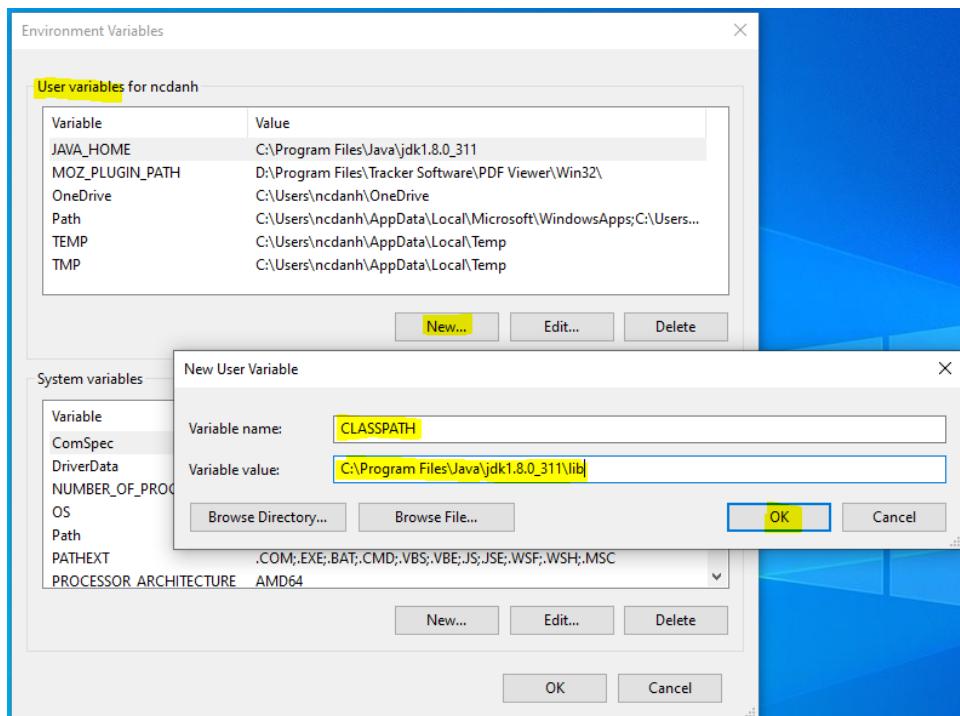


3) User variables => New

JAVA_HOME = C:\Program Files\Java\jdk1.8.0_311

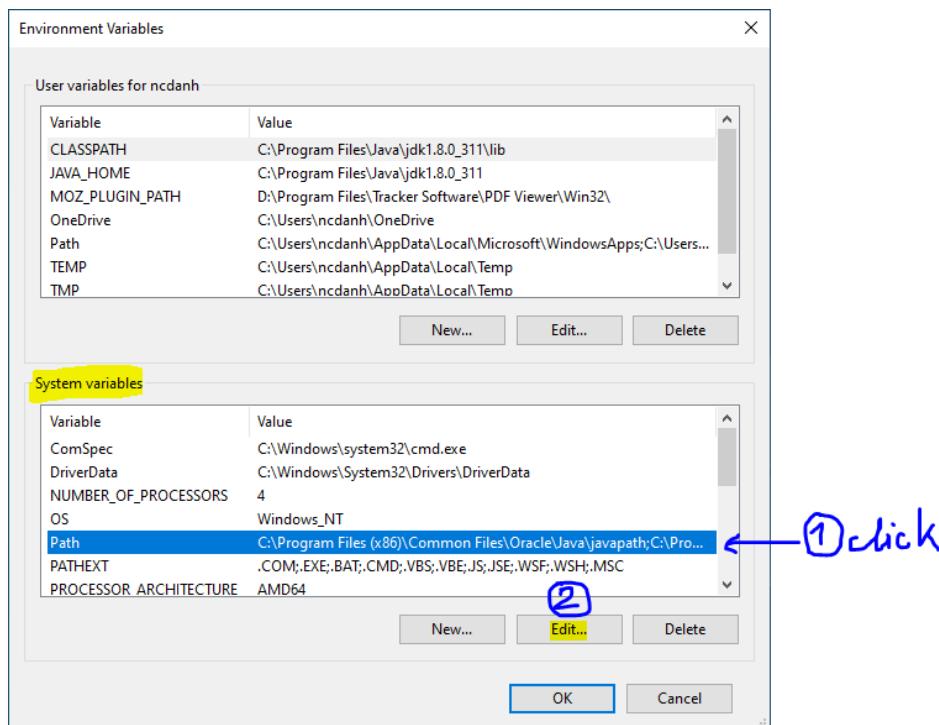
CLASSPATH = C:\Program Files\Java\jdk1.8.0_311\lib

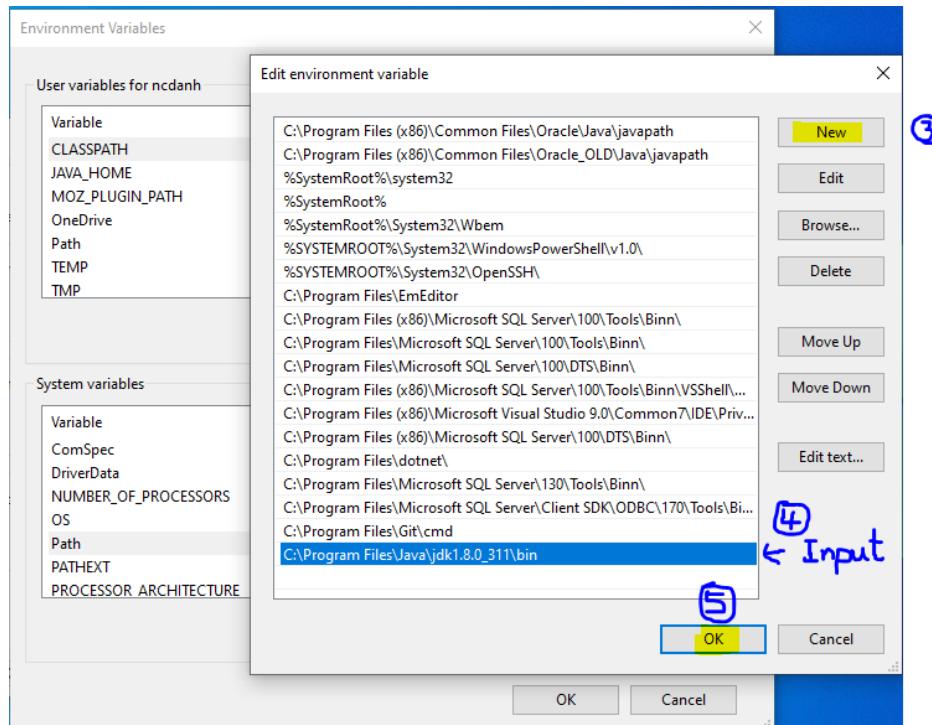




Step 4: System variables => New

PATH = C:\Program Files\Java\jdk1.8.0_311\bin





Test

In order to test the above configuration, open a command prompt by clicking on the Windows Start button and typing “**cmd**” followed by pressing **ENTER**. A new command prompt should open in which the following command can be entered to verify the installed Java version:

```
java -version
```

The result should be as shown below.

```
Command Prompt
Microsoft Windows [Version 10.0.19043.1288]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ncdanh>java -version
java version "1.8.0_311"
Java(TM) SE Runtime Environment (build 1.8.0_311-b11)
Java HotSpot(TM) 64-Bit Server VM (build 25.311-b11, mixed mode)

C:\Users\ncdanh>
```

(see: <https://codenotfound.com/java-download-install-jdk-8-windows.html>)

Step 2: Selenium

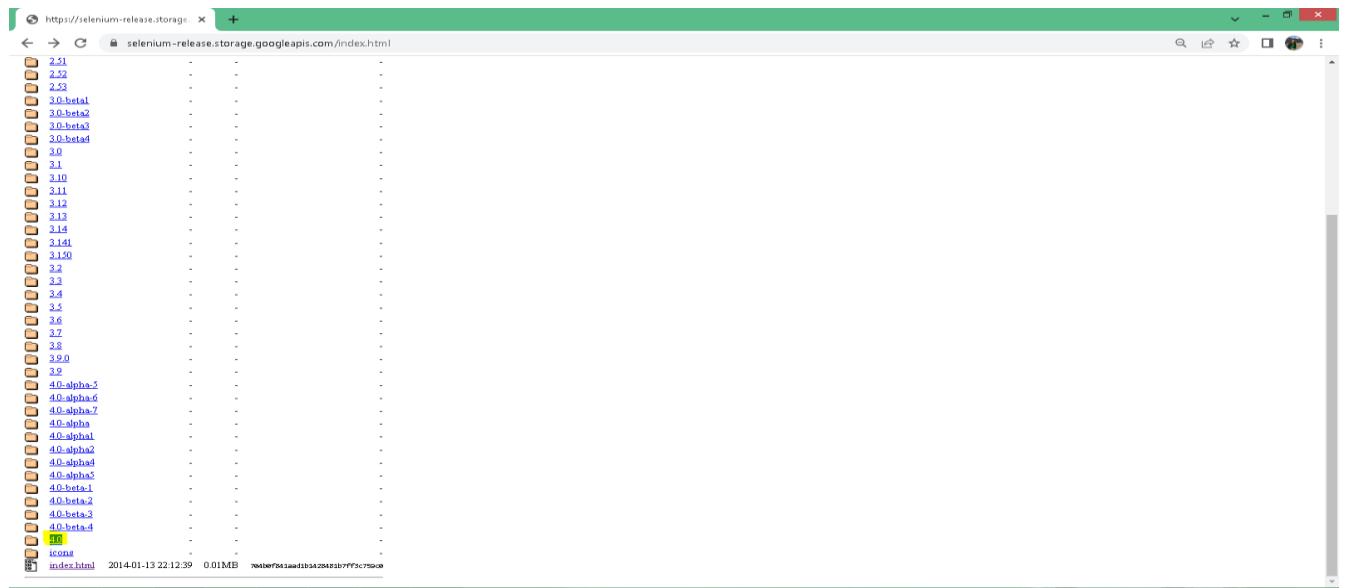
[Download the latest version of Selenium WebDriver Java language bindings.](#)

Link – <http://selenium-release.storage.googleapis.com/index.html>

(file 1: [selenium-server-4.0.0-alpha-2.zip](#)

file 2: [selenium-server-standalone-4.0.0-alpha-2.jar](#))

Extract the above zip file and copy srcs and standalone file to libs folder.

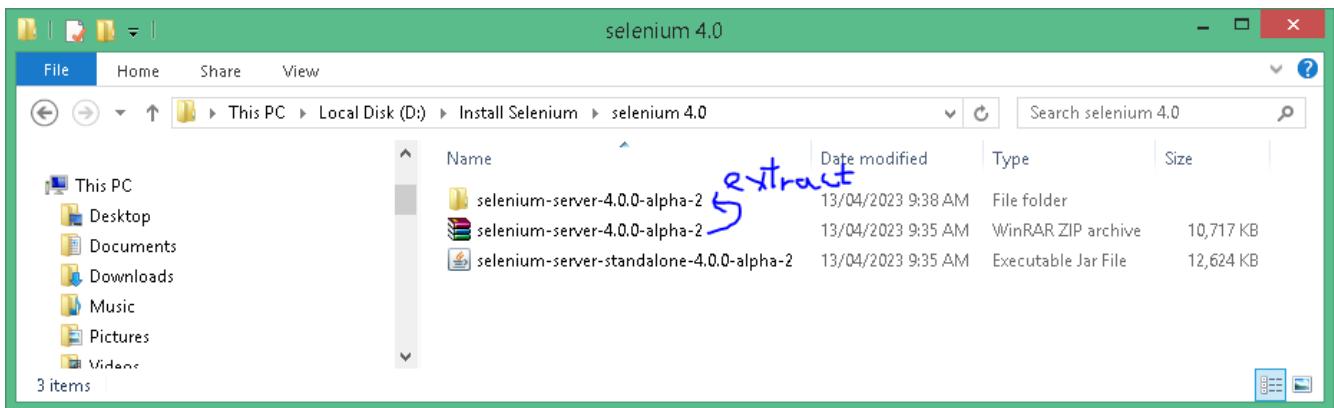


(choose: 4.0)

Name	Last modified	Size	ETag
Parent Directory	-	-	-
selenium-html-runner-4.0.0-alpha-1.jar	2019-04-24 16:17:02	13.52MB	2eca35318710f46d1ba5ed5543a906c9
selenium-html-runner-4.0.0-alpha-2.jar	2019-07-01 21:32:41	13.76MB	346d72e4f425bfec91c7073a46c96208
selenium-java-4.0.0-alpha-1.zip	2019-04-24 16:17:01	8.46MB	db9ed262a07c1cd2bb6098263c7f1e7b
selenium-java-4.0.0-alpha-2.zip	2019-07-01 21:32:33	8.74MB	2d31929580c3d829197eea97ade5f4f0
selenium-server-4.0.0-alpha-1.jar	2019-04-24 16:16:58	10.62MB	c32b1dd1c12cddb42b48f345d65d657fb
selenium-server-4.0.0-alpha-1.zip	2019-04-24 16:16:59	10.20MB	7f0bc4b4fc2a5a7f0a262f62bf782d3
selenium-server-4.0.0-alpha-2.jar	2019-07-01 21:32:04	10.79MB	d0676e6b3ee508b48416aba603662573
selenium-server-4.0.0-alpha-2.zip	2019-07-01 21:32:11	10.47MB	fb19d62db44a7b163f1fbc2fff9dff0a
selenium-server-standalone-4.0.0-alpha-1.jar	2019-04-24 16:17:00	11.98MB	ac553ec987d16d2af8c8e3ef9061772c
selenium-server-standalone-4.0.0-alpha-1.zip	2019-04-24 16:17:00	11.77MB	1974b11f970bad6e15c84e3840ec3897
selenium-server-standalone-4.0.0-alpha-2.jar	2019-07-01 21:32:19	12.33MB	d000d97d24389fde5fbf94f450ede780
selenium-server-standalone-4.0.0-alpha-2.zip	2019-07-01 21:32:27	12.26MB	2466773c71eeddea02004371a5e32324

(Download:

[selenium-server-4.0.0-alpha-2.zip](#)
selenium-server-standalone-4.0.0-alpha-2.jar)



Step 3: Eclipse LUNA

Download latest version of the Eclipse IDE for J2ee developers (32 or 64 bits)

Link – <https://eclipse.org/>

Google search results for 'download eclipse luna':

- Eclipse Luna | The Eclipse Foundation**
https://www.eclipse.org/luna
Please visit our [download](#) page for the latest version of Eclipse. ... Eclipse Luna includes official support for Java 8 in the Java development tools, Plug-in ...
- Eclipse IDE for Java EE**
Tools for Java developers creating Java EE and Web applications ...
- Downloads**
Eclipse IDE Luna SR2 Packages. Eclipse IDE for Java ...
- Eclipse IDE Luna**
Eclipse Luna. SR2 Packages ... Get Eclipse IDE 2019-09 ... More results from eclipse.org »
- R Packages**
Eclipse IDE Luna R Packages. Eclipse Standard 4.4. 206 MB ...
- Luna**
Eclipse Luna includes official support for Java™ 8 in the Java ...
- Eclipse IDE for Java Developers**
The essential tools for any Java developer, including a Java IDE ...

Downloads:

- eclipse-jee-luna-SR2.zip
- eclipse-inst-win64.exe
- selenium-server-standalone.jar
- selenium-server-3.14159...zip
- jdk-13.0.1_windows-x64_bin.exe

(Eclipse Luna)

The screenshot shows the Eclipse Luna website. At the top, there's a navigation bar with links for Members, Working Groups, Projects, More, and a search icon. A prominent orange "Download" button is located in the top right. Below the header, a banner states "Luna is a past version of Eclipse. Please visit our download page for the latest version of Eclipse." The main content area features a large image of people working at computers. On the left, there are links for "Projects", "Demo Camps", "Downloads", and "Friends of Luna". On the right, there's a section titled "Become a Friend of Eclipse" with a "Donate now" button. A sidebar on the right displays recent tweets with the hashtag "#eclipseluna". A cookie consent message at the bottom asks if the user wants to receive cookies, with "Decline" and "Allow cookies" buttons.

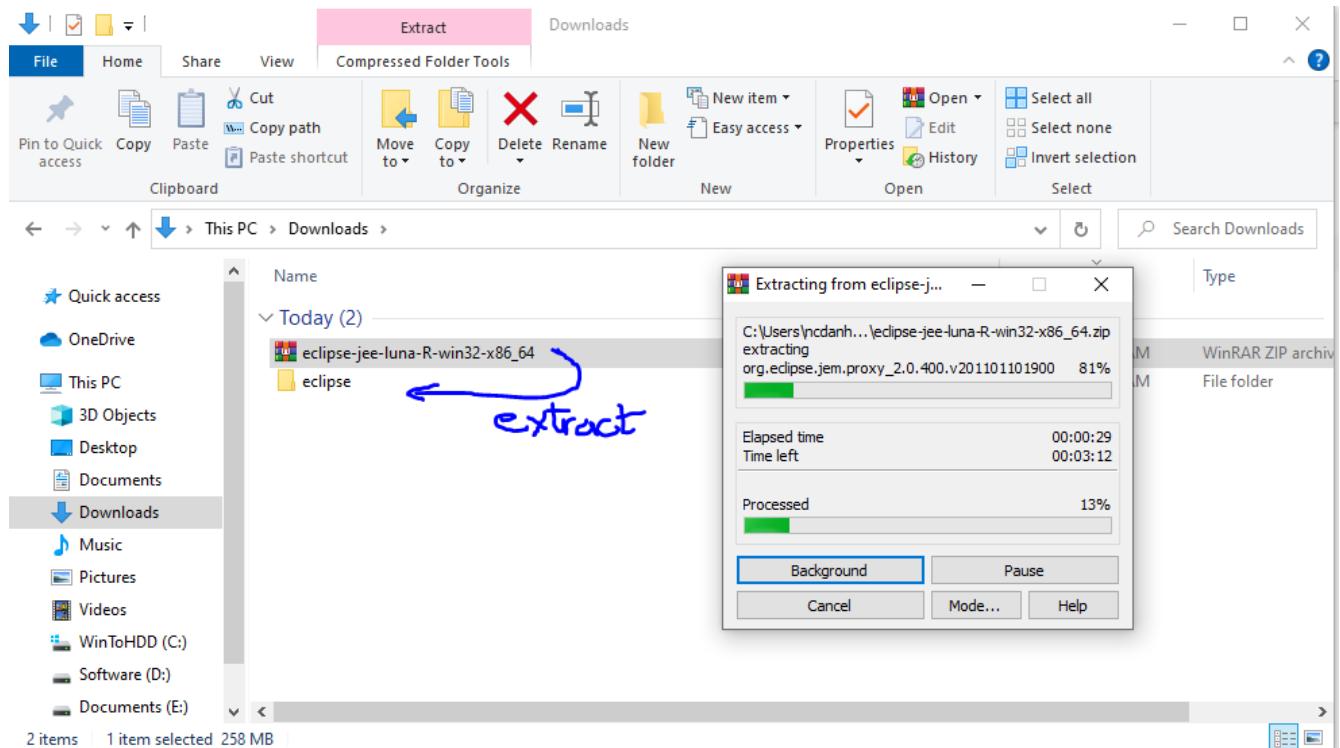
eclipse-jee-luna-SR...zip 8.0/254 MB, 4 hours left | eclipse-inst-win64.exe | selenium-server-sta...jar | selenium-server-3....zip | jdk-13.0.1_window....zip | Show all

(Download)

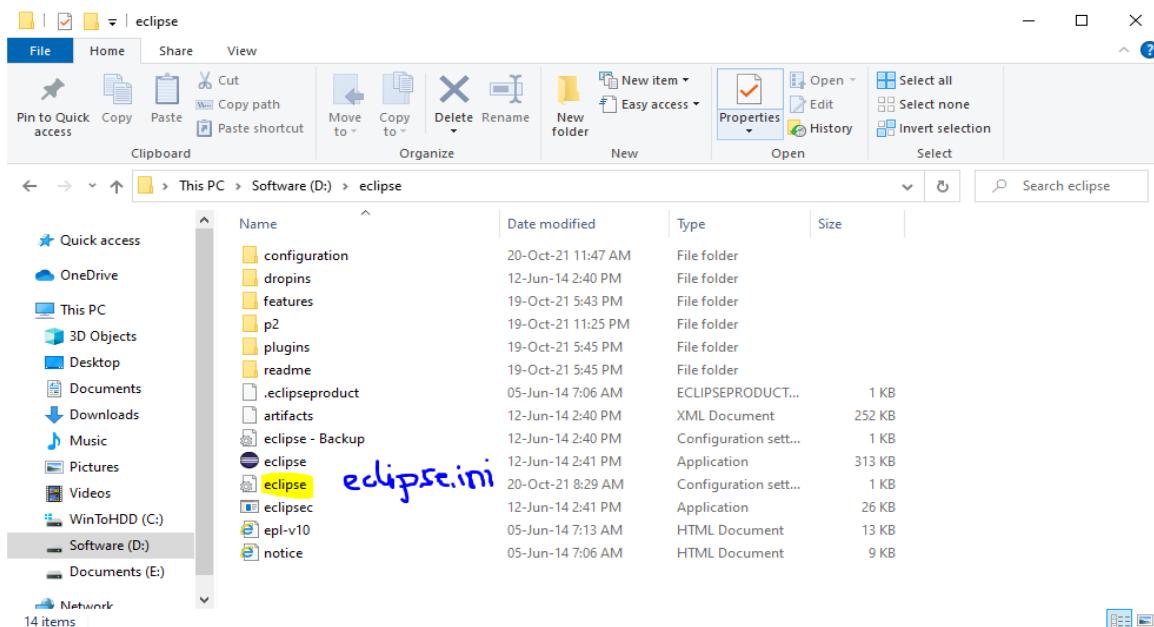
The screenshot shows the "Eclipse IDE Luna SR2 Packages" page. It lists three main packages: "Eclipse IDE for Java Developers", "Eclipse IDE for Java EE Developers", and "Eclipse IDE for C/C++ Developers". Each package has a download link, file size, and download count. For example, the Java Developers package is 155 MB and has 4,177,219 downloads. The Java EE Developers package is 254 MB and has 2,301,244 downloads. The C/C++ Developers package is 166 MB and has 649,156 downloads. To the right, there's a promotional section for "Get Eclipse IDE 2019-09" with a "Download 64 bit" button. A cookie consent message at the bottom asks if the user wants to receive cookies, with "Decline" and "Allow cookies" buttons.

eclipse-jee-luna-SR...zip 8.8/254 MB, 3 hours left | eclipse-inst-win64.exe | selenium-server-sta...jar | selenium-server-3....zip | jdk-13.0.1_window....zip | Show all

(Eclipse IDE for Java EE Developers => 64 bit)



Copy the Eclipse folder to the place you want.



Change the eclipse.ini:

Backup `eclipse.ini`, then, before `-vmargs`, add a string into the `eclipse.ini` file which change a destination of the `javaw.exe` file:

`-vm`

C:\Program Files\Java\jdk1.8.0_311\bin\javaw.exe

Set :

-Dosgi.requiredJavaVersion=1.8

```
D:\eclipse\eclipse.ini - EmEditor
File Edit Search View Tools Window Help
File Save Open Recent Find Replace Go To Insert Tools Options Plugins
eclipse x
-startup
plugins/org.eclipse.equinox.launcher_1.3.0.v20140415-2008.jar
--launcher.library
plugins/org.eclipse.equinox.launcher.win32.win32.x86_64_1.1.200.v20140603-1326
-product
org.eclipse.epp.package.jee.product
--launcher.defaultAction
openFile
--launcher.XXMaxPermSize
256M
--showsplash
org.eclipse.platform
--launcher.XXMaxPermSize
256M
--launcher.defaultAction
openFile
--launcher.appendVmargs
--vm
C:\Program Files\Java\jdk1.8.0_311\bin\javaw.exe ← add
--vmargs
-Dosgi.requiredJavaVersion=1.8 ←
-Xms40m
-Xmx1024m
←
509 bytes (509 bytes), 24 lines. Ini Ln 19, Col 40 Western European (Windows)
```

(see: <https://stackoverflow.com/questions/7302604/eclipse-error-failed-to-create-the-java-virtual-machine?page=1&tab=votes#tab-top>

How to Change Eclipse Java Version for Compiler and JRE?

<https://www.concretewebpage.com/ide/eclipse/how-to-change-eclipse-java-version-for-compiler-and-jre>

)

Check Eclipse Java Version for Compiler and JRE:

1) Install JRE in Eclipse

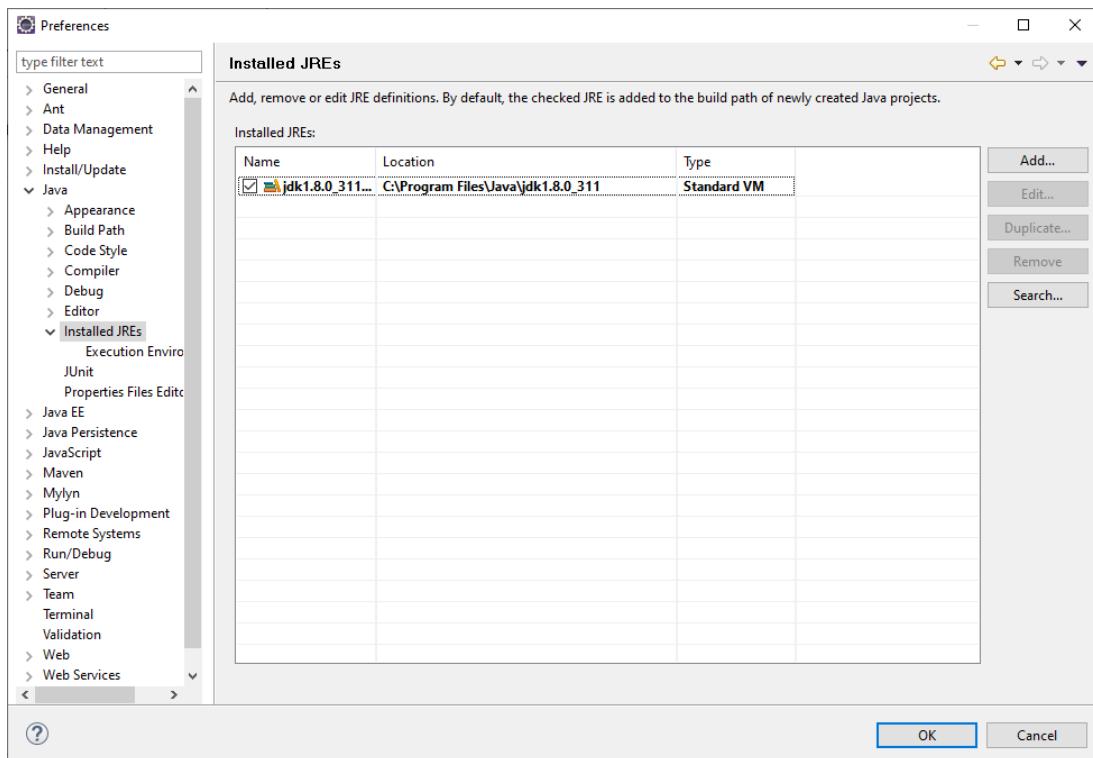
Find the steps to install JRE in eclipse.

Step 1: Go to **Window -> Preferences**

Step 2: Go to **Java -> Installed JREs**

Step 3: Click on **Add** and select **Standard VM** and then click on **Directory** and select JRE home or JDK home. We can add more than one JRE versions. Find the print screen

Step 4: Select the check box to activate the required version of JRE. In our demo we have activated JRE 1.8.



2) Configure Compiler Compliance Level and Settings

To configure compiler compliance level and settings in eclipse, find the below steps.

Step 1: Go to **Window -> Preferences**

Step 2: Go to **Java -> Compiler**. Find the print screen.

Step 3: Select **Compiler compliance level**.

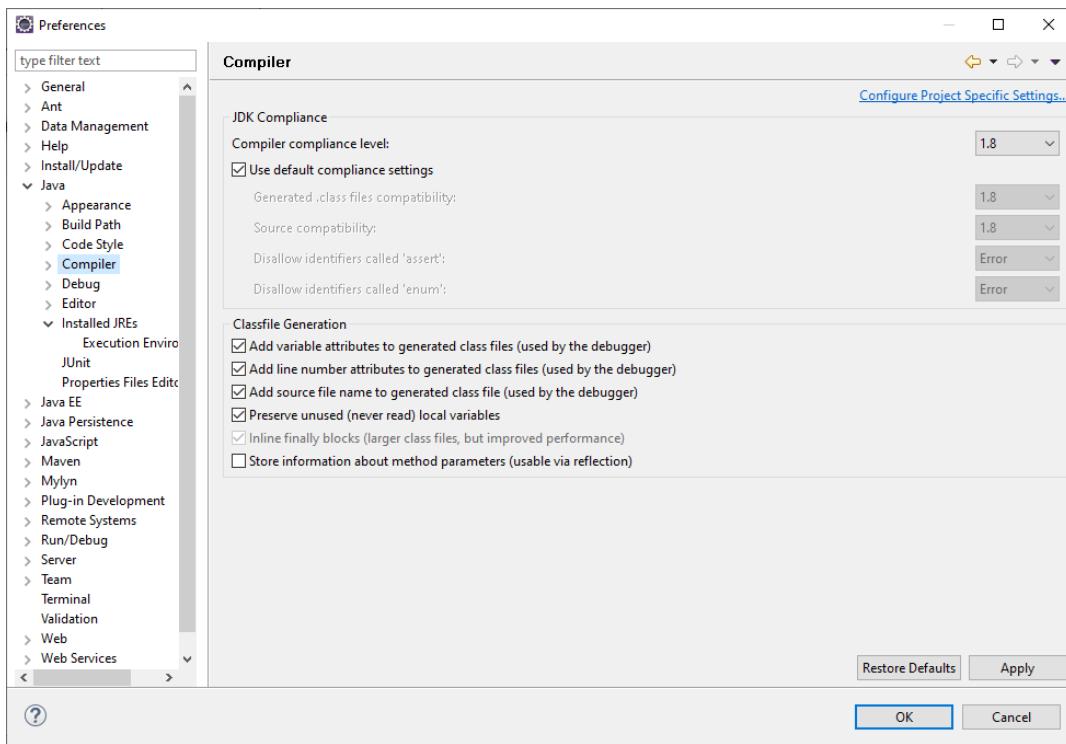
Step 4: To change default compliance settings, we need to uncheck **Use default compliance settings** and set the compiler java version for .class and source compatibility.

Step 5: We can also change the settings here for class file generation such as to add variable attribute, line number, source file name to generated class file which is used by the debugger. We can also change the settings to preserve unused local variables and to *store information about method parameters introduced in java 8*.

If the version of compiler compliance level and Installed JRE is different, eclipse gives the messages as follows.

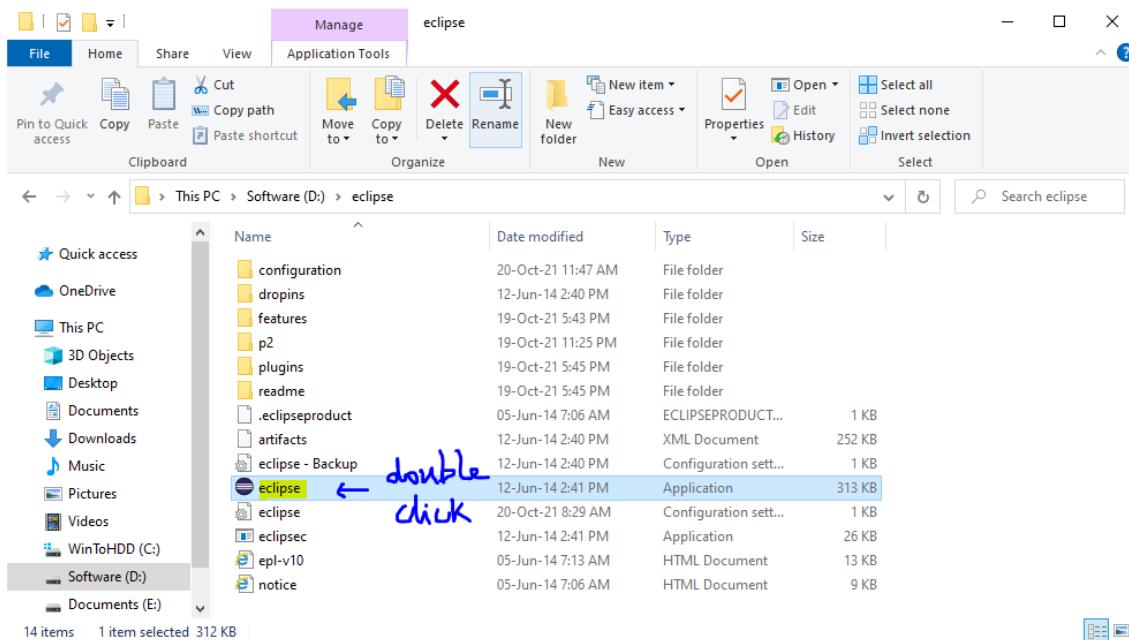
"When selecting 1.8 compliance, make sure to have a compatible JRE installed and activated (currently 1.8)"

These settings will be effective for new projects.



Step 4: Launch workspace and create a workspace on your system.

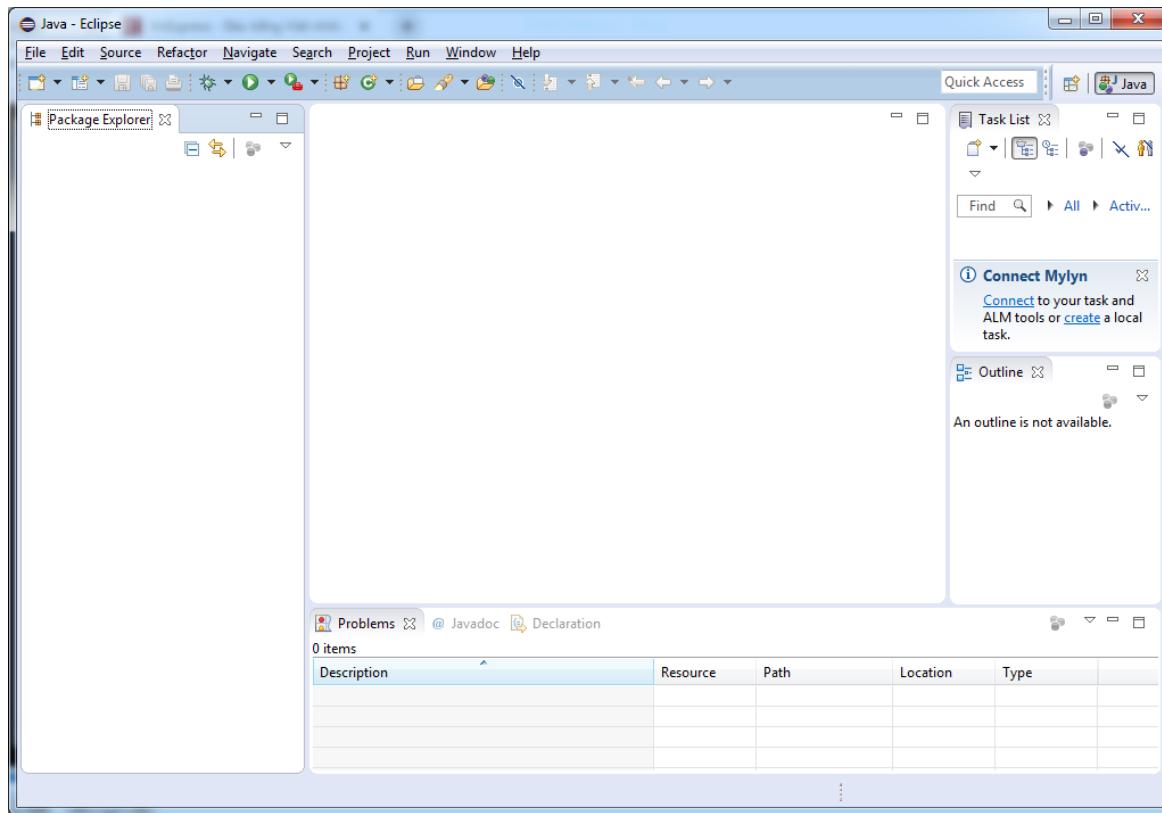
Create a Java project in eclipse and selenium-server-standalone.jar as external jar in libraries tab and selenium-server-srcs.jar as source attachment to standalone jar.

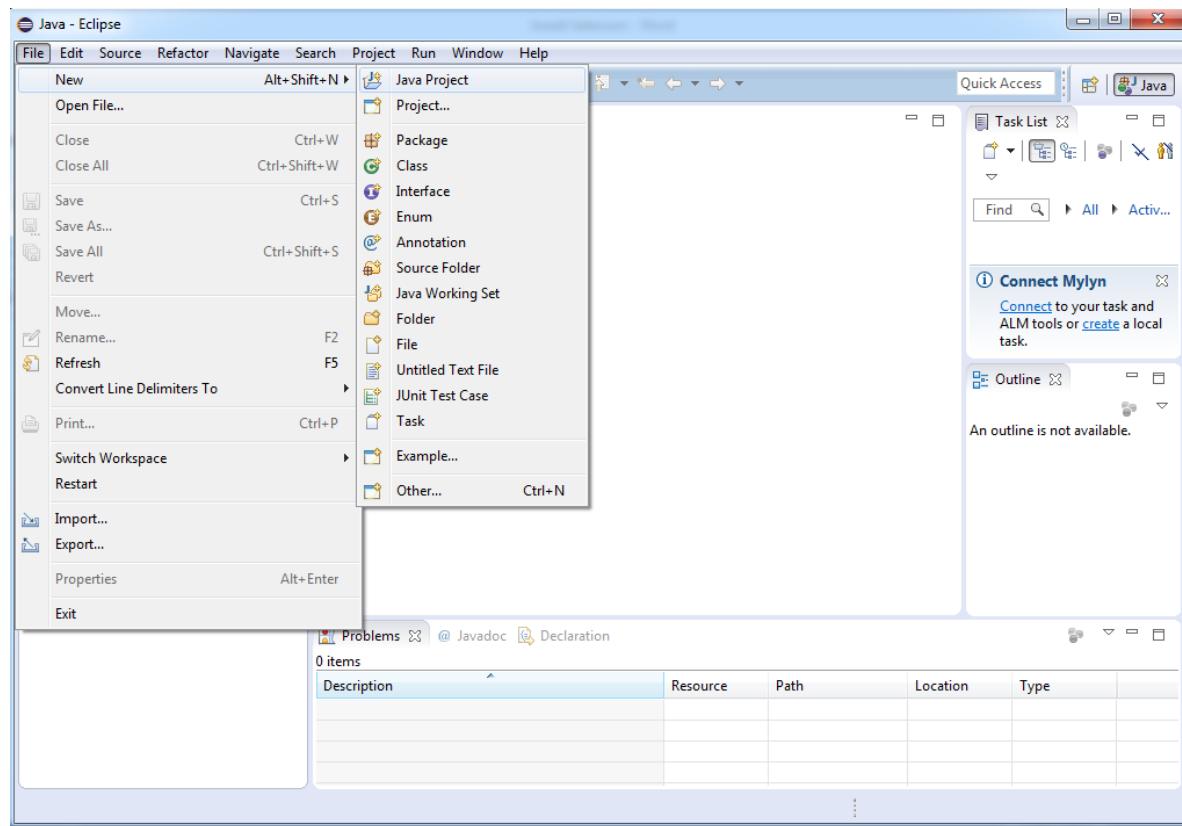




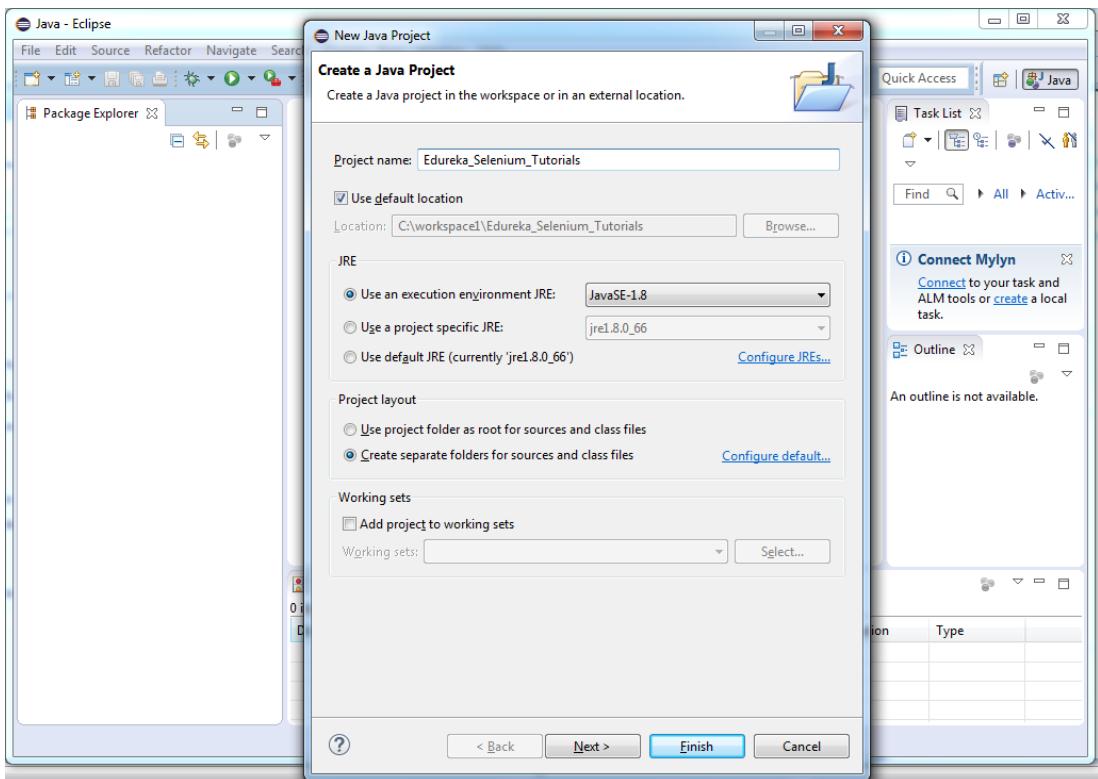
(See when we open Eclipse from very first time => Click on Workbench to start your code)

We can choose switch **File=> Switch Workspace => Other...**

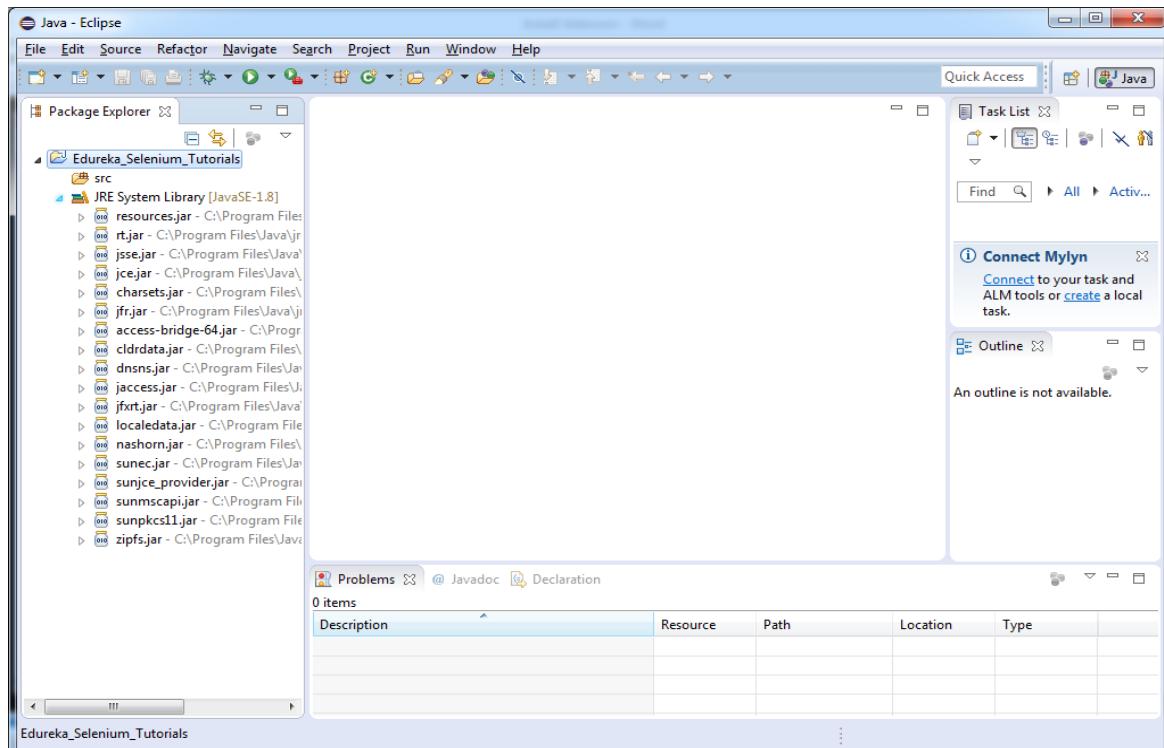




Create a new Project: Edureka_Selenium_Tutorials:

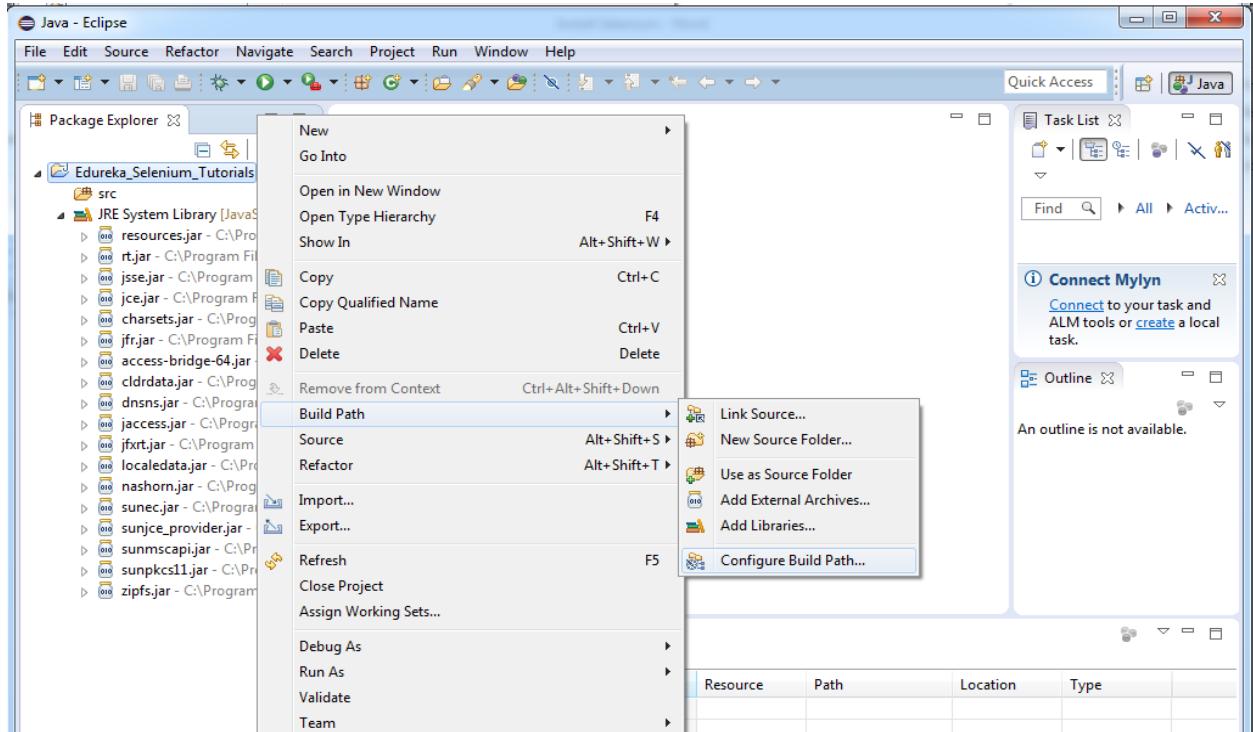


(Finish)

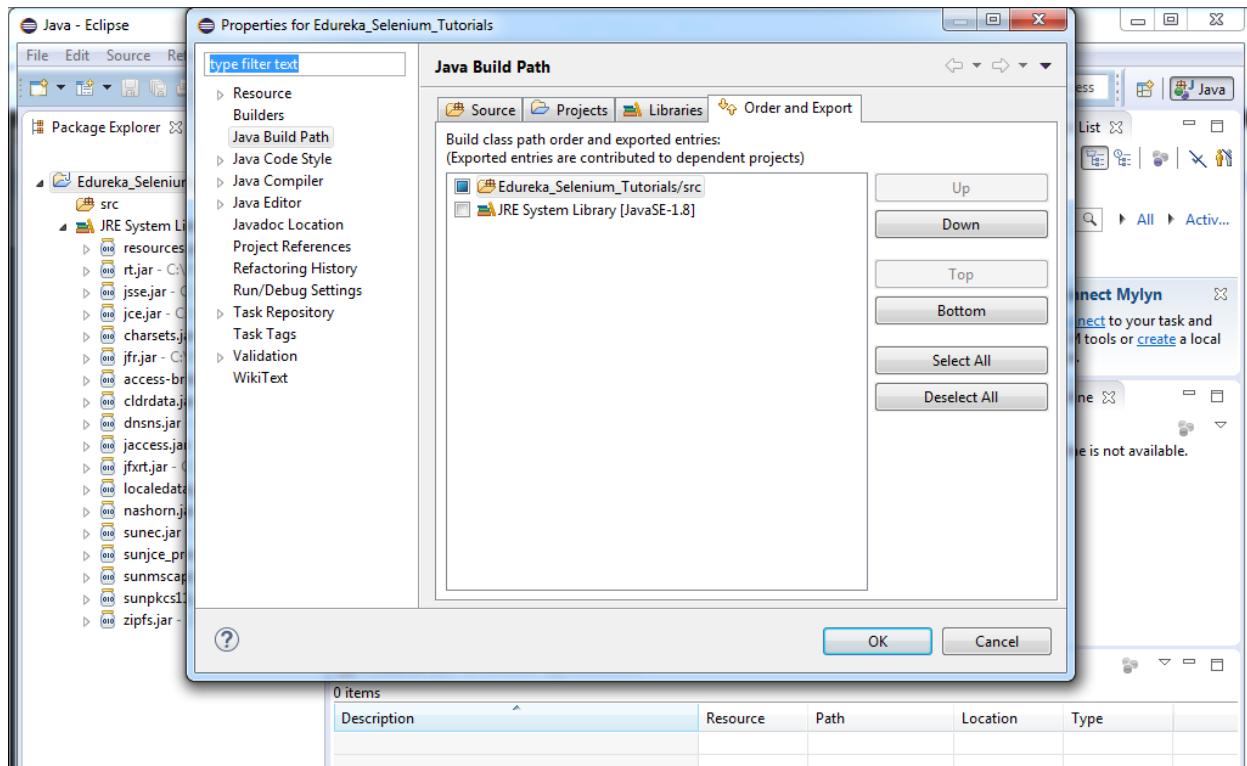


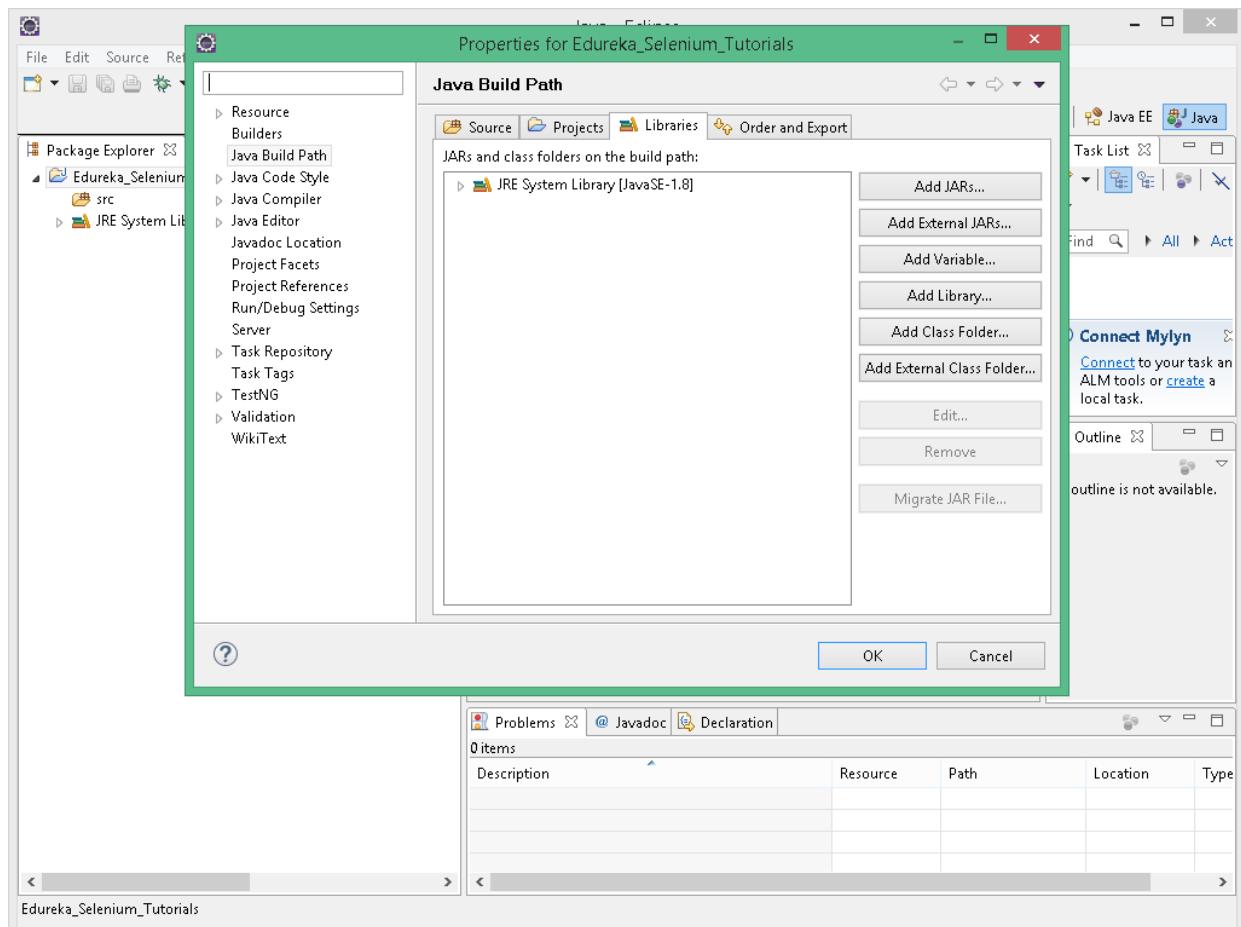
(To get this view, make sure that Java already exist before installing Eclipse)

Now, bring any Selenium's jars into the project:

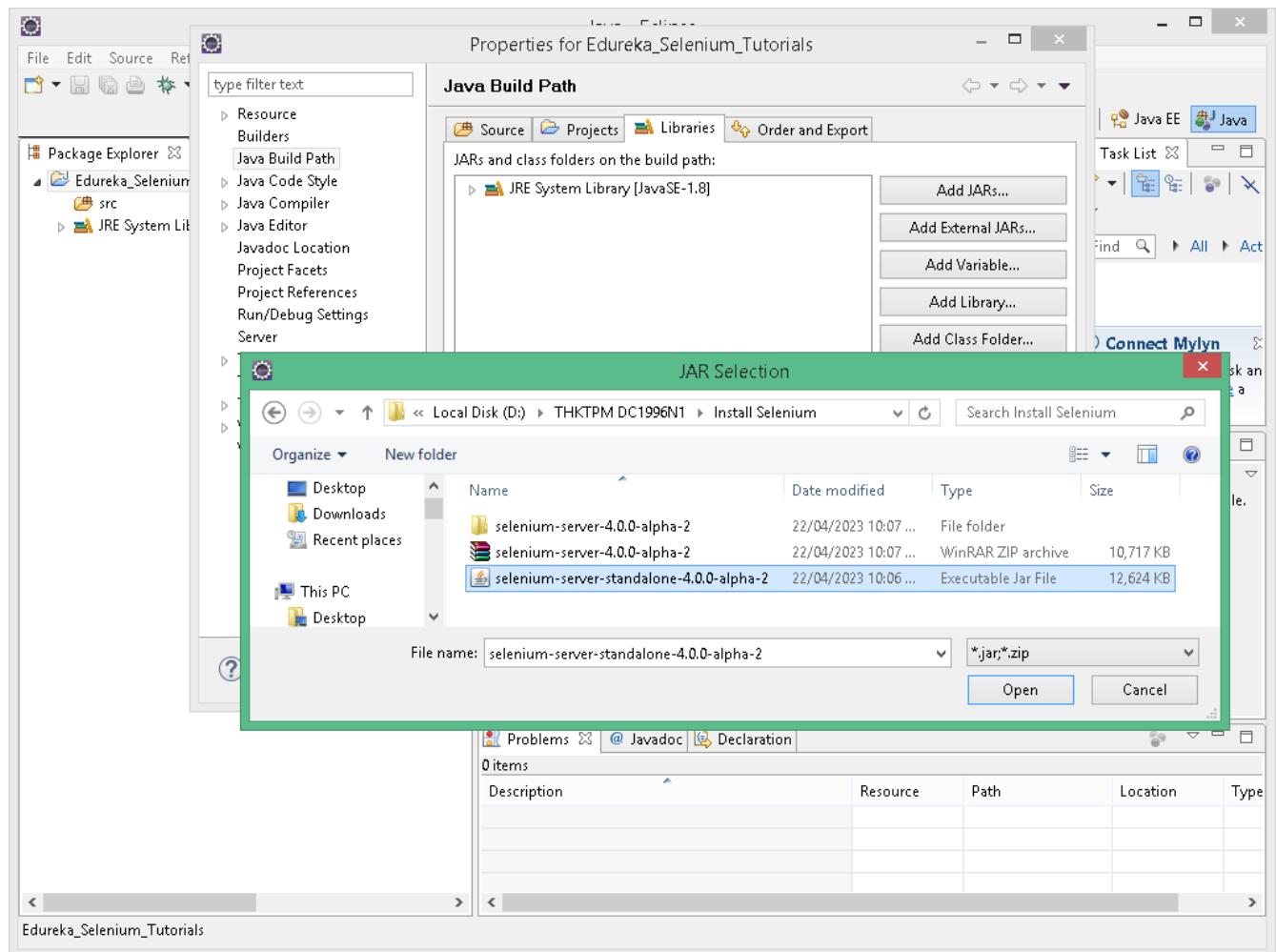


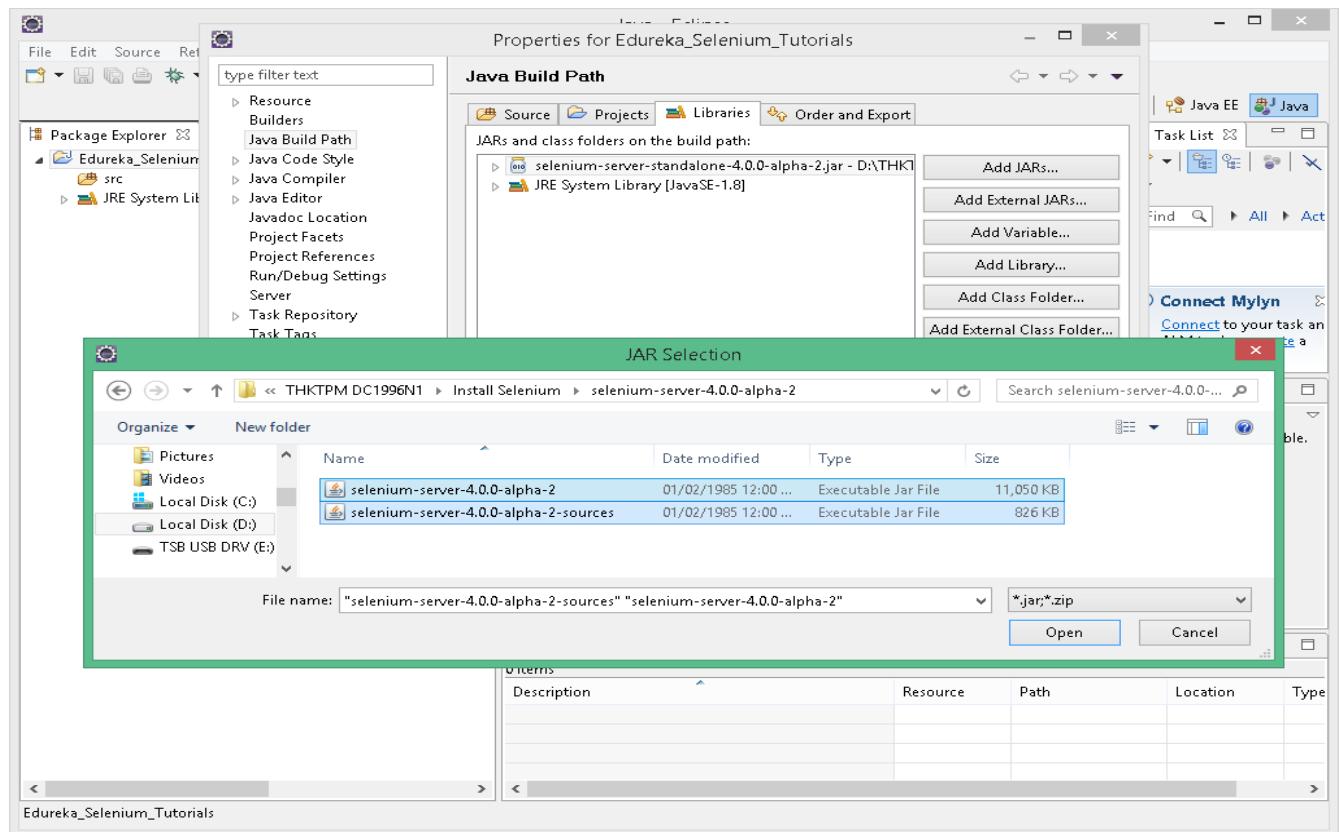
(Right click on the project's name => Build Path => Configure Build Path...)



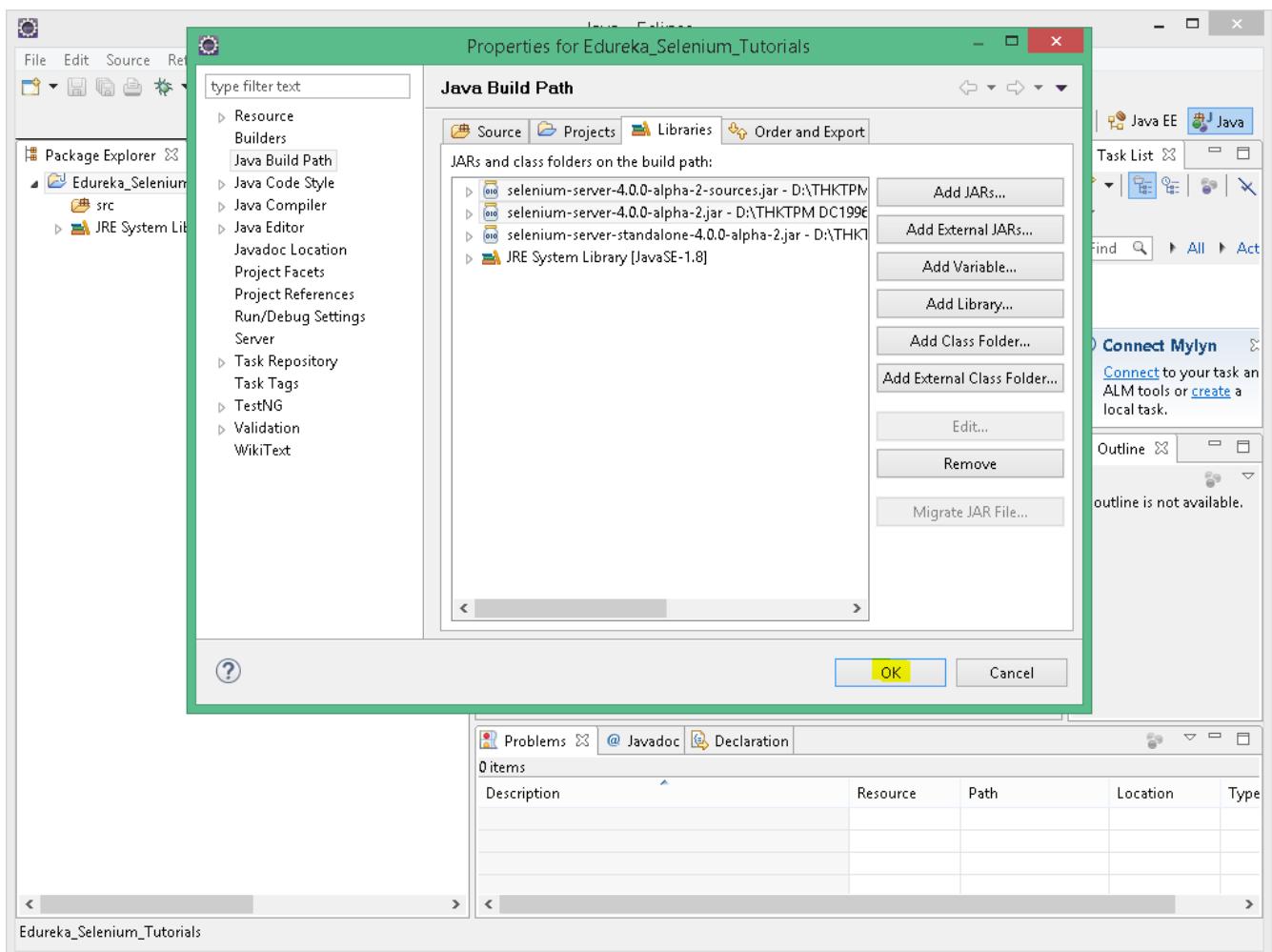


(Libraries => Add External JARS... => selenium-server-standalone-4.0.0-alpha-2.jar
in D:\Install selenium\selenium 4.0=> Open)

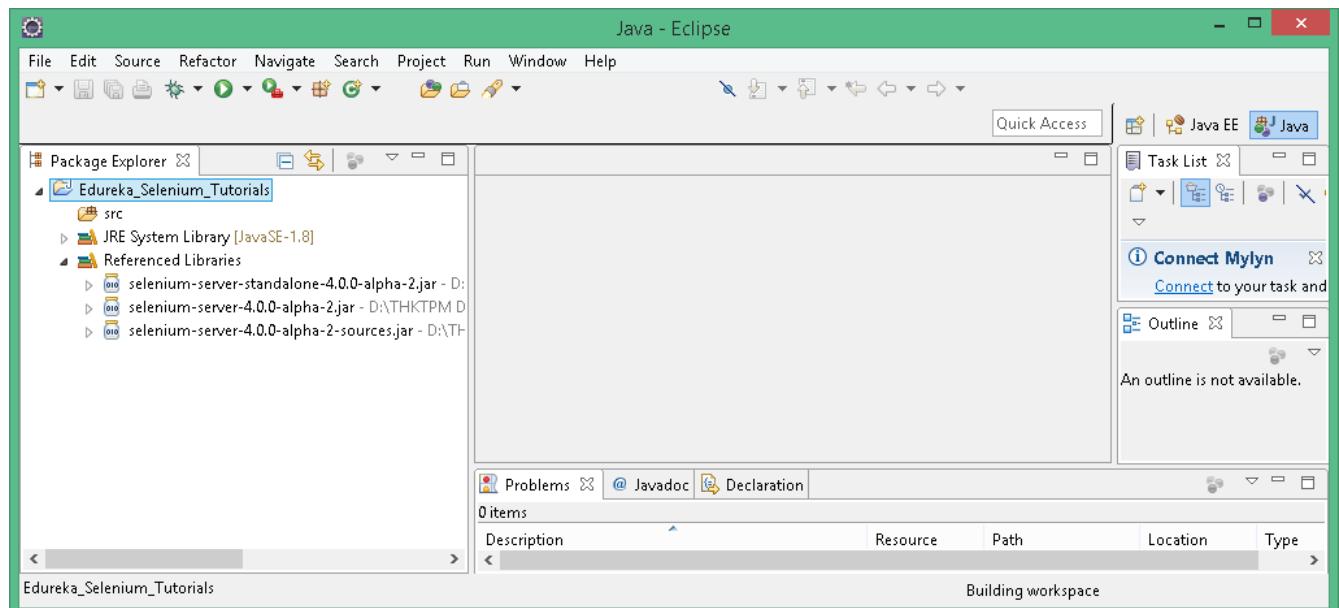




(Add External JARS... =>
selenium-server-4.0.0-alpha-2.jar
selenium-server-4.0.0-alpha-2-sources.jar
in D:\Install selenium\selenium 4.0=> Open)

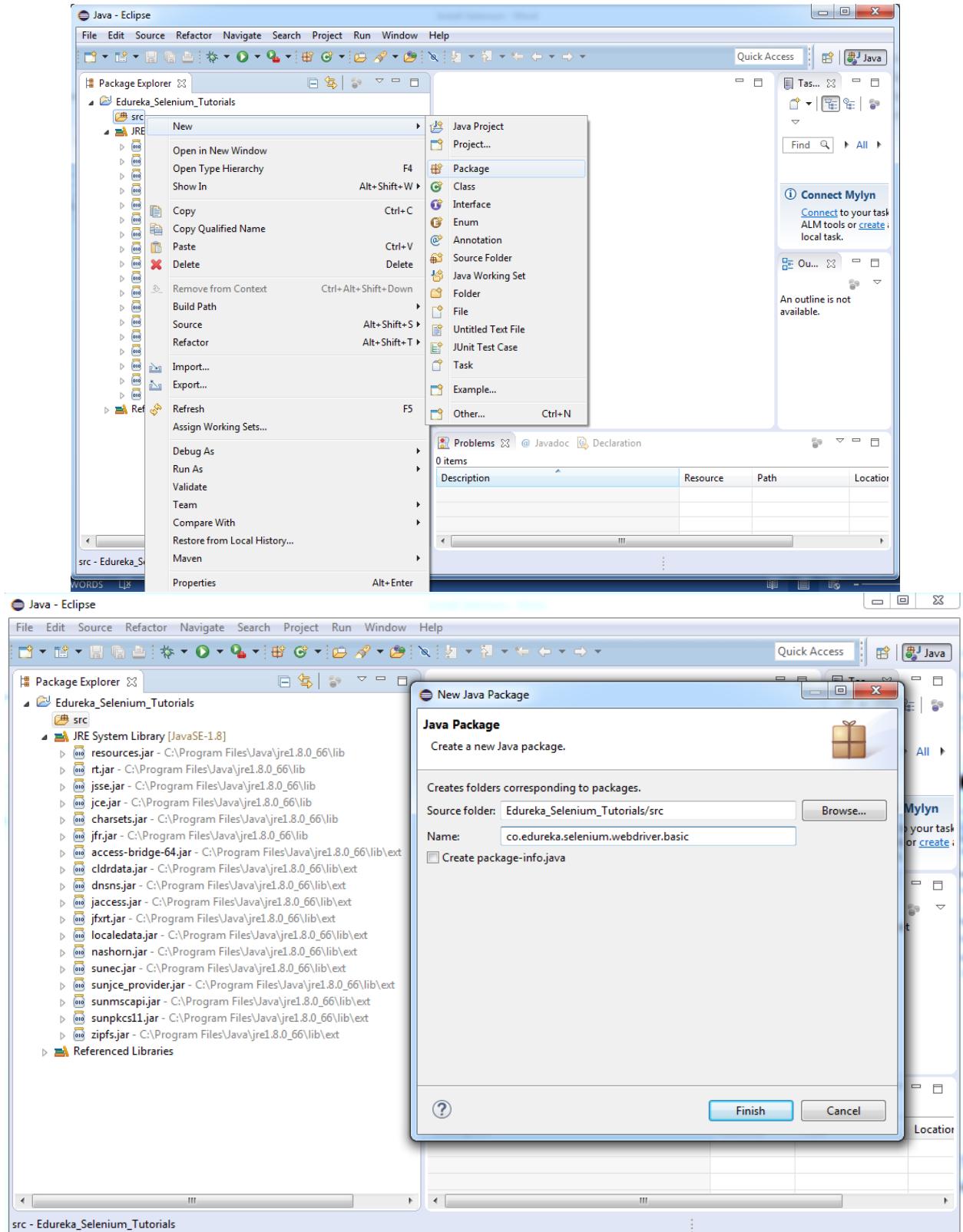


(OK)

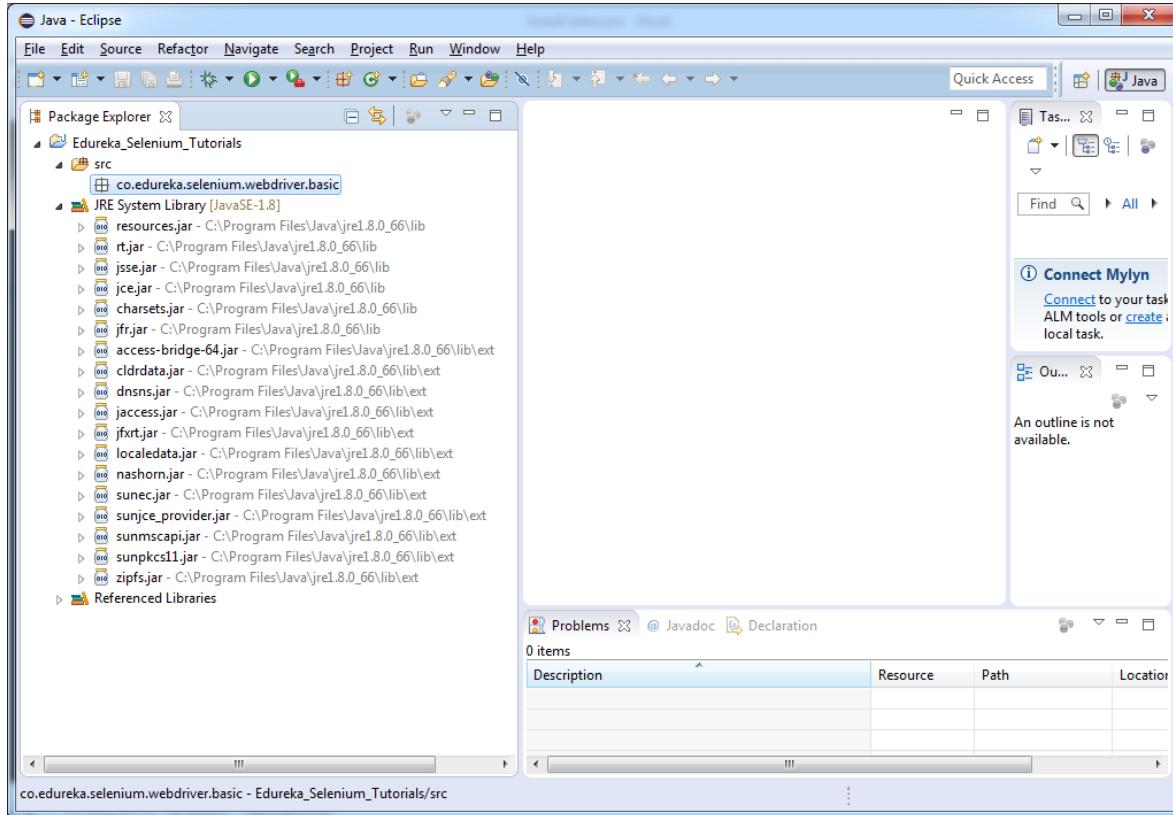


(Now, we can see Referenced Libraries also)

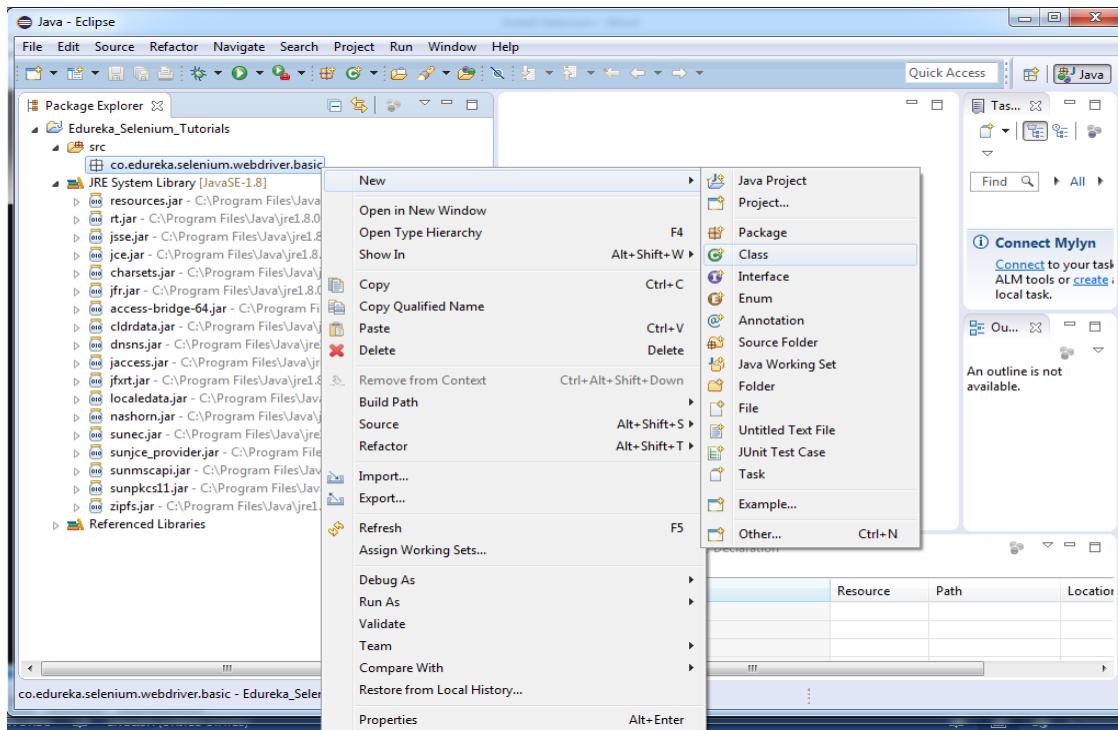
Right click on src to create a new package:

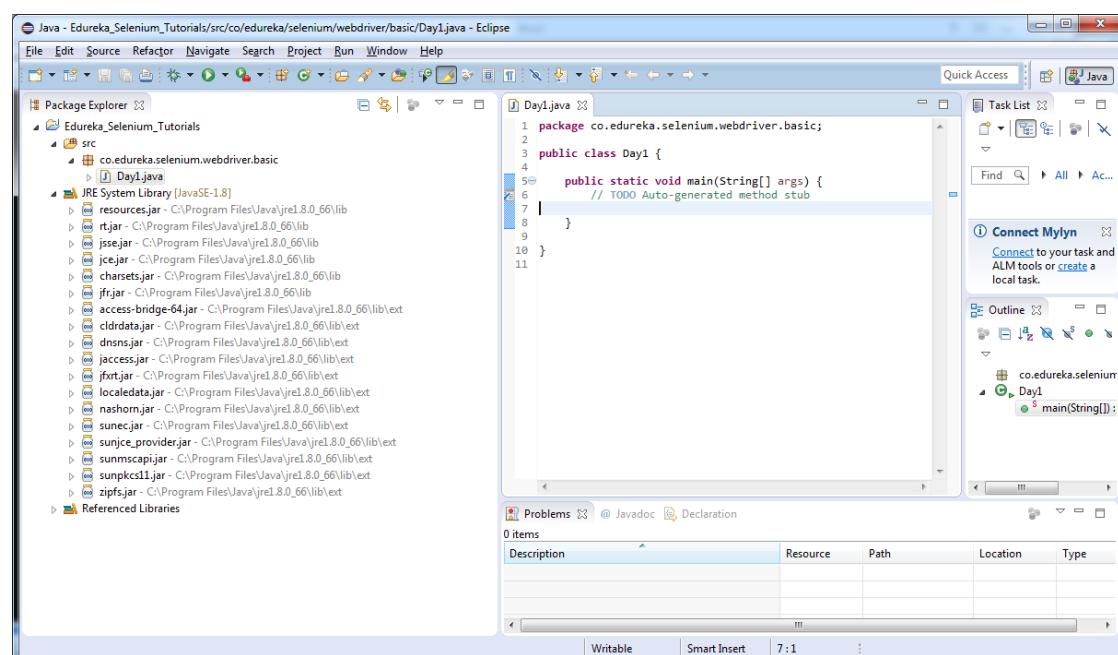
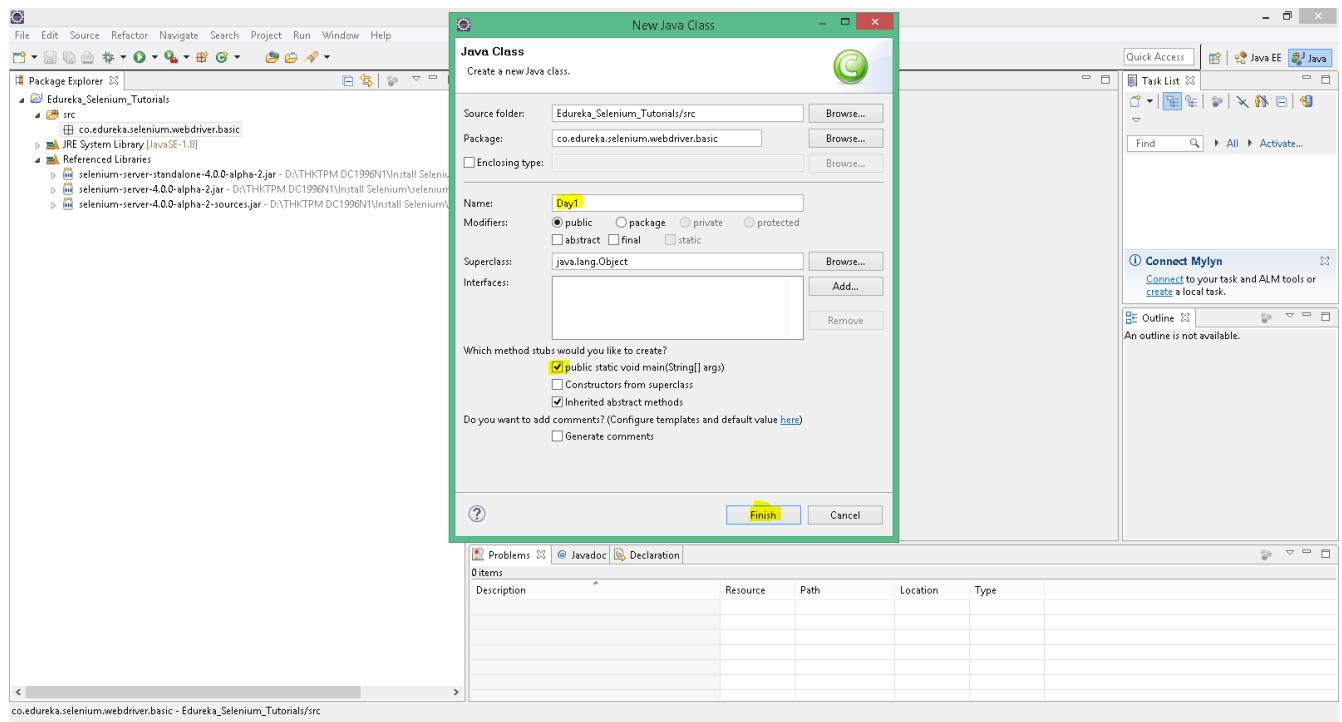


(Name: co.edureka.selenium.webdriver.basic => Finish)

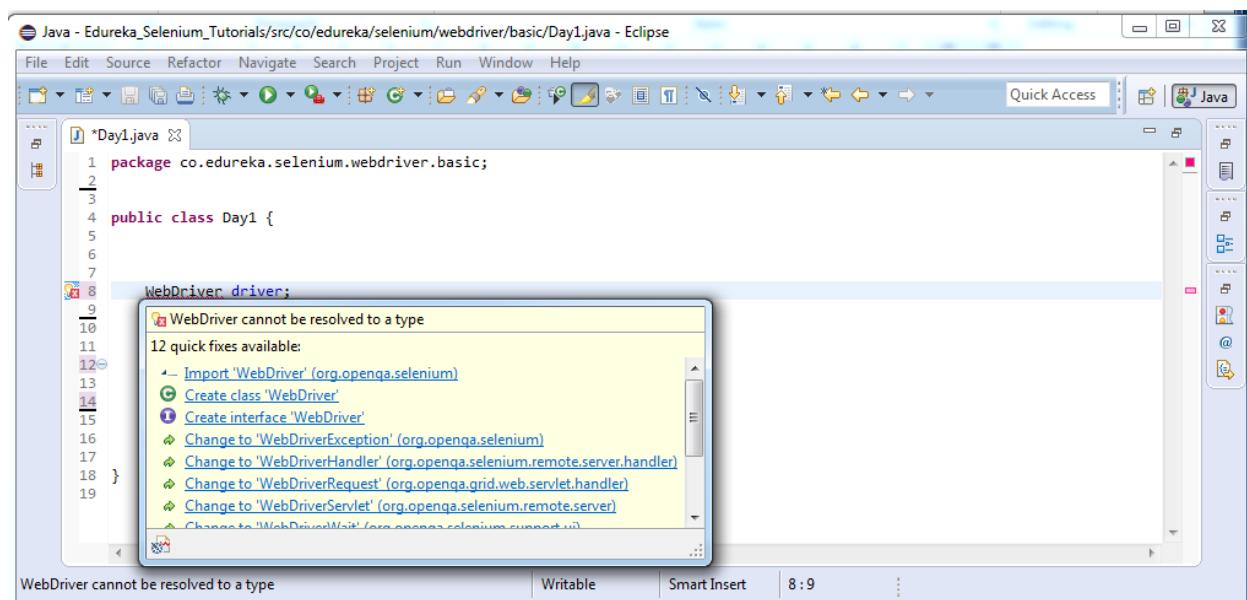


Right click on the `co.edureka.selenium.webdriver.basic` package to create a new class:



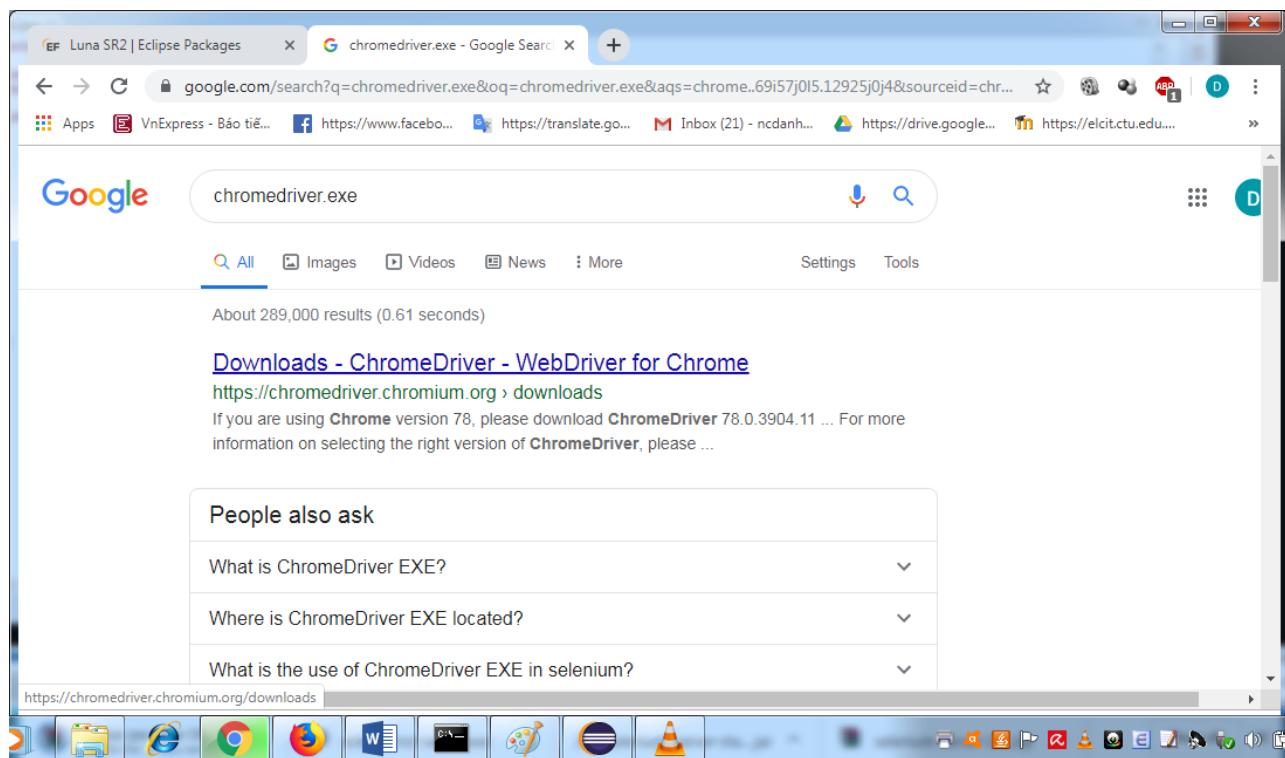


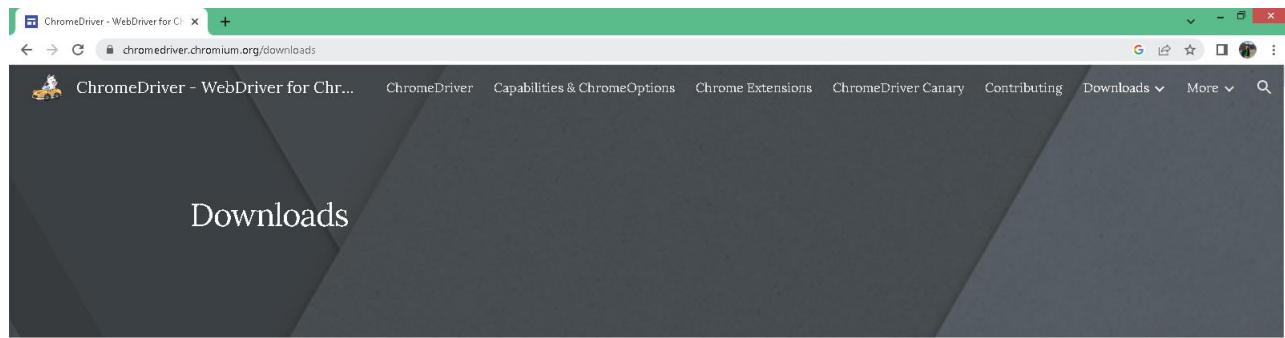
(Name: Day1; public; public static void main(String[] args => Finish))



(Change to or click to import WebDriver package or Ctrl+Shift+O)

Step 5: Download chromedriver.exe into D:\Install selenium\chromedriver_win32:





Current Releases

- If you are using Chrome version 113, please download [ChromeDriver 113.0.5672.24](#)
- If you are using Chrome version 112, please download [ChromeDriver 112.0.5615.49](#)
- If you are using Chrome version 111, please download [ChromeDriver 111.0.5563.64](#)
- For older version of Chrome, please see below for the version of ChromeDriver that supports it.

If you are using Chrome from Dev or Canary channel, please follow instructions on the [ChromeDriver Canary](#) page.

For more information on selecting the right version of ChromeDriver, please see the [Version Selection](#) page.

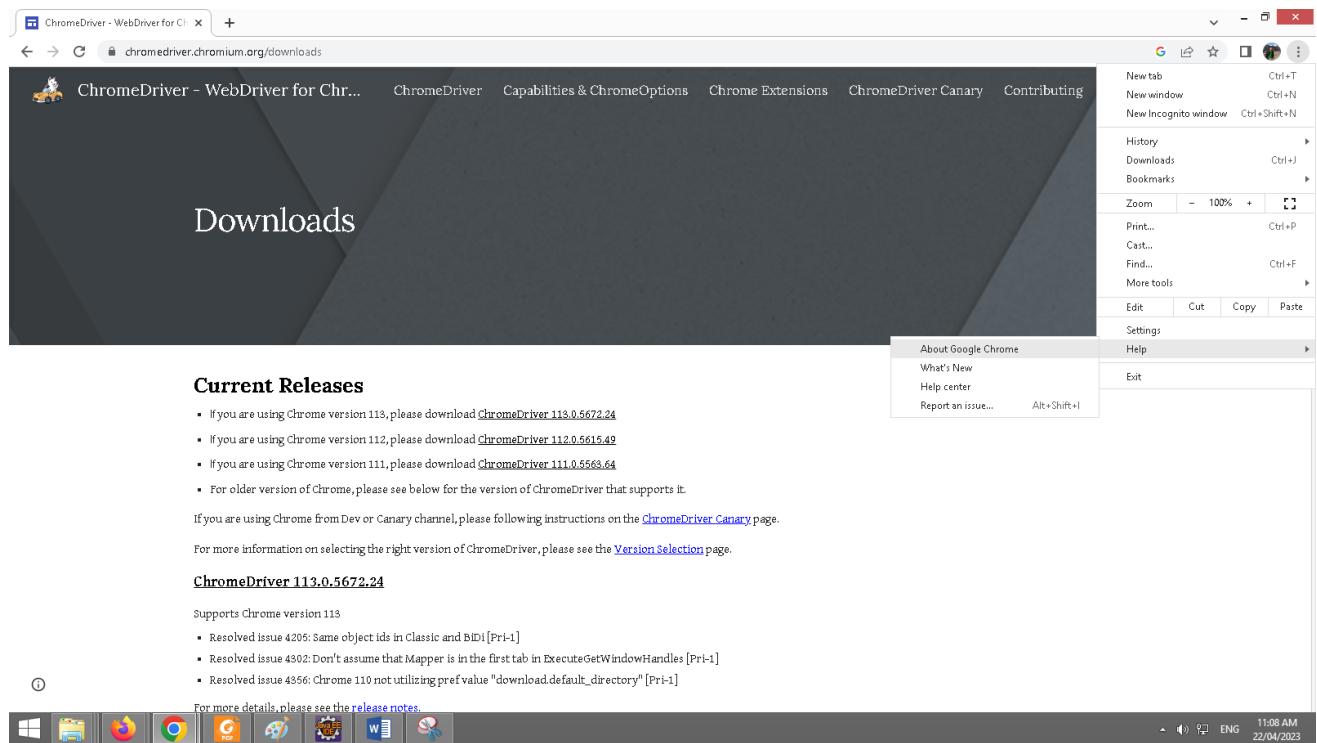
[ChromeDriver 113.0.5672.24](#)

Supports Chrome version 113

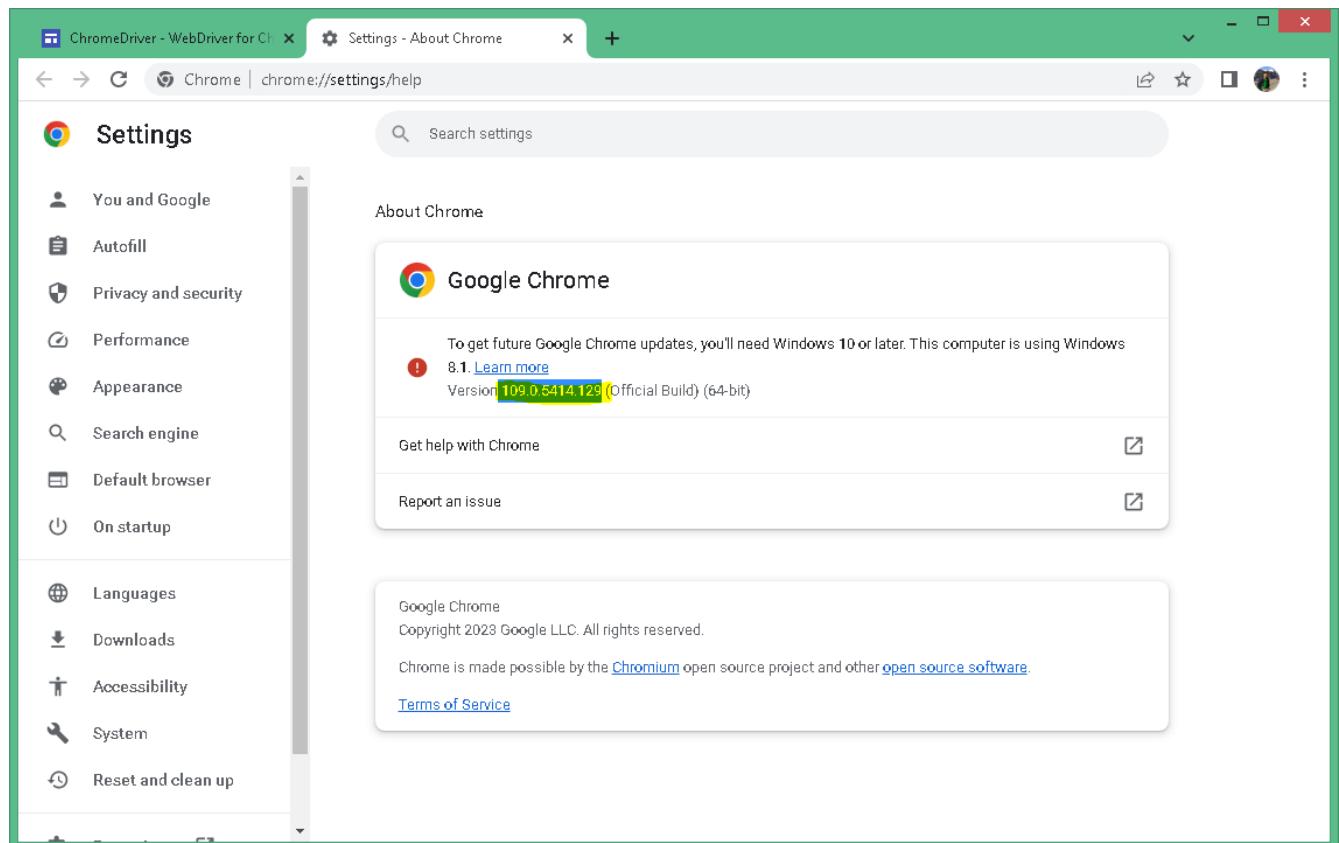
- Resolved issue 4205: Same object ids in Classic and BIDI [Pri-1]
- Resolved issue 4302: Don't assume that Mapper is in the first tab in ExecuteGetWindowHandles [Pri-1]
- Resolved issue 4356: Chrome 110 not utilizing pref value "download.default_directory" [Pri-1]

For more details, please see the [release notes](#).

Let's see your Chrome:



(Help => About Google Chrome)



(=>Version 109.0.5414.129)

The screenshot shows the chromedriver.chromium.org/downloads page. It lists three available versions of ChromeDriver:

- ChromeDriver 109.0.5414.74**
Supports Chrome version 110
▪ Resolved issue 4193: Failed to start new session on Android 13 [Pri-]
▪ Resolved issue 4272: WebSocket should treat code=0 as an indication of FIN [Pri-]
▪ Resolved issue 4276: Fix connectivity issues in ChromeDriver [Pri-]
▪ Resolved issue 4295: ChromeDriver with "webSocketUrl": true is racy [Pri-]
▪ Resolved issue 4297: ChromeDriver Bidi serializes incorrectly [Pri-]
For more details, please see the [release notes](#).
- ChromeDriver 109.0.5414.74**
Supports Chrome version 109
▪ Resolved issue 4179: BiDi session must support multiple connections [Pri-]
▪ Resolved issue 4203: Improve credits information [Pri-]
▪ Resolved issue 4263: Crash on Meta+A [Pri-]
For more details, please see the [release notes](#).
- ChromeDriver 109.0.5414.25**
Supports Chrome version 109
▪ Resolved issue 4179: BiDi session must support multiple connections [Pri-]
▪ Resolved issue 4203: Improve credits information [Pri-]

(Click ChromeDriver 109.0.5414.74)

(Hoặc vào <https://chromedriver.storage.googleapis.com/index.html>=> download ChromeDriver 109.0.5414.129)
(Hoặc vào <https://chromedriver.chromium.org/downloads/version-selection>)

Index of /109.0.5414.74/

Name	Last modified	Size	ETag
Parent Directory	-	-	-
chromedriver_linux64.zip	2023-01-11 05:40:13	6.96MB	245747a6d5f2b7da02c465941f43e0e8
chromedriver_mac64.zip	2023-01-11 05:40:17	8.72MB	5b5bab24847bb5a6d714985967f2a87a
chromedriver_mac_arm64.zip	2023-01-11 05:40:20	7.95MB	d5c6a6edadb4c3647df677b4350c7721
chromedriver_win32.zip	2023-01-11 05:40:23	6.79MB	b447a4cb23af51da8272f6d867b9b1c7
notes.txt	2023-01-11 05:40:30	0.00MB	c0c31f9a056a92b1ad304580f25cbf81

(Download chromedriver_win32.zip)

Computer > Software (D:) > Install selenium >

Extract files to the specified folder

Extract to chromedriver_win32\

Extract files to chromedriver_win32\

Extract Here

Extract to chromedriver_win32\

Scan selected items for viruses

Scan selected files with Avira

Restore previous versions

Send to

Cut

Copy

Create shortcut

Delete

Rename

Properties

(Extract it)

Computer > Software (D:) > Install selenium > chromedriver_win32

File Edit View Tools Help

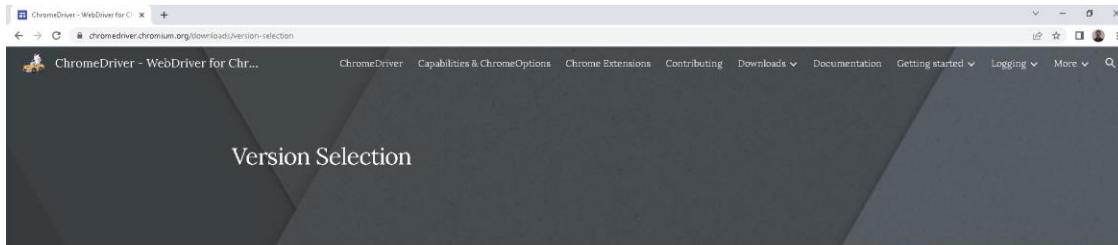
Organize Include in library Share with New folder

Name	Date modified	Type	Size
chromedriver	18/08/2019 8:32 PM	Application	8,498 KB

(Now, set the path to chromedriver.exe)

/* For versions 115 and newer

<https://chromedriver.chromium.org/downloads/version-selection>



Starting with 115, the ChromeDriver release process is integrated with that of Chrome. The latest Chrome + ChromeDriver releases per release channel (Stable, Beta, Dev, Canary) are starting with Chrome for Testing (CFT) enabling download. As a result, you might no longer have a need for version selection – you could choose any available CFT version instead simply download the correspondingly-versioned ChromeDriver binary.

For automated version downloading one can use the convenient [CFT JSON endpoints](#).

If you still have a need for version selection (e.g. to match a non-CFT Chrome binary with a compatible ChromeDriver binary), look up the Chrome binary's MAJOR, MINOR, BUILD version in the latest patch version per build [JSON endpoint](#) to find the corresponding ChromeDriver version.

Alternatively, you can use the [LATEST_RELEASES_endpoints](#) at the new locations.

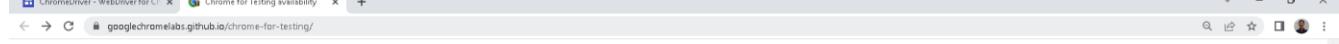
For versions 114 and older

We maintain multiple versions of ChromeDriver. Which version to select depends on the version of Chrome you are using it with. Specifically:

- ChromeDriver uses the same version number scheme as Chrome. See <https://www.chromium.org/developers/version-numbers> for more details.
- Each version of ChromeDriver supports Chrome with matching major, minor, and build version numbers. For example, ChromeDriver 73.0.3683.20 supports all Chrome versions that start with 73.0.3683.
- Before a new major version of Chrome goes to beta, a matching version of ChromeDriver will be released.
- After the initial release of a new major version, we will release patches as needed. These patches may or may not coincide with updates to Chrome.

Here are the steps to select the version of ChromeDriver to download:

- First, find out which version of Chrome you are using. Let's say you have Chrome 72.0.3626.81.
- Take the Chrome version number, remove the last part, and append the result to URL "https://chromedriver.storage.googleapis.com/LATEST_RELEASE_72". For example, with Chrome version 72.0.3626.81 you'd use a URL https://chromedriver.storage.googleapis.com/LATEST_RELEASE_72.



Chrome for Testing availability

This page lists the latest available cross-platform Chrome for Testing versions and assets per Chrome release channel.

Consult [our JSON API endpoints](#) if you're looking to build automated scripts based on Chrome for Testing release data.

Last updated @ 2023-10-17T02:13:23.851Z

Channel Version Revision Status

Channel	Version	Revision	Status
Stable	118.0.5993.70	r1192594	<input checked="" type="checkbox"/>
Beta	119.0.6045.21	r1204232	<input checked="" type="checkbox"/>
Dev	120.0.6062.2	r1208568	<input checked="" type="checkbox"/>
Canary	120.0.6070.0	r1209973	<input checked="" type="checkbox"/>

Stable

Version: 118.0.5993.70 (r1192594)

Binary	Platform	URL	HTTP status
chrome	linux64	https://edgedl.me.gvt1.com/edgedl/chrome/chrome-for-testing/118.0.5993.70/linux64/chrome-linux64.zip	200
chrome	mac-arm64	https://edgedl.me.gvt1.com/edgedl/chrome/chrome-for-testing/118.0.5993.70/mac-arm64/chrome-mac-arm64.zip	200
chrome	mac-x64	https://edgedl.me.gvt1.com/edgedl/chrome/chrome-for-testing/118.0.5993.70/mac-x64/chrome-mac-x64.zip	200
chrome	windows32	https://edgedl.me.gvt1.com/edgedl/chrome/chrome-for-testing/118.0.5993.70/win32/chrome-win32.zip	200
chrome	windows64	https://edgedl.me.gvt1.com/edgedl/chrome/chrome-for-testing/118.0.5993.70/win64/chrome-win64.zip	200
chromedriver	linux64	https://edgedl.me.gvt1.com/edgedl/chrome/chrome-for-testing/118.0.5993.70/linux64/chromedriver-linux64.zip	200
chromedriver	mac-arm64	https://edgedl.me.gvt1.com/edgedl/chrome/chrome-for-testing/118.0.5993.70/mac-arm64/chromedriver-mac-arm64.zip	200
chromedriver	mac-x64	https://edgedl.me.gvt1.com/edgedl/chrome/chrome-for-testing/118.0.5993.70/mac-x64/chromedriver-mac-x64.zip	200

ChromeDriver - WebDriver for Chrome

Version: 118.0.5993.70 (r1192594)

Stable

Binary	Platform	URL	HTTP status
chrome	linux64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/linux64/chrome-linux64.zip	200
chrome	mac-arm64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/mac-arm64/chrome-mac-arm64.zip	200
chrome	mac-x64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/mac-x64/chrome-mac-x64.zip	200
chrome	windows32	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/win32/chrome-win32.zip	200
chrome	windows64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/win64/chrome-win64.zip	200
chromedriver	linux64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/linux64/chromedriver-linux64.zip	200
chromedriver	mac-arm64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/mac-arm64/chromedriver-mac-arm64.zip	200
chromedriver	mac-x64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/mac-x64/chromedriver-mac-x64.zip	200
chromedriver	windows32	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/win32/chromedriver-win32.zip	200
chromedriver	windows64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/win64/chromedriver-win64.zip	200
chrome-headless-shell	linux64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/linux64/chrome-headless-shell-linux64.zip	200
chrome-headless-shell	mac-arm64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/mac-arm64/chrome-headless-shell-mac-arm64.zip	200
chrome-headless-shell	mac-x64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/mac-x64/chrome-headless-shell-mac-x64.zip	200
chrome-headless-shell	windows32	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/win32/chrome-headless-shell-win32.zip	200
chrome-headless-shell	windows64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/118.0.5993.70/win64/chrome-headless-shell-win64.zip	200

Beta

Version: 119.0.6045.21 (r1204232)

Binary	Platform	URL	HTTP status
chrome	linux64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/119.0.6045.21/linux64/chrome-linux64.zip	200
chrome	mac-arm64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/119.0.6045.21/mac-arm64/chrome-mac-arm64.zip	200
chrome	mac-x64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/119.0.6045.21/mac-x64/chrome-mac-x64.zip	200
chrome	windows32	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/119.0.6045.21/win32/chrome-win32.zip	200
chrome	windows64	https://edged1.me.gvt1.com/edged1/chrome/chrome-for-testing/119.0.6045.21/win64/chrome-win64.zip	200

*/

Java - Edureka_Selenium_Tutorials/src/co/edureka/selenium/webdriver/basic/Day1.java - Eclipse

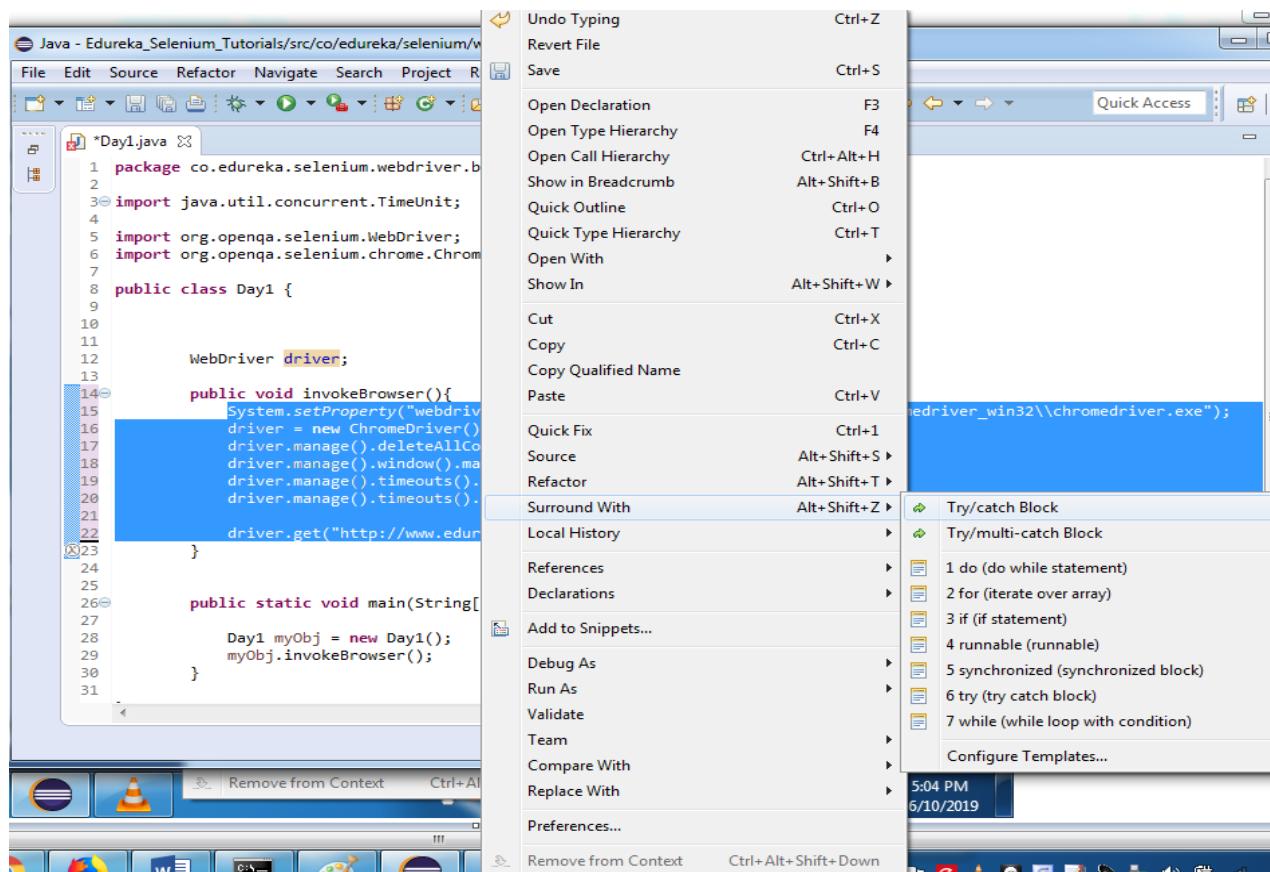
```

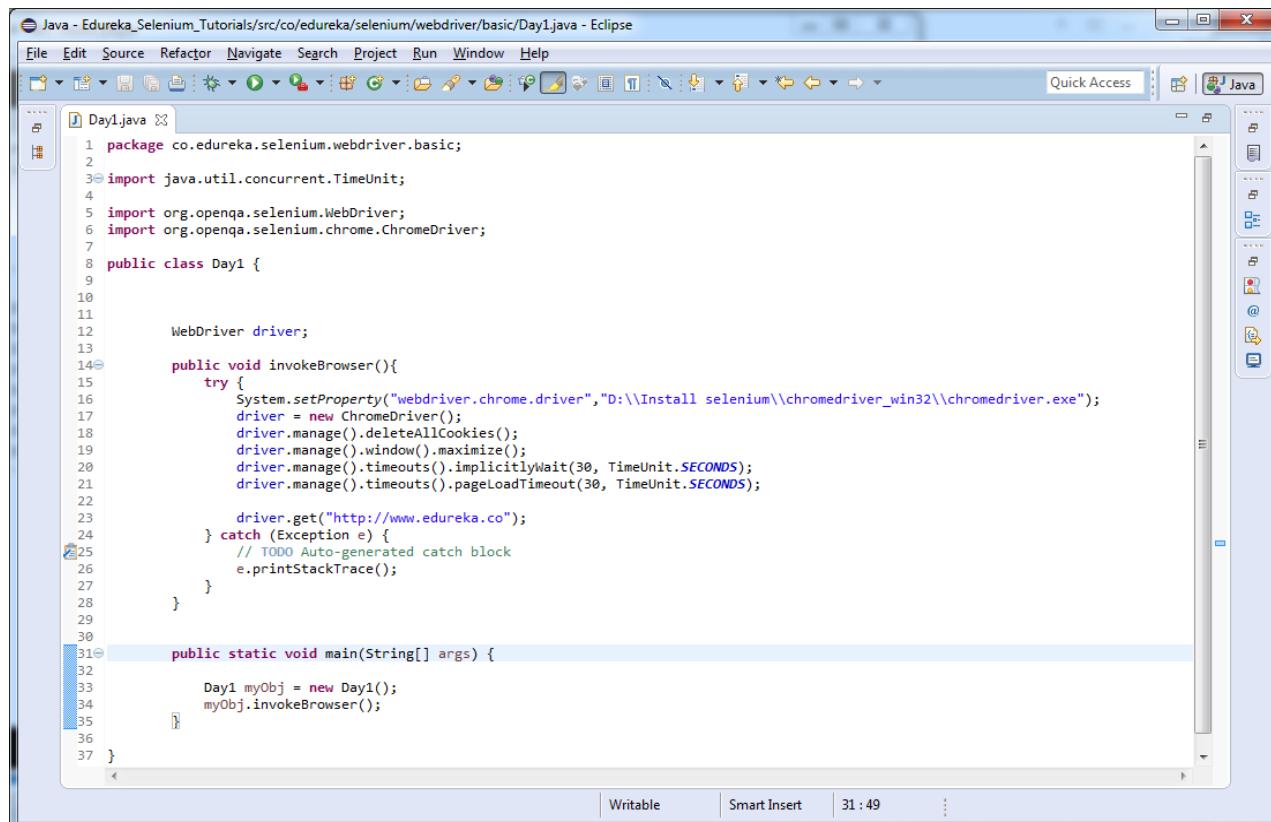
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access Java
Day1.java
import org.openqa.selenium.chrome.ChromeDriver;
public class Day1 {
    WebDriver driver;
    public void invokeBrowser(){
        System.setProperty("webdriver.chrome.driver","D:\\Install selenium\\chromedriver_win32\\chromedriver.exe");
        driver = new ChromeDriver();
        driver.manage().deleteAllCookies();
        driver.manage().window().maximize();
        driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
        driver.manage().timeouts().pageLoadTimeout(30, TimeUnit.SECONDS);
        driver.get("http://www.edureka.co");
    }
    public static void main(String[] args) {
}

```

The screenshot shows the Eclipse IDE interface with the title bar "Java - Edureka_Selenium_Tutorials/src/co/edureka/selenium/webdriver/basic/Day1.java - Eclipse". The menu bar includes File, Edit, Source, Refactor, Navigate, Search, Project, Run, Window, Help. The toolbar has various icons for file operations like Open, Save, Cut, Copy, Paste, Find, etc. The main editor window displays the Java code for Day1.java:

```
1 package co.edureka.selenium.webdriver.basic;
2
3 import java.util.concurrent.TimeUnit;
4
5 import org.openqa.selenium.WebDriver;
6 import org.openqa.selenium.chrome.ChromeDriver;
7
8 public class Day1 {
9
10     WebDriver driver;
11
12     public void invokeBrowser(){
13         System.setProperty("webdriver.chrome.driver","D:\\Install selenium\\chromedriver_win32\\chromedriver.exe");
14         driver = new ChromeDriver();
15         driver.manage().deleteAllCookies();
16         driver.manage().window().maximize();
17         driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
18         driver.manage().timeouts().pageLoadTimeout(30, TimeUnit.SECONDS);
19
20         driver.get("http://www.edureka.co");
21     }
22
23
24
25     public static void main(String[] args) {
26
27         Day1 myObj = new Day1();
28         myObj.invokeBrowser();
29     }
30
31 }
```

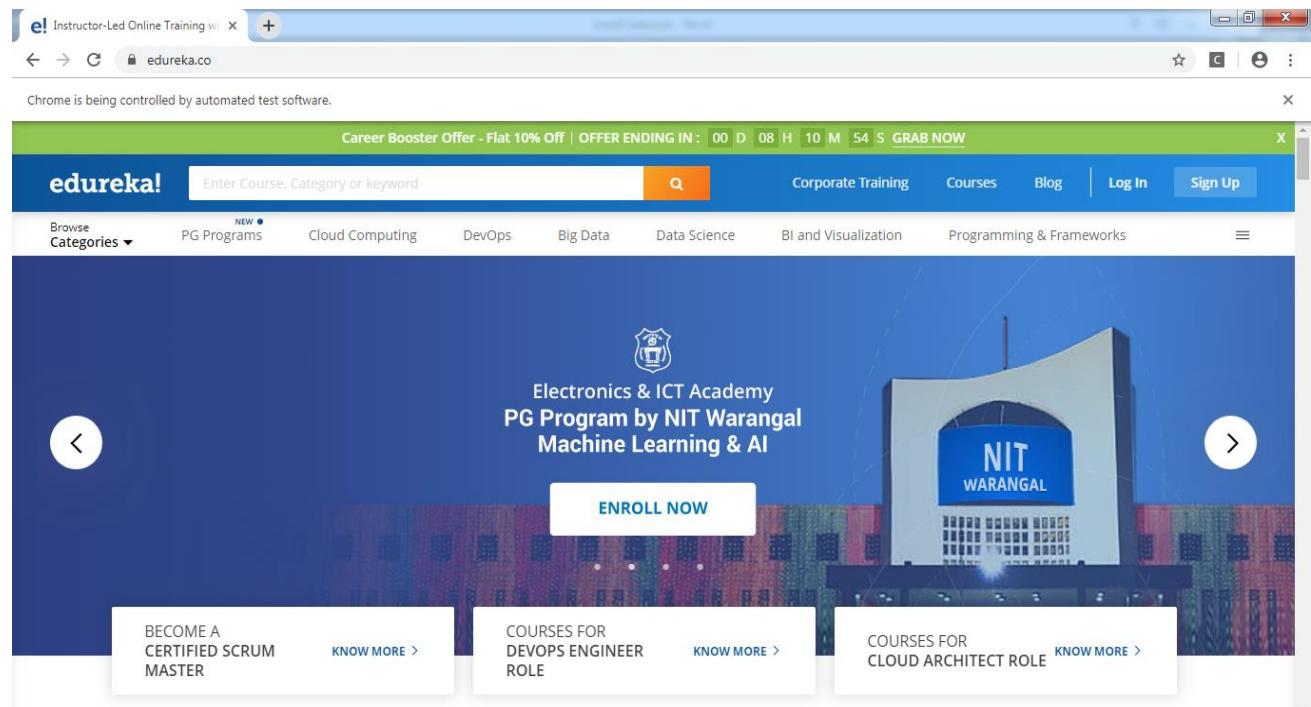




```
Java - Edureka_Selenium_Tutorials/src/co/edureka/selenium/webdriver/basic/Day1.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access Java
Day1.java
1 package co.edureka.selenium.webdriver.basic;
2
3 import java.util.concurrent.TimeUnit;
4
5 import org.openqa.selenium.WebDriver;
6 import org.openqa.selenium.chrome.ChromeDriver;
7
8 public class Day1 {
9
10
11     WebDriver driver;
12
13     public void invokeBrowser(){
14         try {
15             System.setProperty("webdriver.chrome.driver","D:\\Install selenium\\chromedriver_win32\\chromedriver.exe");
16             driver = new ChromeDriver();
17             driver.manage().deleteAllCookies();
18             driver.manage().window().maximize();
19             driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
20             driver.manage().timeouts().pageLoadTimeout(30, TimeUnit.SECONDS);
21
22             driver.get("http://www.edureka.co");
23         } catch (Exception e) {
24             // TODO Auto-generated catch block
25             e.printStackTrace();
26         }
27     }
28
29
30     public static void main(String[] args) {
31         Day1 myObj = new Day1();
32         myObj.invokeBrowser();
33     }
34
35 }
36
37 }
```

(Surround With => Try/Catch Block)

Now, run the Java program and see the browser is automatically open:



The code of the above program:

```
//Day1.java

package co.edureka.selenium.webdriver.basic;

import java.util.concurrent.TimeUnit;

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

public class Day1 {

    WebDriver driver;

    public void invokeBrowser(){
        try {
            System.setProperty("webdriver.chrome.driver", "D:\\Install
selenium\\chromedriver_win32\\chromedriver.exe");
            driver = new ChromeDriver();
            driver.manage().deleteAllCookies();
            driver.manage().window().maximize();
            driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
            driver.manage().timeouts().pageLoadTimeout(30, TimeUnit.SECONDS);

            driver.get("http://www.edureka.co");
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }

    public static void main(String[] args) {
        Day1 myObj = new Day1();
        myObj.invokeBrowser();
    }
}
```

Note that:

Chrome -> chromedriver.exe (download)
Firefox -> geckodriver.exe
Internet Explorer -> iedriver.exe

Step 6: Scroll down and select an element.

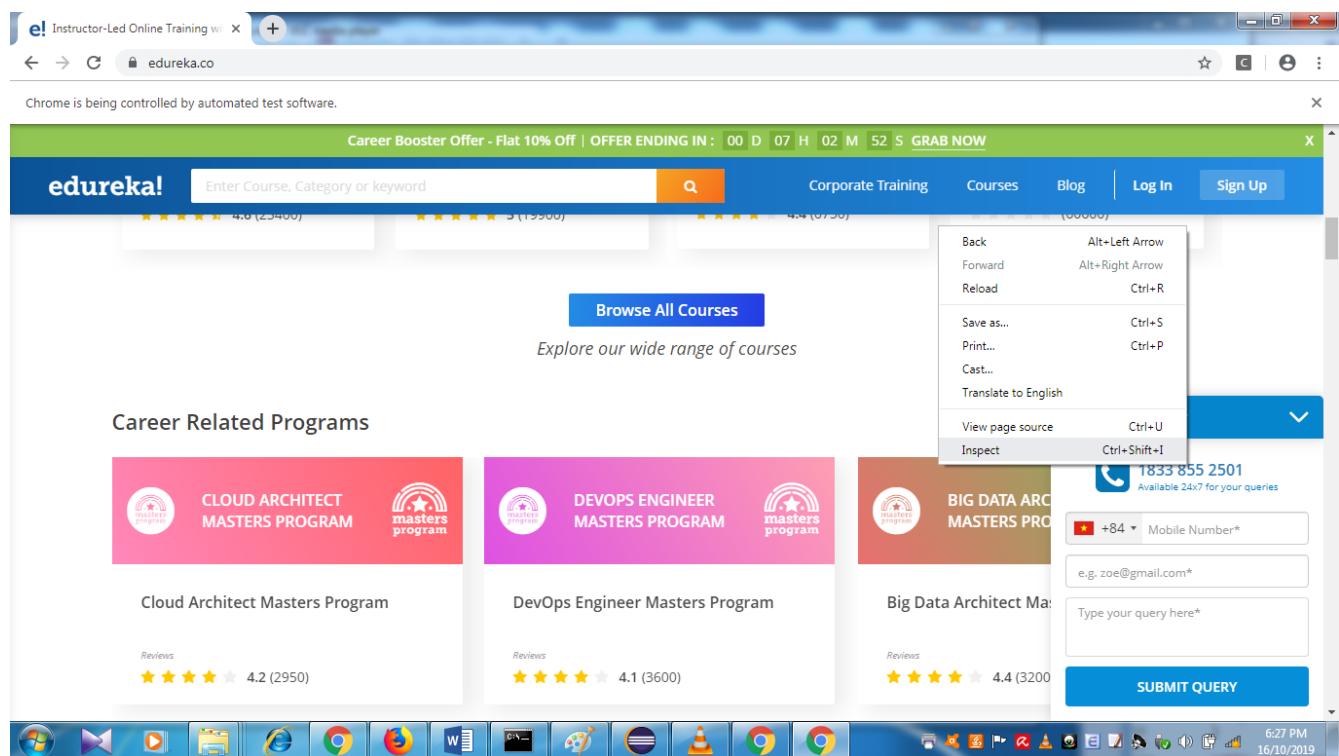
Selenium can only find an element on the visible page. Thus, to find an element on the below pages, we need to scroll down and select (click) that element.

Create another function to search by:

-id

- name
- classname
- tagname
- cssSelector
- linkText
- partialLinkText
- xpath

In Chrome, use inspect to find an element.



Use the element locator to find an element: click on an element and see corresponding HTML code is changing:

The screenshot shows a web browser window with the URL edureka.co. The page content includes sections for 'AWS Architect Certification Training' and 'Python Certification Training for Data Sci.'. Below these are 'Career Related Programs' sections for 'CLOUD ARCHITECT MASTERS PROGRAM' and 'DEV MAS'. A 'Drop us a Query' form is also present. The browser's developer tools are open, specifically the 'Elements' tab. A tooltip highlights the element `a.browsebtn.ga-top-cat-browse-courses.trackButton`, which corresponds to the 'Browse All Courses' button. The detailed HTML structure for this element is shown in the Elements panel.

This screenshot shows the same web browser setup as the previous one, but with a noticeable change in the CSS applied to the document. The 'margin-top: 93px;' style is now applied to the `body` element, as shown in the 'Elements' panel of the developer tools. This change has shifted all the page content down the page. The rest of the UI, including the navigation bar, course cards, and contact form, appears identical to the first screenshot.

The screenshot shows the edureka.co homepage. A search bar at the top has the placeholder "Enter Course, Category or keyword". The DevTools Elements tab is open, displaying the HTML code for the search input field, which is styled with a padding of 9px, a border of 1px, and a background color of #FFFFFF. The search input is located within a form element with the class ".search_inp". The browser's taskbar at the bottom shows various pinned icons.

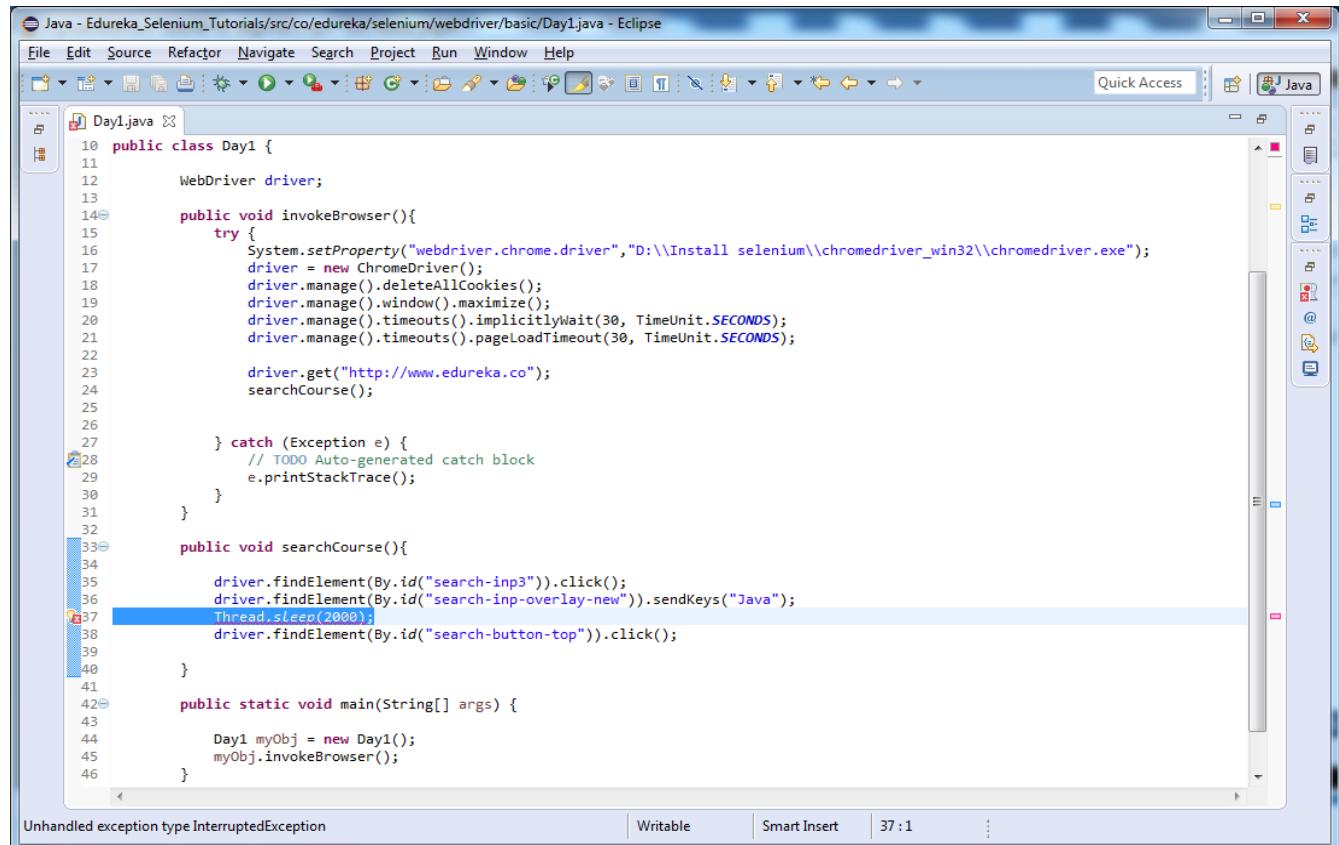
This screenshot is similar to the one above, but a context menu is open over the search input field. The "Copy XPath" option is highlighted. The DevTools sidebar shows the current file path: "/index.html". The browser's taskbar at the bottom shows various pinned icons.

What do we want? We want to search for Java courses: We click on the textbox and see the relevant code of that textbox.

We need to identify any thing here that can be used for searching the textbox. For instance, id is one locator technique, but id can be a dynamic locator. We copy the id = “search-inp3” into the java program. When we click this textbox, another textbox appears with id = “search-inp-overlay-new”.

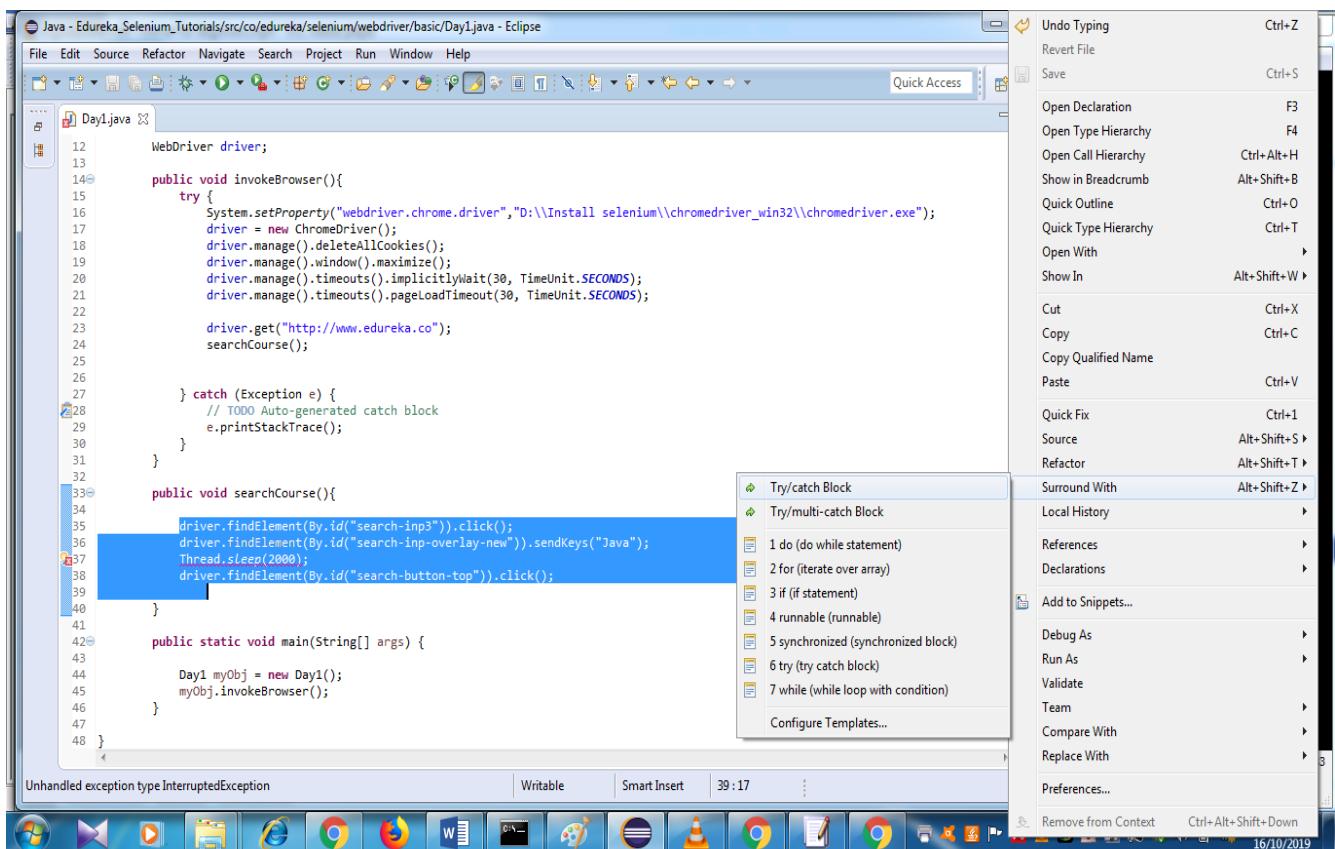
To search for “Java”, we send this key to textbox “search-inp-overlay-new”. Next, to press the Search button, first of all, we need to search for this button. We see its id is “search-button-top”. We press click on this button.

Finally, we call the searchCourse function.



The screenshot shows the Eclipse IDE interface with a Java file named Day1.java open. The code implements a WebDriver interface to interact with a browser. It includes methods for invoking the browser, searching for courses, and performing a main execution. A specific line of code at the bottom is highlighted in blue, indicating it is currently selected or being edited.

```
Java - Edureka_Selenium_Tutorials/src/co/edureka/selenium/webdriver/basic/Day1.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Day1.java
10 public class Day1 {
11
12     WebDriver driver;
13
14     public void invokeBrowser(){
15         try {
16             System.setProperty("webdriver.chrome.driver","D:\\Install selenium\\chromedriver_win32\\chromedriver.exe");
17             driver = new ChromeDriver();
18             driver.manage().deleteAllCookies();
19             driver.manage().window().maximize();
20             driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
21             driver.manage().timeouts().pageLoadTimeout(30, TimeUnit.SECONDS);
22
23             driver.get("http://www.edureka.co");
24             searchCourse();
25
26
27         } catch (Exception e) {
28             // TODO Auto-generated catch block
29             e.printStackTrace();
30         }
31     }
32
33     public void searchCourse(){
34
35         driver.findElement(By.id("search-inp3")).click();
36         driver.findElement(By.id("search-inp-overlay-new")).sendKeys("Java");
37         Thread.sleep(2000);
38         driver.findElement(By.id("search-button-top")).click();
39
40     }
41
42     public static void main(String[] args) {
43
44         Day1 myObj = new Day1();
45         myObj.invokeBrowser();
46     }
}
Unhandled exception type InterruptedException
```



The code for the above program:

```
//Day1.java

package co.edureka.selenium.webdriver.basic;

import java.util.concurrent.TimeUnit;

import org.apache.http.util.Asserts;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class Day1 {

    WebDriver driver;

    public void invokeBrowser(){
        try {
            System.setProperty("webdriver.chrome.driver",
                    "D:\\Install selenium\\chromedriver_win32\\chromedriver.exe");
            driver = new ChromeDriver();
            driver.manage().deleteAllCookies();
            driver.manage().window().maximize();
            driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
            driver.manage().timeouts().pageLoadTimeout(30, TimeUnit.SECONDS);

            driver.get("http://www.edureka.co");
            searchCourse();

        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }

    public void searchCourse(){

        driver.findElement(By.id("search-input")).click();
        driver.findElement(By.id("search-input-overlay-new")).sendKeys("Java");
        Thread.sleep(2000);
        driver.findElement(By.id("search-button-top")).click();
    }

    public static void main(String[] args) {
        Day1 myObj = new Day1();
        myObj.invokeBrowser();
    }
}
```

```

        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }

    public void searchCourse(){

        try {
            driver.findElement(By.id("search-inp3")).click();
            driver.findElement(By.id("search-inp-overlay-new")).sendKeys("Java");
            Thread.sleep(2000);
            driver.findElement(By.id("search-button-top")).click();
        } catch (InterruptedException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }

    public static void main(String[] args) {

        Day1 myObj = new Day1();
        myObj.invokeBrowser();
    }
}

```

New code written for new webpage:

```

//Day1.java
package co.edureka.selenium.webdriver.basic;

import java.util.concurrent.TimeUnit;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.Keys;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class Day1 {

    WebDriver driver;

    public void invokeBrowser(){
        try {
            System.setProperty("webdriver.chrome.driver","D:\\Install
Selenium\\chromedriver_win32\\chromedriver.exe");
            driver = new ChromeDriver();
            driver.manage().deleteAllCookies();
            driver.manage().window().maximize();
            driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
            driver.manage().timeouts().pageLoadTimeout(30, TimeUnit.SECONDS);

            driver.get("http://www.edureka.co");
        }
    }
}

```

```

        searchCourse();

    } catch (Exception e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    }
}

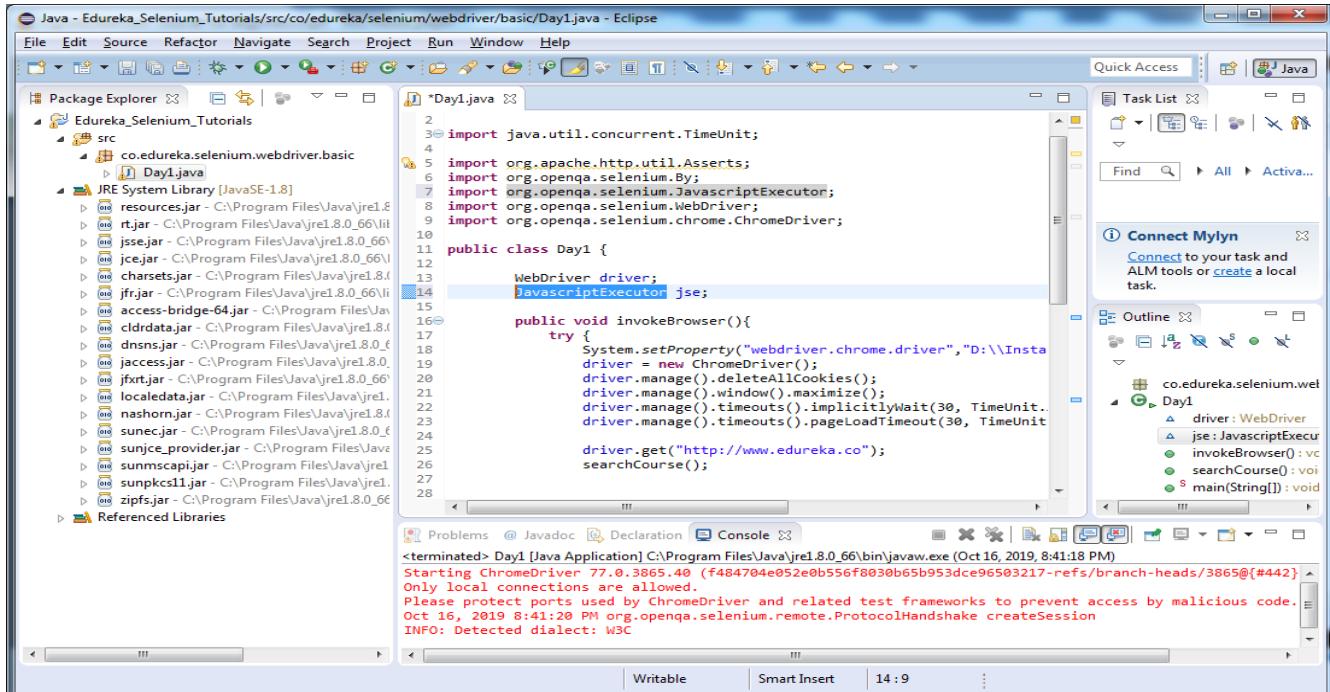
public void searchCourse() {
    driver.findElement(By.className("open_search_overlay")).click();
    driver.findElement(By.id("search-input")).sendKeys("Java");
    driver.findElement(By.id("search-input")).sendKeys(Keys.ENTER);

    try {
        Thread.sleep(2000);
    } catch (InterruptedException e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    }
}

public static void main(String[] args) {
    // TODO Auto-generated method stub
    Day1 myObj = new Day1();
    myObj.invokeBrowser();
}
}

```

Step 7: Scroll down and find a text



Go down and select Web Development Certification Training, use xpath to locate this text:

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The code for the program:

```
//Day1.java
package co.edureka.selenium.webdriver.basic;
```

```

import java.util.concurrent.TimeUnit;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.Keys;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

public class Day1 {

    WebDriver driver;
    JavascriptExecutor jse;

    public void invokeBrowser(){
        try {
            System.setProperty("webdriver.chrome.driver", "D:\\Install Selenium\\chromedriver_win32\\chromedriver.exe");
            driver = new ChromeDriver();
            driver.manage().deleteAllCookies();
            driver.manage().window().maximize();
            driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
            driver.manage().timeouts().pageLoadTimeout(30, TimeUnit.SECONDS);

            driver.get("http://www.edureka.co");

            searchCourse();

        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }

    public void searchCourse(){
        driver.findElement(By.className("open_search_overlay")).click();
        driver.findElement(By.id("search-input")).sendKeys("Java");
        driver.findElement(By.id("search-input")).sendKeys(Keys.ENTER);

        jse = (JavascriptExecutor)driver;
        jse.executeScript("scroll(0, 1000)"); //execute a script

        driver.findElement(By.xpath("//*[@id='add-master-courses']/a[7]/div[1]/div[2]/div[1]/h3")).click();;

        try {
            Thread.sleep(2000);
        } catch (InterruptedException e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Day1 myObj = new Day1();
        myObj.invokeBrowser();
    }
}

```

}

Reference

Selenium Tutorial For Beginners, <https://www.youtube.com/watch?v=5FUdrBq-WFo>