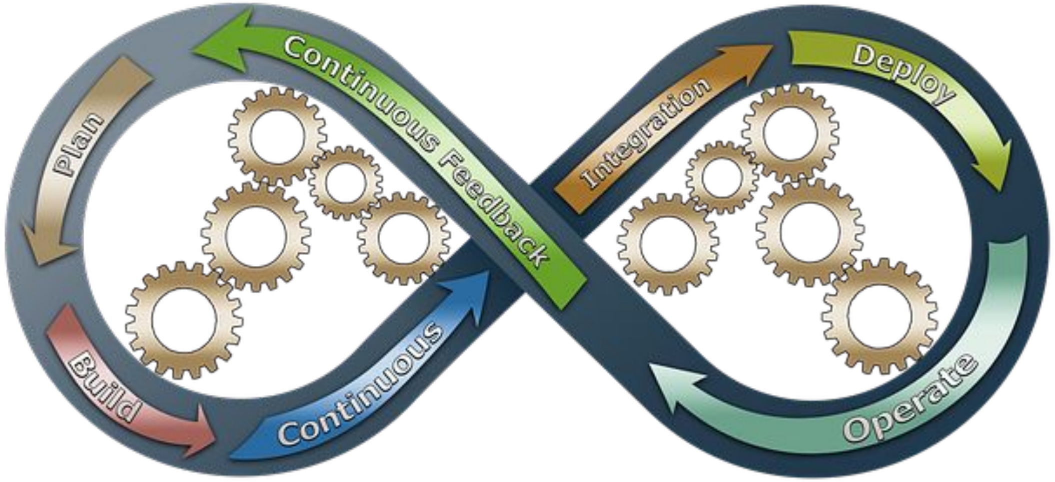


Session 4.3

Selenium Web Driver

AN INITIATIVE BY

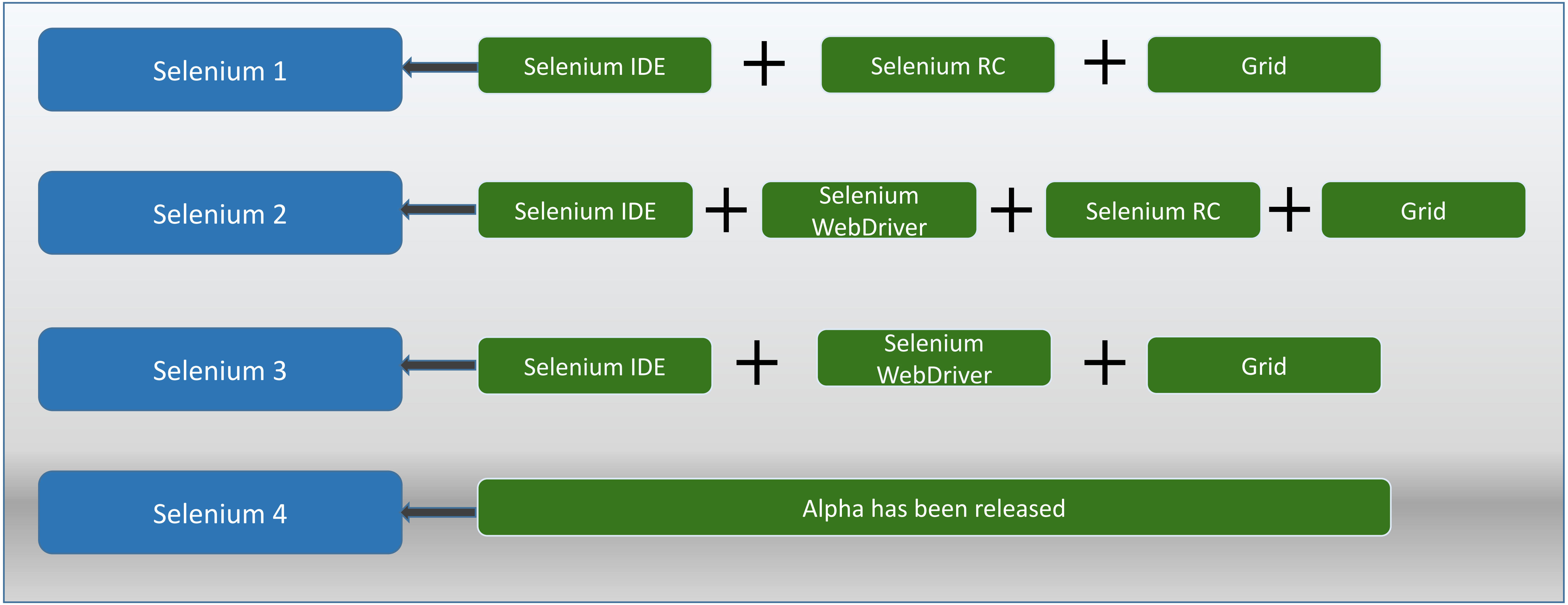
UNICAL ACADEMY

Introduction

Let’s go!!!

Historical Perspective of Selenium

History of various Selenium versions



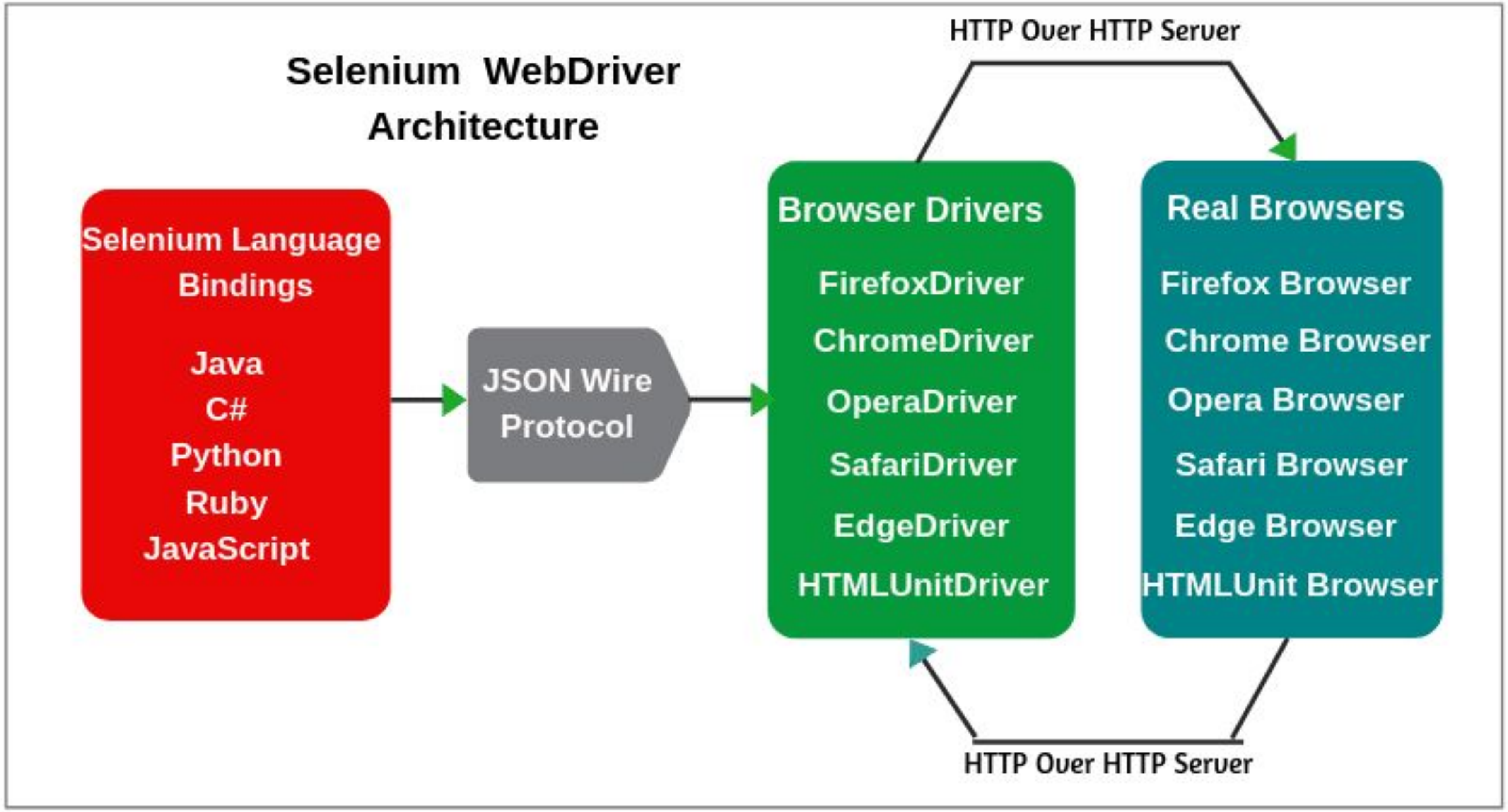
Selenium 1 ← Selenium IDE + Selenium RC + Grid

Selenium 2 ← Selenium IDE + Selenium WebDriver + Selenium RC + Grid

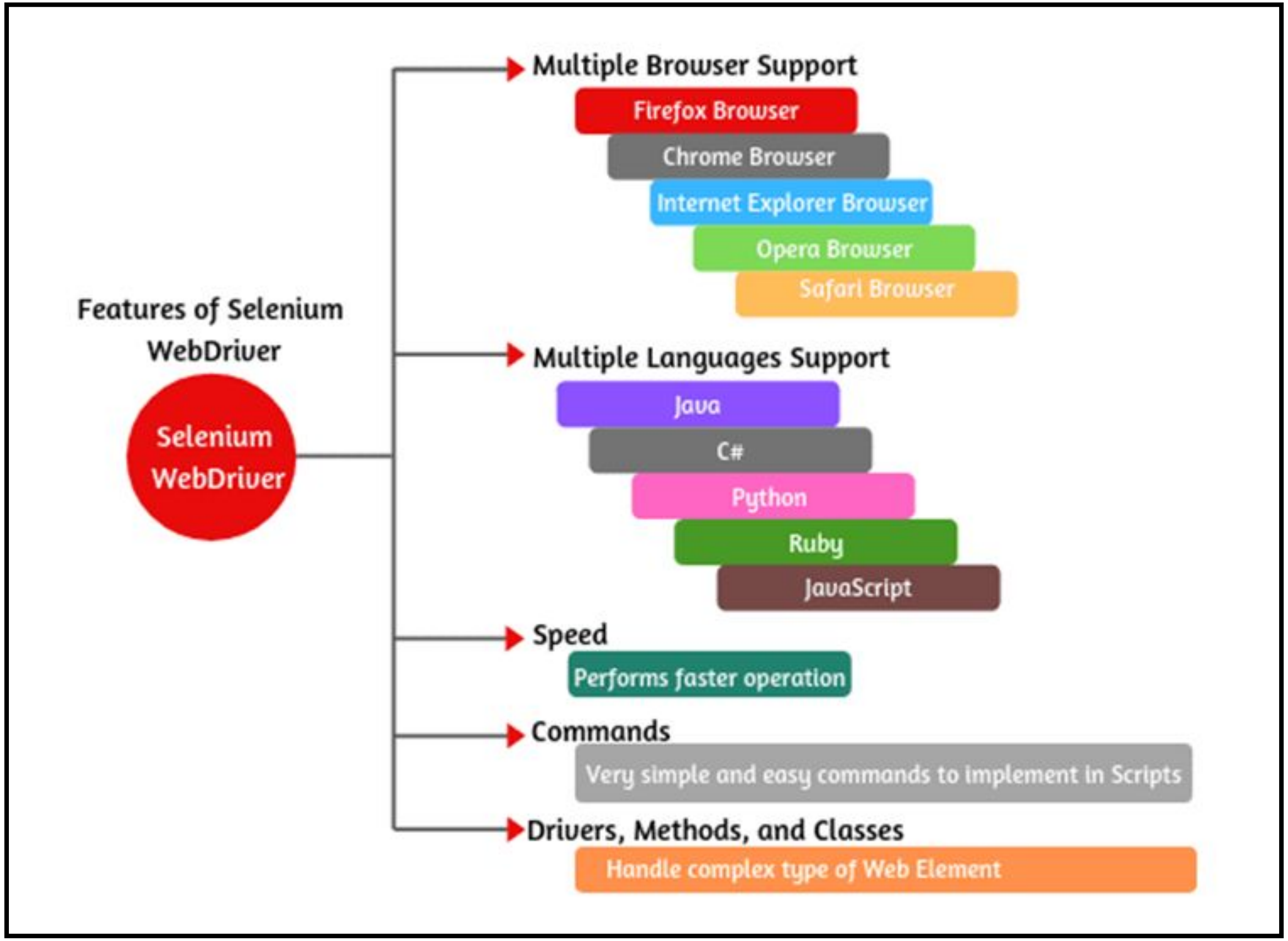
Selenium 3 ← Selenium IDE + Selenium WebDriver + Grid

Selenium 4 ← Alpha has been released

Selenium WebDriver Architecture



Features of Selenium



Features of Selenium WebDriver

Selenium WebDriver

Multiple Browser Support
- Firefox Browser
- Chrome Browser
- Internet Explorer Browser
- Opera Browser
- Safari Browser

Multiple Languages Support
- Java
- C#
- Python
- Ruby
- JavaScript

Speed
- Performs faster operation

Commands
- Very simple and easy commands to implement in Scripts

Drivers, Methods, and Classes
- Handle complex type of Web Element

Limitations of Selenium Webdriver

Limitations of Selenium Webdriver

- **No support for desktop applications** – Selenium does not support testing for desktop applications.
- **Expertise** – Selenium requires expertise of your team — and resources to manage.
- **Maintenance and Scalability** – Selenium is a maintenance-heavy framework — and is difficult to scale as one grows.
- **Open Source Forums** – Since Selenium is open source software, one has to rely on community forums to get your technical issues resolved.
- **No support for REST and SOAP Platforms** – We can't perform automation tests on web services like SOAP or REST using Selenium.
- **No Reporting capability** – Selenium does not have any inbuilt reporting capability, one has to rely on plug-ins like JUnit and TestNG for test reports.
- **Image Testing** – It is not possible to perform testing on images. One needs to integrate Selenium with Sikuli for image testing.

Session 4.3

Configure Selenium with Eclipse IDE

UNICAL ACADEMY

Step 1:

- Download and install the Java Software Development Kit (JDK) here.
- Once installation is complete, open command prompt and type “java”

Step 2:

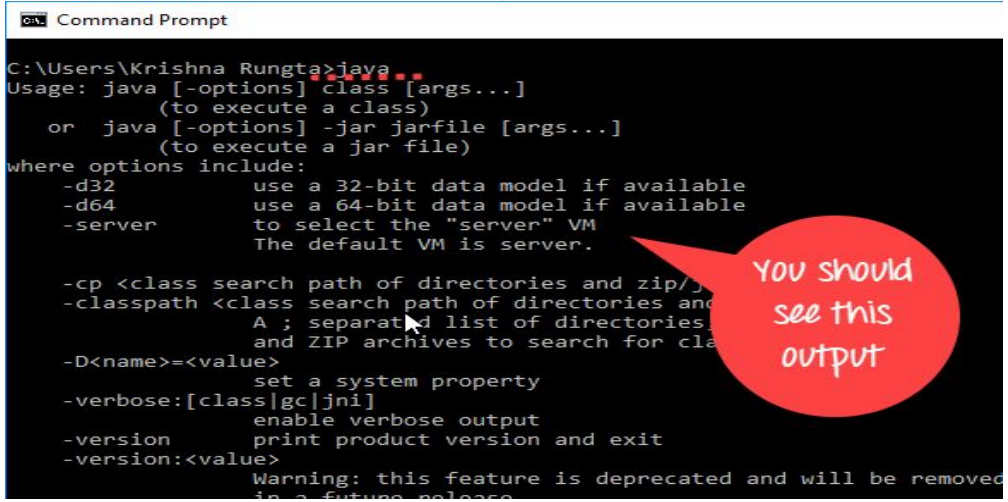
- Download latest version of "Eclipse IDE for Java Developers" here.
- During installation choose Eclipse IDE for Java Developers

Step 3:

- Download **Selenium Webdriver for Java Client Driver** here.
- Extract downloaded Zip file on your C drive so that you would have the directory "C:\selenium-3.14.0\".

Step 4:

- Double click on Eclipse.exe file to open Eclipse IDE.
- Choose project workspace directory.
- Create a new project through File > New > Java Project.



Command Prompt

```
C:\Users\Krishna Rungta>java
Usage: java [-options] class [args...]
           (to execute a class)
   or  java [-options] -jar jarfile [args...]
           (to execute a jar file)
where options include:
    -d32          use a 32-bit data model if available
    -d64          use a 64-bit data model if available
    -server       to select the "server" VM
                  The default VM is server.

    -cp <class search path of directories and zip/j
    -classpath <class search path of directories and
                  A ; separated list of directories
                  and ZIP archives to search for cla
    -D<name>=<value>
                  set a system property
    -verbose:[class|gc|jni]
                  enable verbose output
    -version      print product version and exit
    -version:<value>
                  Warning: this feature is deprecated and will be removed
                  in a future release
```

You should see this output

Step 5:

- A new pop-up window will open enter details as follow
  1. Project Name
  2. Location to save project
  3. Select an execution JRE
  4. Select layout project option
  5. Click on Finish button

Step 6:

1. Right-click on the newly created project and
2. Select New > Package, and name that package as "newpackage".

Step 7:

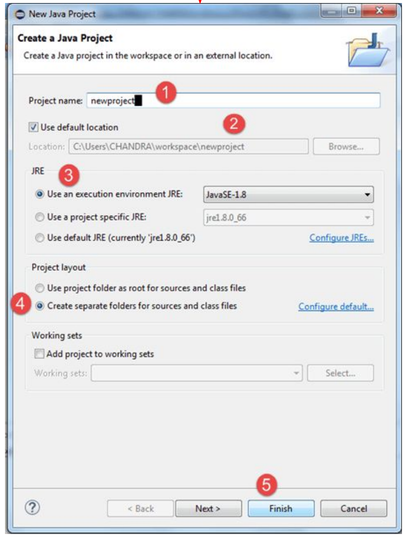
A pop-up window will open to name the package,

1.Enter the name of the package

2.Click on Finish button

Step 8:

- Create a new Java class under newpackage by right-clicking on it and then selecting- New -> Class, and then name it as "MyClass". Your Eclipse IDE should look like the image below.



New Java Project

Create a Java Project

Create a Java project in the workspace or in an external location.

1 Project name: newproject

2 ☑ Use default location

Location: C:\Users\CHANDRA\workspace\newproject

JRE 3

● Use an execution environment JRE: JavaSE-1.8

○ Use a project specific JRE: jre1.8.0_66

○ Use default JRE (currently 'jre1.8.0_66')

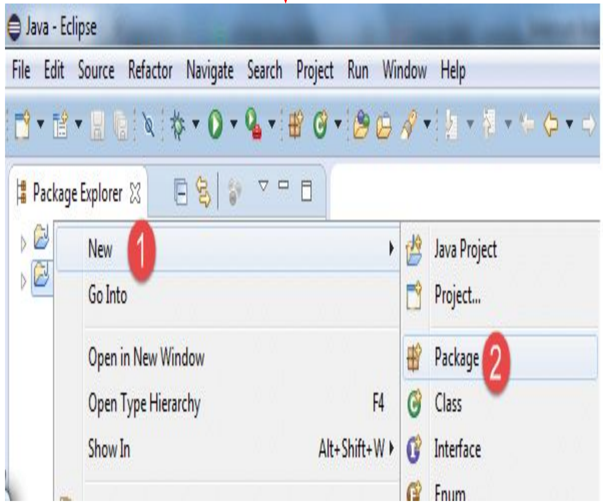
Project layout

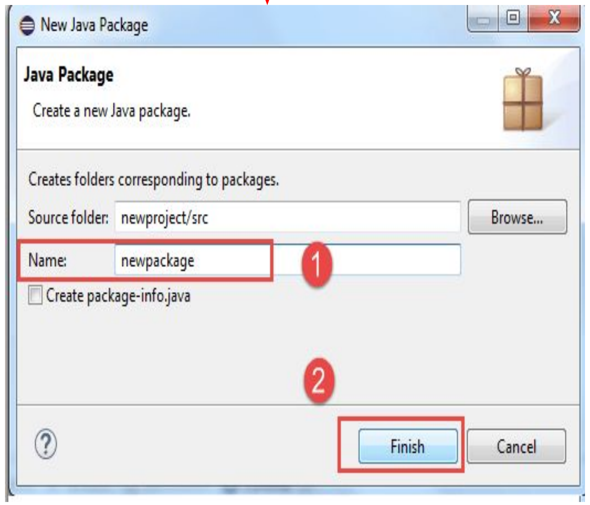
○ Use project folder as root for sources and class files

4 ● Create separate folders for sources and class files

Working sets

☐ Add project to working sets





New Java Package

Java Package

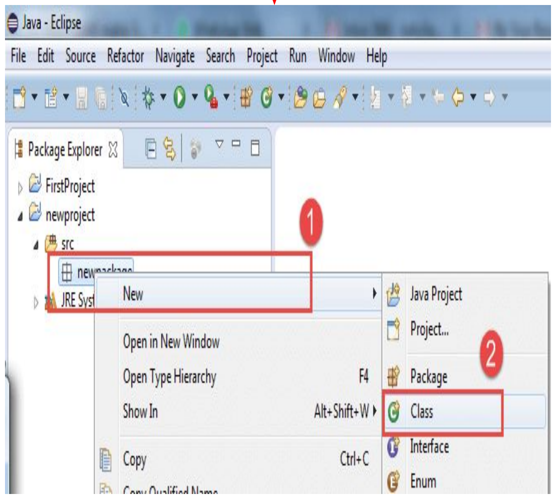
Create a new Java package.

Creates folders corresponding to packages.

Source folder: newproject/src

Name: newpackage 1

☐ Create package-info.java



Step 9:

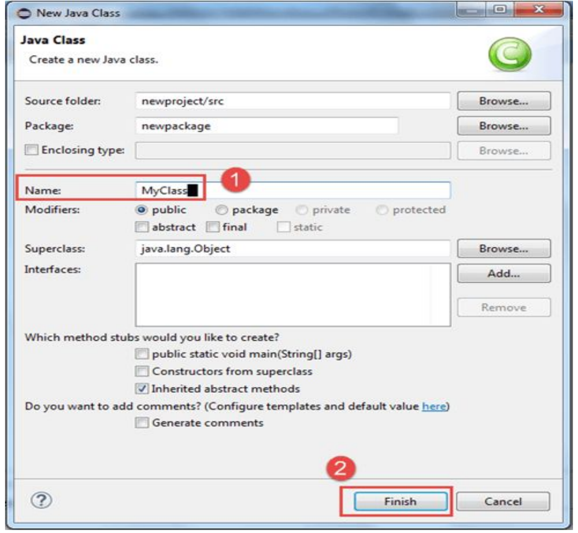
- When you click on Class, a pop-up window will open, enter details as
  1. Name of the class
  2. Click on Finish button

Step 10:

1. Right-click on “**New Project**" and select Properties.
2. On the Properties dialog, click on "**Java Build Path**".
3. Click on the Libraries tab, and then
4. Click on "Add External JARs..“
5. Go to the Selenium directory and select jar files, then click on OK button.
6. Select all files inside the lib folder.
7. Select files outside lib folder
8. Once done, click "**Apply and Close**" button.

Step 11:

- Finally, click OK and we are done importing Selenium libraries into our project.



New Java Class

Java Class

Create a new Java class.

Source folder: newproject/src

Package: newpackage

□ Enclosing type:

Name: MyClass

Modifiers: ● public ○ package ○ private ○ protected

□ abstract □ final □ static

Superclass: java.lang.Object

Interfaces:

Which method stubs would you like to create?

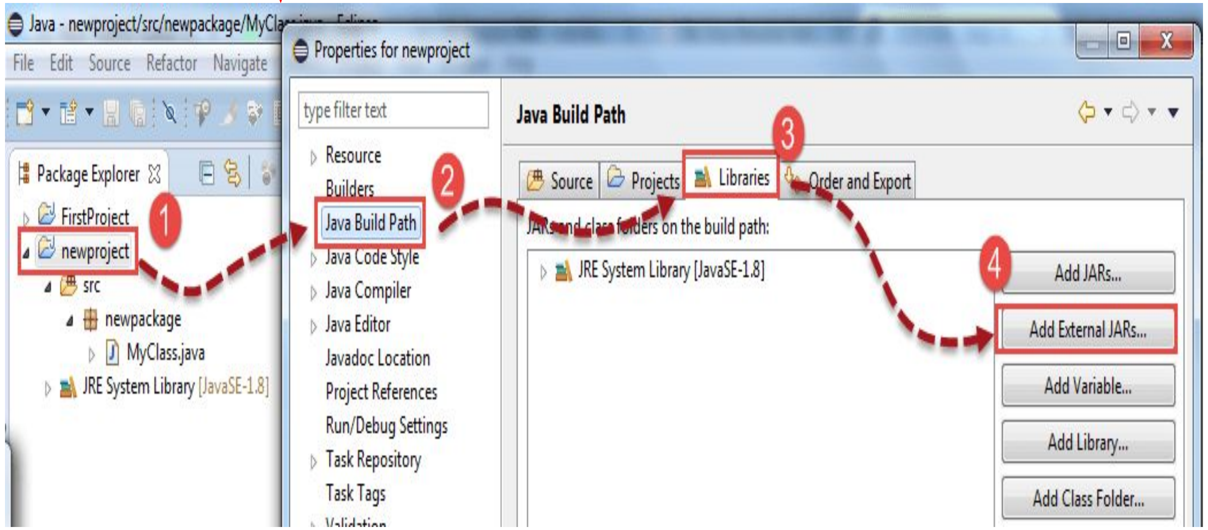
□ public static void main(String[] args)

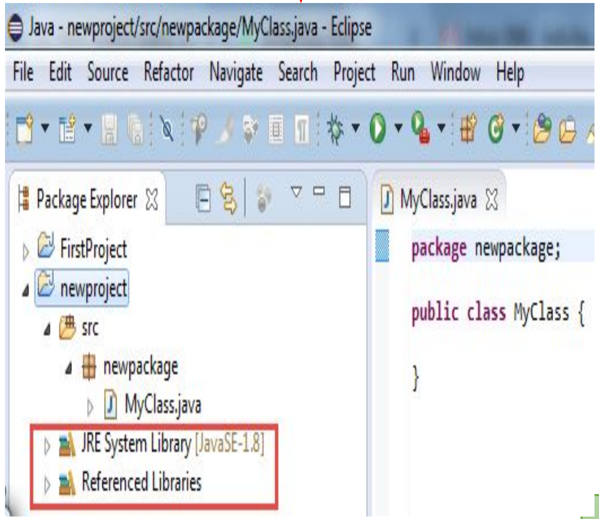
□ Constructors from superclass

☑ Inherited abstract methods

Do you want to add comments? (Configure templates and default value here)

□ Generate comments





```
package newpackage;

public class MyClass {

}
```

Configure Selenium with Chrome

Step 1:

- Pre-requisite of Selenium ChromeDriver
  1) Java JDK
  2) Eclipse IDE
  3) Selenium Webdriver
  4) Check the Chrome version

Step 2:

- Download Chrome driver using this link ***ChromeDriver download page***
- Download chrome driver as same version of chrome browser installed to you.
- once the download is complete, extract the zip file and place the "***chromedriver.exe***" at any preferred location on your system

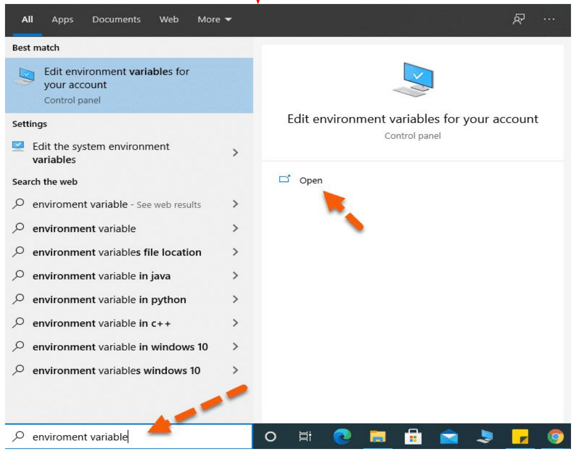
Step 3:

- Setup Chromedriver with Selenium by anyone of the following ways sets it up:
  1) *Setup ChromeDriver using System Properties in Environment Variables.*
  2) Setup ChromeDriver using System Properties in the test script.

Setup ChromeDriver using System Properties in Environment Variables

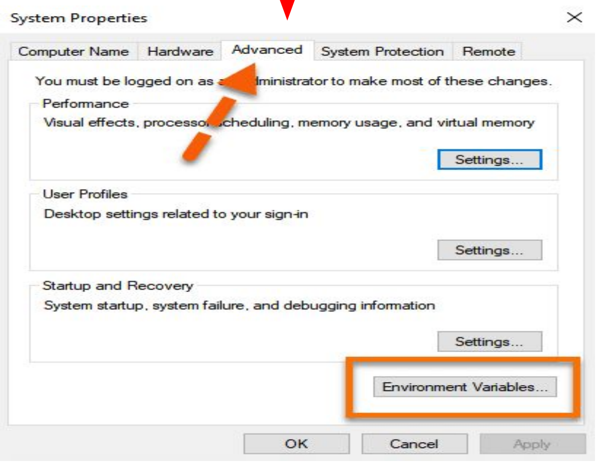
Step 1:

First, we need to open the Environment Variable pop-up. To do that, click on the search bar and search for “Environment Variables”. It will search and display “Edit environment variables for your account“, as shown in the image below. After that, click on the “Open” to open the System Properties pop-up


All
Apps
Documents
Web
More
Best match
Edit environment variables for your account
Control panel
Settings
Edit the system environment variables
Search the web
enviroment variable - See web results
environment variable
environment variables file location
environment variable in java
environment variable in python
environment variable in c++
environment variable in windows 10
environment variables windows 10
Edit environment variables for your account
Control panel
Open
enviroment variable

Step 2:

Secondly, the “System Properties ” pop-up will open. In the pop-up, select the “Advanced ” tab as marked by the arrow. After that, in the Advanced tab, click on the “Environment Variables ” button



You must be logged on as an Administrator to make most of these changes.

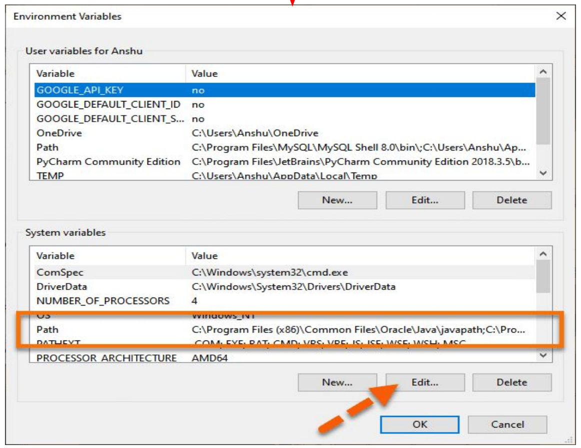
Visual effects, processor scheduling, memory usage, and virtual memory

Desktop settings related to your sign-in

System startup, system failure, and debugging information

Step 3:

Thirdly, this will open the “Environment Variables ” pop-up. In the pop-up System variables section, look for the “path ” variable marked in the below image. After that, click on the path variable to select it. Once selected, click on the “Edit ” button as marked by the arrow.



User variables for Anshu

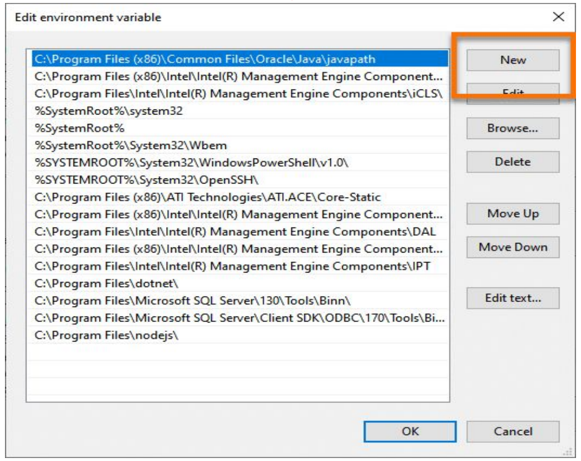
Variable	Value
GOOGLE_API_KEY	no
GOOGLE_DEFAULT_CLIENT_ID	no
GOOGLE_DEFAULT_CLIENT_S...	no
OneDrive	C:\Users\Anshu\OneDrive
Path	C:\Program Files\MySQL\MySQL Shell 8.0\bin\;C:\Users\Anshu\Ap...
PyCharm Community Edition	C:\Program Files\JetBrains\PyCharm Community Edition 2018.3.5\b...
TEMP	C:\Users\Anshu\AppData\Local\Temp

System variables

Variable	Value
ComSpec	C:\Windows\system32\cmd.exe
DriverData	C:\Windows\System32\Drivers\DriverData
NUMBER_OF_PROCESSORS	4
OS	Windows_NT
Path	C:\Program Files (x86)\Common Files\Oracle\Java\javapath;C:\Pro...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ARCHITECTURE	AMD64

Step 4:

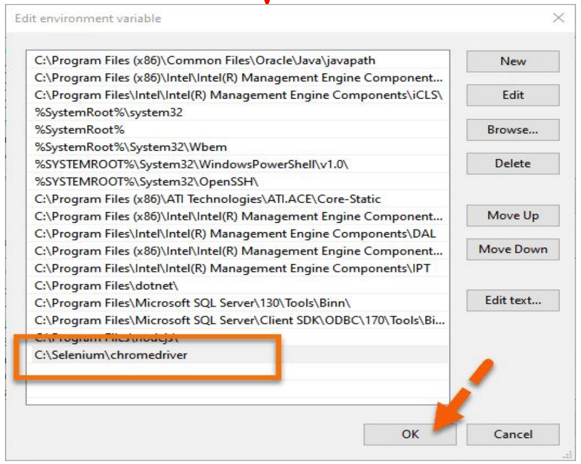
Fourthly, once the "Edit environment variable " pops-up, click on the "New " button



```
C:\Program Files (x86)\Common Files\Oracle\Java\javapath
C:\Program Files (x86)\Intel\Intel(R) Management Engine Component...
C:\Program Files\Intel\Intel(R) Management Engine Components\iCLS\
%SystemRoot%\system32
%SystemRoot%
%SystemRoot%\System32\Wbem
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\
%SYSTEMROOT%\System32\OpenSSH\
C:\Program Files (x86)\ATI Technologies\ATI.ACE\Core-Static
C:\Program Files (x86)\Intel\Intel(R) Management Engine Component...
C:\Program Files\Intel\Intel(R) Management Engine Components\DAL
C:\Program Files (x86)\Intel\Intel(R) Management Engine Component...
C:\Program Files\Intel\Intel(R) Management Engine Components\IPT
C:\Program Files\dotnet\
C:\Program Files\Microsoft SQL Server\130\Tools\Binn\
C:\Program Files\Microsoft SQL Server\Client SDK\ODBC\170\Tools\Bi...
C:\Program Files\nodejs\
```

Step 5:

Fifthly, add the ChromeDriver's folder location to the path. We have placed our driver at the following location "C:\Selenium\chromedriver", so we have added the same as the path variable. Once done, click on the "OK " button as denoted by the arrow



```
C:\Program Files (x86)\Common Files\Oracle\Java\javapath
C:\Program Files (x86)\Intel\Intel(R) Management Engine Component...
C:\Program Files\Intel\Intel(R) Management Engine Components\iCLS\
%SystemRoot%\system32
%SystemRoot%
%SystemRoot%\System32\Wbem
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\
%SYSTEMROOT%\System32\OpenSSH\
C:\Program Files (x86)\ATI Technologies\ATI.ACE\Core-Static
C:\Program Files (x86)\Intel\Intel(R) Management Engine Component...
C:\Program Files\Intel\Intel(R) Management Engine Components\DAL
C:\Program Files (x86)\Intel\Intel(R) Management Engine Component...
C:\Program Files\Intel\Intel(R) Management Engine Components\IPT
C:\Program Files\dotnet\
C:\Program Files\Microsoft SQL Server\130\Tools\Binn\
C:\Program Files\Microsoft SQL Server\Client SDK\ODBC\170\Tools\Bi...
C:\Program Files\nodejs\
C:\Selenium\chromedriver
```

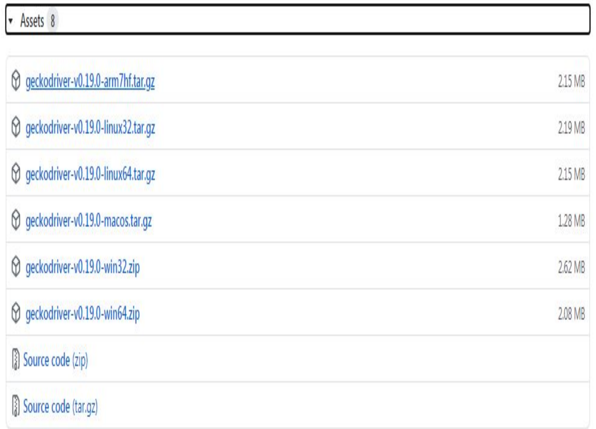
Step 6:

After closing all the subsequent windows, Note that you might have to restart your system for the Environment Variables changes to take effect

Setup Firefox Driver

Step 1:

Selenium FirefoxDriver or Selenium GeckoDriver can be downloaded from the official GitHub repository of Mozilla.
Go to the link and scroll towards the bottom of the page. Open the Assets menu and download the Selenium FirefoxDriver respective to your operating system.



▾ Assets 8

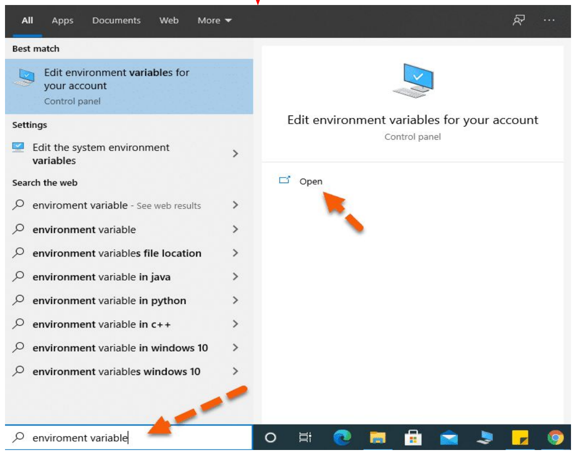
geckodriver-v0.19.0-arm7hf.tar.gz	2.15 MB
geckodriver-v0.19.0-linux32.tar.gz	2.19 MB
geckodriver-v0.19.0-linux64.tar.gz	2.15 MB
geckodriver-v0.19.0-macos.tar.gz	1.28 MB
geckodriver-v0.19.0-win32.zip	2.62 MB
geckodriver-v0.19.0-win64.zip	2.08 MB
Source code (zip)	
Source code (tar.gz)	

Step 2:

Extract the downloaded file
Copy the GeckoDriver (geckodriver.exe) to the folder where the Firefox browser is located. By doing so, you can avoid giving the absolute path of the Selenium GeckoDriver if the Selenium FirefoxDriver instance is created in the test code.

Step 3:

First, we need to open the Environment Variable pop-up. To do that, click on the search bar and search for "Environment Variables". It will search and display "Edit environment variables for your account", as shown in the image below. After that, click on the "Open" to open the System Properties pop-up



Best match

Edit environment variables for your account
Control panel

Settings

Edit the system environment variables

Search the web

enviroment variable - See web results
environment variable
environment variables file location
environment variable in java
environment variable in python
environment variable in c++
environment variable in windows 10
environment variables windows 10

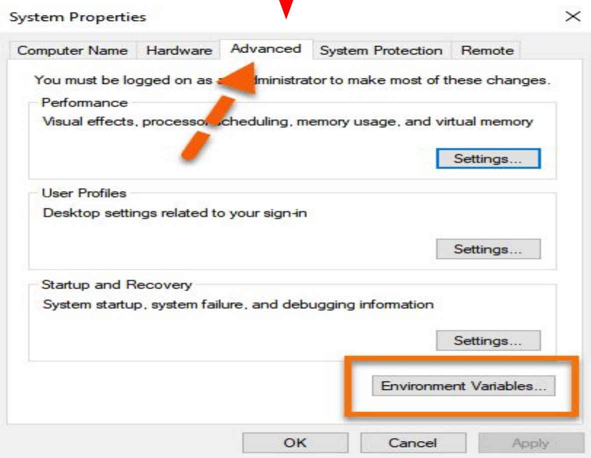
Edit environment variables for your account
Control panel

Open

enviroment variable

Step 4:

Secondly, the "System Properties " pop-up will open. In the pop-up, select the "Advanced " tab as marked by the arrow. After that, in the Advanced tab, click on the "Environment Variables " button



System Properties

You must be logged on as an Administrator to make most of these changes.

Performance
Visual effects, processor scheduling, memory usage, and virtual memory
Settings...

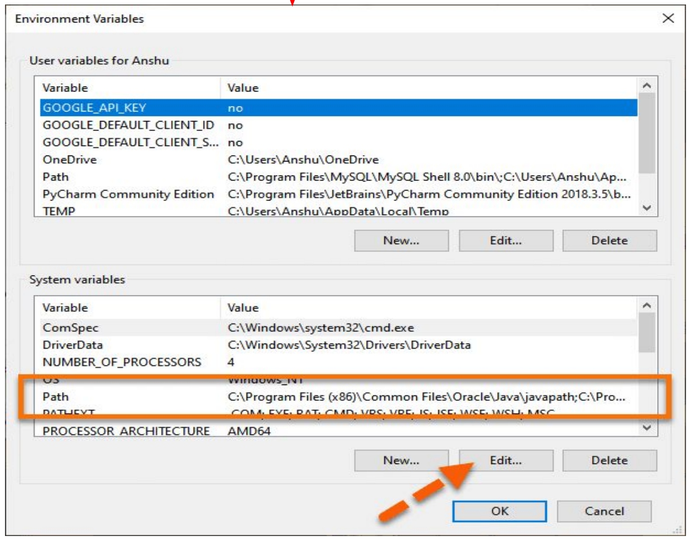
User Profiles
Desktop settings related to your sign-in
Settings...

Startup and Recovery
System startup, system failure, and debugging information
Settings...

Environment Variables...

Step 5:

Thirdly, this will open the “Environment Variables ” pop-up. In the pop-up System variables section, look for the “path ” variable marked in the below image. After that, click on the path variable to select it. Once selected, click on the “Edit ” button as marked by the arrow.



Environment Variables

User variables for Anshu

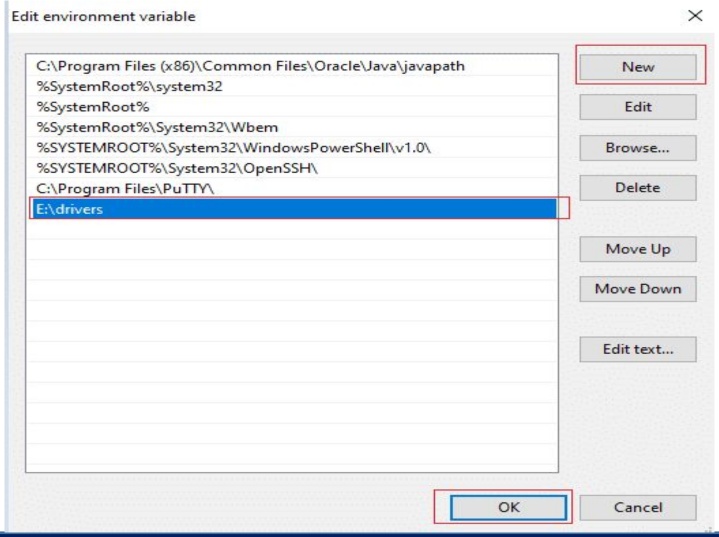
Variable	Value
GOOGLE_API_KEY	no
GOOGLE_DEFAULT_CLIENT_ID	no
GOOGLE_DEFAULT_CLIENT_S...	no
OneDrive	C:\Users\Anshu\OneDrive
Path	C:\Program Files\MySQL\MySQL Shell 8.0\bin\;C:\Users\Anshu\Ap...
PyCharm Community Edition	C:\Program Files\JetBrains\PyCharm Community Edition 2018.3.5\b...
TEMP	C:\Users\Anshu\AppData\Local\Temp

System variables

Variable	Value
ComSpec	C:\Windows\system32\cmd.exe
DriverData	C:\Windows\System32\Drivers\DriverData
NUMBER_OF_PROCESSORS	4
OS	Windows_NT
Path	C:\Program Files (x86)\Common Files\Oracle\Java\javapath;C:\Pro...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ARCHITECTURE	AMD64

Step 6:

After that, you need to append the path of the GeckoDriver. Click on New and paste the path at the last editable row and click on OK. Moreover, we need to specify the folder path where the GeckoDriver executable file resides. In our case, it was “E:\drivers. “



Edit environment variable

```
C:\Program Files (x86)\Common Files\Oracle\Java\javapath
%SystemRoot%\system32
%SystemRoot%
%SystemRoot%\System32\Wbem
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\
%SYSTEMROOT%\System32\OpenSSH\
C:\Program Files\PuTTY\
E:\drivers
```

Step 7:

After closing all the subsequent windows, you can use GeckoDriver without using the system property code. Note that you might have to restart your system for the Environment Variables changes to take effect. You can now update the test code to instantiate the WebDriver directly, as shown below:

Setup IEDriver

Step 1:

Pre-requisite of Selenium IE Driver

1) Java JDK
2) Eclipse IDE
3) Selenium Webdriver
4) Check the IE version

Step 2:

- First, go to the link. You can download the zip file of the IE Driver which is compatible with your operating system and the browser.
- Then, as the download is successful, unzip the zip file and keep it in a particular location.

Step 3:

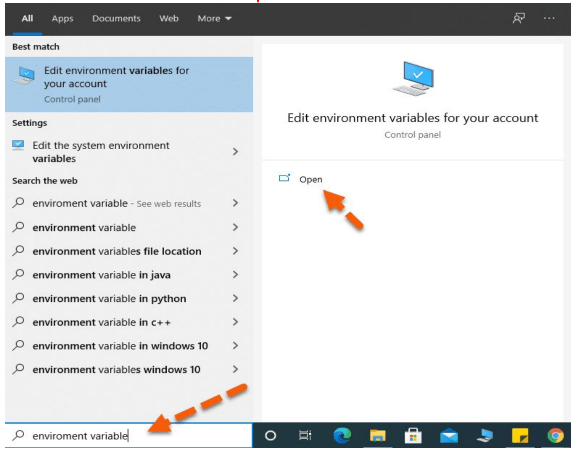
Thirdly, this will open the “Environment Variables” pop-up. In the pop-up System variables section, look for the “path” variable marked in the below image. After that, click on the path variable to select it. Once selected, click on the “Edit” button as marked by the arrow.

Step 4:

- Create a Java project after opening Eclipse. Incorporate all the project dependencies.
- To configure IE Driver with Selenium, so as we can run Selenium tests on Internet Explorer, the IE Driver executable file should be made available to the test scripts.

Step 5:

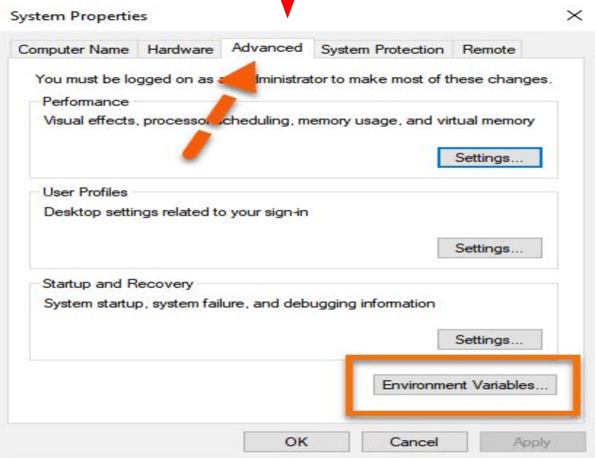
First, we need to open the Environment Variable pop-up. To do that, click on the search bar and search for “Environment Variables”. It will search and display “Edit environment variables for your account“, as shown in the image below. After that, click on the “Open” to open the System Properties pop-up


All
Apps
Documents
Web
More
Best match
Edit environment variables for your account
Control panel
Settings
Edit the system environment variables
Search the web
enviroment variable - See web results
environment variable
environment variables file location
environment variable in java
environment variable in python
environment variable in c++
environment variable in windows 10
environment variables windows 10
Edit environment variables for your account
Control panel
Open

enviroment variable

Step 6:

Secondly, the “System Properties ” pop-up will open. In the pop-up, select the “Advanced ” tab as marked by the arrow. After that, in the Advanced tab, click on the “Environment Variables ” button



You must be logged on as an Administrator to make most of these changes.

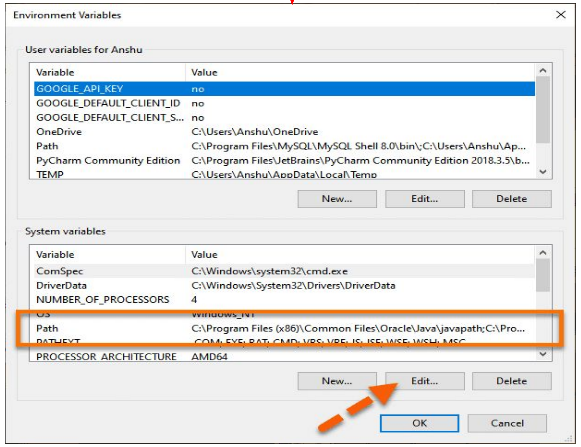
Visual effects, processor scheduling, memory usage, and virtual memory

Desktop settings related to your sign-in

System startup, system failure, and debugging information

Step 7:

Thirdly, this will open the “Environment Variables ” pop-up. In the pop-up System variables section, look for the “path ” variable marked in the below image. After that, click on the path variable to select it. Once selected, click on the “Edit ” button as marked by the arrow.

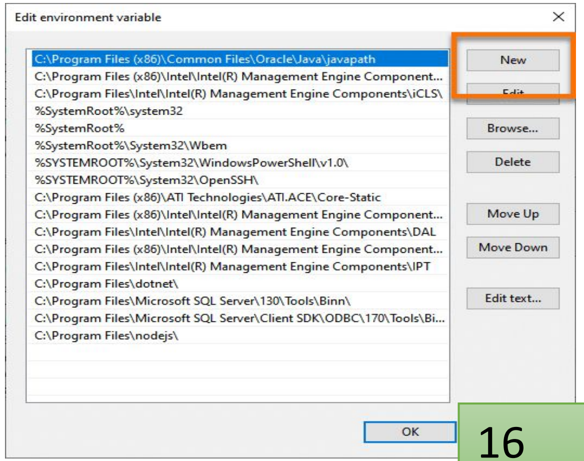


Variable	Value
GOOGLE_API_KEY	no
GOOGLE_DEFAULT_CLIENT_ID	no
GOOGLE_DEFAULT_CLIENT_S...	no
OneDrive	C:\Users\Anshu\OneDrive
Path	C:\Program Files\MySQL\MySQL Shell 8.0\bin\;C:\Users\Anshu\Ap...
PyCharm Community Edition	C:\Program Files\JetBrains\PyCharm Community Edition 2018.3.5\b...
TEMP	C:\Users\Anshu\AppData\Local\Temp

Variable	Value
ComSpec	C:\Windows\system32\cmd.exe
DriverData	C:\Windows\System32\Drivers\DriverData
NUMBER_OF_PROCESSORS	4
OS	Windows_NT
Path	C:\Program Files (x86)\Common Files\Oracle\Java\javapath;C:\Pro...
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC
PROCESSOR_ARCHITECTURE	AMD64

Step 8:

Fourthly, once the “Edit environment variable ” pops-up, click on the “New ” button



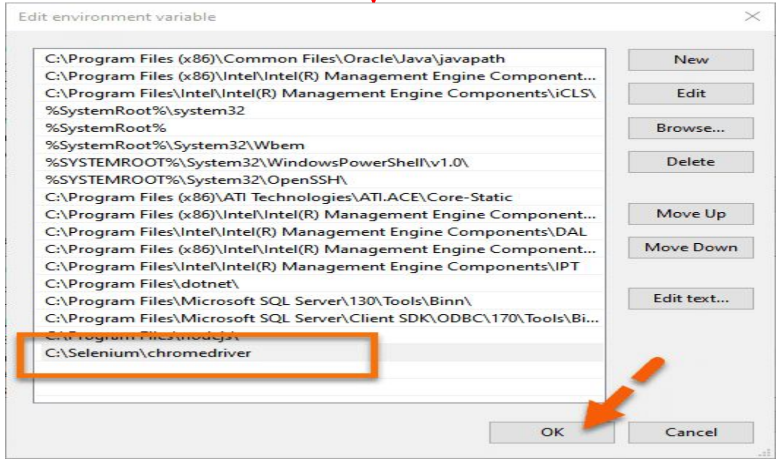
C:\Program Files (x86)\Common Files\Oracle\Java\javapath
C:\Program Files (x86)\Intel\Intel(R) Management Engine Component...
C:\Program Files\Intel\Intel(R) Management Engine Components\iCLS\
%SystemRoot%\system32
%SystemRoot%
%SystemRoot%\System32\Wbem
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\
%SYSTEMROOT%\System32\OpenSSH\
C:\Program Files (x86)\ATI Technologies\ATI.ACE\Core-Static
C:\Program Files (x86)\Intel\Intel(R) Management Engine Component...
C:\Program Files\Intel\Intel(R) Management Engine Components\DAL
C:\Program Files (x86)\Intel\Intel(R) Management Engine Component...
C:\Program Files\Intel\Intel(R) Management Engine Components\IPT
C:\Program Files\dotnet\
C:\Program Files\Microsoft SQL Server\130\Tools\Binn\
C:\Program Files\Microsoft SQL Server\Client SDK\ODBC\170\Tools\Bi...
C:\Program Files\nodejs\

Step 9:

Fifthly, add the ChromeDriver’s folder location to the path. We have placed our driver at the following location “C:\Selenium\chromedriver“, so we have added the same as the path variable. Once done, click on the “OK ” button as denoted by the arrow

Step 10:

After closing all the subsequent windows, Note that you might have to restart your system for the Environment Variables changes to take effect



Edit environment variable

```
C:\Program Files (x86)\Common Files\Oracle\Java\javapath
C:\Program Files (x86)\Intel\Intel(R) Management Engine Component...
C:\Program Files\Intel\Intel(R) Management Engine Components\iCLS\
%SystemRoot%\system32
%SystemRoot%
%SystemRoot%\System32\Wbem
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\
%SYSTEMROOT%\System32\OpenSSH\
C:\Program Files (x86)\ATI Technologies\ATI.ACE\Core-Static
C:\Program Files (x86)\Intel\Intel(R) Management Engine Component...
C:\Program Files\Intel\Intel(R) Management Engine Components\DAL
C:\Program Files (x86)\Intel\Intel(R) Management Engine Component...
C:\Program Files\Intel\Intel(R) Management Engine Components\IPT
C:\Program Files\dotnet\
C:\Program Files\Microsoft SQL Server\130\Tools\Binn\
C:\Program Files\Microsoft SQL Server\Client SDK\ODBC\170\Tools\Bi...
C:\Program Files\nodejs\
C:\Selenium\chromedriver
```

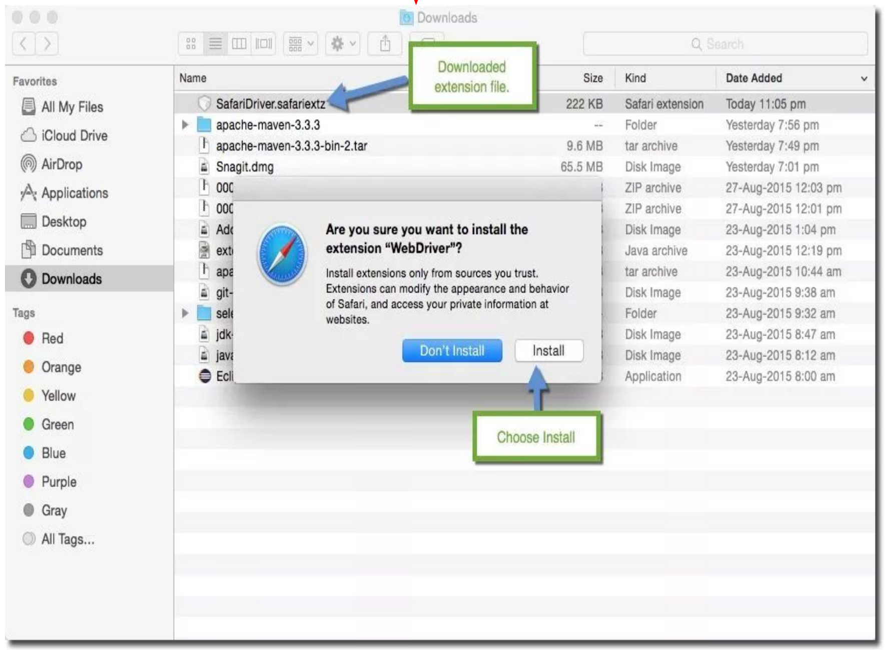
Setup Safari browser

Step 1:

- Download the Safari Browser Extension – The latest version of Safari browser extension can be downloaded here.
- Install the Safari Browser Extension – Go to the folder where the file has downloaded and double click on it. You will get a prompt, as shown in the image below, there select “Install“

Step 2:

- Enable WebDriver Browser Extension – Now open the preferences pane on the Safari browser. Go to Safari >> Preferences and open the preferences window.
- Restart your Browser – All you have to do here is to restart your browser.



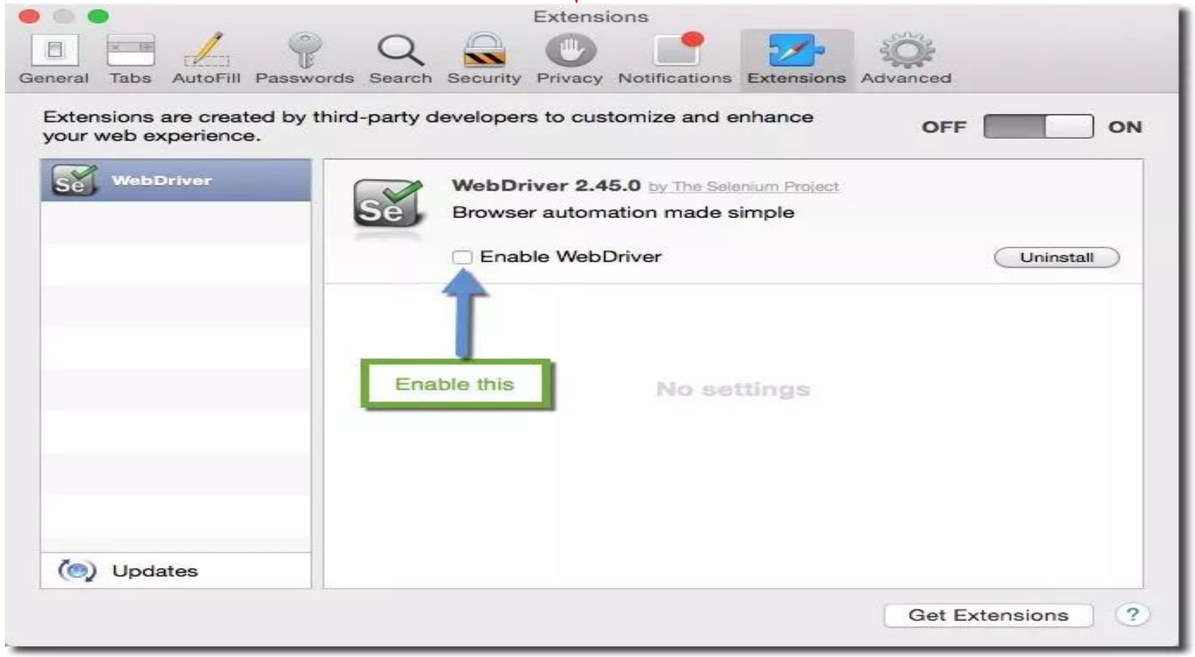
Downloaded extension file.

Name	Size	Kind	Date Added
SafariDriver.safariextz	222 KB	Safari extension	Today 11:05 pm
apache-maven-3.3.3	--	Folder	Yesterday 7:56 pm
apache-maven-3.3.3-bin-2.tar	9.6 MB	tar archive	Yesterday 7:49 pm
Snagit.dmg	65.5 MB	Disk Image	Yesterday 7:01 pm
000		ZIP archive	27-Aug-2015 12:03 pm
000		ZIP archive	27-Aug-2015 12:01 pm
Adc		Disk Image	23-Aug-2015 1:04 pm
ext		Java archive	23-Aug-2015 12:19 pm
apa		tar archive	23-Aug-2015 10:44 am
git-		Disk Image	23-Aug-2015 9:38 am
sel		Folder	23-Aug-2015 9:32 am
jdk-		Disk Image	23-Aug-2015 8:47 am
java		Disk Image	23-Aug-2015 8:12 am
Ecl		Application	23-Aug-2015 8:00 am

Are you sure you want to install the extension “WebDriver”?

Install extensions only from sources you trust. Extensions can modify the appearance and behavior of Safari, and access your private information at websites.

Choose Install



Extensions are created by third-party developers to customize and enhance your web experience.

WebDriver 2.45.0 by The Selenium Project

Browser automation made simple

□ Enable WebDriver

Enable this

No settings

Browser Commands

Get Command

- "get()": The command () command is used to open a new browser window and it will get / receive the page you provided.
- Passing string URLs as parameters to navigate to a web page.
- •It gives the string as a parameter and gives zero i.e. nothing.

Get Title

- "getTitle()": This command is used to get the title of the current page
- It does not allow any parameter and its return type string.

Browser Commands

Get Text

- “getText()”: This command is used to obtain the text of the element.
- Able to store element text in string.
- String Button_Text = driver.findElement(By.id("Button")).getText();

Get Current URL Command

- “getCurrentUrl()”: This command is used to get the current URL of the browser.
- This method currently returns a string containing URLs opened in the browser window, it does not allow any parameter and its return type string.
- String Current_url = driver.getCurrentUrl()

Browser Commands

Get Page Source Command

- "getPageSource()": This command is used to get the source code of the page.
- It does not allow any parameter and its return type is zero.
- String Page_Source = driver.getPageSource();

Close Command

- "close()": This method destroys the existing window which is controlled by WebDriver.
- It does not allow any parameter and its return type is zero.
- This will end the browser, if it's just the currently open window.
- String Current_url = driver.getCurrentUrl()

Browser Commands

Quit Command

- “quit()”: This method closes all windows opened by WebDriver.
- It does not allow any parameter and its return value is string.
- It will automatically close all open windows and eliminate the browser.
- driver.quit();

Maximize a browser

- “maximize()”: The maximum () command is used to maximize the new open window.
- driver.manage().window().maximize();

Browser Commands

MInimize a browser

- “setPosition()”: The setPosition command is able to minimize the browser command.
- driver.manage().window().setPosition(new Point(0, -1000));

Navigation Commands

Navigate To Command

- “navigate().to()” : This command is like the get() command.
- It opens a new browser window and it will receive / find the page you provided.
- Able to redirect from the current web page to the expected web page.
- driver.navigate().to("https://stqatools.com/");

Forward Command

- “navigate().forward()” : A page leads you to the history of the browser.
- Navigate (). Move forward page using the Forward () command.
- driver.navigate().forward();

Navigation Commands

Back Command

- "navigate().back()" : This command is used to return to a page in the browser's history.
- Navigate (). Use the back () command to go to the backward page.
- driver.navigate().back();

Refresh Command

- "navigate().refresh()" : This command is used to refresh the current page.
- Refresh the current page if there is a change in the web page at times.
- driver.navigate().refresh();

Handling Cookies

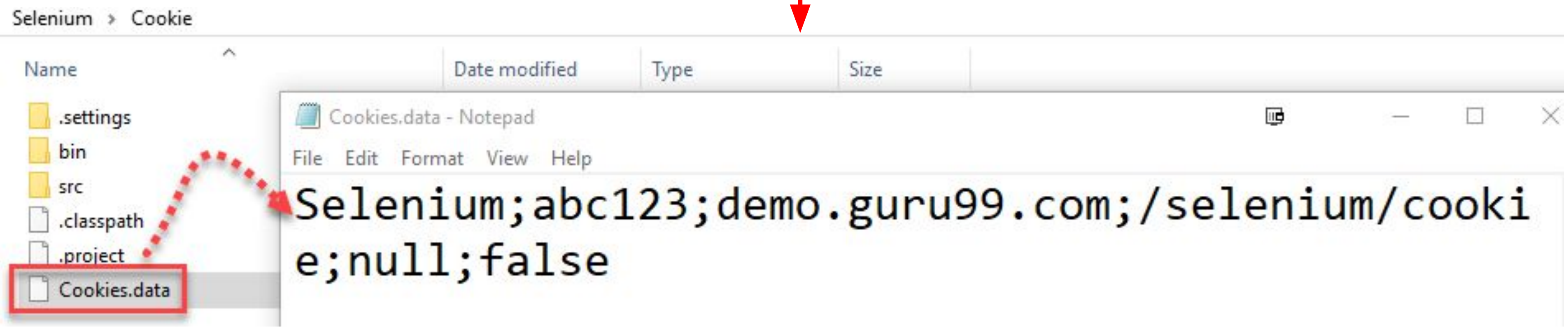
Storing cookie information

Step 1:

- Create WebDriver instance
- We visit the website using the driver.get("http://182.18.182.98/MOSS_SB_STAGE_PFPL/")
- Login into the Application
- Read the cookie information using
- driver.manage().getCookies();

Step 2:

- Store the cookie information using FileWriter Class to write streams of characters and BufferedWriter to write the text into a file to create into a file Cookies.data
- "Cookies.data" file stores all cookies information along with "Name, Value, Domain, Path". We can retrieve this information and login into the application without entering the login credentials.
- Once you run above code the Cookie.data file is created into the project folder structure as shown in below screen. Open the Cookie.data file, you can see login credential of the AUT is saved in the format of Cookie, see below-highlighted screen



```
Selenium;abc123;demo.guru99.com;/selenium/cooki
e;null;false
```

Session 4.3

UNICAL ACADEMY

Session Recap