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Software Quality and Testing

Title: Assignment on Automated Testing Tool

Section: A Session: Fall (2022-23)

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Table of Contents

Introduction	2
Driver 3. Java Development Kit (JDK) 4. Eclipse	2
Download and Install	2
Set up & testing:	5
Figure 1: Selenium download for java language	2
Figure 2: Check Chrome browser Version	2
Figure 3: Download Chrome Driver	3
Figure 4: Download JDK	3
Figure 5: Create Environment for java	4
Figure 6: Download Eclipse	4
Figure 7: New Java Project Create	5
Figure 8: Create Project process-2	
Figure 9: Project Create Process-3	
Figure 10: Adding Selenium Library	
Figure 11: Adding Chrome Driver to the created project	
Figure 12: Test Code for login page	
Figure 13: Finding Id from Inspect	
Figure 14: Finding XPath for button	
Figure 15: Testing got error	
Figure 16: Test code for order with login	
Figure 17: Test code for Information Edit	

Introduction

This assignment's main objective is to familiarize with the Selenium auto-testing tool. For this reason, we have to test any of our previous projects here and observe how they work. So we need to download and set an environment for work. Need to download 1. Selenium for java 2. Chrome Driver 3. Java Development Kit (JDK) 4. Eclipse.

Download and Install

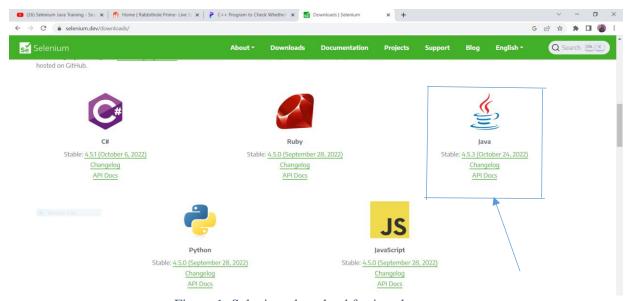


Figure 1: Selenium download for java language

Figure-1: At first download Selenium for Java language from Selenium website like above figure.

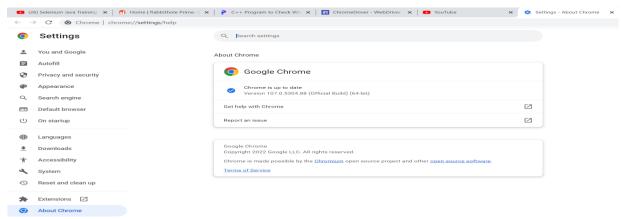


Figure 2: Check Chrome browser Version

Figure-2: For downloading the chrome driver need to check your machine's chrome version. For that open chrome then go to the 3 dotted symbol then click help then about chrome to get the version.

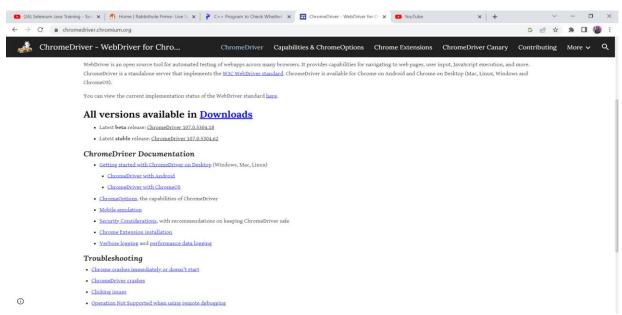


Figure 3: Download Chrome Driver

Figure-3: After check the version according to it download the chrome driver.

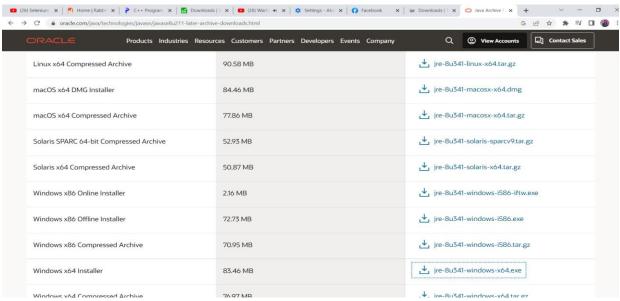


Figure 4: Download JDK

Figure-4: To execute Java, one must download the JDK and set up the necessary environment on own computer.

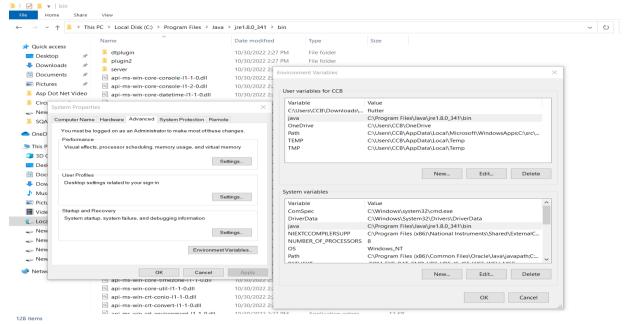


Figure 5: Create Environment for java

Figure-5: Create the necessary environments to run the Java project after downloading JDK.

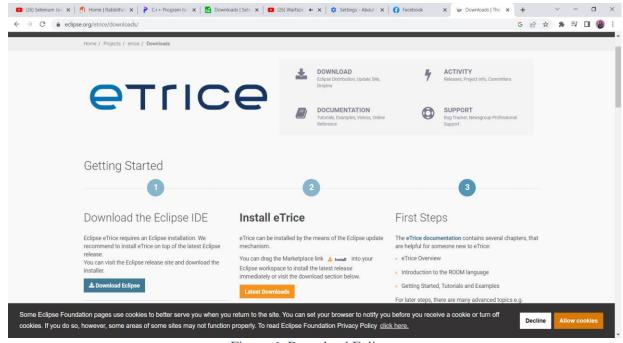


Figure 6: Download Eclipse

Figure-6: Eclipse needs to be downloaded as it is used for creating and executing java project.

Set up & testing:

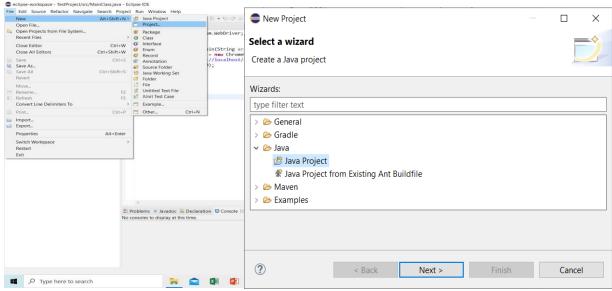


Figure 7: New Java Project Create

Figure-7: In eclipse, create a new project so that click new Project java project as shown in above figure.

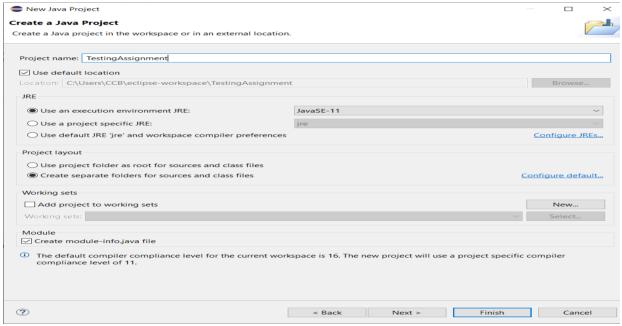


Figure 8: Create Project process-2

Figure-8: Name the Java project. We should adhere to the Camel case convention when naming the thing. We always use JavaSe-11, it is also mandatory.

New Java Class				×		
Java Class				3		
4 The use of the de						
Source folder:	TestingAssignment/src		Browse	e		
Package:		(default)	Browse	e		
Enclosing type:			Browse	e		
Name:	TestingClass					
Modifiers:		tected				
	abstract final static					
Superclass:	java.lang.Object		Browse	e		
Interfaces:			Add			
			Remo	ve		
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						
?	F	inish	Cance	I		

Figure 9: Project Create Process-3

Figure-9: After creating the project, sub folder src is created once the project is created. We should construct a class in src. For it named the class and also mark public static void main function for ready main function.

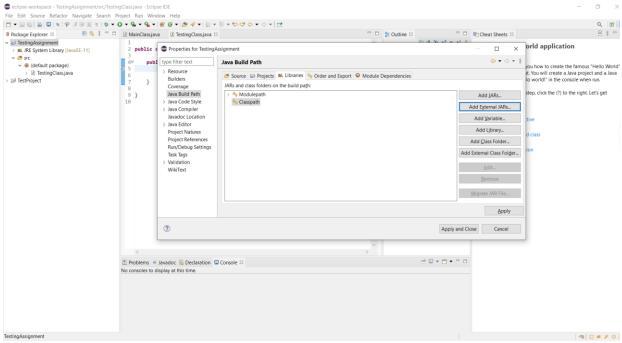


Figure 10: Adding Selenium Library

Figure-10: After Creating Project we select root project folder and include selenium jars file which we already downloaded and extract.

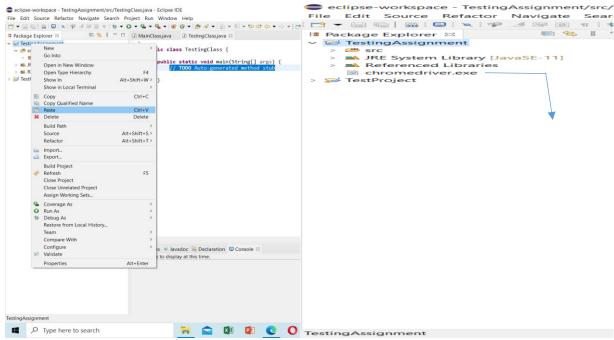


Figure 11: Adding Chrome Driver to the created project

Figure-11: Copying the downloaded chrome driver and paste it to the root project folder to add chrome driver. By adding it automated tested is happen in chrome browser automatically.

```
File Edit Source Relation Navigue Search Project Plan Window Help

| TestingAssignment | Plan | Pla
```

Figure 12: Test Code for login page

Figure-12: After creating class need to write code to instruct for automated testing of login module. At first create object for Chrome driver class then call get function to call current webpage URL, then call find element to find which field or which element we need to insert data. For login we use username and password for that using two times find element function. And for login button

we use button's xpath because in development time don't use id for button. Then use getcurrenturl because if successfully login complete then show which web page for the path using it. Run the code as a java application mode after completing the test in console shows testing complete.

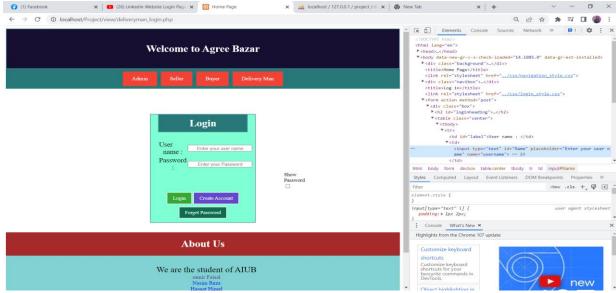


Figure 13: Finding Id from Inspect

Figure-13: For finding the elements id, go to the web page and select the specific input element or button then go inspect to get the id as shown in above figure.

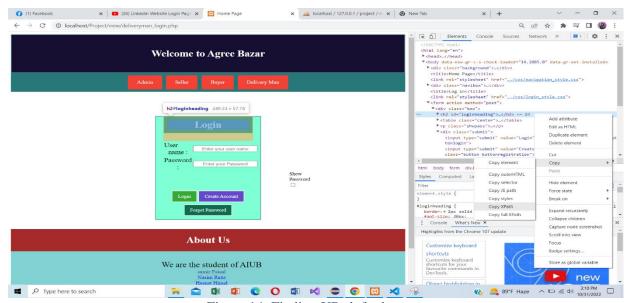


Figure 14: Finding XPath for button

Figure-14: Which element don't have id for those finding xpth, go to the web page and select the specific input element or button then go inspect and copy the select element's xpath as shown in above figure.

```
О
eclipse-workspace - TestingAssignment/src/TestingClass.iava - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
□ № 0 № □ ■ Cheat Shee_ ₩ □ □
                                   E 💲 🖁 □ 🔲 TestingClass.java 🕮 📝 MainClass.java
Package Explorer 23
                                                                         18 import org.openqa.selenium.By;
2 import org.openqa.selenium.WebDriver;
3 import org.openqa.selenium.chrome.ChromeDriver;
                                                                                                                                                                                                                                                                                         Create a Hello Worl

→ Θ<sub>▶</sub> TestingClas application

                                                                         5 public class TestingClass {
                                                                                                                                                                                                                                                                          e s main(Str - Introduction
                                                                                  public static void main(String[] args) throws InterruptedException {
                                                                                                                                                                                                                                                                                         This cheat sheet shows you
                                                                                                                                                                                                                                                                                         This cheat sheet shows you 
to create the famous "Hellic 
World" application and try 
out. You will create a Java 
project and a Java class tha 
print "Hello world!" in the 
console when run.
                                                                                        // TODO Auto-generated method stub

NebDriver d = new fromeDriver();

d.egt("http://localhost/Project/view/deliveryman_login.php");

d.findElement(By.id("Name")).sendKeys("Rahat");

d.findElement(By.id("Name")).sendKeys("Rahat");

d.findElement(By.id("Password")).sendKeys("layds"));

d.findElement(By.xpdrth("html/body/form/div/div/input[1]")).click();

String u = d.getCurrentUp();

if(u.equals("http://localhost/Project/view/deliveryman_profile.php"))
                                                                                                                                                                                                                                                                                         If you need help at any step
click the (?) to the right. Let
get started!
                                                                                             System.out.println("Testing correctly");

    Open the Java perspecti

                                                                                             System.out.println("Testing Fail");

Create a Java project

Create your HelloWorld

Add a print statement
                                                                                                                                                                                                                                                                                          Run your Java applicati
                                                                                                                                                                                                                             Smart Insert 28:1:807
```

Figure 15: Testing got error

Figure-15: Get error message because automated testing is not successfully complete for giving wrong password.

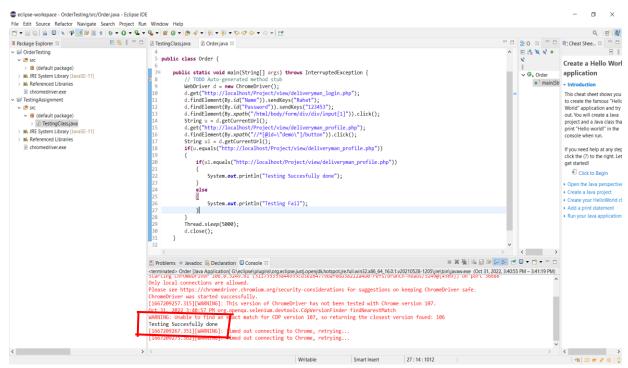


Figure 16: Test code for order with login

Figure-16: For order table we are doing automated testing and get successful test complete message.

```
- Eclipse IDE
Project Run Window Help
8 □ □ ② TestingClass.java ② Order.java ② Edit.java 🌣
               public class Edit {
                   public static void main(String[] args) throws InterruptedException {
                        // TODO Auto-generated method
                        WebDriver d = new ChromeDriver();
                        d.get("http://localhost/Project/view/deliveryman_login.php");
                        d.findElement(By.id("Nemsword")).sendkeys("123453");
d.findElement(By.id("Password")).sendkeys("123453");
d.findElement(By.xpath("/html/body/form/div/div/input[1]")).click();
                        String u = d.getCurrentUrl();
d.get("http://localhost/Project/view/deliveryman_profile.php");
                        Thread.sleep(5000);
d.findElement(By.xpath("//*[@id=\"demo\"]/button")).click();
                        //String u1 = d.getCurrentUrl();
if(u.equals("http://localhost/Project/view/deliveryman_profile.php"))
                            d.get("http://localhost/Project/view/deliveryman_profile.php");
d.findflement(By.xyath("/html/body/form/div[1]/table/tbody/tr[2]/td[2]/input")).clear();
d.findflement(By.xyath("/html/body/form/div[1]/table/tbody/tr[2]/td[2]/input")).sendKeys("Barisal");
d.findflement(By.xyath("/html/body/form/div[1]/table/tbody/tr[6]/td[2]/input")).clear();
                                                                                                                                                             SLF4J: No SLF4J providers were found.
                              d. findElement(By.xpath("/tml/body/form/div[1]/table/tbody/tr[6]/td[2]/input")). sendKeys("ashraful2012@gmaild.findElement(By.xpath("/html/body/form/div[1]/div/input[1]")). click(); 
                                                                                                                                                             SLF4J: Defaulting to no-operation (NOP) logger implementation
                                                                                                                                                             SLF4J: See https://www.slf4j.org/codes.html#noProviders for further do
                             String u2 = d.getCurrentUrl();
                             Thread.sleep(5000);
                                                                                                                                                             Starting ChromeDriver 106.0.5249.61 (511755355844955cd3e264779baf0dd3
                             if(u2.equals("http://localhost/Project/view/deliveryman_profile.php"))
                                                                                                                                                             Only local connections are allowed.
                                 System.out.println("Edit Testing done");
                                                                                                                                                             Please see https://chromedriver.chromium.org/security-considerations
                                                                                                                                                             ChromeDriver was started successfully.
                             else
                                                                                                                                                             [1667217290.189][WARNING]: This version of ChromeDriver has not been
                                 System.out.println("Edit Testing Fail");
                                                                                                                                                             Oct 31, 2022 5:54:50 PM org.openqa.selenium.devtools.CdpVersionFinder
                                                                                                                                                             WARNING: Unable to find an exact match for CDP version 107, so return
                         Thread.sleep(5000);
                                                                                                                                                             Edit Testing done
                        d.close();
                                                                                                                                                             [1667217310.550][WARNING]: Timed out connecting to Chrome, retrying...
                                                                                                                                                              [1667217318.559][WARNING]: Timed out connecting to Chrome, retrying..
                                                                                                                                                             [1667217326.567][WARNING]: Timed out connecting to Chrome, retrying..
          43 }
                                                                                                                                                             [1667217334.577][WARNING]: Timed out connecting to Chrome, retrying..
                                                                                                                                Exception in thread "main" ore.openga.selenium.WebDriverException: di
```

Figure 17: Test code for Information Edit

Figure-17: For profile information edit we are used automated testing and get success.

The End