

1. TITLE OF THE LAB REPORT EXPERIMENT: Software Testing Tools (Setting Up Selenium WebDriver for Facebook and YouTube)

2. OBJECTIVES/AIM:

- To be familiar with web testing tools.
- To gain practical knowledge on Selenium Web-driver.
- To setup Selenium Web-driver for running automated testing.

3. PROCEDURE / ANALYSIS: Selenium is a free (open-source) automated testing framework used to validate web applications across different browsers and platforms. we can use multiple programming languages like Java, C#, Python etc. to create Selenium Test Scripts. Testing done using the Selenium testing tool is usually referred to as Selenium Testing. For this automated testing at first, we need updated and stable version of chrome. I have updated chrome; my chrome version is 120.0.6099.130 (Official Build) (64-bit). We also need NetBeans for run the selenium code, I already download NetBeans in my laptop. After that we need the Java Selenium WebDriver package. I download the package from <https://www.selenium.dev/downloads/> and extract the compressed file. After that I open a java project, the name of my java project is LaB04.java. In the projects library I added selenium libraries, the inside file of selenium-java-4.16.1. After that we need chrome driver for automated selenium testing. I download Chrome Driver from <https://chromedriver.chromium.org/downloads>. After that I integrate the subsequent code snippet to configure the Chrome driver's location. The Chrome driver is extracted to the directory "C:\\Users\\jehan\\Downloads\\Compressed\\chromedriver-win64". For Facebook instantiate a Chrome Driver object to initiate the opening of a URL (www.facebook.com) using-

```
WebDriver driver = new ChromeDriver();  
driver.get("https://www.facebook.com");  
driver.manage().window().maximize();
```

For YouTube instantiate a Chrome Driver object to initiate the opening of a URL (to <https://www.youtube.com/>) using-

```
WebDriver driver = new ChromeDriver();  
driver.get("to https://www.youtube.com/ ");  
driver.manage().window().maximize();
```

For a search of "Green University of Bangladesh" using-

```
WebElement searchBox = driver.findElement(By.name("search_query"));  
searchBox.sendKeys("Green University of Bangladesh");
```

Temporarily halt the ongoing code execution for a specific duration (1 minute) to allow the Chrome window to be visible, employing the subsequent code snippet, Thread.sleep(10000);

Conclude by shutting down the driver using the provided code driver.close();.

4. IMPLEMENTATION:

Facebook:

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this
license
 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Main.java to edit this template
 */
package lab04;

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

/**
 *
 * @author owadud
 */
public class LaB04 {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) throws InterruptedException {
        // TODO code application logic here
        System.setProperty("chromedriver-win64",
"C:\\Users\\jehan\\Downloads\\Compressed\\chromedriver-win64");
        WebDriver driver = new ChromeDriver();
        driver.get("https://www.facebook.com");
        driver.manage().window().maximize();
        Thread.sleep(10000);
        driver.close();
    }

}
```

YouTube:

```
/*
 * Click nbfs://nbhost/SystemFileSystem/Templates/Licenses/license-default.txt to change this
license
 * Click nbfs://nbhost/SystemFileSystem/Templates/Classes/Main.java to edit this template
```

```

*/
package lab04;

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

/**
 *
 * @author owadud
 */
public class LaB04 {

    /**
     * @param args the command line arguments
     */
    public static void main(String[] args) throws InterruptedException {
        // TODO code application logic here
        System.setProperty("chromedriver-win64",
"C:\\Users\\jehan\\Downloads\\Compressed\\chromedriver-win64");
        WebDriver driver = new ChromeDriver();

        // Open YouTube and maximize the window
        driver.get("https://www.youtube.com/");
        driver.manage().window().maximize();

        // Find the search box and enter the query
        WebElement searchBox = driver.findElement(By.name("search_query"));
        searchBox.sendKeys("Green University of Bangladesh");

        // Press Enter to perform the search
        searchBox.sendKeys(Keys.ENTER);

        // Wait for search results to load (you might need to adjust the wait time)
        try {
            Thread.sleep(10000);
        } catch (InterruptedException e) {
            e.printStackTrace();
        }
    }
}

```

```

    }

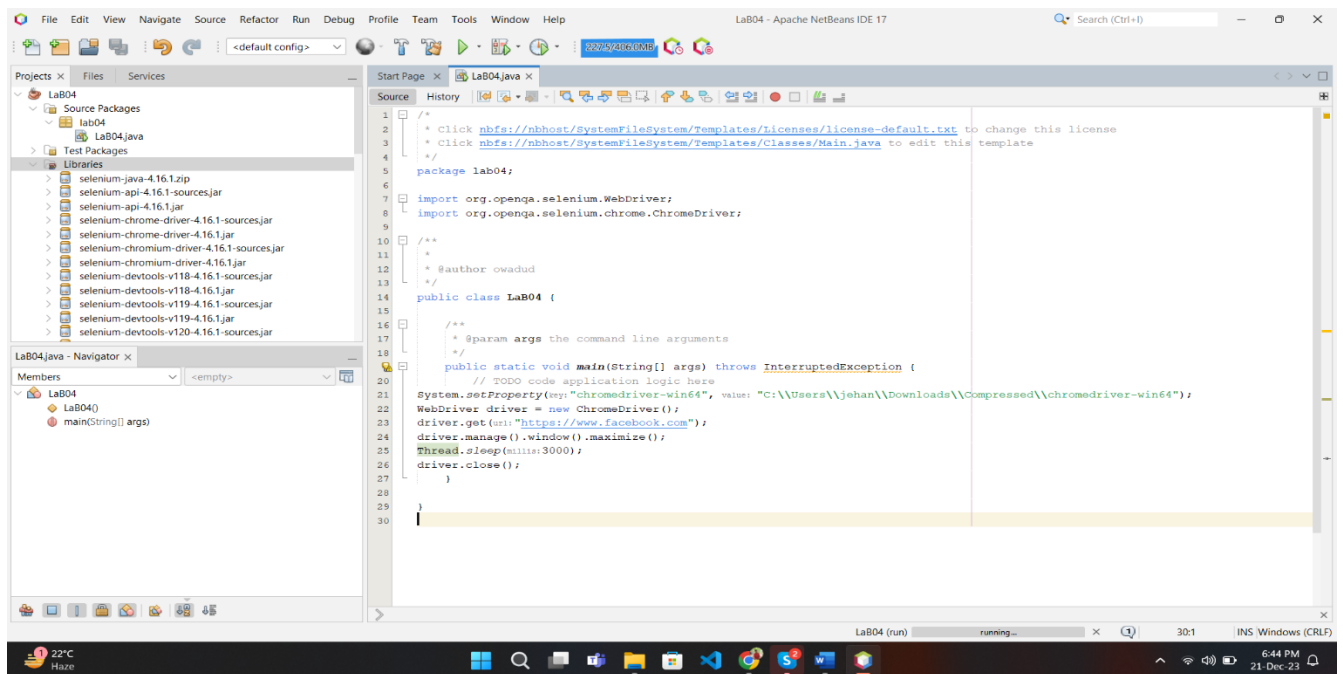
    // Perform actions on search results if needed

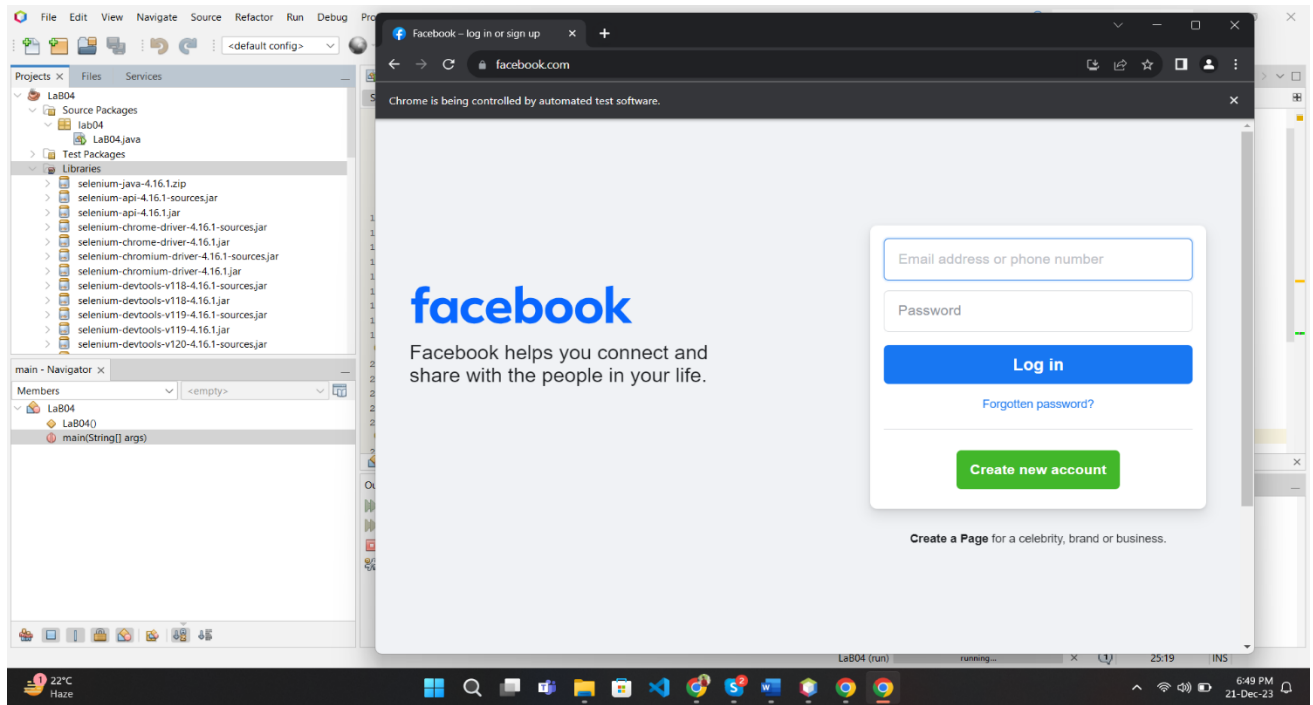
    // Close the browser
    driver.quit();
}
}

```

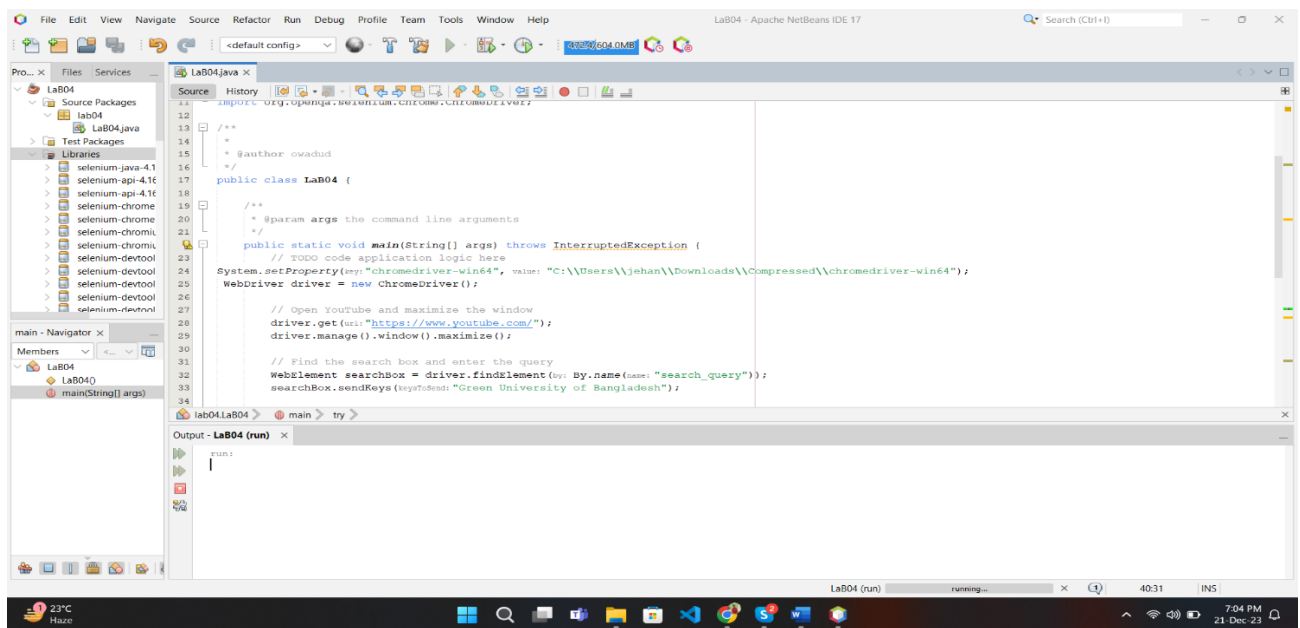
5. TEST RESULT / OUTPUT:

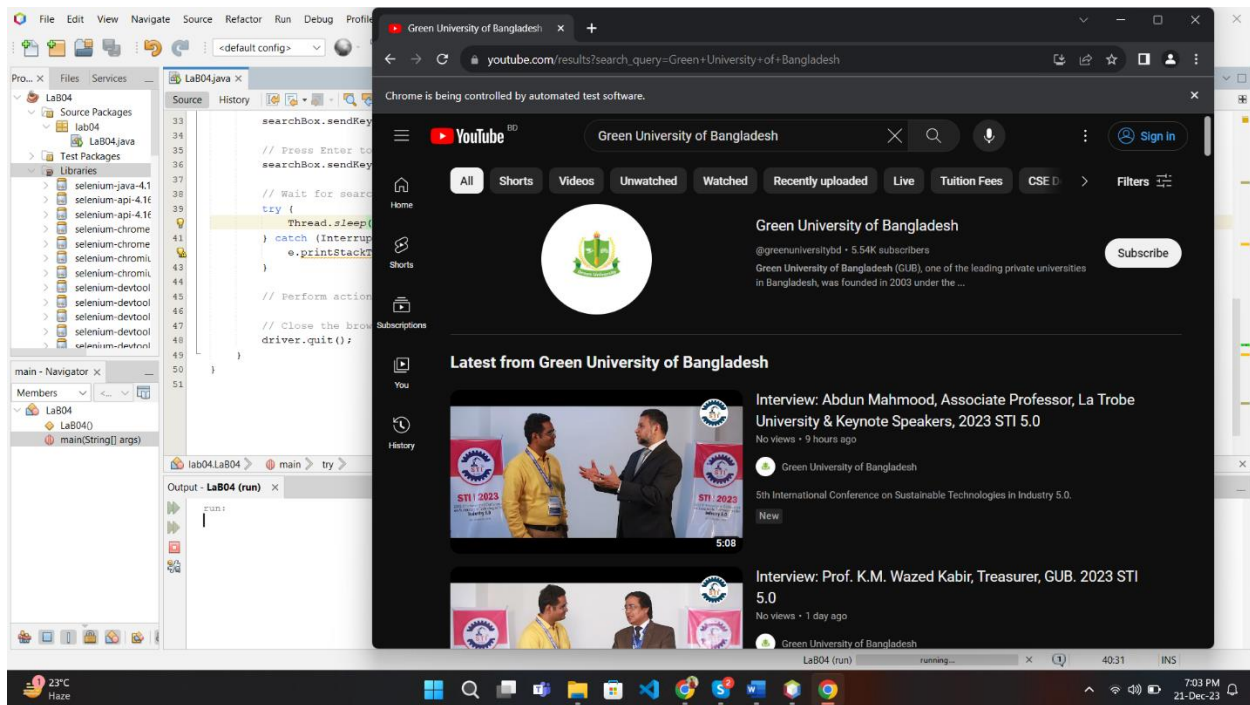
Facebook:





YouTube:





6. ANALYSIS AND DISCUSSION:

- In this lab report, for this automated testing at first, we need updated and stable version of chrome. I have updated chrome; my chrome version is 120.0.6099.130 (Official Build) (64-bit).
- We also need NetBeans for run the selenium code, I already download NetBeans in my laptop. After that we need the Java Selenium WebDriver package.
- I download the package from <https://www.selenium.dev/downloads/> and extract the compressed file. After that I open a java project, the name of my java project is LaB04.java. In the projects library I added selenium libraries, the inside file of selenium-java-4.16.1.
- After that we need chrome driver for automated selenium testing. I download Chrome Driver from <https://chromedriver.chromium.org/downloads>. After that I integrate the subsequent code snippet to configure the Chrome driver's location.
- Temporarily halt the ongoing code execution for a specific duration (1 minute) to allow the Chrome window to be visible, employing the subsequent code `Thread.sleep(10000);`
- Conclude by shutting down the driver using the provided code `driver.close();`.

7. SUMMARY: In Selenium automated testing, we need updated and stable version of chrome, we also need NetBeans for run the selenium code, I download the package from <https://www.selenium.dev/downloads/> and extract the compressed file and selenium libraries inside file of selenium-java-4.16.1. After that we need chrome driver for automated testing. I download Chrome Driver from <https://chromedriver.chromium.org/downloads>. After that I integrate the subsequent code snippet to configure the Chrome driver's location. • Temporarily halt the ongoing code execution for a specific duration (1 minute) to allow the Chrome window to be visible, employing the subsequent code `Thread.sleep(10000);` Conclude by shutting down the driver using the provided code `driver.close();`.