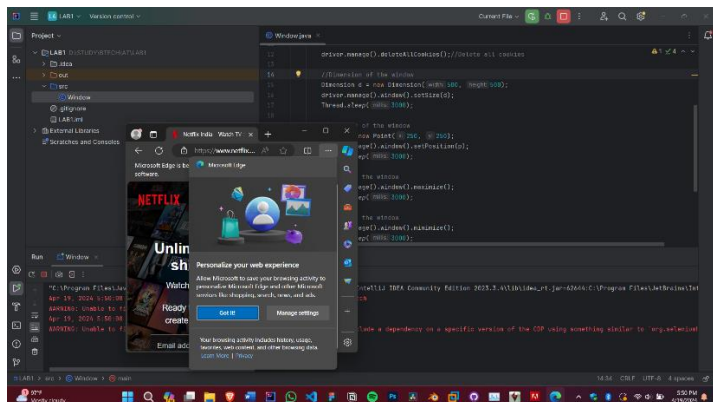
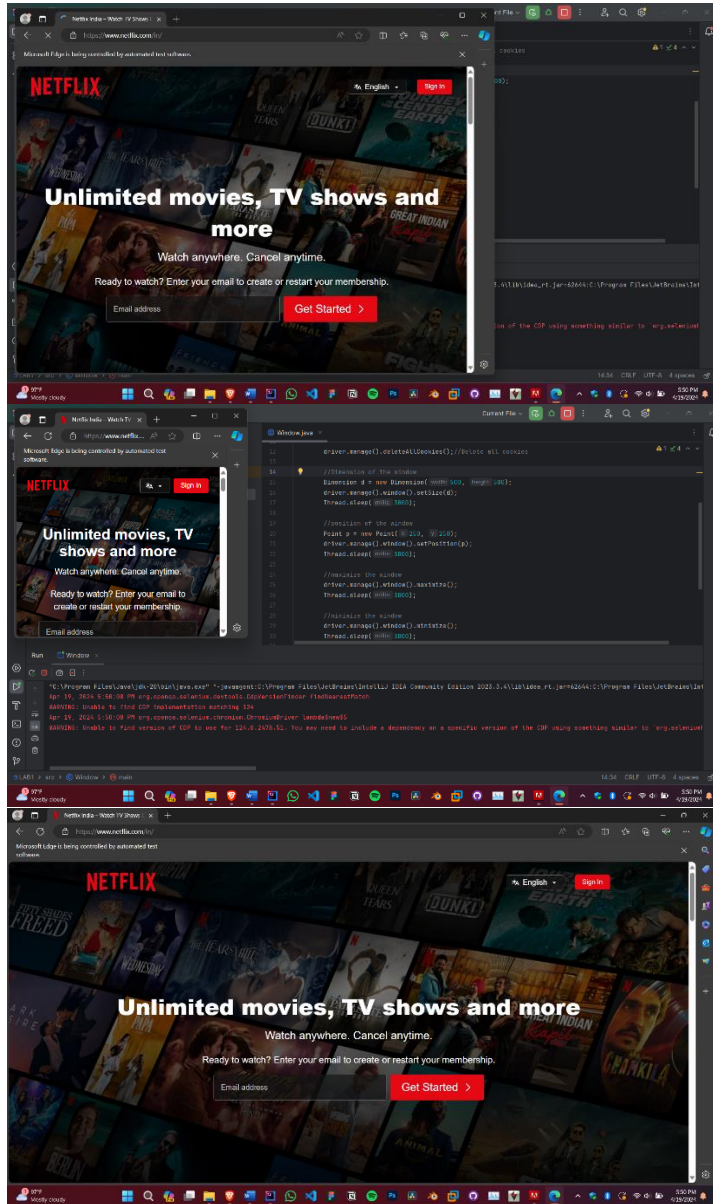




## OUTPUT:



## **Program– 1**

**Aim:** Write a selenium java program to demonstrate window operations.

**Code:**

```
import org.openqa.selenium.*;
import org.openqa.selenium.edge.EdgeDriver;
public class Window {

    public static void main(String Args[]) throws InterruptedException {

        System.setProperty("webdriver.edge.driver",
D:\\STUDY\\BTECH\\AT\\edgedriver_win64\\msedgedriver.exe");
        WebDriver driver = new EdgeDriver();

        driver.get("https://www.netflix.com");

        driver.manage().deleteAllCookies();//Delete all cookies

        //Dimension of the window
        Dimension d = new Dimension(500, 500);
        driver.manage().window().setSize(d);
        Thread.sleep(3000);

        //position of the window
        Point p = new Point(250, 250);
        driver.manage().window().setPosition(p);
        Thread.sleep(3000);

        //maximize the window
        driver.manage().window().maximize();
        Thread.sleep(3000);

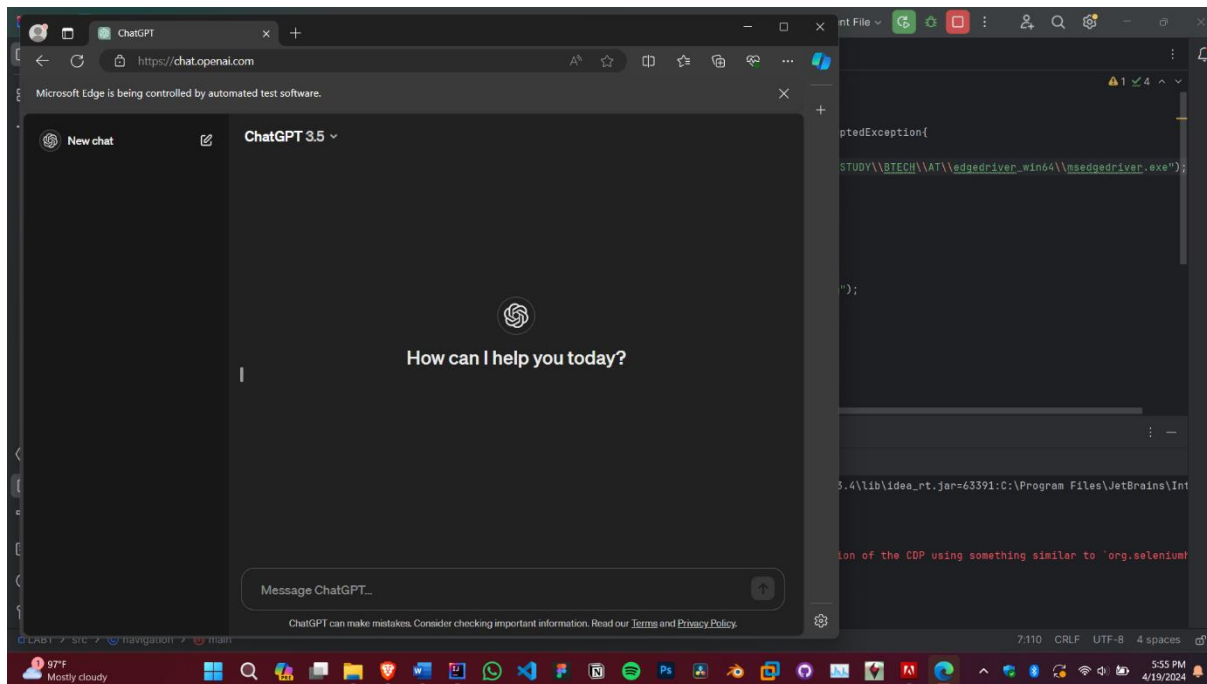
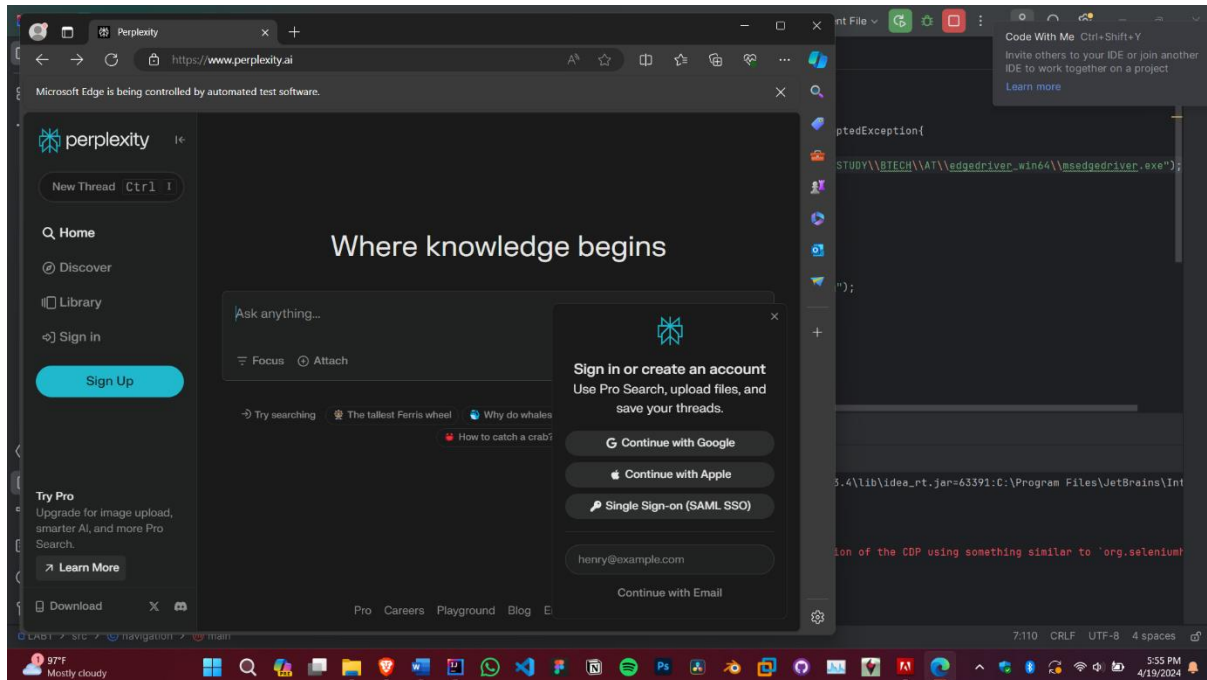
        //minimize the window
        driver.manage().window().minimize();
        Thread.sleep(3000);

        driver.quit();

    }

}
```

## OUTPUT:



## **Program–2**

**Aim:** Write a selenium java program to demonstrate navigation.

**Code:**

```
import org.openqa.selenium.*;
import org.openqa.selenium.edge.EdgeDriver;

public class navigation{
    public static void main(String Args[]) throws InterruptedException{

        System.setProperty("webdriver.edge.driver",
"D:\\STUDY\\BTECH\\AT\\edgedriver_win64\\msedgedriver.exe");
        WebDriver driver = new EdgeDriver();

        driver.get("https://www.perplexity.ai");
        Thread.sleep(3000);

        //navigate to another site
        driver.navigate().to("https://chat.openai.com");
        Thread.sleep(3000);

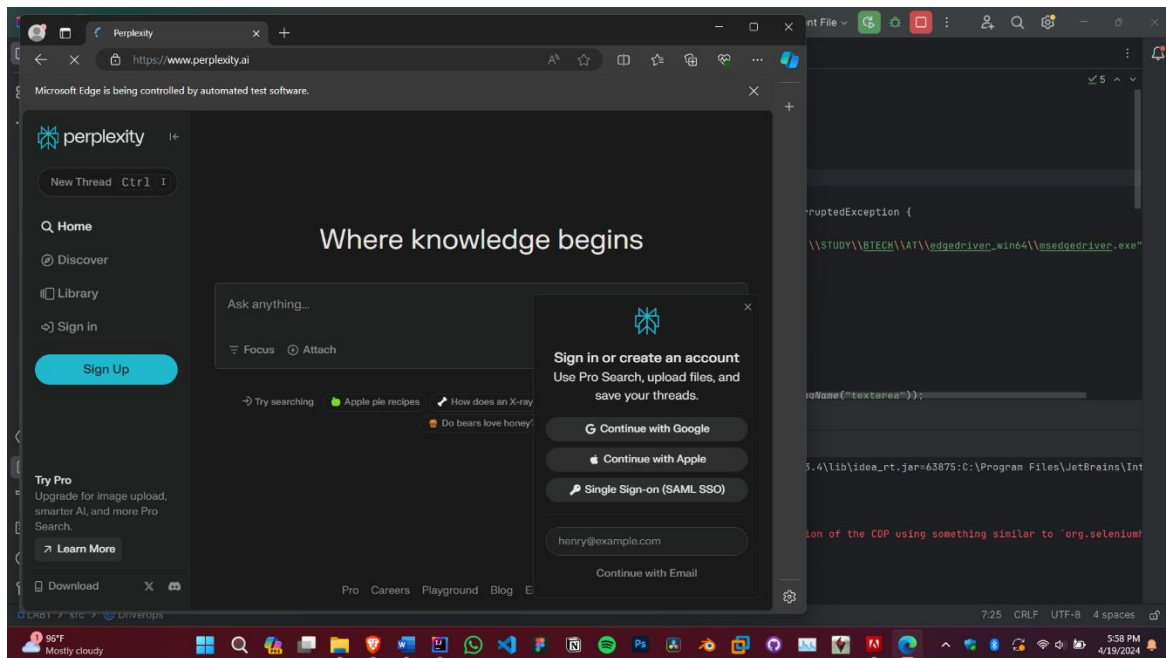
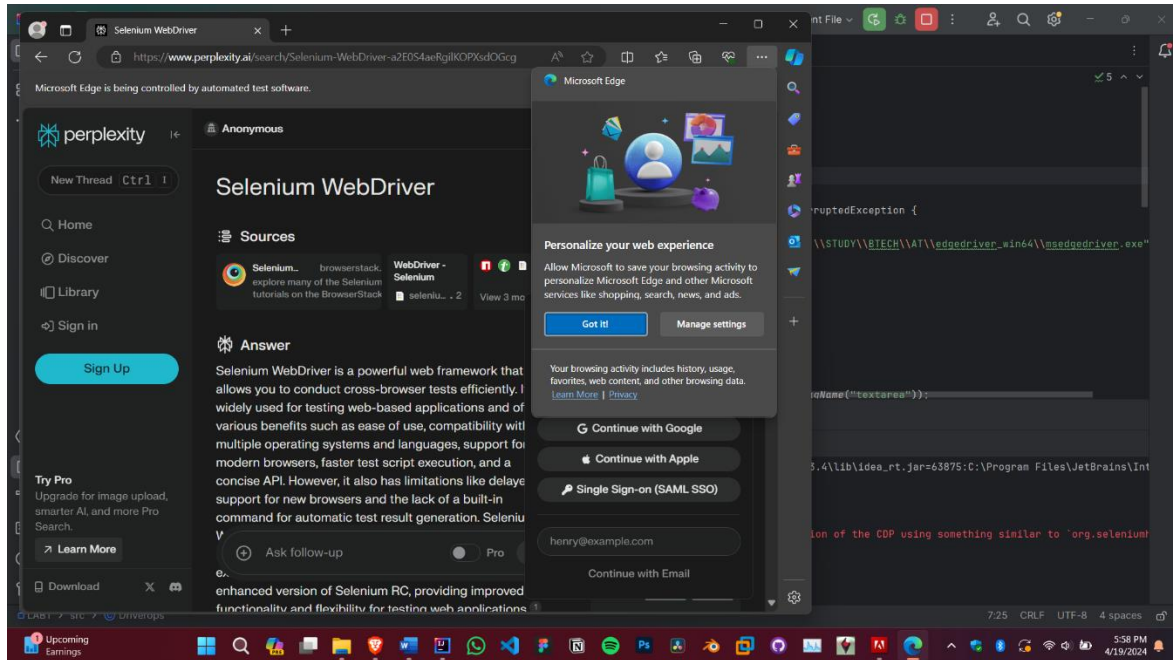
        //Navigate back
        driver.navigate().back();
        Thread.sleep(3000);

        //Navigate forward
        driver.navigate().forward();
        Thread.sleep(3000);

        //Refresh
        driver.navigate().refresh();
        Thread.sleep(5000);

        driver.quit();
    }
}
```

## OUTPUT:



Page Title: Selenium WebDriver

Current URL: <https://www.perplexity.ai/search/Selenium-WebDriver-a2E0S4aeRqilKOPXsdOGcg>

Process finished with exit code 0

## Program–3

**Aim:** Write a selenium java program to demonstrate driver operations.

**Code:**

```
import org.openqa.selenium.By;
import org.openqa.selenium.Keys;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.edge.EdgeDriver;

public class Driverops {

    public static void main(String[] args) throws InterruptedException {
        System.setProperty("webdriver.edge.driver",
"D:\\STUDY\\BTECH\\AT\\edgedriver_win64\\msedgedriver.exe");
        WebDriver driver = new EdgeDriver();
        driver.get("https://www.perplexity.ai");

        WebElement searchBox = driver.findElement(By.tagName("textarea"));
        searchBox.sendKeys("Selenium WebDriver");
        searchBox.sendKeys(Keys.ENTER);

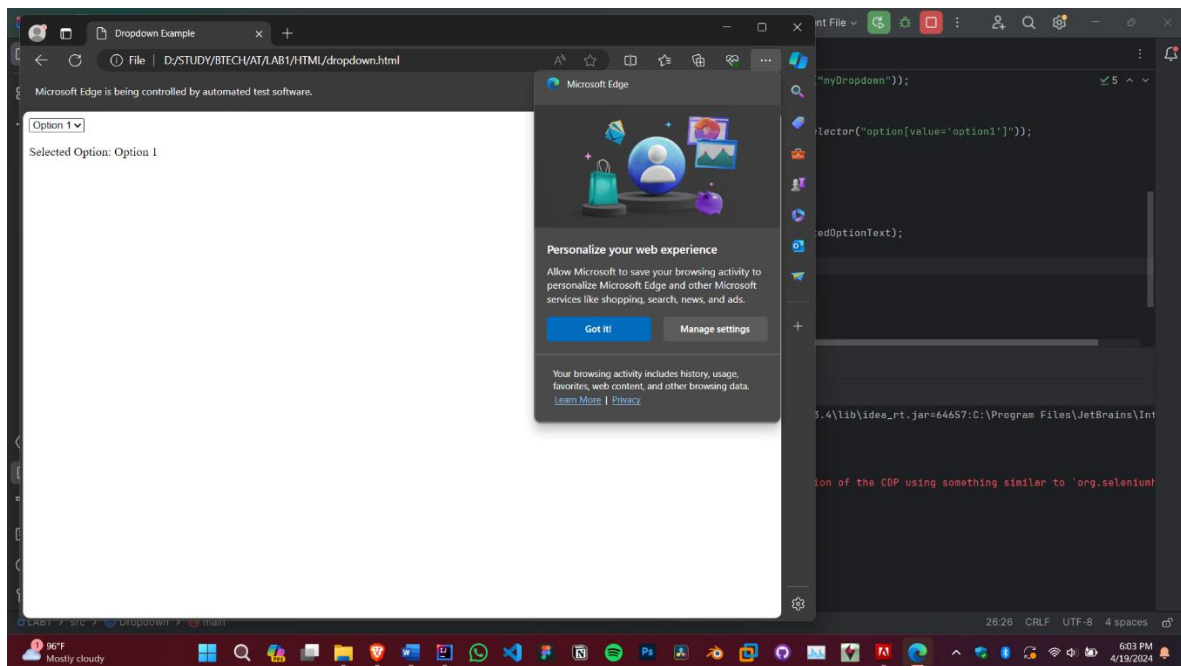
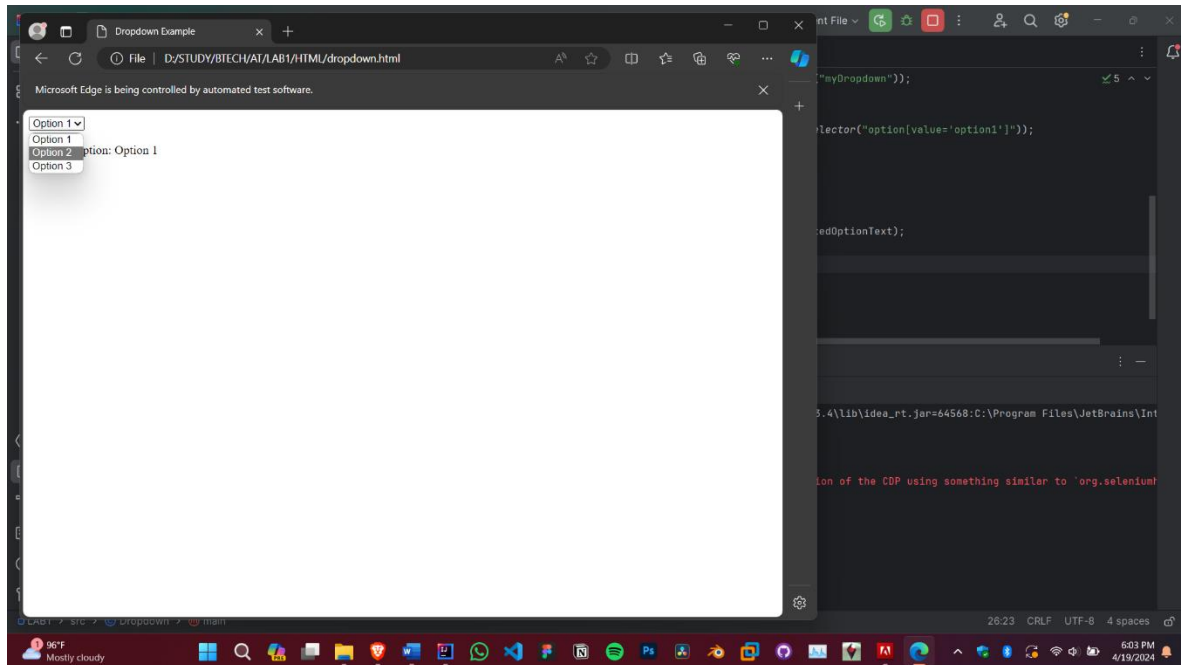
        Thread.sleep(5000);

        String pageTitle = driver.getTitle();
        System.out.println("Page Title: " + pageTitle);

        String currentUrl = driver.getCurrentUrl();
        System.out.println("Current URL: " + currentUrl);

        Thread.sleep(5000);
        driver.quit();
    }
}
```

## OUTPUT:



Selected Option: Option 1

Process finished with exit code 0



## **Program-4**

**Aim:** Write a selenium java program to demonstrate dropdown or list.

### **HTML code:**

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Dropdown Example</title>
</head>
<body>
<select id="myDropdown" onchange="showSelectedOption()">
<option value="option1">Option 1</option>
<option value="option2">Option 2</option>
<option value="option3">Option 3</option>
</select>

<p id="selectedOption"></p>

<script>
  // Set the default selected option
  document.getElementById("myDropdown").value = "option2";

  // Function to display the selected option
  function showSelectedOption() {
    var dropdown = document.getElementById("myDropdown");
    var selectedOption = dropdown.options[dropdown.selectedIndex].text;
    document.getElementById("selectedOption").innerText = "Selected Option: " + selectedOption;
  }
</script>
</body>
</html>
```

### **Java Code:**

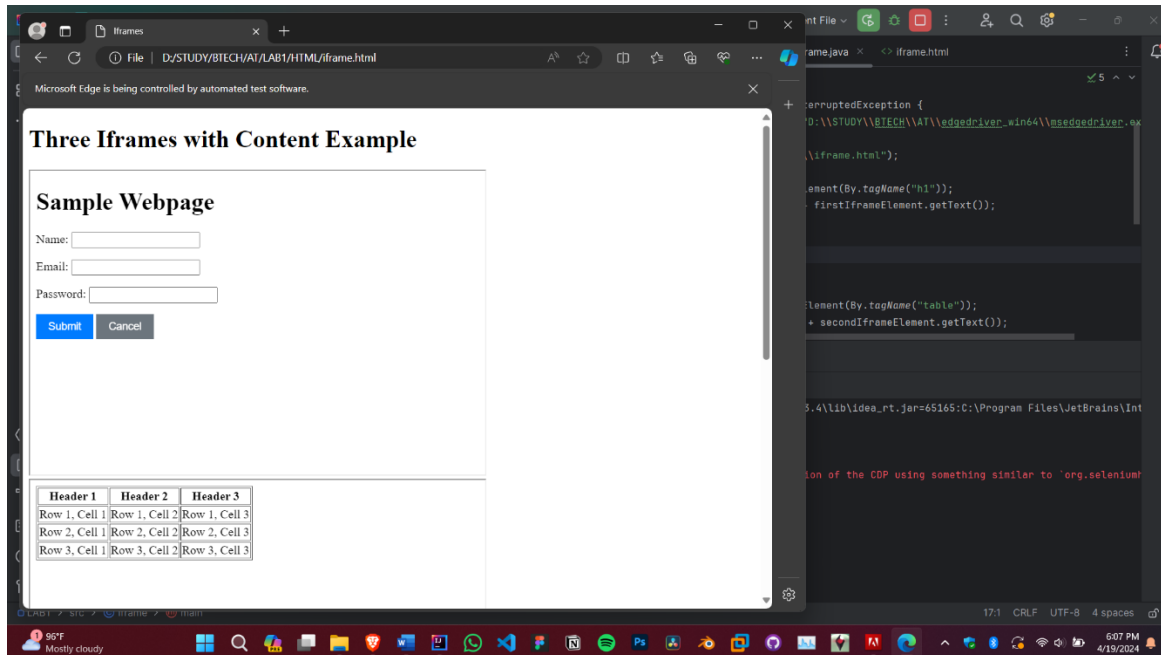
```
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.edge.EdgeDriver;

public class Dropdown {
```



```
public static void main(String[] args) throws InterruptedException {  
  
    System.setProperty("webdriver.edge.driver",  
"D:\\STUDY\\BTECH\\AT\\edgedriver_win64\\msedgedriver.exe");  
    WebDriver driver = new EdgeDriver();  
  
    driver.get("D:\\STUDY\\BTECH\\AT\\LAB1\\HTML\\dropdown.html");  
  
    WebElement dropdown = driver.findElement(By.id("myDropdown"));  
    dropdown.click();  
  
    WebElement option = driver.findElement(By.cssSelector("option[value='option1']"));  
    option.click();  
  
    Thread.sleep(3000);  
  
    String selectedOptionText = option.getText();  
    System.out.println("Selected Option: " + selectedOptionText);  
  
    Thread.sleep(2000);  
  
    driver.quit();  
}  
}
```

## OUTPUT:



```
First Iframe Content: Sample Webpage
Second Iframe Content: Header 1 Header 2 Header 3
Row 1, Cell 1 Row 1, Cell 2 Row 1, Cell 3
Row 2, Cell 1 Row 2, Cell 2 Row 2, Cell 3
Row 3, Cell 1 Row 3, Cell 2 Row 3, Cell 3
Third Iframe Content: Result Page

Process finished with exit code 0
```

## **Program-5**

**Aim:** Write a selenium java program to demonstrate frame and iframe.

### **HTML code:**

```
<!DOCTYPE html>
<head>
<title>Iframes</title>
</head>
<body>
<h1>Three Iframes with Content Example</h1>
<iframe src="test_page.html" width="600" height="400" title="First iframe">
</iframe>

<iframe src="table.html" width="600" height="400" title="Second iframe">
</iframe>

<iframe src="result.html" width="600" height="400" title="Third iframe">
</iframe>
</body>
</html>
```

### **Java Code:**

```
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.edge.EdgeDriver;

public class Iframe {

    public static void main(String[] args) throws InterruptedException {
        System.setProperty("webdriver.edge.driver",
"D:\\STUDY\\BTECH\\AT\\edgedriver_win64\\msedgedriver.exe");
        WebDriver driver = new EdgeDriver();
        driver.get("D:\\STUDY\\BTECH\\AT\\LAB1\\HTML\\iframe.html");
        driver.switchTo().frame(0);
        WebElement firstIframeElement = driver.findElement(By.tagName("h1"));
        System.out.println("First Iframe Content: " + firstIframeElement.getText());

        Thread.sleep(3000);
        driver.switchTo().defaultContent();
    }
}
```



```
driver.switchTo().frame(1);
WebElement secondIframeElement = driver.findElement(By.tagName("table"));
System.out.println("Second Iframe Content: " + secondIframeElement.getText());

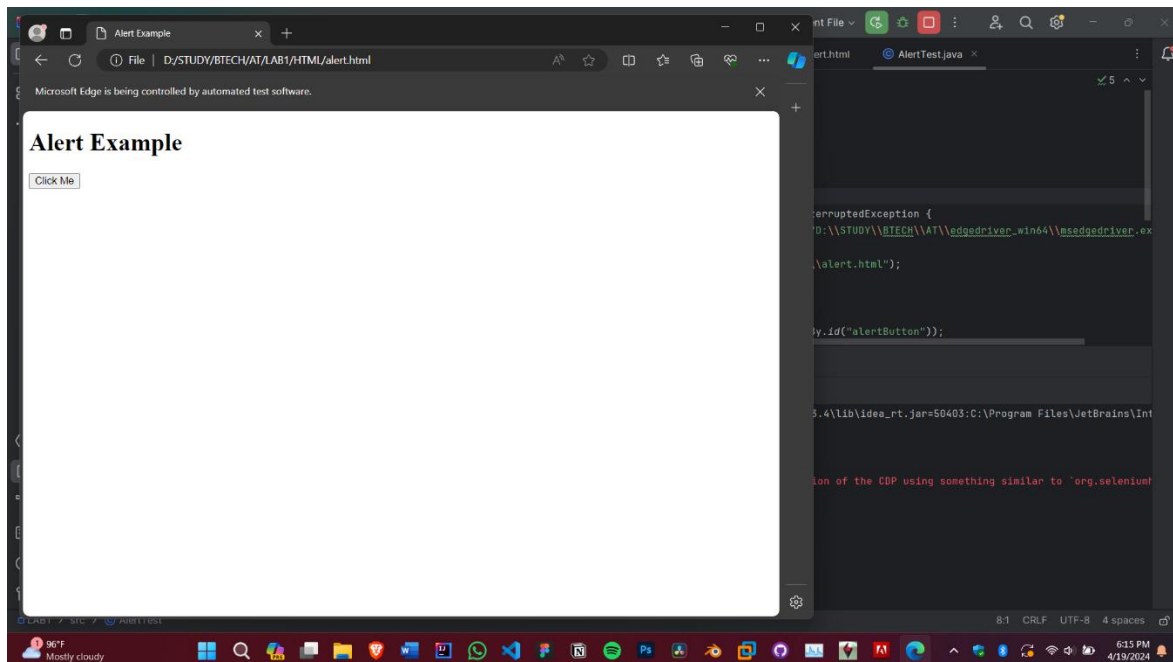
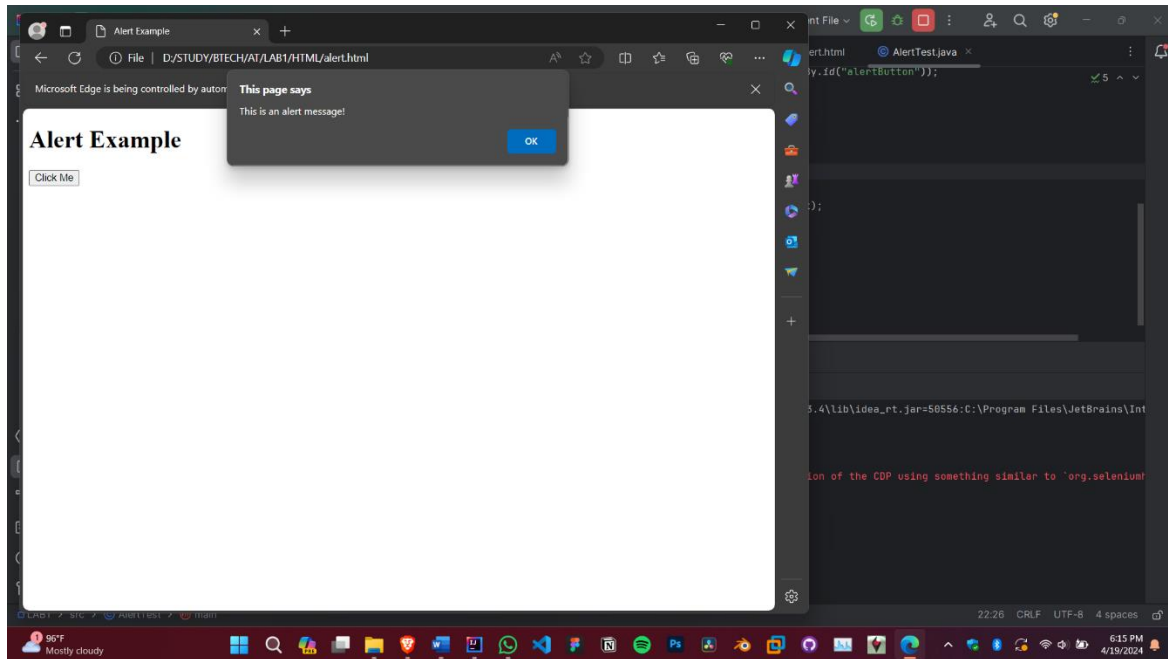
Thread.sleep(3000);

driver.switchTo().defaultContent();
driver.switchTo().frame(2);
WebElement thirdIframeElement = driver.findElement(By.tagName("h1"));
System.out.println("Third Iframe Content: " + thirdIframeElement.getText());

Thread.sleep(3000);

driver.quit();
}
}
```

## OUTPUT:



Alert Text: This is an alert message!

Process finished with exit code 0



## **Program–6**

**Aim:** Write a selenium java program to demonstrate alert.

### **HTML code:**

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<title>Alert Example</title>
</head>
<body>
<h1>Alert Example</h1>
<button id="alertButton" onclick="showAlert()">Click Me</button>

<script>
    function showAlert() {
        alert("This is an alert message!");
    }
</script>
</body>
</html>
```

### **Java Code:**

```
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.edge.EdgeDriver;
import org.openqa.selenium.Alert;

public class AlertTest {

    public static void main(String[] args) throws InterruptedException {
        System.setProperty("webdriver.edge.driver",
"D:\\STUDY\\BTECH\\AT\\edgedriver_win64\\msedgedriver.exe");
        WebDriver driver = new EdgeDriver();
        driver.get("D:\\STUDY\\BTECH\\AT\\LAB1\\HTML\\alert.html");

        Thread.sleep(3000);
```

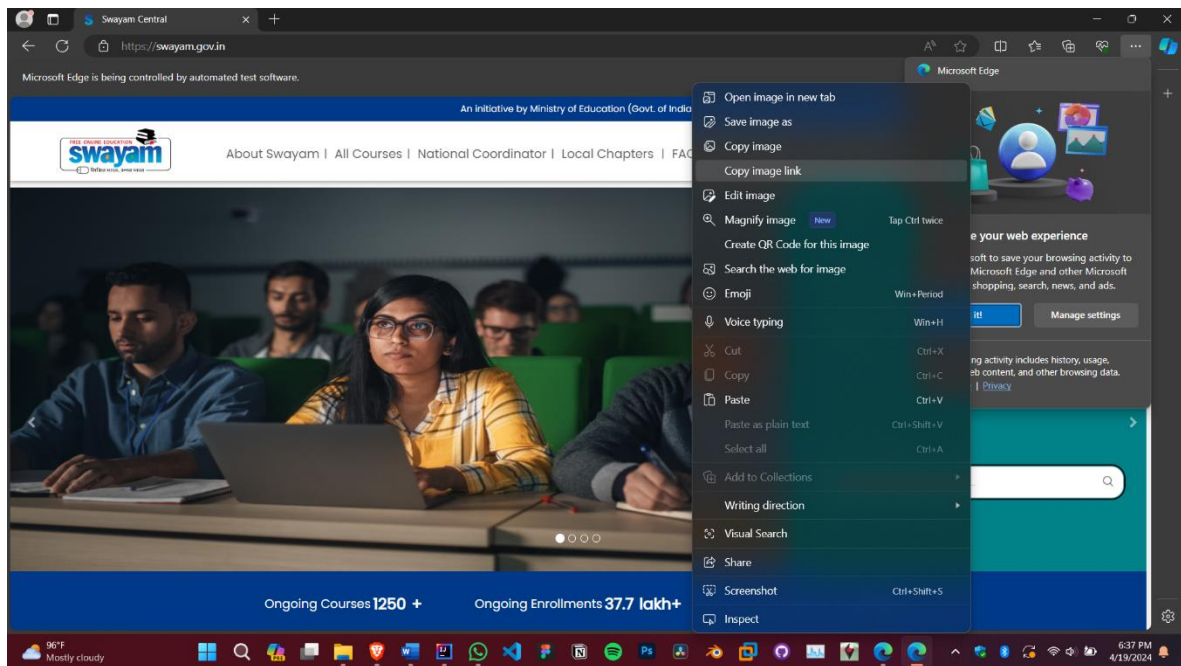
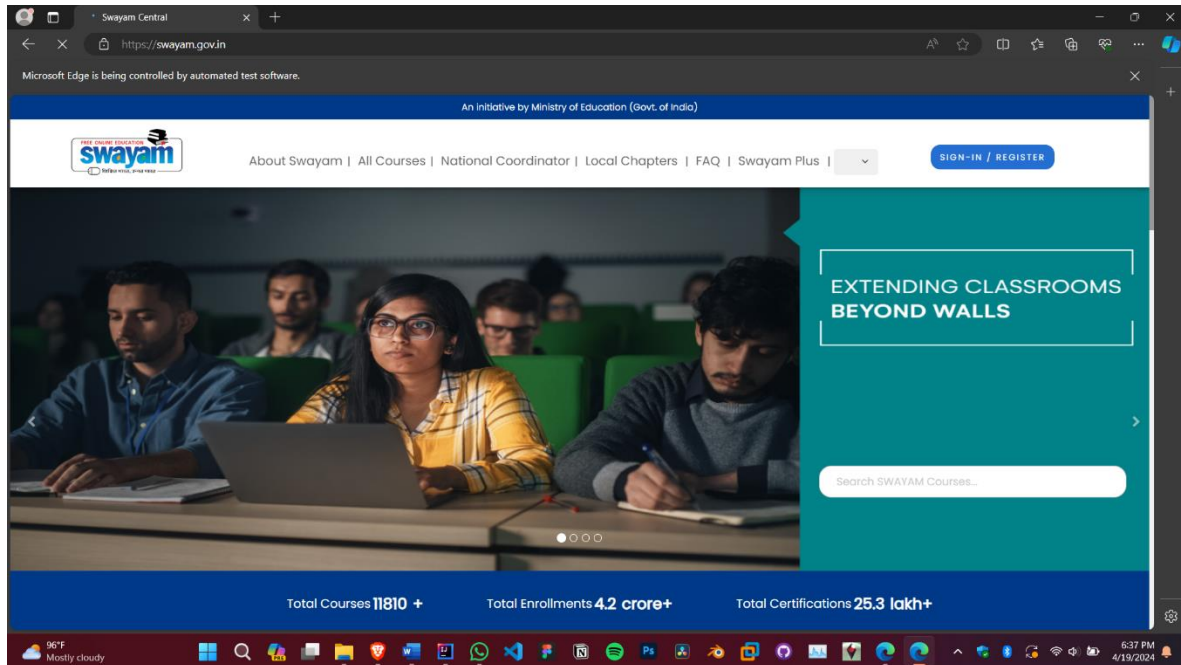


```
WebElement alertButton = driver.findElement(By.id("alertButton"));
alertButton.click();

Alert alert = driver.switchTo().alert();
String alertText = alert.getText();

System.out.println("Alert Text: " + alertText);
alert.accept();
driver.quit();
    }
}
```

## OUTPUT:



## **Program-7**

**Aim:** Write a selenium java program to demonstrate actions(Mouse and Keyboard).

**Code:**

```
import org.openqa.selenium.By;
import org.openqa.selenium.Keys;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.edge.EdgeDriver;
import org.openqa.selenium.interactions.Actions;

public class ActionsTest {

    public static void main(String[] args) throws InterruptedException{
        System.setProperty("webdriver.edge.driver",
"D:\\STUDY\\BTECH\\AT\\edgedriver_win64\\msedgedriver.exe");
        WebDriver driver = new EdgeDriver();
        driver.manage().window().maximize();
        driver.get("https://swayam.gov.in/");

        WebElement element =
driver.findElement(By.xpath("/html/body/div[3]/section/div/form/div/input"));

        Actions actions = new Actions(driver);

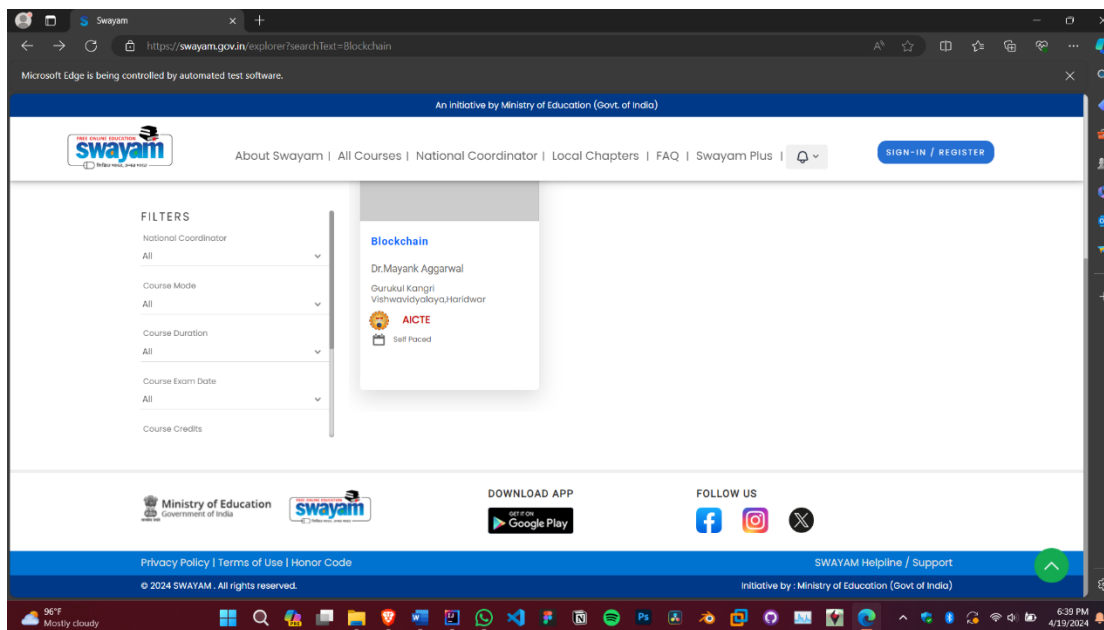
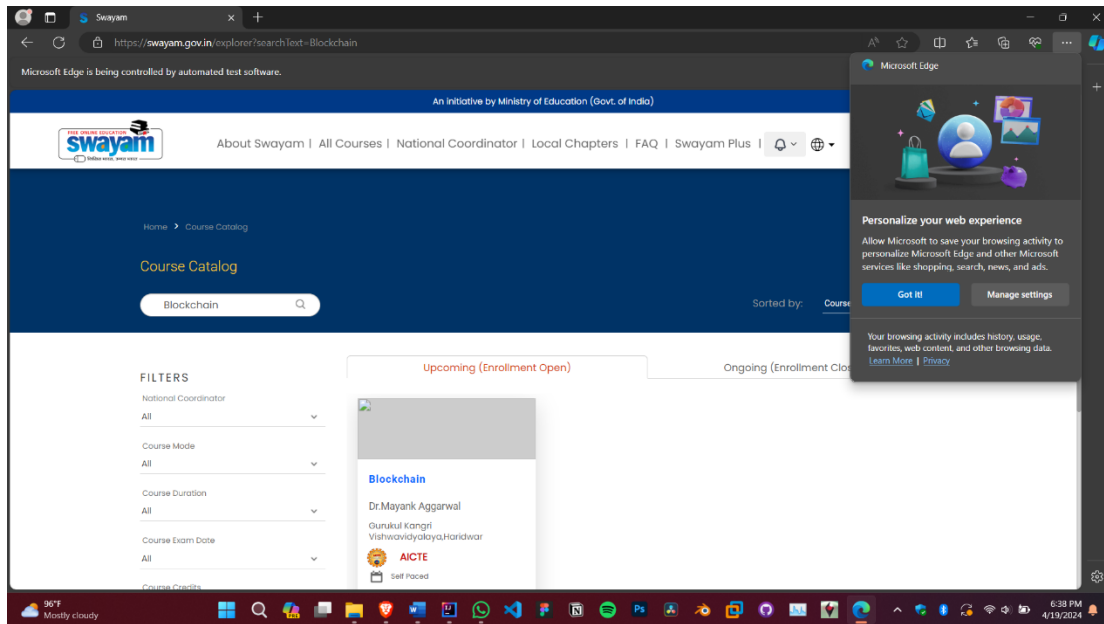
        actions.moveToElement(element).perform();
        Thread.sleep(2000);

        actions.contextClick(element).perform();
        Thread.sleep(2000);

        actions.sendKeys("Blockchain");
        Thread.sleep(2000);

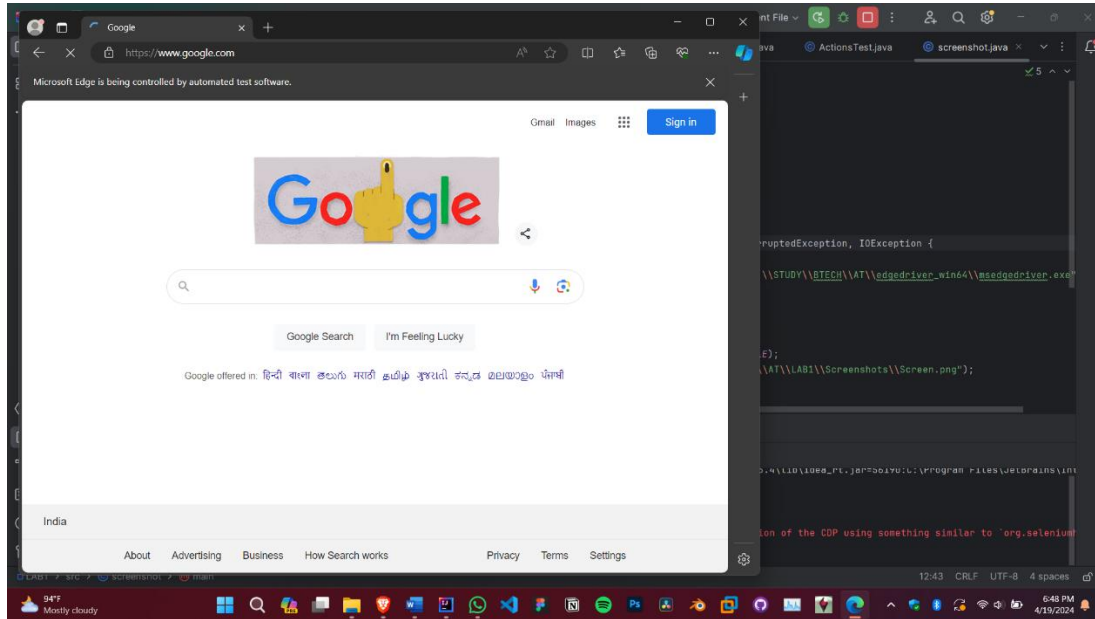
        WebElement element2 = driver.findElement(By.xpath("//section/div/form/div/span"));
        actions.moveToElement(element2).click().perform();
        Thread.sleep(8000);

        WebElement element3 = driver.findElement(By.xpath("//div[2]/div/div[2]/div[2]/course-card-
grouper/div[1]/course-cards/div/div/course-card"));
        actions.moveToElement(element3).perform();
```



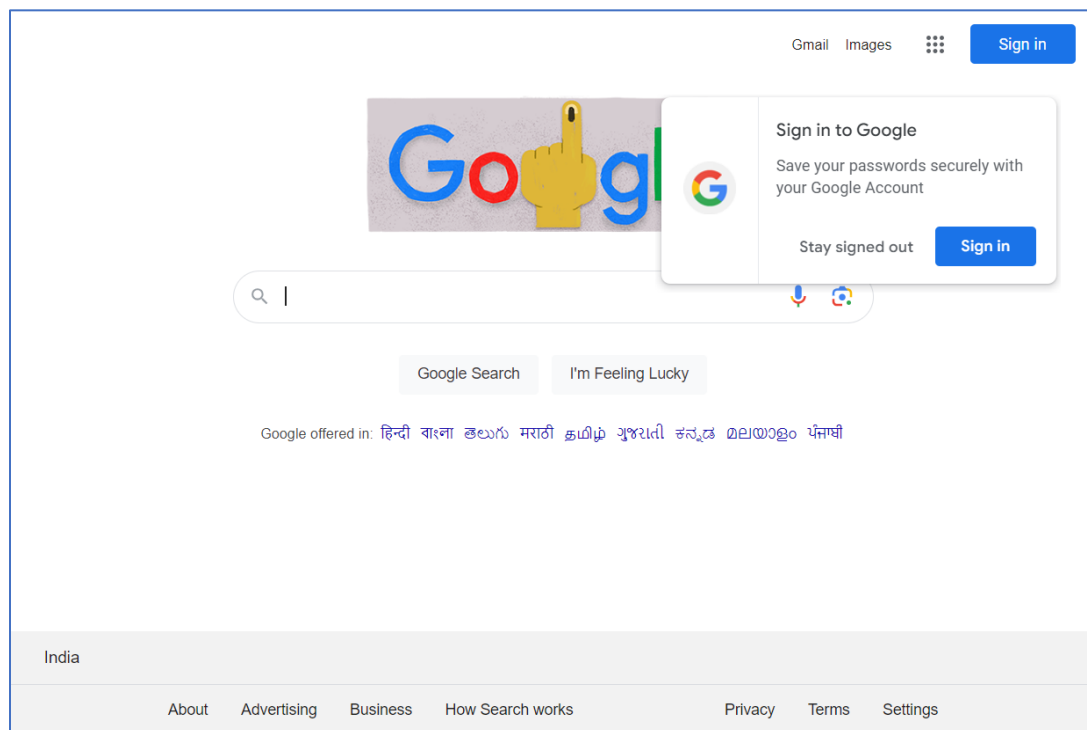
```
Thread.sleep(2000);  
    actions.keyDown(Keys.CONTROL).sendKeys(Keys.END).perform();  
    Thread.sleep(2000);  
actions.sendKeys(Keys.BACK_SPACE);  
Thread.sleep(3000);  
    driver.quit();  
}  
}
```

## OUTPUT:



Screenshot is captured

Process finished with exit code 0





## **Program–8**

**Aim:** Write a selenium java program to demonstrate Screenshot.

**Code:**

```
import java.io.File;
import java.io.IOException;
import org.openqa.selenium.io.FileHandler;
import org.openqa.selenium.OutputType;
import org.openqa.selenium.TakesScreenshot;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.edge.EdgeDriver;

public class screenshot {

    public void sshot() throws InterruptedException, IOException {

        System.setProperty("webdriver.edge.driver",
"D:\\STUDY\\BTECH\\AT\\edgedriver_win64\\msedgedriver.exe");
        WebDriver driver = new EdgeDriver();
        driver.get("https://www.google.com/");

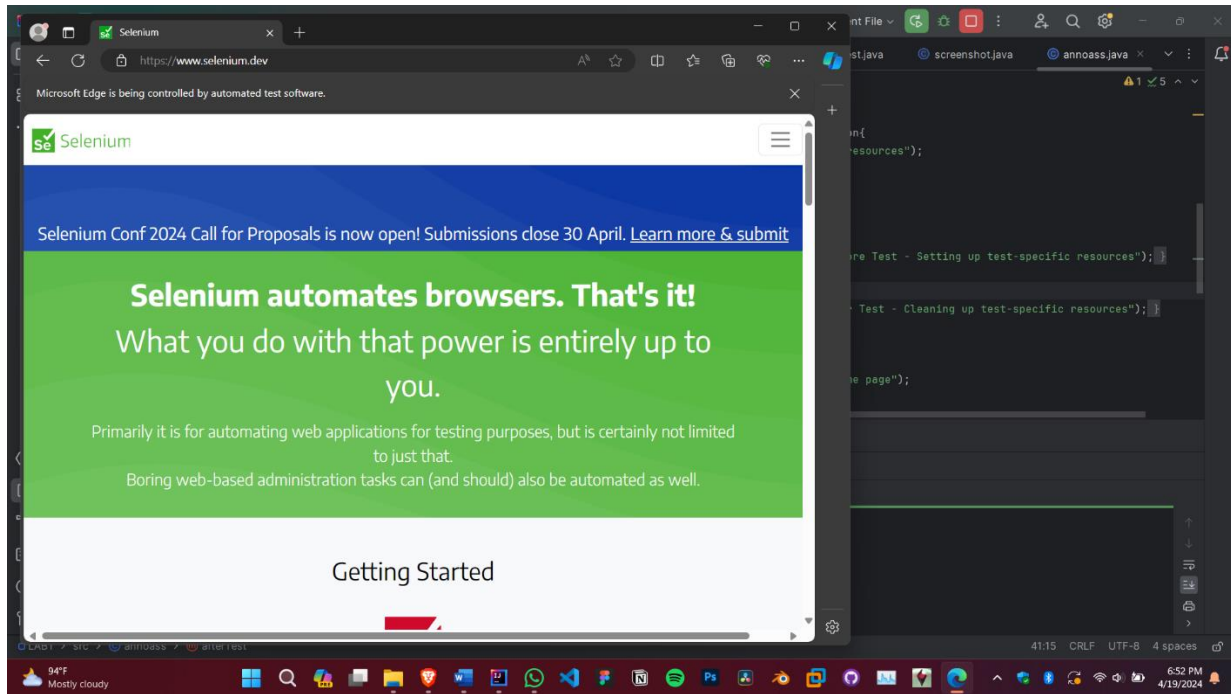
        TakesScreenshot tk = (TakesScreenshot)driver;
        File source = tk.getScreenshotAs(OutputType.FILE);
        File des = new File("D:\\STUDY\\BTECH\\AT\\LAB1\\Screenshots\\Screen.png");
        FileHandler.copy(source, des);

        System.out.println("Screenshot is captured");
        Thread.sleep(5000);
        driver.quit();

    }

}
```

## OUTPUT:



```
Before Suite - Setting up environment variables
Before Test - Setting up test-specific resources
Before Class - Initializing resources
Test Method - Verifying home page
After Class - Cleaning up resources
After Test - Cleaning up test-specific resources
After Suite - Cleaning up after all tests

=====
Default Suite
Total tests run: 1, Passes: 1, Failures: 0, Skips: 0
=====

Process finished with exit code 0
```

## **Program–9**

**Aim:** Write a selenium java program to demonstrate Testing – Assertions and Annotations.

**Code:**

```
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.edge.EdgeDriver;
import org.testng.Assert;
import org.testng.annotations.*;

public class annoass {
    WebDriver driver;
    String baseUrl = "https://www.selenium.dev/";

    @BeforeSuite
    public void beforeSuite() {
        System.out.println("Before Suite - Setting up environment variables");
    }

    @AfterSuite
    public void afterSuite() {
        System.out.println("After Suite - Cleaning up after all tests");
    }

    @BeforeClass
    public void beforeClass() {
        System.out.println("Before Class - Initializing resources");
        System.setProperty("webdriver.edge.driver",
"D:\\STUDY\\BTECH\\AT\\edgedriver_win64\\msedgedriver.exe");
        driver = new EdgeDriver();
        driver.get(baseUrl);
    }

    @AfterClass
    public void afterClass() {
        System.out.println("After Class - Cleaning up resources");
        driver.quit();
    }

    @BeforeTest
    public void beforeTest() {
        System.out.println("Before Test - Setting up test-specific resources");
    }
}
```

--

```
@AfterTest
public void afterTest() {
    System.out.println("After Test - Cleaning up test-specific resources");
}












@Test
public void verifyHome() {
    System.out.println("Test Method - Verifying home page");
    String expectedTitle = "Selenium";
    String actualTitle = driver.getTitle();
    Assert.assertEquals(actualTitle, expectedTitle);
}
}
```

**OUTPUT:**

```
PASSED: TestLogin("pod", "pod123")
PASSED: TestLogin("neeraj", "Emma")
PASSED: TestLogin("admin", "admin123")
```

```
=====
Default test
Tests run: 1, Failures: 0, Skips: 0
=====
```

```
=====
Default suite
Total tests run: 3, Passes: 3, Failures: 0, Skips: 0
=====
```

 All Tests	 Failed Tests	Summary
▼  Default suite ( 3/0/0/0 ) (54.172 s)		
▼  Default test ( 54.172 s)		
▼  record.Testing		
▼  TestLogin (19.229 s)		
 "admin","admin123" (19.229 s)		
▼  TestLogin (17.098 s)		
 "pod","pod123" (17.098 s)		
▼  TestLogin (17.845 s)		
 "neeraj","Emma" (17.845 s)		

## Program-10

**Aim:** Write a selenium java program to demonstrate Data Driven Testing.

**Code:**

**Pom.xml:**

```
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
https://maven.apache.org/xsd/maven-4.0.0.xsd">
```

```
    <modelVersion>4.0.0</modelVersion>
    <groupId>Test</groupId>
    <artifactId>Da_Dri</artifactId>
    <version>0.0.1-SNAPSHOT</version>
    <name>Data_Driven</name>
```

```
    <dependencies>
    <dependency>
    <groupId>org.testng</groupId>
    <artifactId>testng</artifactId>
    <version>7.4.0</version>
    </dependency>
```

```
    <dependency>
    <groupId>io.github.bonigarcia</groupId>
    <artifactId>webdrivermanager</artifactId>
    <version>5.8.0</version>
    </dependency>
```

```
    <dependency>
    <groupId>org.seleniumhq.selenium</groupId>
    <artifactId>selenium-java</artifactId>
    <version>4.19.1</version>
    </dependency>
```

```
    <dependency>
        <groupId>org.apache.poi</groupId>
        <artifactId>poi</artifactId>
        <version>4.1.1</version>
    </dependency>
    <dependency>
        <groupId>org.apache.poi</groupId>
        <artifactId>poi-ooxml</artifactId>
        <version>4.1.1</version>
    </dependency>
    <dependency>
```





```
<groupId>org.slf4j</groupId>
<artifactId>slf4j-api</artifactId>
<version>1.7.5</version>
</dependency>
<dependency>
  <groupId>org.slf4j</groupId>
  <artifactId>slf4j-simple</artifactId>
  <version>1.7.5</version>
</dependency>

</dependencies>
</project>
```

### **Testing.java:**

```
package aditya;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import org.testng.Assert;
import org.testng.annotations.Test;
import io.github.bonigarcia.wdm.WebDriverManager;

public class Testing {

    @Test(dataProvider = "loginData", dataProviderClass = ExcelDataSupplier.class)
    public void TestLogin(String userName, String password) throws Exception {
        //WebDriverManager.chromedriver().setup();
        WebDriver driver = new ChromeDriver();
        driver.manage().window().maximize();

        driver.get("https://github.com/login");
        driver.findElement(By.name("login")).sendKeys(userName);
        driver.findElement(By.name("password")).sendKeys(password);
        driver.findElement(By.name("commit")).click();
        Thread.sleep(5000);
        driver.quit();
    }
}
```



**ExcelDataSupplier.java:**

```
package aditya;
import java.io.File;
import java.io.FileInputStream;
import java.util.Arrays;

import org.apache.poi.ss.usermodel.DataFormatter;
import org.apache.poi.xssf.usermodel.XSSFSheet;
import org.apache.poi.xssf.usermodel.XSSFWorkbook;
import org.testng.annotations.DataProvider;

public class ExcelDataSupplier {

    @DataProvider(name="loginData")
    public String[][] getData() throws Exception {
        File excelFile = new File("./src/test/resources/Test.xlsx");
        FileInputStream fis = new FileInputStream(excelFile);
        XSSFWorkbook workbook = new XSSFWorkbook(fis);
        XSSFSheet sheet = workbook.getSheet("Sheet1");
        int noOfRows = sheet.getPhysicalNumberOfRows();
        int noOfColumns = sheet.getRow(0).getLastCellNum();

        String[][] data = new String[noOfRows-1][noOfColumns];
        for (int i = 0; i < noOfRows-1; i++) {
            for (int j = 0; j < noOfColumns; j++) {
                DataFormatter df = new DataFormatter();
                data[i][j] = df.formatCellValue(sheet.getRow(i+1).getCell(j));
            }
        }
        workbook.close();
        fis.close();

        for (String[] dataArr : data) {
            System.out.println(Arrays.toString(dataArr));
        }
        return data;
    }
}
```