

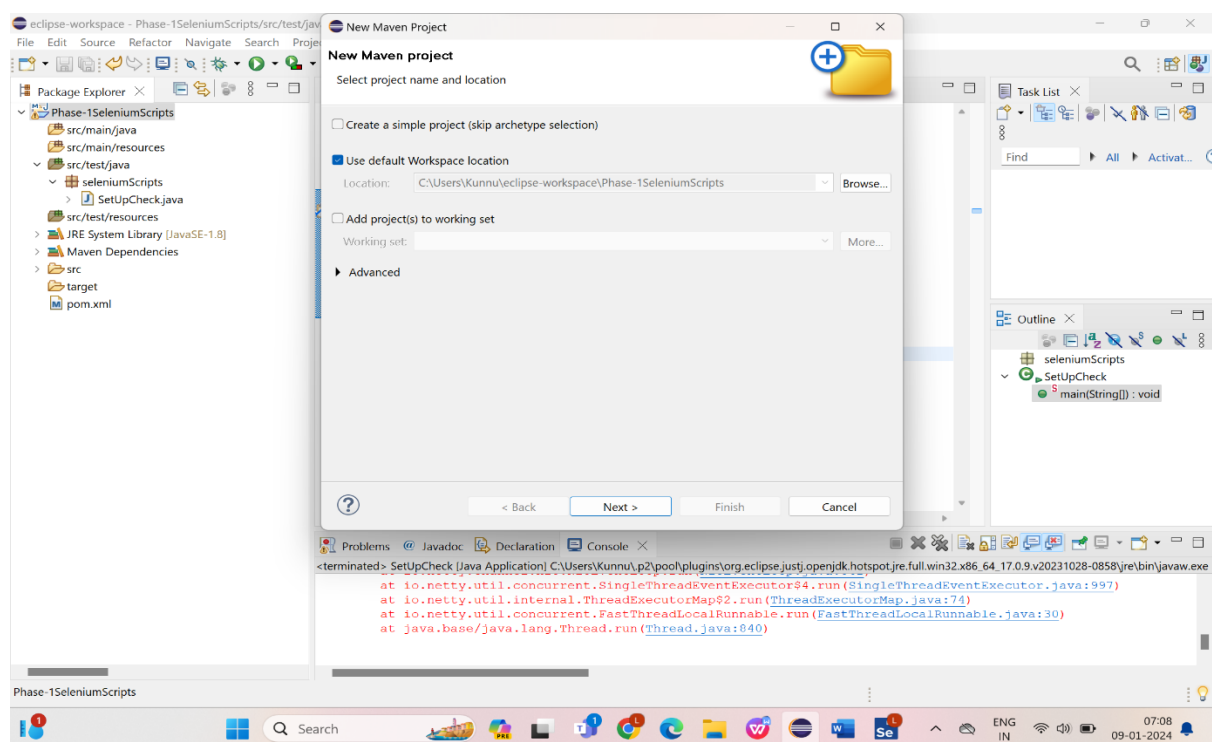
1.Features of Selenium:

Features:

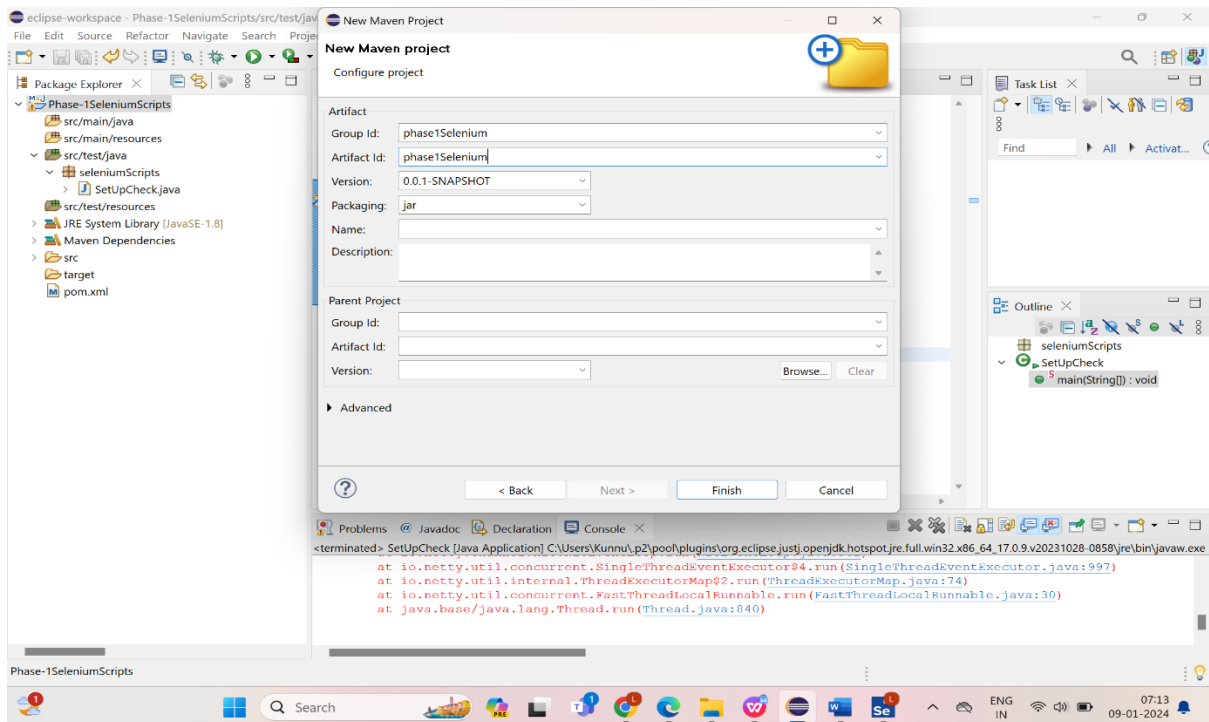
- It is not a complete tool, it is a small extension/plugin which can be downloaded for chrome and fire fox browsers
- It is a record and playbook
- It records user actions of manual execution of test and we save that test
- Using selenium IDE, we can play the test case again and again.
- This is a very simple and easy tool
- Suitable for testers who are new to testing
- gives you an idea about what is automation testing
- We may never use this tool for automation testing on major webpages
- You don't write any code or scripts in IDE

2.Selenium Web Driver is installed and Integrated in Eclipse:

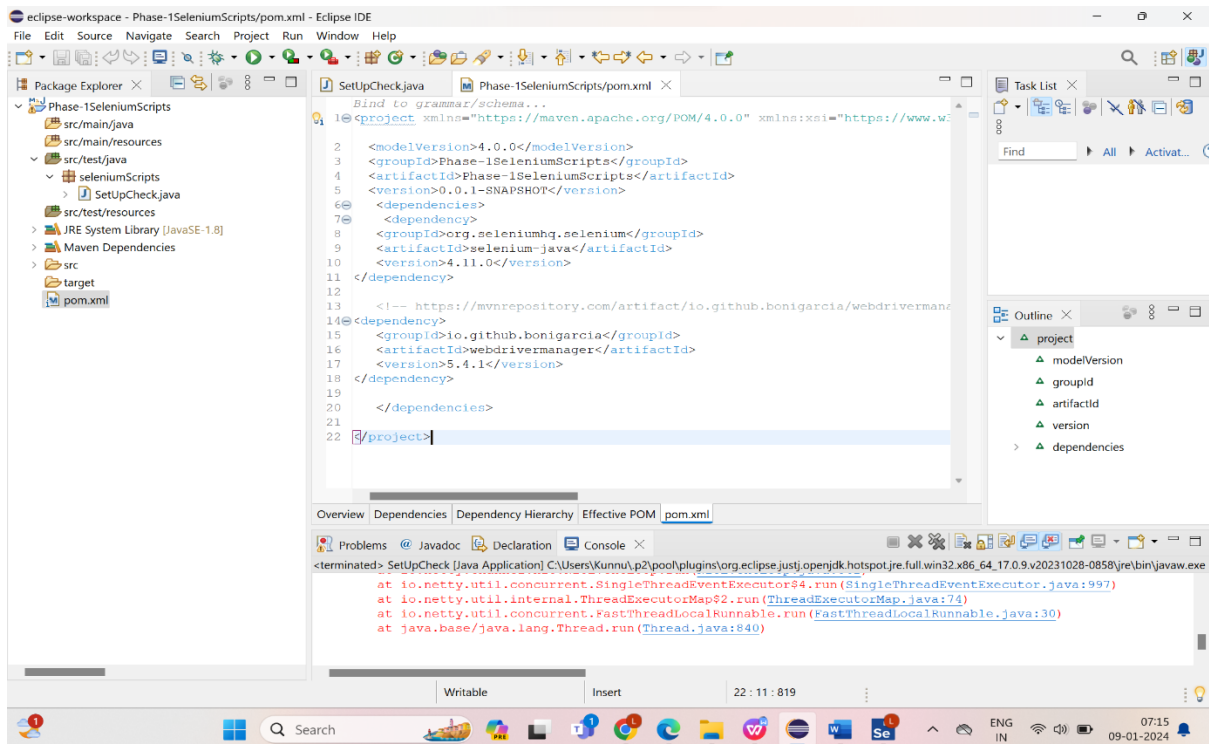
> Go to Eclipse → Go to file→ New project → Maven project → Select checkbox- Create a simple project -> pls make sure your workspace location is your default workspace location
If it is not default → uncheck the second checkbox→ from the drop down select the workspace.



Press Next → enter group id : Phase1-SeleniumScripts → enter artifact id = Phase1-SeleniumScripts -> click on Finish button



Double click on POM.xml file and open it

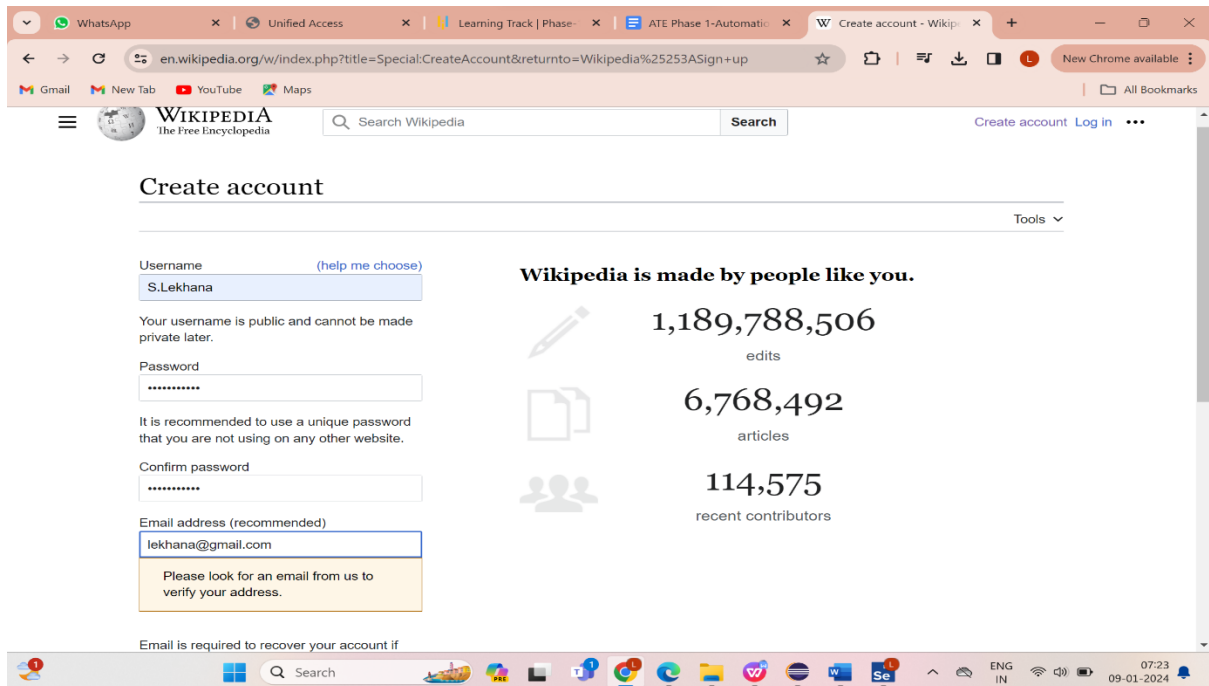


Your setup for selenium is now complete.

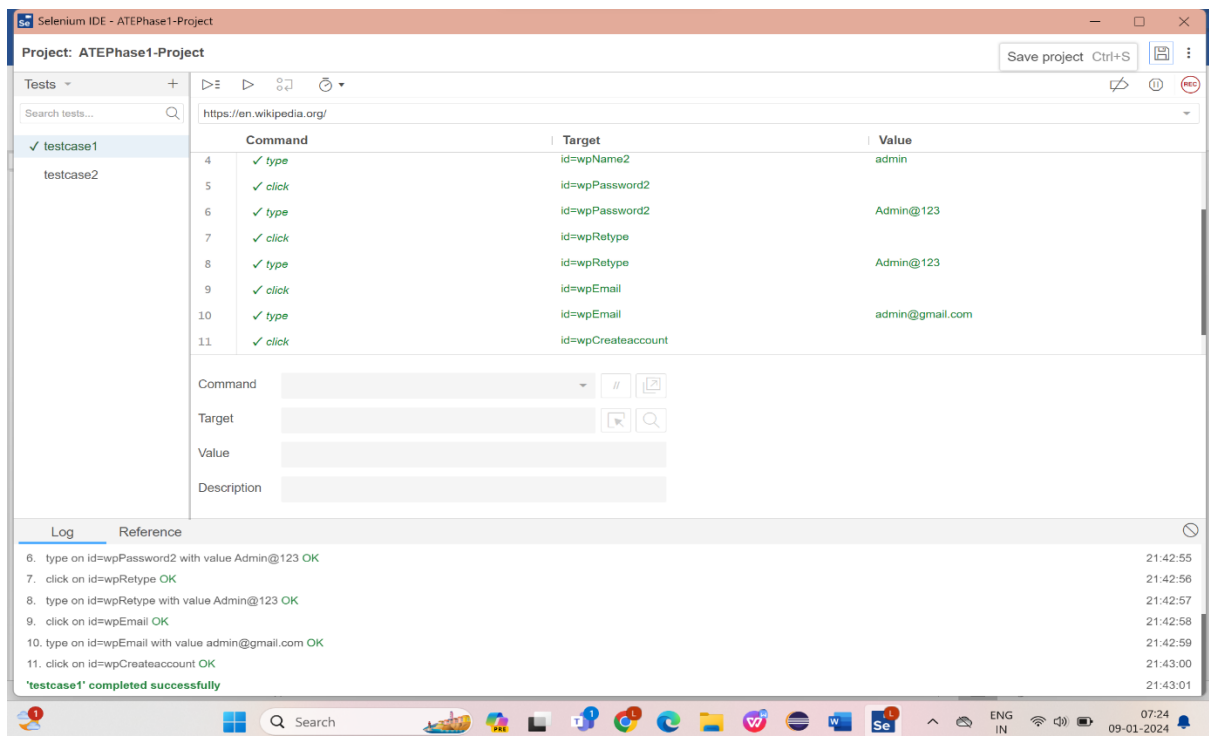
3. Demonstrate elements are located using selenium webdriver :

1. Open the Eclipse IDE and navigate to your SeleniumTest class.

2. Modify the code to interact with elements on a sample website. For this example, let's use the website.



Run the selenium test cases in java application



4. Demonstrate elements through css and xpath :

```
package SeleniumScripts;
```

```

import java.util.List;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.support.ui.Select;

public class DropDownXpath {

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

        // TODO Auto-generated method stub

        WebDriver driver = new ChromeDriver();

        driver.get("https://www.ironspider.ca/forms/dropdowns.htm");

        driver.manage().window().maximize();

        // write xpath for the main drop down not of the dropdown option

        // to handle drop down, selenium gives you a class Select class and method

        // Select dd = new Select(dropdownelement));

        Select dd = new Select(driver.findElement(By.xpath("//select[@name='coffee']")));

        // selectByIndex(),selectByVisibleText(),selectByValue() methods to select a
dropdown option

        dd.selectByIndex(1); // select with cream

        Thread.sleep(1500);

        dd.selectByValue("sugar");

        Thread.sleep(1500);

        dd.selectByVisibleText("Crisp (har har...)");

        // Get all the options from the dropdown and store it in a list object. Print it on console

        List<WebElement> li = dd.getOptions(); // this method returns a list of elements in the
dropdown

        System.out.println("The size of the list" + li.size());

        for(WebElement e:li)

        {

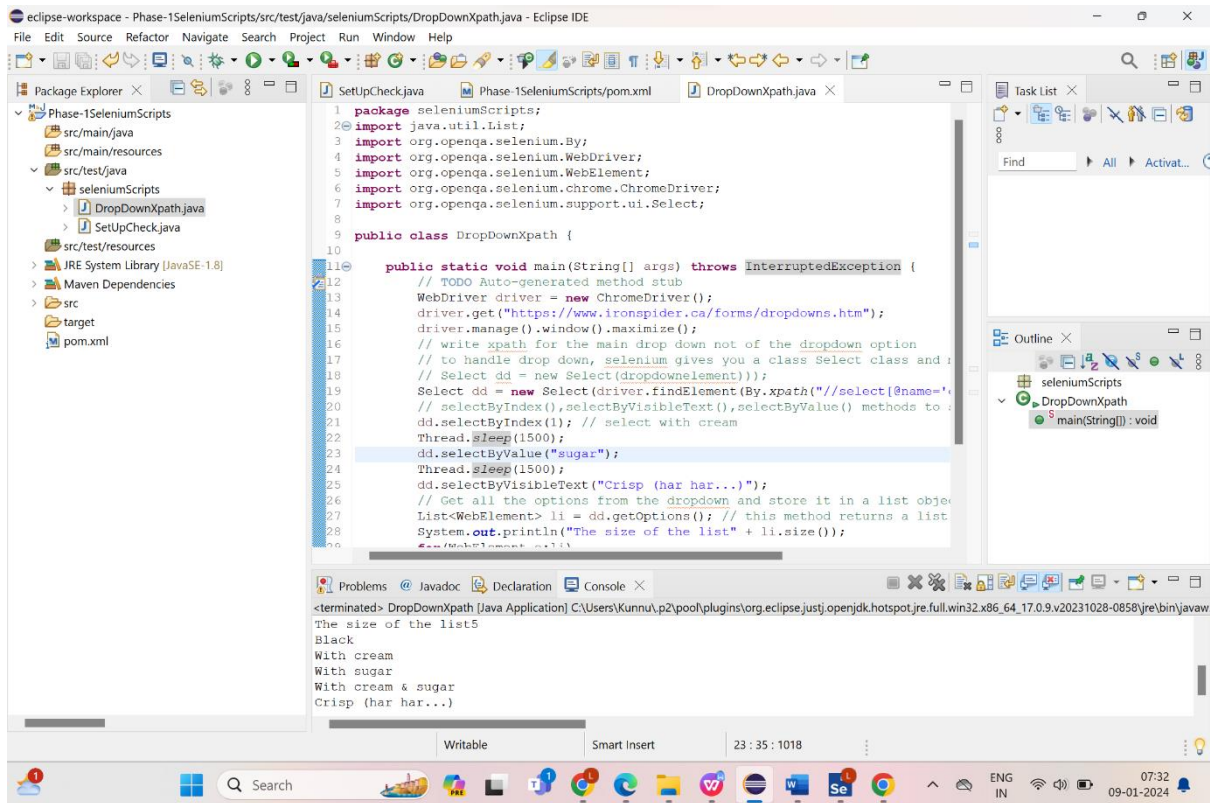
```

```
System.out.println(e.getText()); // get the each element in the list and print it.
```

```
}
```

```
}
```

```
}
```



5 . Demonstrate webelements handled in selenium :

```
package SeleniumScripts;  
  
import org.openqa.selenium.By;  
  
import org.openqa.selenium.WebDriver;  
  
import org.openqa.selenium.chrome.ChromeDriver;  
  
public class LocatorsIDNames {  
  
    public static void main(String[] args) {  
  
        // TODO Auto-generated method stub  
  
        WebDriver driver = new ChromeDriver();
```

```
driver.get("https://en.wikipedia.org/w/index.php?title=Special:CreateAccount&returnto=Wikipedia%3ASign+up");
```

```
driver.manage().window().maximize();
```

```
// find the element username and perform an action on it using id locator
```

```
// check if the element username is visible on the webpage
```

```
boolean display = driver.findElement(By.id("wpName2")).isDisplayed(); // returns true  
or false
```

```
System.out.println("the element is visible : " + display);
```

```
// check if the element username is enabled on the webpage
```

```
boolean enable = driver.findElement(By.id("wpName2")).isEnabled();
```

```
System.out.println("the element is enabled : " + enable);
```

```
// now enter the data in the text box
```

```
// sendKeys("inputdata") - method used to enter data in text box on webpage.
```

```
driver.findElement(By.id("wpName2")).sendKeys("admin");
```

```
/******
```

```
// Find the id locator for password field on the webpage
```

```
display = driver.findElement(By.id("wpPassword2")).isDisplayed(); // returns true or false
```

```
System.out.println("the element is visible : " + display);
```

```
enable = driver.findElement(By.id("wpPassword2")).isEnabled();
```

```
System.out.println("the element is enabled : " + enable);
```

```
driver.findElement(By.id("wpPassword2")).sendKeys("admin@123");
```

```
/******
```

```
// Find the name locator for retype password field on the webpage
```

```
display = driver.findElement(By.name("retype")).isDisplayed();
```

```
System.out.println("the element is visible : " + display);
```

```
enable = driver.findElement(By.name("retype")).isEnabled();
```

```
System.out.println("the element is enabled : " + enable);
```

```
driver.findElement(By.name("retype")).sendKeys("admin@123");
```

```
//Find the name locator for email field on the webpage
```

```
display = driver.findElement(By.name("email")).isDisplayed();
```

```
System.out.println("the element is visible : " + display);
```

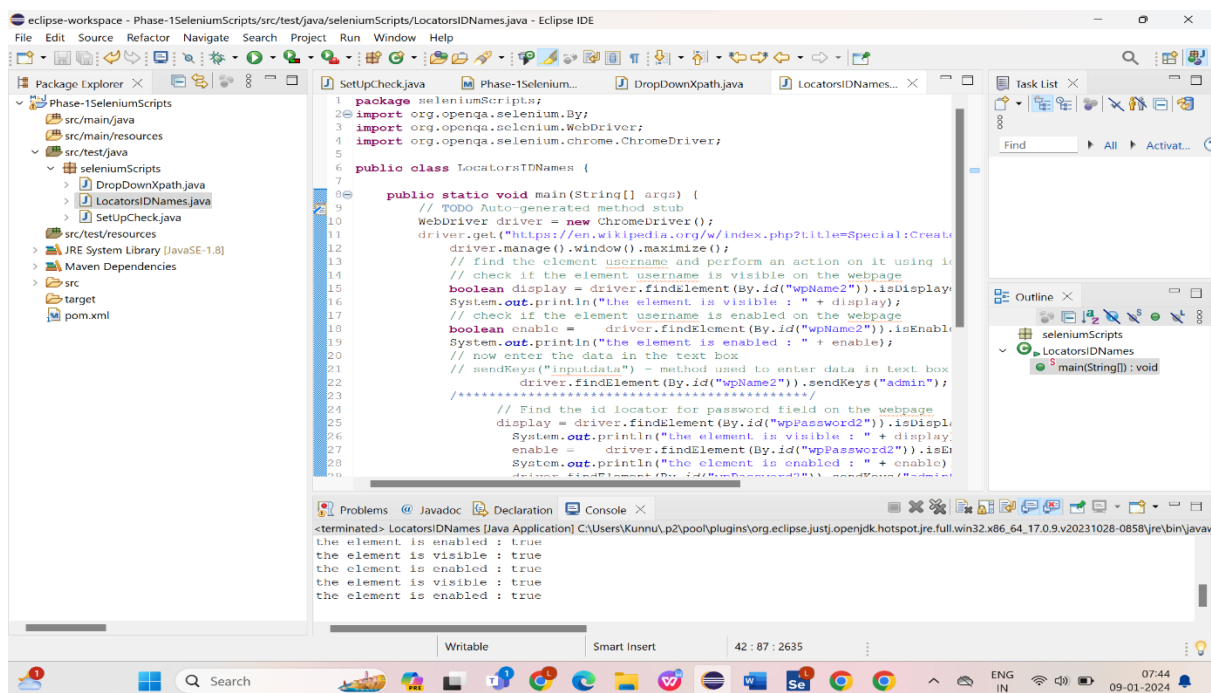
```
enable = driver.findElement(By.name("email")).isEnabled();
```

```
System.out.println("the element is enabled : " + enable);
```

```
driver.findElement(By.name("email")).sendKeys("admin@gmail.com");
```

```
}
```

```
}
```



6 . Demonstrate Calendars on web page :

```
package SeleniumScripts;
```

```
import org.openqa.selenium.By;
```

```
import org.openqa.selenium.WebDriver;
```

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

```
public class CalenderDemo {
```

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

```
        // TODO Auto-generated method stub
```

```

WebDriver driver = new ChromeDriver();

        driver.manage().window().maximize();

driver.get("https://seleniumpractise.blogspot.com/2016/08/how-to-handle-calendar-in-selenium.html");

        // Click on the text box field , so that the calendar is displayed.

driver.findElement(By.xpath("//div[@class='date-posts']/descendant::input")).click();

Thread.sleep(1500);

        // On the calendar lets inspect the month and year tab and print the month and year
text

String monthyear = driver.findElement(By.xpath("//div[@class='ui-datepicker-
title']")).getText();

System.out.println(monthyear); // January 2024

// Split the String monthyear in to 2 new strings

// Create a new array object that will store the string month and year

String my[] = monthyear.split(" "); // split based on the space

String month = my[0]; //January

String year = my[1]; //2024

// write a loop

while(!(month.equals("August") && year.equals("2025")))

{

        //click on the next button in the calendar

driver.findElement(By.xpath("//span[text()='Next']")).click();

        // come out of the loop

monthyear = driver.findElement(By.xpath("//div[@class='ui-datepicker-
title']")).getText();

        month = monthyear.split(" ")[0];

year = monthyear.split(" ")[1];

}

// select the date : //a[text()='8']

```



```

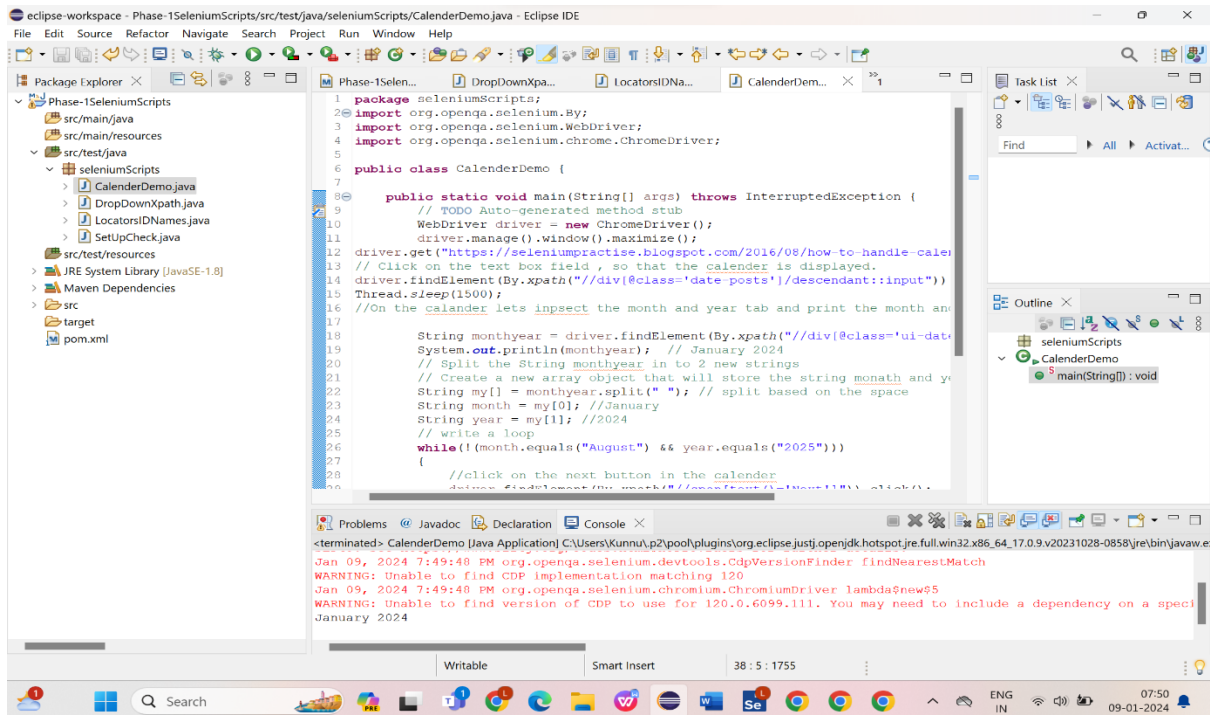
        //table[@class='ui-datepicker-calendar']/descendant::a[8]

        driver.findElement(By.xpath("//table[@class='ui-datepicker-
calendar']/descendant::a[8]")).click();

    }

}

```



7 . Using selenium web driver, write program to handle alerts :

```

package SeleniumScripts;

import org.openqa.selenium.Alert;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.chrome.ChromeDriver;

public class AlertBox {

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

        // TODO Auto-generated method stub

        WebDriver driver = new ChromeDriver();
    }
}

```

```

        driver.manage().window().maximize();

        driver.manage().deleteAllCookies();

        driver.get("https://mail.rediff.com/cgi-bin/login.cgi");

        // just click on Sign in button without enter username and password. An alert box will be displayed

        driver.findElement(By.xpath("//input[@type='submit']")).click();

        // to perform actions on alertbox, switch to it

        Thread.sleep(2000);

        Alert a = driver.switchTo().alert();

        // get the text from alert

        String text = a.getText();

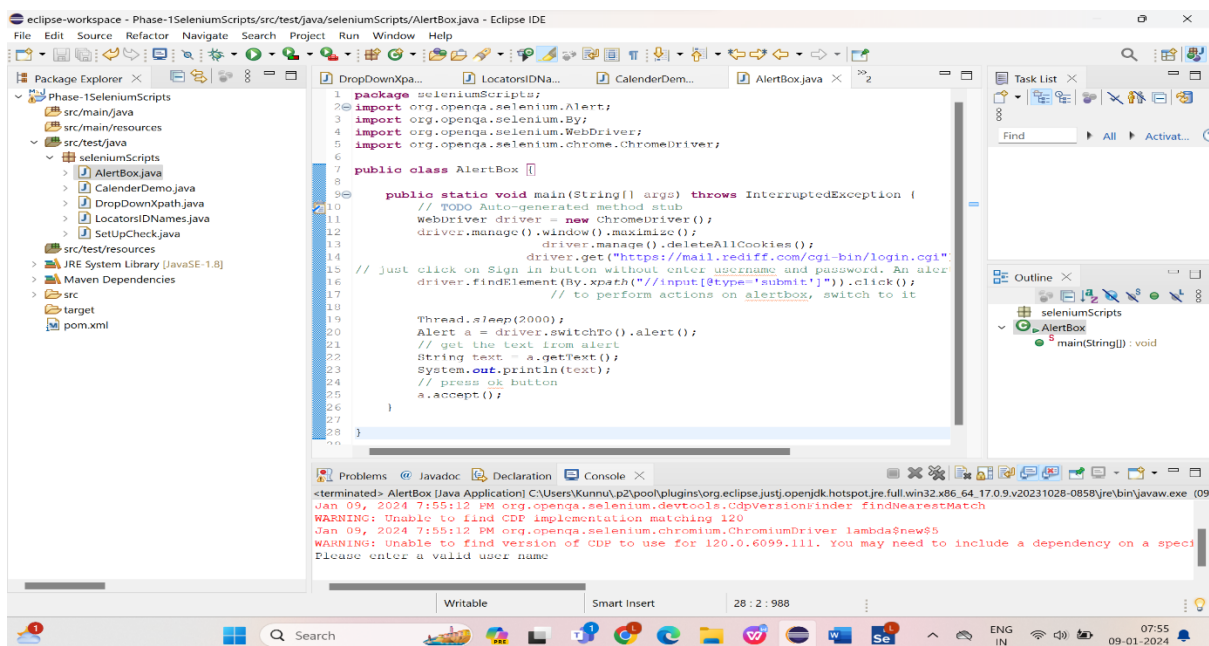
        System.out.println(text);

        // press ok button

        a.accept();

    }
}

```



8 . Demonstrate screenshots are captured and browser profiles are changed in selenium

```

package SeleniumScripts;

import java.io.File;

import java.io.IOException;

import org.apache.commons.io.FileUtils;

import org.openqa.selenium.OutputType;

import org.openqa.selenium.TakesScreenshot;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.chrome.ChromeDriver;

public class Screenshots {

    public static void main(String[] args) throws IOException {

        // TODO Auto-generated method stub

        WebDriver driver = new ChromeDriver();

        driver.manage().window().maximize();

        driver.manage().deleteAllCookies();

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

        // take screenshot of current window and save it in a file

        // Use class TakesScreenshot and method -> getScreenshotAs

        File srcFile = ((TakesScreenshot)driver).getScreenshotAs(OutputType.FILE);

        // Screenshot is saved in the object srcFile

        // In the current project --> create a folder Screenshot--> create a file with name
opera1.png

        File destFile = new File("./Screenshot/opera1.png");

        FileUtils.copyFile(srcFile, destFile);

        /*Copies a file to a new location preserving the file date.

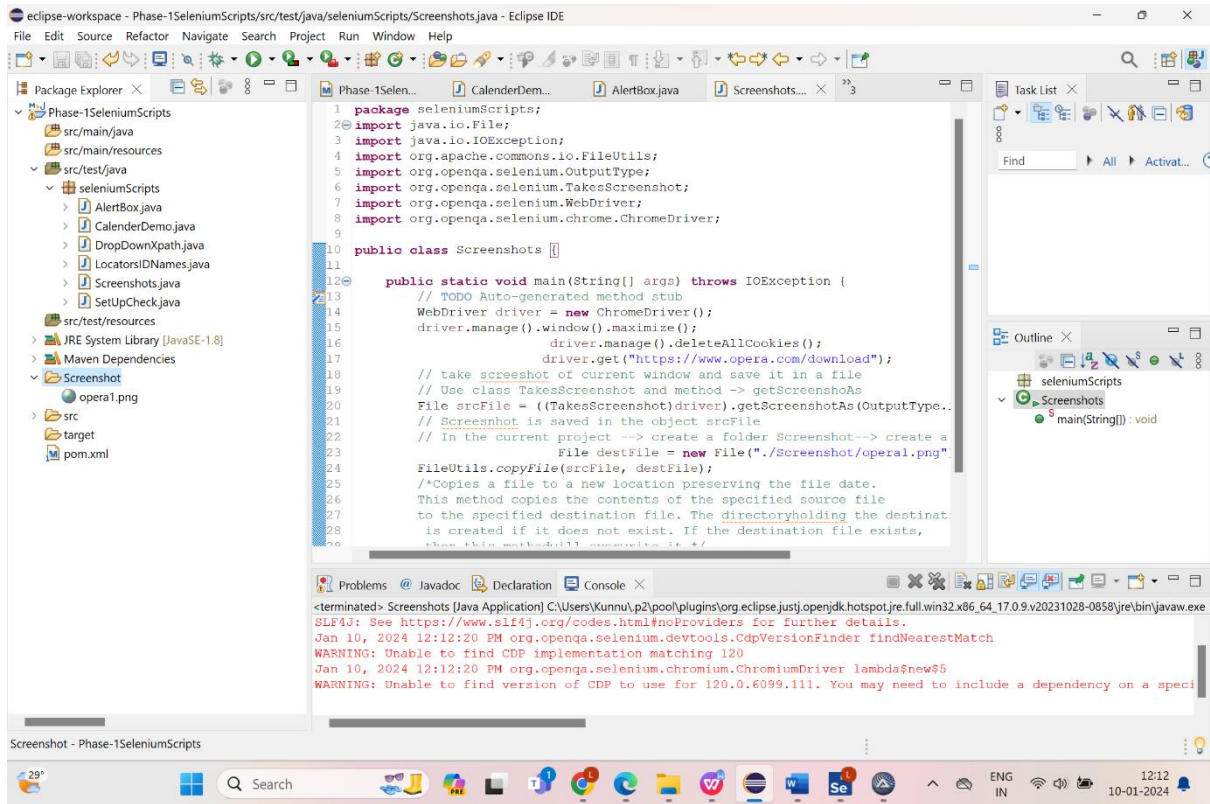
        This method copies the contents of the specified source file

        to the specified destination file. The directory holding the destination file

        is created if it does not exist. If the destination file exists,

        then this method will overwrite it */

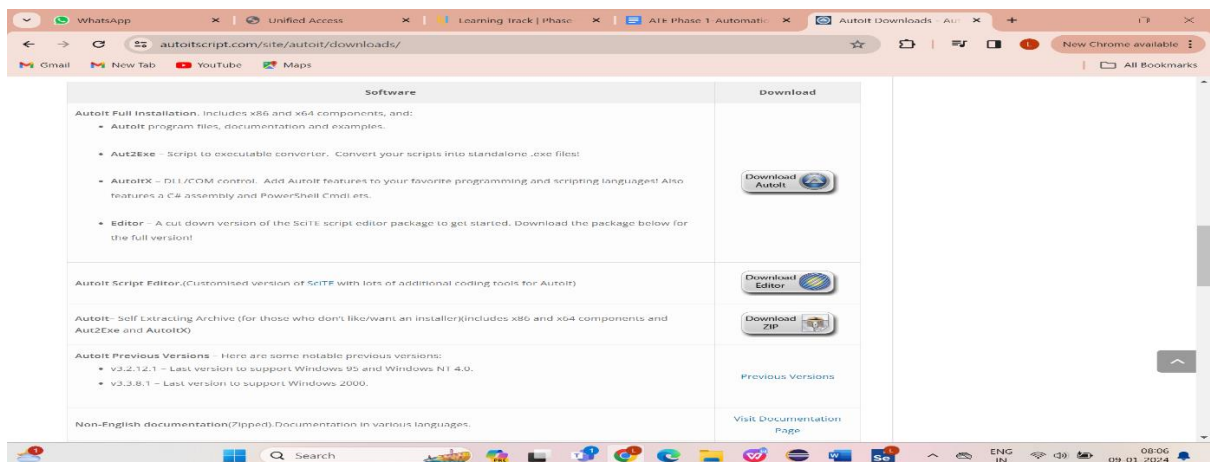
```



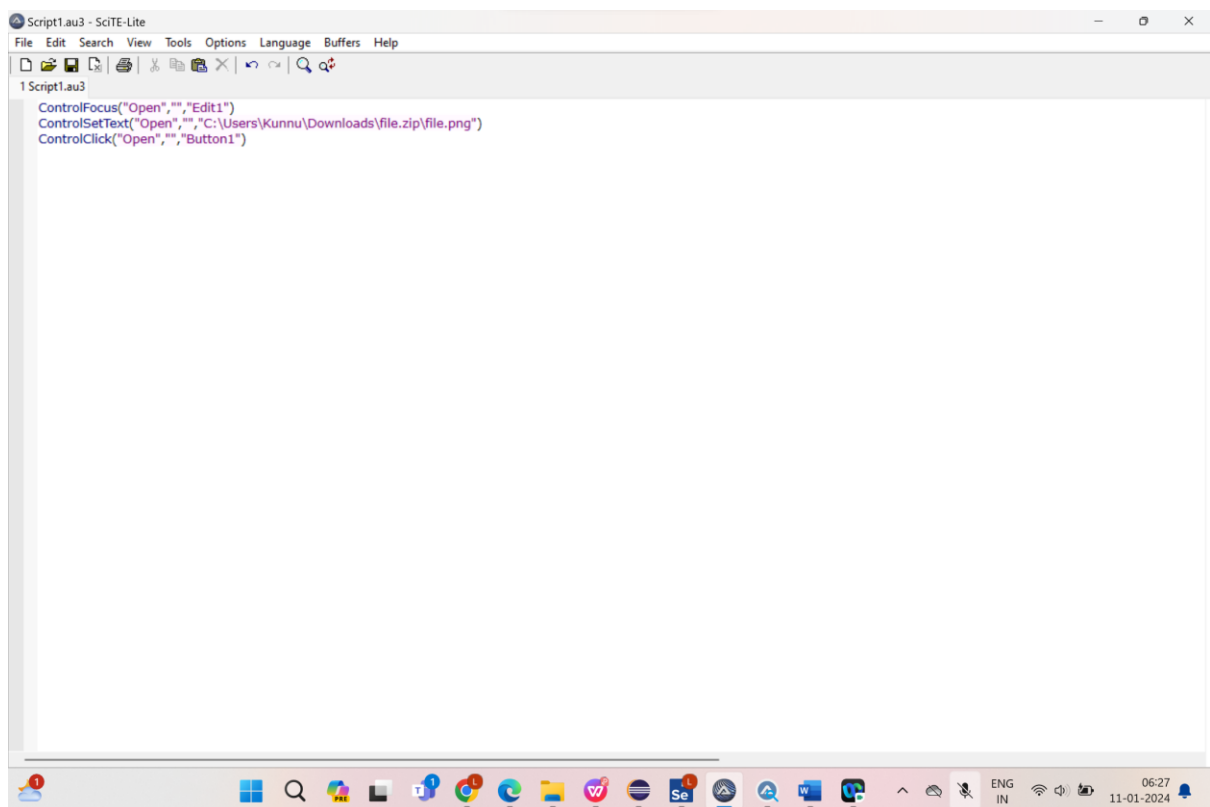
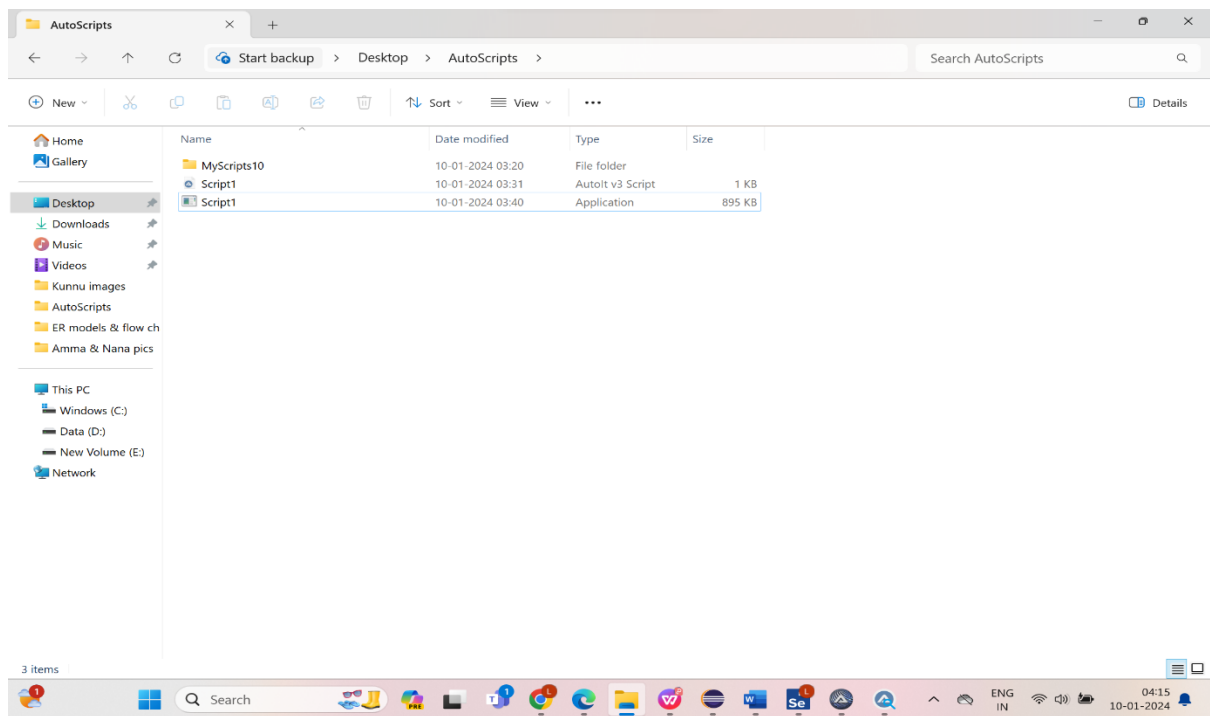
9. Demonstrate installation and configuration of auto it :

1. Download Auto IT

<https://www.autoitscript.com/site/autoit/downloads/>



2. Click on Auto IT & Editor to download.



10.Demonstrate how file uploads are handled in Auto IT:

```
package seleniumScripts;
import java.io.IOException;
```

```

import java.time.Duration;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import
org.openqa.selenium.support.ui.ExpectedConditions;
import org.openqa.selenium.support.ui.WebDriverWait;
public class AutoItDemo {
    public static void main(String[] args) throws
IOException {
        // TODO Auto-generated method stub

        WebDriver driver = new ChromeDriver();
        driver.manage().window().maximize();
        driver.manage().deleteAllCookies();

        driver.get("https://www.remove.bg/");

        WebDriverWait wait = new
WebDriverWait(driver, Duration.ofSeconds(10));

        // wait until the given condition is
satisfied

        wait.until(ExpectedConditions.visibilityOfElement
Located(By.xpath("//div[@class='mx-auto w-full px-8
max-w-5xl relative']/descendant::button[1]")));

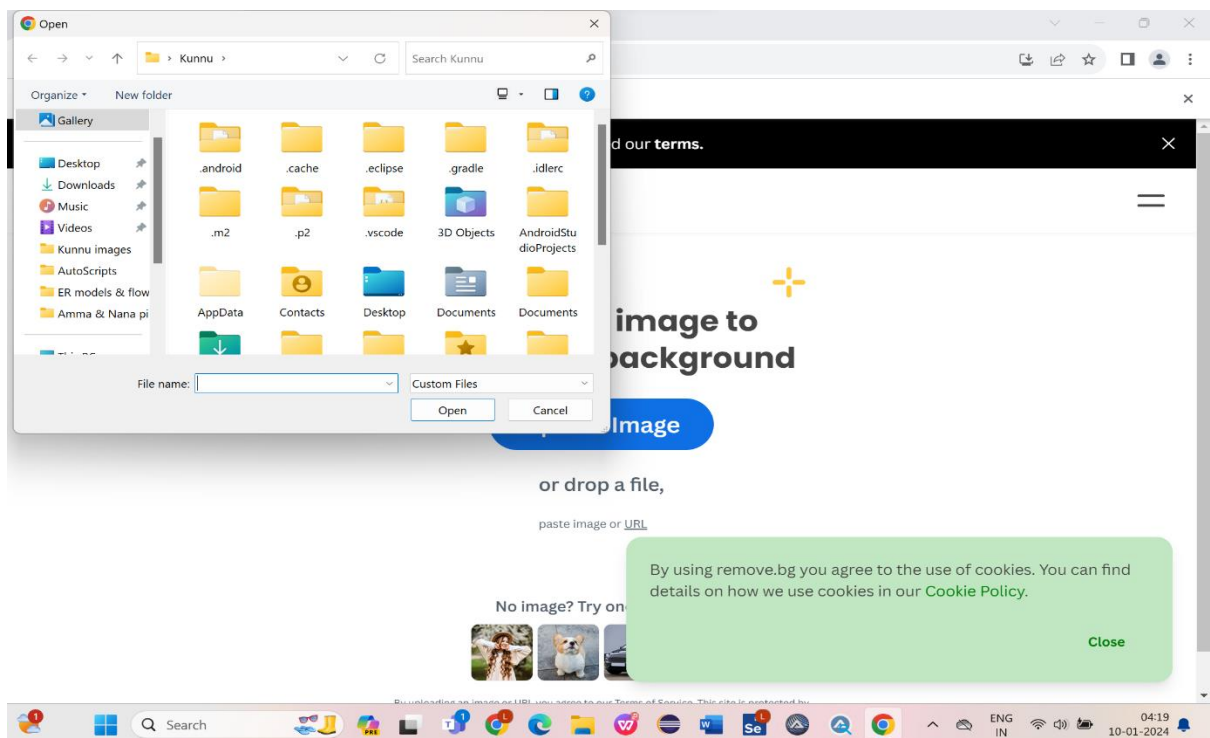
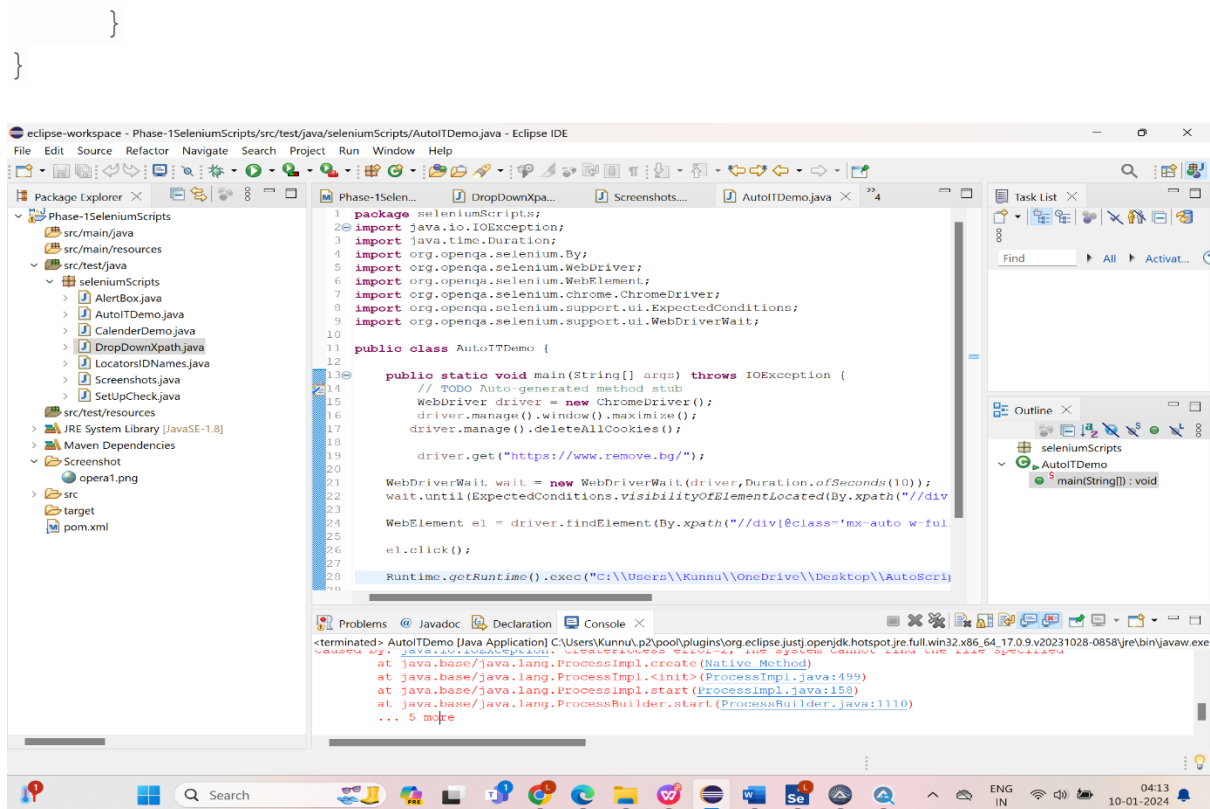
        WebElement e1 =
driver.findElement(By.xpath("//div[@class='mx-auto w-
full px-8 max-w-5xl
relative']/descendant::button[1]"));

        e1.click();

        // selenium to run the autoID compiled script

        Runtime.getRuntime().exec("C:\\Users\\sonal\\Desk
top\\AutiiScripts\\myscripts09\\Script1.exe");

```



11. UI testing in selenium:

```
package demo;
import java.time.Duration;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.ExpectedConditions;
import org.openqa.selenium.support.ui.WebDriverWait;
import org.sikuli.script.FindFailed;
import org.sikuli.script.Pattern;
import org.sikuli.script.Screen;
public class SkuliUploadFile {
    public static void main(String[] args) throws InterruptedException, FindFailed {
        // TODO Auto-generated method stub
        WebDriver driver = new ChromeDriver();
        driver.manage().window().maximize();
        driver.manage().deleteAllCookies();
        driver.get("https://www.remove.bg/");
        Thread.sleep(4000);
        WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(10));
        // wait until the given condition is satisfied
        wait.until(ExpectedConditions.visibilityOfElementLocated(By.xpath("//div[@class='mx-auto w-full px-8 max-w-5xl relative']/descendant::button[1]")));
        WebElement e1 = driver.findElement(By.xpath("//div[@class='mx-auto w-full px-8 max-w-5xl relative']/descendant::button[1]"));
        e1.click();
        Screen s = new Screen();
        Pattern textfield = new Pattern("C:\\sikuli\\image10.png");
        Pattern openButton = new Pattern("C:\\sikuli\\image101.png");
        s.wait(textfield, 20);
        s.type(textfield, "C:\\Users\\OneDrive\\Documents\\ATE-Phase1-SL\\sikulidemo");
        s.click(openButton);
    }
}
```

12. JDBC Selenium :

```
package seleniumScripts;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.SQLException;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
public class SeleniumHJDBC {
    public static void main(String[] args) throws ClassNotFoundException, SQLException {
        // TODO Auto-generated method stub
        WebDriver driver = new ChromeDriver();
        driver.manage().window().maximize();
        // go to webpage, fetch its URL and title and store in a DB
        driver.get("https://www.facebook.com/");
        String URL = driver.getCurrentUrl();
        String title = driver.getTitle();
        // send the URL and title to the DB
        String dburl = "jdbc:mysql://localhost:3306/seleniumtest";
        String username = "root";
        String password = "root";
        Class.forName("com.mysql.cj.jdbc.Driver");
    }
}
```



```

Connection con = DriverManager.getConnection(dburl, username, password);
PreparedStatement ps = con.prepareStatement("insert into webtest values(?,?)");
ps.setString(1, title);
ps.setString(2, URL);
ps.executeUpdate();
driver.navigate().to("https://www.selenium.dev/downloads/");
URL = driver.getCurrentUrl();
title = driver.getTitle();
ps = con.prepareStatement("insert into webtest values(?,?)");
ps.setString(1, title);
ps.setString(2, URL);
ps.executeUpdate();
con.close();
}
}

```

