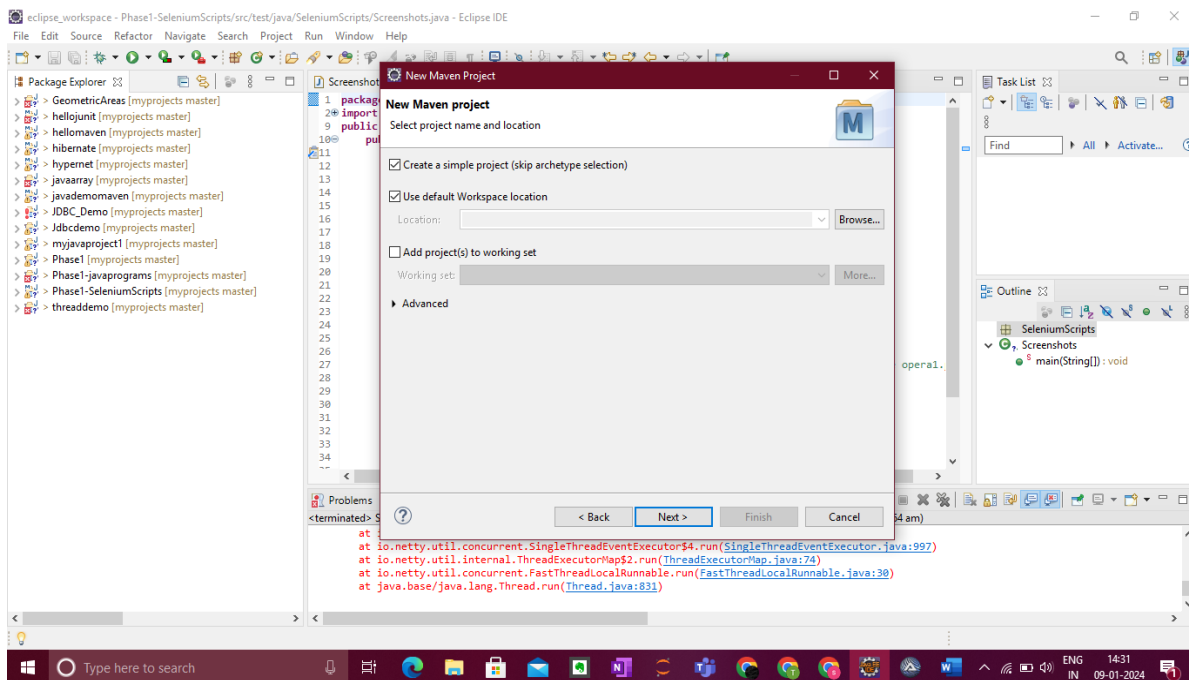


## 1. Demonstrate the features of Selenium :

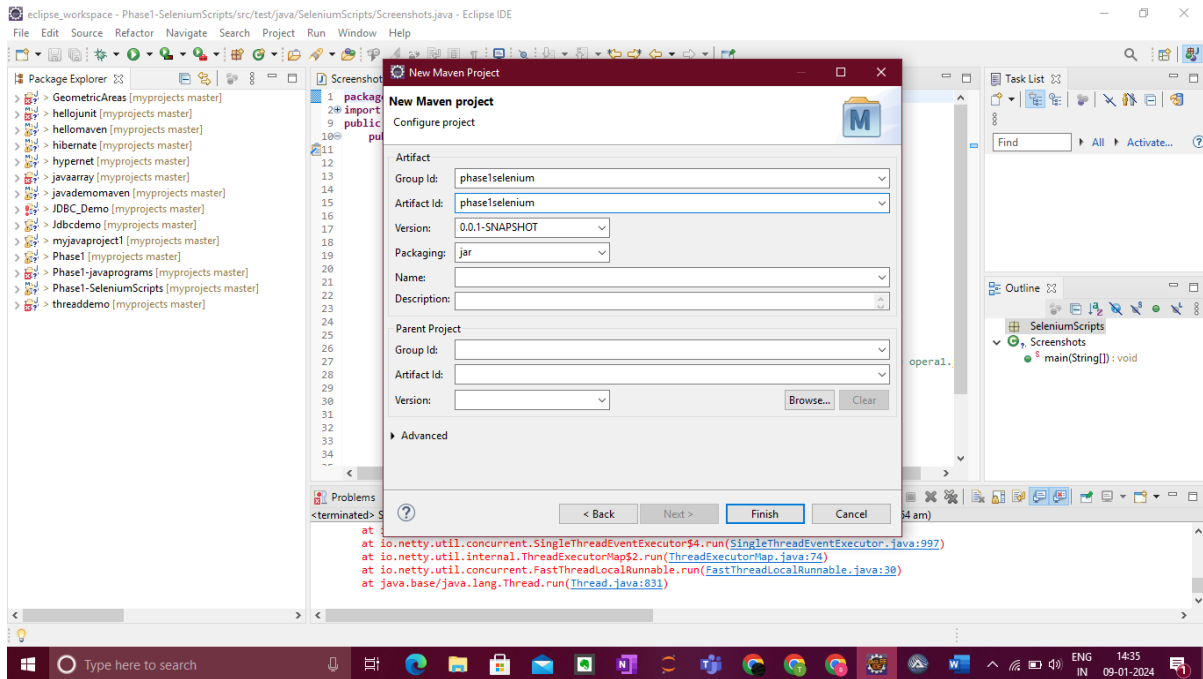
- Selenium webdriver is the main component of Selenium tools
- This tool has no front end, we will install it in our Eclipse
- It is a java library that has to be added in the eclipse java project
  - Add it manually
  - Add it automatically by using Maven project
- Using selenium webdriver, we will write selenium automation scripts
- You write the script once and same works on all browsers
- All the complex automation testing will be done using webdriver component only
- Support testing on all browsers and all OS
- Webdriver can be integrated with other frameworks like testNG, cucumber, apache poi
- Data driven testing, parametrization of scripts
- Prioritization, pre condition & post condition
- Generate test reports

## 2. Demonstrate selenium web driver installed and integrated in eclipse :

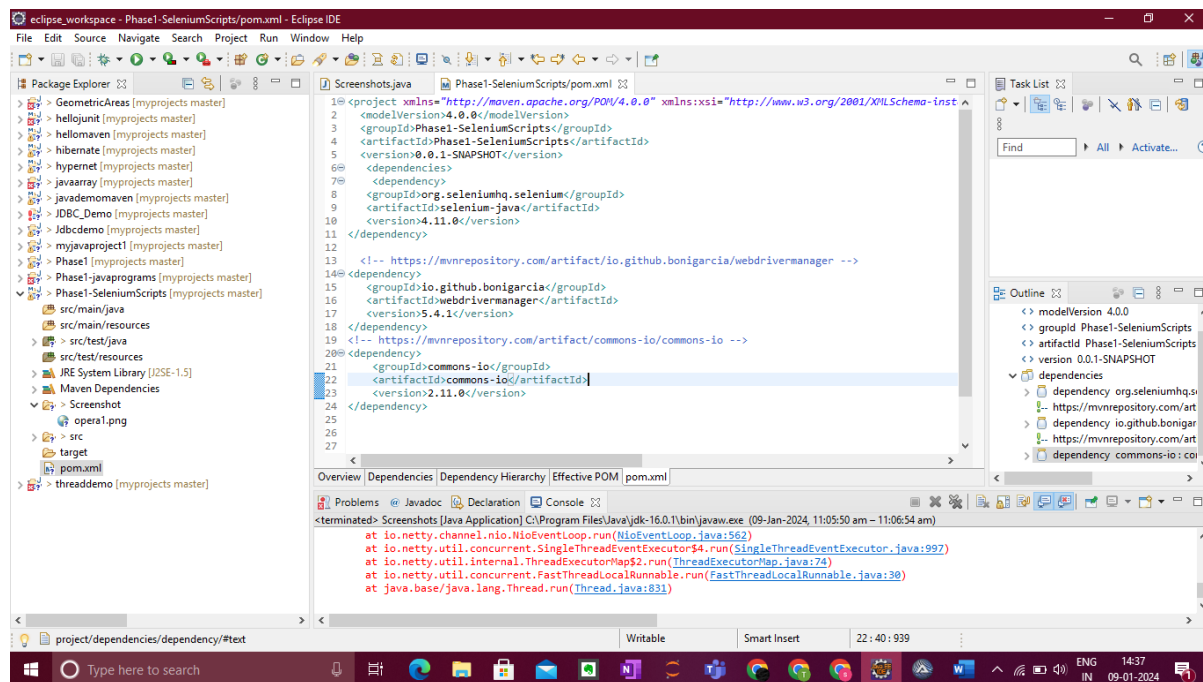
> Go to Eclipse → Go to file → New project → Maven project → Select checkbox- Create a simple project -> pls make sure your workspace location is your default workspace location  
If it is not default → uncheck the second checkbox → from the drop down select the workspace.



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



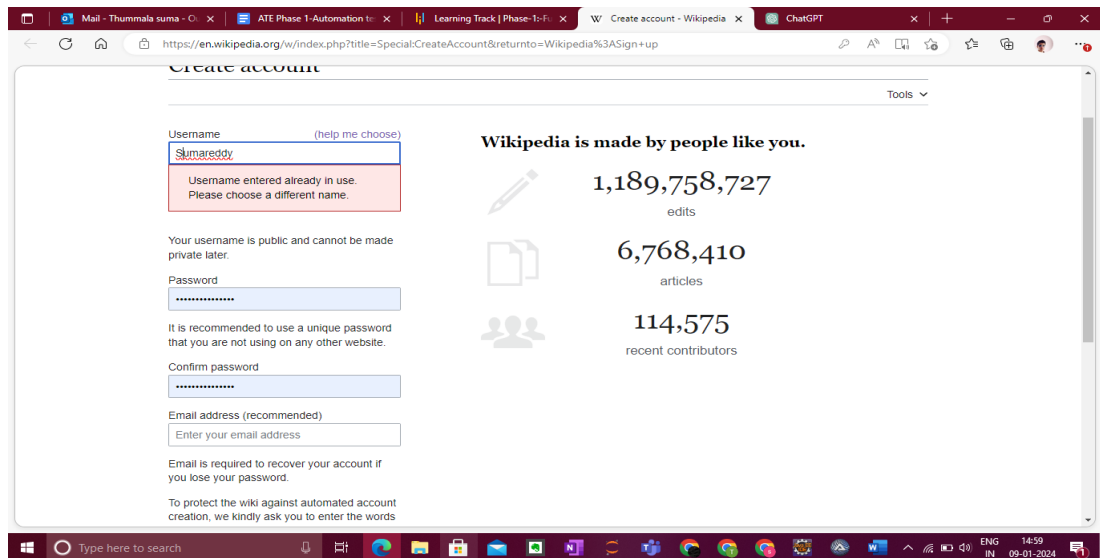
Double click on POM.xml file and open it



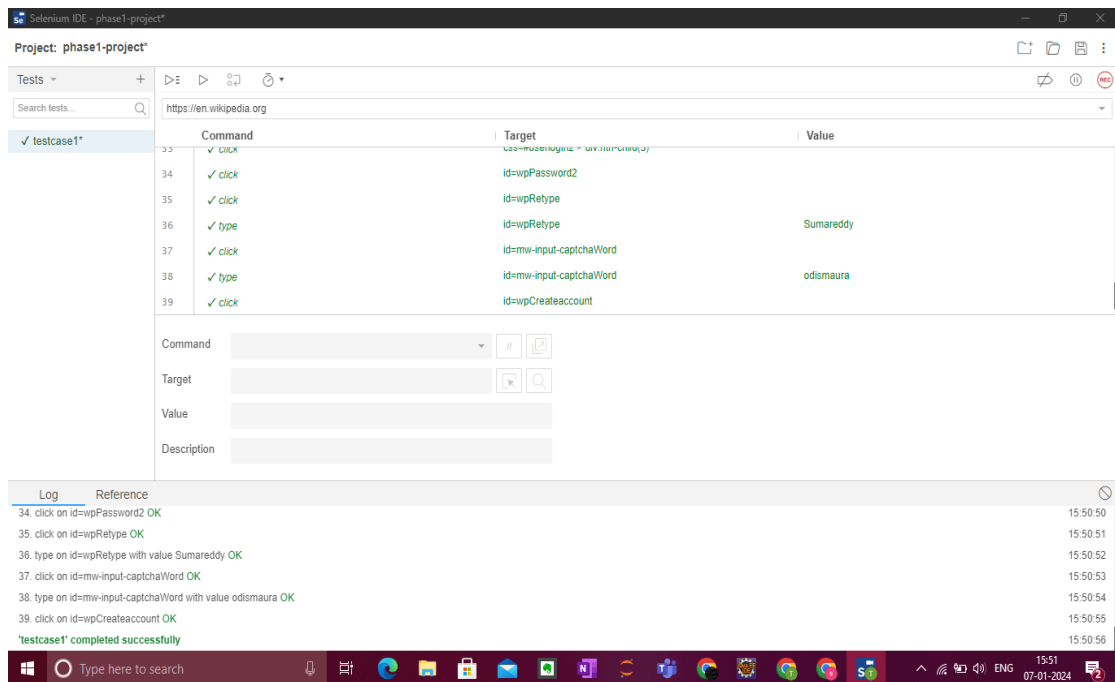
Your setup for selenium is now complete.

### 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)

        {

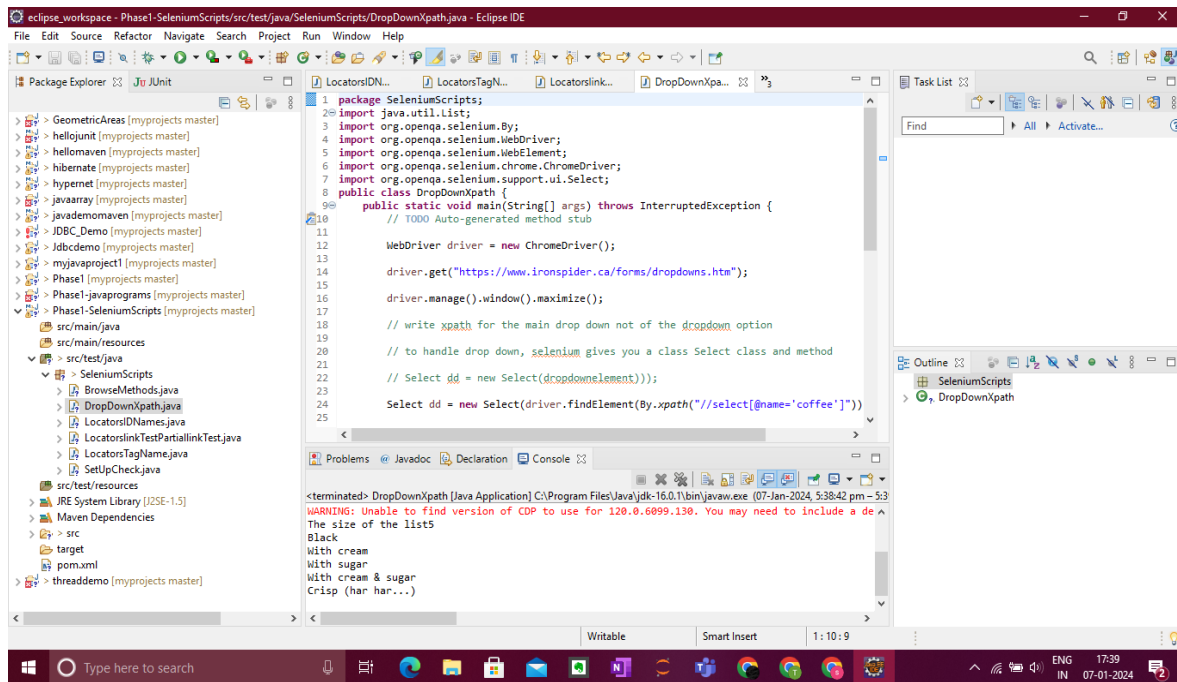
            System.out.println(e.getText()); // get the each element in the list and print it.

        }

    }

}

```



## 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);

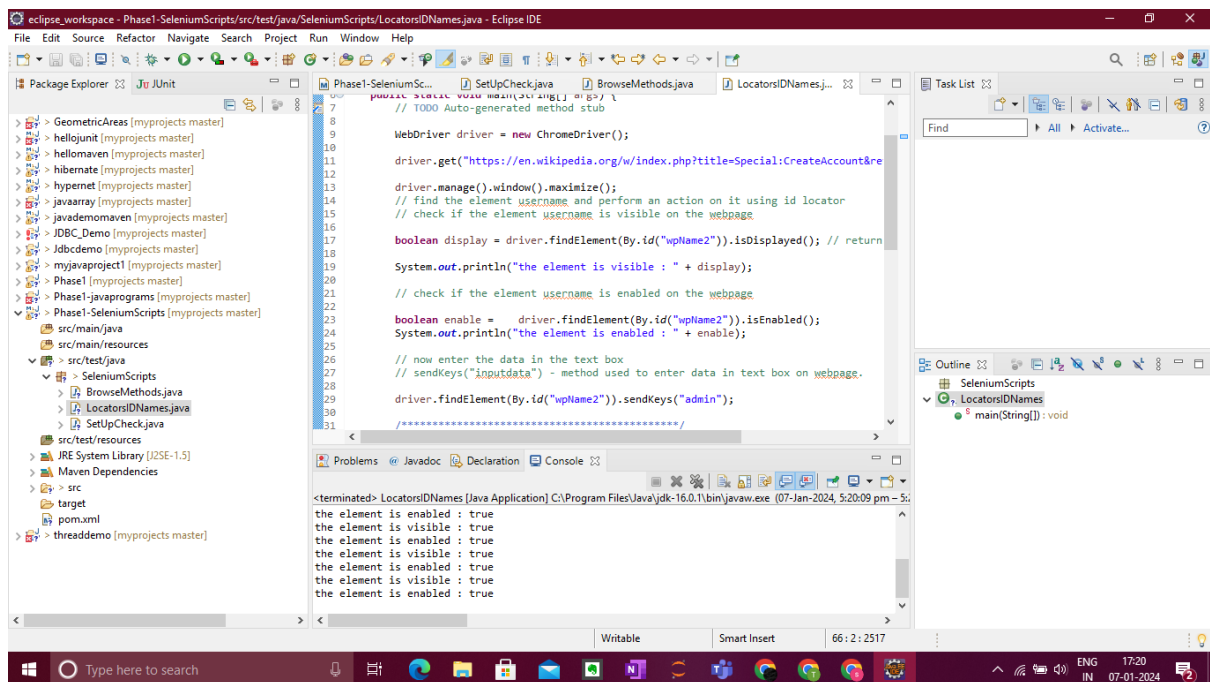
driver.findElement(By.name("email")).sendKeys("admin@gmail.com");

```

```

}}

```



**6 . Demonstrate calenders 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 calender is displayed.
```

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

```
Thread.sleep(1500);
```

```
// On the calander 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 monath 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 calender

            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]

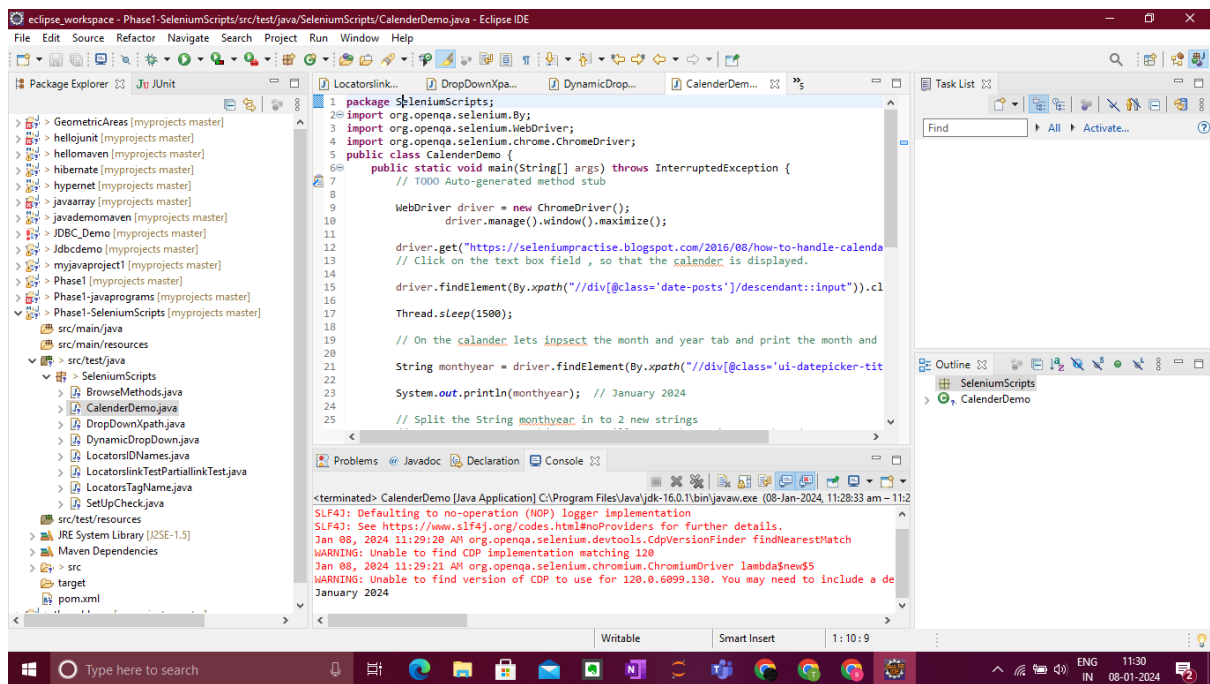
        driver.findElement(By.xpath("//table[@class='ui-datepicker-
calendar']/descendant::a[8]")).click();

    }

}

```





## 7 . Usind selenium webdriver,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);

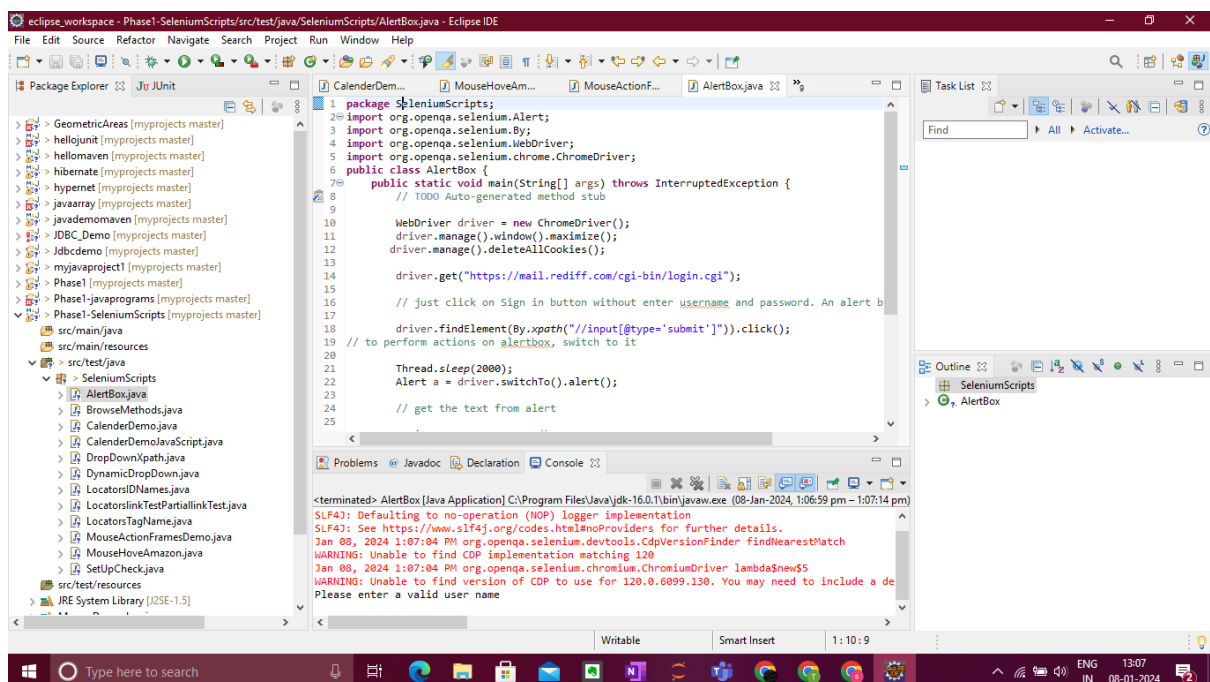
// press ok button

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

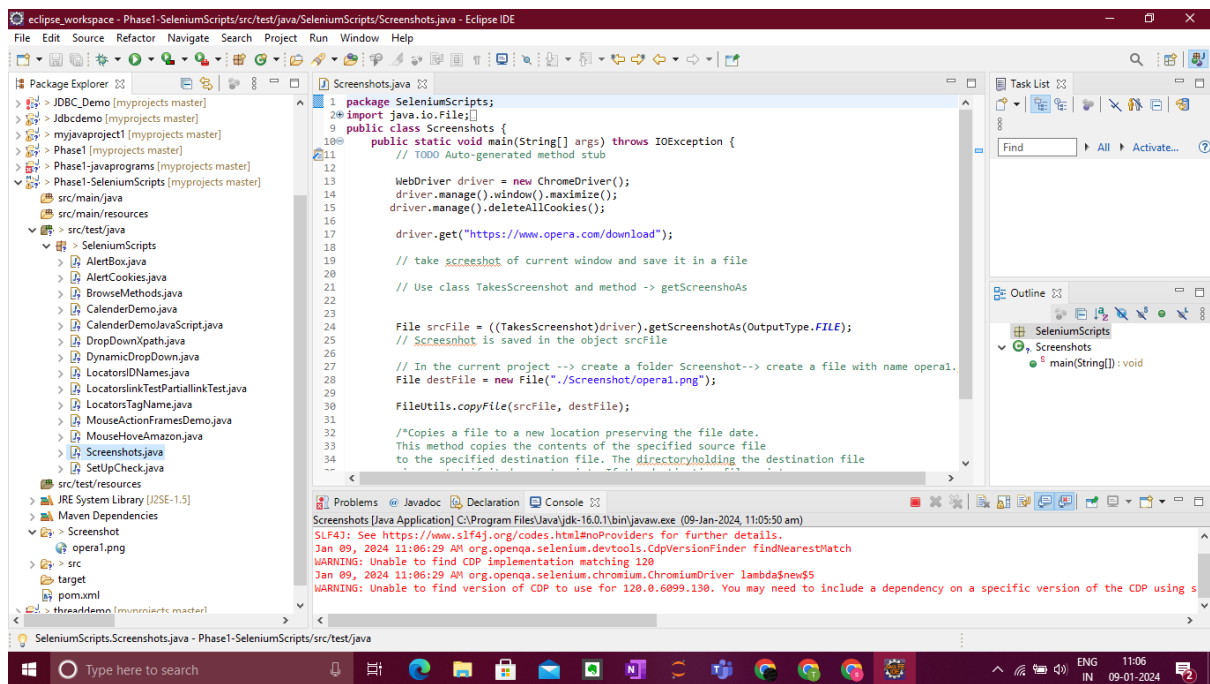
        is created if it does not exist. If the destination file exists,

        then this method will overwrite it */

    }

}

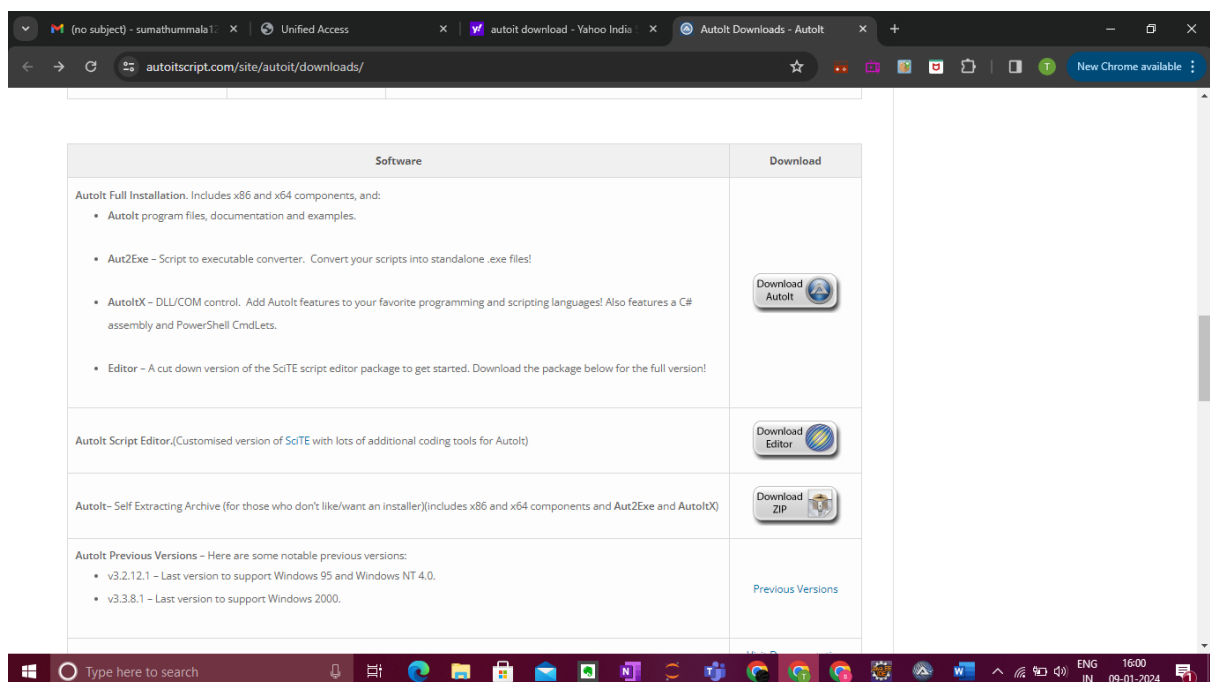
```



## 9. Demonstrate installation and configuration of AutoIT :

### 1. Download AutoIT

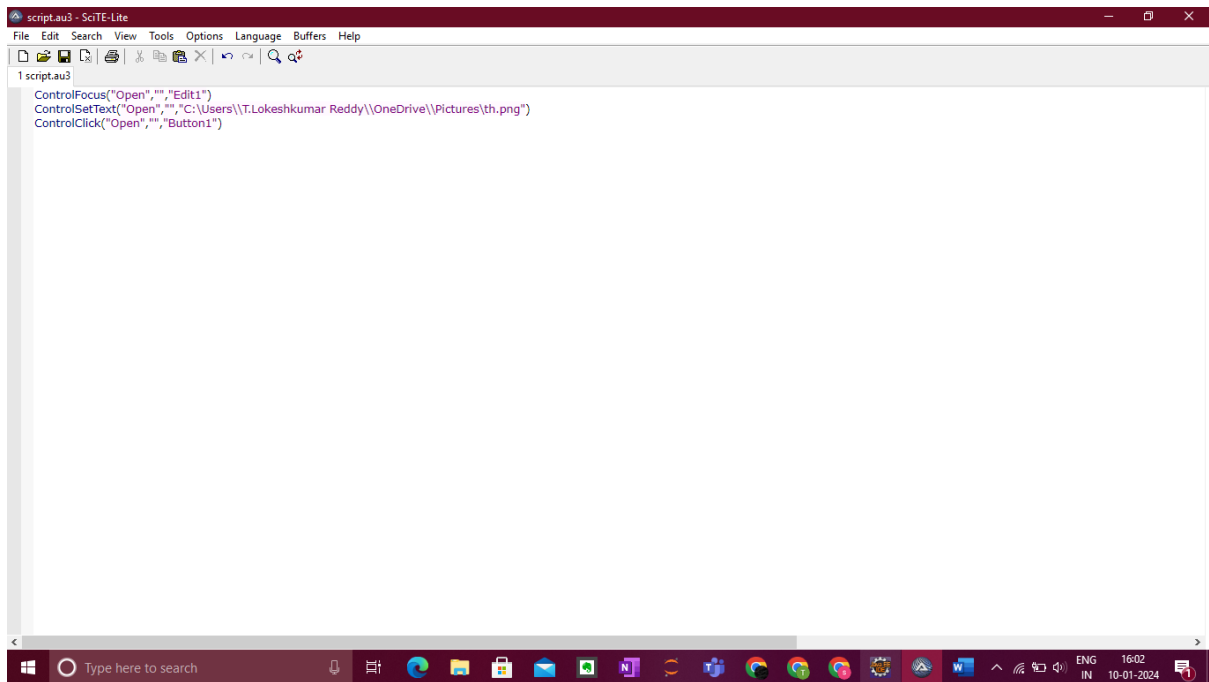
<https://www.autoitscript.com/site/autoit/downloads/>



Write the script in editor

Save the script

Open the folder where the script is → right click on the script → show more options and compile it



## 10. Files uploads are handled in autoit :

```
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 AutotIDemo {
    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.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]"));

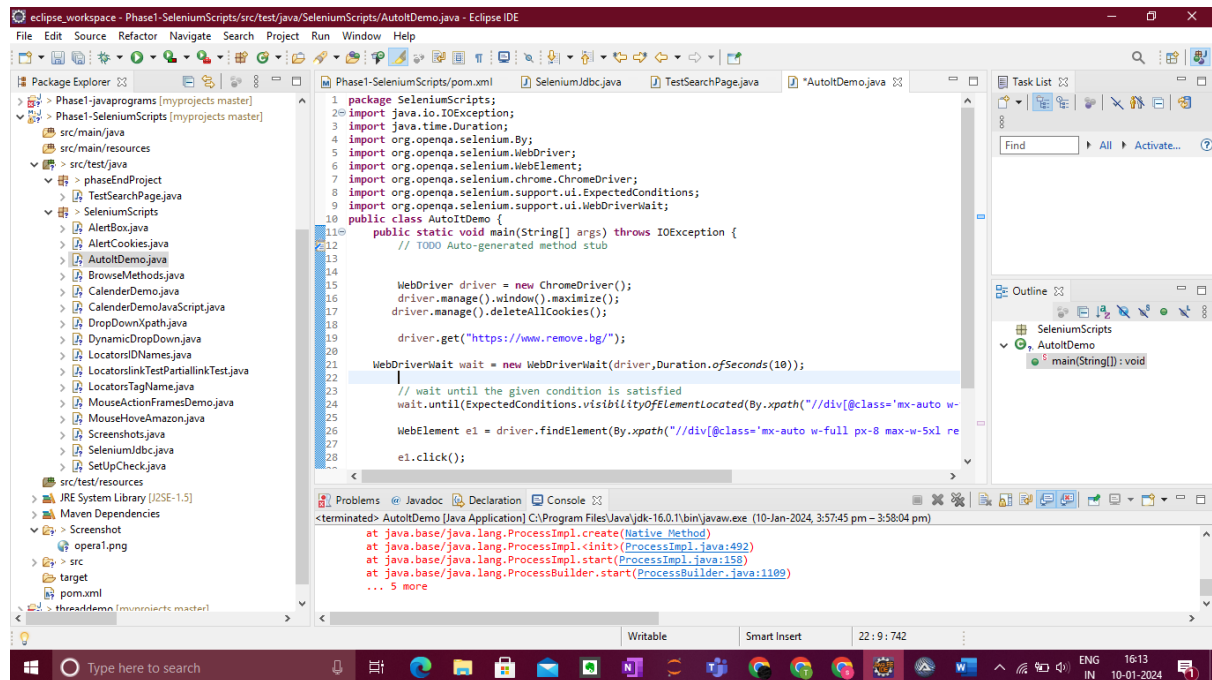
        e1.click();

        // selenium to run the autoID compiled script
```

```

Runtime.getRuntime().exec("C:\\Users\\T.Lokeshkumar
Reddy\\OneDrive\\Documents\\MY SCRIPTS\\Script.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 SkuiliUploadFile {
    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();
    }
}

```

