

1) What is Automation Testing?

Automation testing is the process of using specialized tools or scripts to execute test cases automatically, compare actual results with expected outcomes, and report defects—reducing manual effort, increasing speed, and improving test accuracy.

2) Which are the Browsers Supported by Selenium Ide?

Selenium IDE supports Google Chrome, Mozilla Firefox, and Microsoft Edge browsers.

3) What are the benefits of Automation Testing?

Benefits of Automation Testing:

1. **Faster Execution** – Runs tests much quicker than manual testing.
2. **Reusability** – Test scripts can be reused for different builds or versions.
3. **Accuracy** – Eliminates human errors in repetitive tasks.
4. **Cost-Effective in Long Run** – Saves time and resources over multiple test cycles.
5. **Better Coverage** – Can execute a large number of test cases and complex scenarios.
6. **Continuous Testing** – Supports CI/CD for faster releases.
7. **Improved Reporting** – Generates detailed logs and reports automatically.

4) What are the advantages of Selenium?

Advantages of Selenium:

1. **Open Source** – Free to use with no licensing cost.
2. **Cross-Browser Support** – Works on Chrome, Firefox, Edge, Safari, etc.
3. **Cross-Platform** – Runs on Windows, macOS, and Linux.
4. **Multiple Language Support** – Compatible with Java, Python, C#, JavaScript, etc.
5. **Integration Friendly** – Works well with tools like TestNG, JUnit, Maven, Jenkins.
6. **Supports Parallel Testing** – Saves time by running tests simultaneously.
7. **Active Community** – Large user base and continuous updates.

5) Why testers should opt for Selenium and not QTP?

Reasons to choose Selenium over QTP:

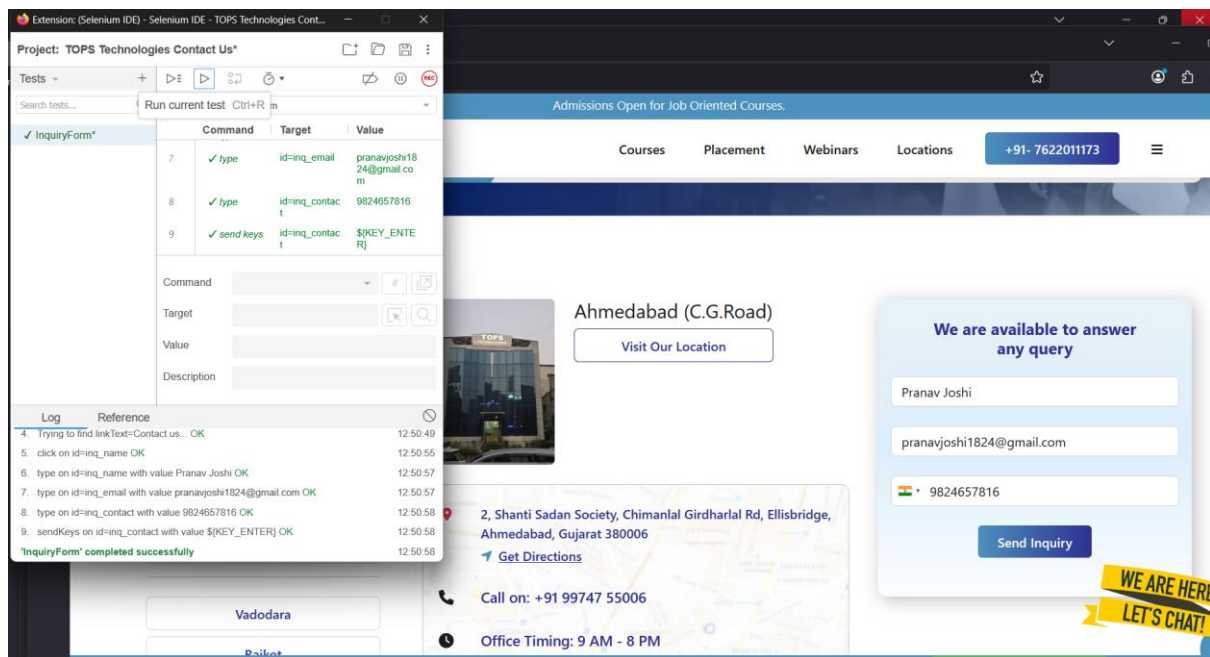
1. **Cost** – Selenium is free and open-source, while QTP (UFT) is paid.
2. **Language Support** – Selenium supports multiple languages (Java, Python, C#, etc.), QTP supports only VBScript.
3. **Browser Support** – Selenium works on Chrome, Firefox, Edge, Safari, etc.; QTP mainly supports Internet Explorer.
4. **OS Compatibility** – Selenium runs on Windows, macOS, and Linux; QTP works only on Windows.

5. **Flexibility** – Selenium integrates easily with CI/CD tools and frameworks; QTP is less flexible.

6. **Community Support** – Selenium has a larger, active community for help and updates.

6) To validate the tops technologies website Contact us page and enter your friend detail at last “Login and side menu” <https://www.saucedemo.com/>.

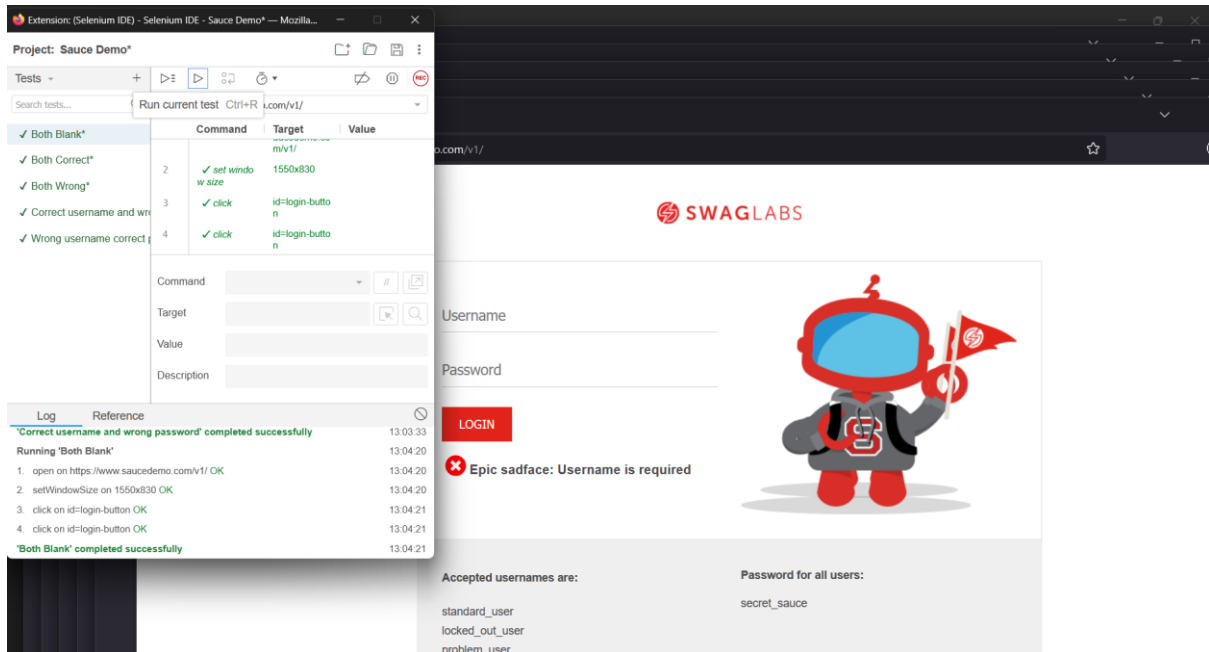
1. TOPS Technologies Contact Us



“TOPS Technologies Contact Us Page”

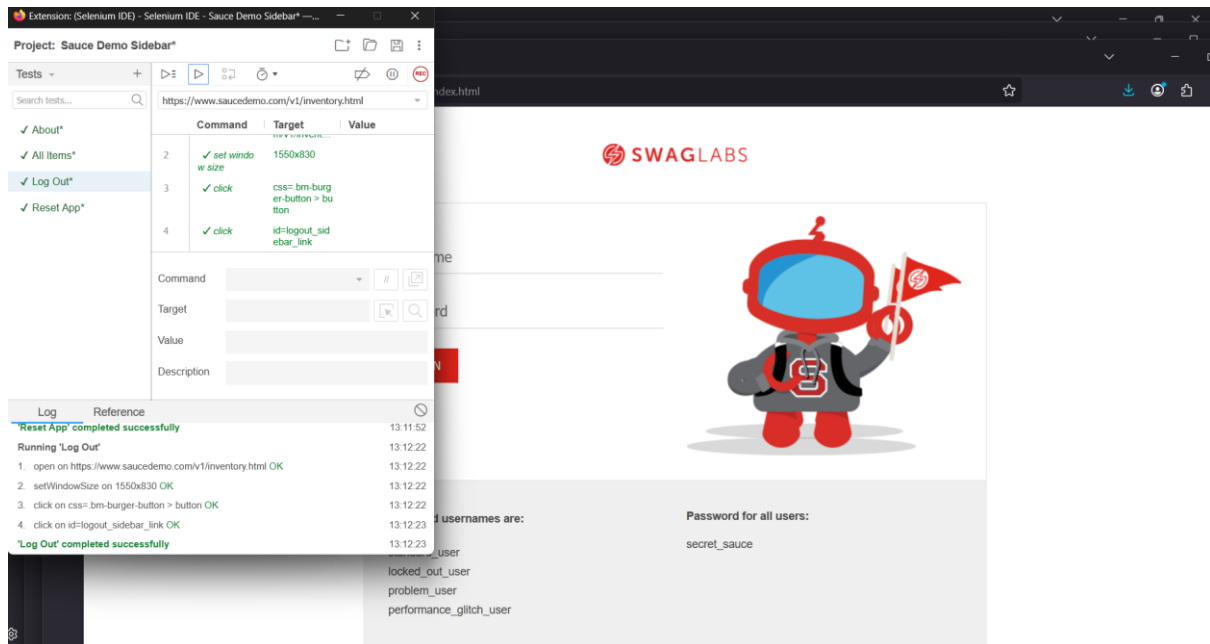
2. Sauce Demo Website: -

i. Sauce Demo Login Page:



“Sauce Demo Login Page”

ii. Sauce Demo Sidebar: -



“Sauce Demo Sidebar”

Selenium WebDriver:

1. W.A.J. Script for Locating links by `linkText()` and `partialLinkText()`.

```
package Assignment;
```

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

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

```
import org.openqa.selenium.WebElement;
```

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

```
public class LocateLinksExample {
```

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

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

```
        String path = System.getProperty("user.dir");
```

```
        System.out.println(path);
```

```
        String fullpath = path +  
        "\\src\\main\\java\\webdriver\\chromedriver.exe";
```

```
        System.out.println("full path "+fullpath);
```

```
        System.setProperty("webdriver.chrome.driver",fullpath);
```

```
//System.setProperty("webdriver.chrome.driver",  
"C:/Users/Lenovo/Downloads/chromedriver-  
win64/chromedriver-win64/chromedriver.exe");
```

```
// Initialize webDriver
```

```
WebDriver driver = new ChromeDriver();
```

```
// Open the target URL
```

```
driver.get("https://the-internet.herokuapp.com/");
```

```
//Maximize window
```

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

```
// Locate link by exact link text
```

```
WebElement Link = driver.findElement(By.linkText("A/B  
Testing"));
```

```
System.out.println("A/B          Testing          href"  
+Link.getAttribute("href"));
```

```
// Locate link by partial link text
```

```
WebElement          partialLink          =  
driver.findElement(By.partialLinkText("Broken"));
```

```
System.out.println("A/B          Testing          href"          +  
partialLink.getAttribute("href"));
```

```

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

```

2) W.A.J. Script for Selecting multiple items in a drop dropdown.

```
package Assignment;
```

```

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 MultiSelectDropdown {
    public static void main(String[] args) {
        // TODO Auto-generated method stub
        String path = System.getProperty("user.dir");
        System.out.println(path);
        String fullpath = path +
"\src\main\java\webdriver\chromedriver.exe";
        System.out.println("full path "+fullpath);
    }
}

```



```
System.setProperty("webdriver.chrome.driver",fullpath);  
    //System.setProperty("webdriver.chrome.driver",  
"C:/Users/Lenovo/Downloads/chromedriver-  
win64/chromedriver-win64/chromedriver.exe");
```

```
// Initialize webDriver
```

```
WebDriver driver = new ChromeDriver();
```

```
//Maximize window (optional)
```

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

```
// Open the target URL
```

```
driver.get("https://testautomationpractice.blogspot.com/")  
;
```

```
WebElement multiSelect =  
driver.findElement(By.id("colors"));
```

```
//Select class object
```

```
Select select = new Select(multiSelect);
```

```
if (select.isMultiple()) {
```

```
    select.selectByVisibleText("Red");
```

```

        select.selectByVisibleText("Green");
        select.selectByVisibleText("Blue");

        System.out.println("Selected: Red, Green, Blue");
    }
    else {
        System.out.println("Dropdown is NOT multi-
select.");
    }
    //driver.quit();
}
}

```

3. W.A.J. script to use different methods to manage the windows-alerts and pop ups.

```

package Assignment;

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

public class AlertsAndPopups {

```

```

WebDriver driver;

public void launchBrowser() {
    String path = System.getProperty("user.dir");
    System.out.println(path);
    String fullpath = path +
    "\\src\\main\\java\\webdriver\\chromedriver.exe";
    System.out.println("full path "+fullpath);

    System.setProperty("webdriver.chrome.driver",fullpath);
    //System.setProperty("webdriver.chrome.driver",
    "C:/Users/Lenovo/Downloads/chromedriver-
    win64/chromedriver-win64/chromedriver.exe");

    // Initialize webDriver
    driver = new ChromeDriver();

    // Open the target URL
    driver.get("https://the-
    internet.herokuapp.com/javascript_alerts");

    //Maximize window (optional)
    driver.manage().window().maximize();

```

```
}
```

```
// Handle Simple Alert
```

```
public void handleSimpleAlert() throws  
InterruptedException {  
    driver.findElement(By.xpath("//button[text()='Click for  
JS Alert']")).click();  
    Alert alert = driver.switchTo().alert();  
    System.out.println("Simple Alert text: " + alert.getText());  
    Thread.sleep(1000);  
    alert.accept();  
}
```

```
// Handle Confirmation Alert
```

```
public void handleConfirmationAlert() throws  
InterruptedException {  
    driver.findElement(By.xpath("//button[text()='Click for  
JS Confirm']")).click();  
    Alert alert = driver.switchTo().alert();  
    System.out.println("Confirmation Alert text: " +  
alert.getText());  
    Thread.sleep(1000);  
    alert.dismiss(); // or alert.accept();  
}
```

```

// Handle Prompt Alert

public void handlePromptAlert() throws
InterruptedException {
    driver.findElement(By.xpath("//button[text()='Click for
JS Prompt']")).click();
    Alert alert = driver.switchTo().alert();
    System.out.println("Prompt Alert text: " +
alert.getText());
    alert.sendKeys("Hello Avani");
    Thread.sleep(1000);
    alert.accept();
}

```

```

public void closeBrowser() {
    driver.quit();
}

```

```

public static void main(String[] args) throws
InterruptedException {
    // TODO Auto-generated method stub

```

```

    AlertsAndPopups ap = new AlertsAndPopups();
    ap.launchBrowser();
    ap.handleSimpleAlert();

```

```

        ap.handleConfirmationAlert();
        ap.handlePromptAlert();
        ap.closeBrowser();
    }
}

```

4. W.A.J.script to register your self in Gmail.

```
package Assignment;
```

```

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

```

```
public class Gmail {
```

```

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

```

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

```

        String path = System.getProperty("user.dir");
        System.out.println(path);
    }
}

```

```
String      fullpath      =      path      +  
"\\src\\main\\java\\webdriver\\chromedriver.exe";
```

```
System.out.println("full path "+fullpath);
```

```
System.setProperty("webdriver.chrome.driver",fullpath);
```

```
//System.setProperty("webdriver.chrome.driver",  
"C:/Users/Lenovo/Downloads/chromedriver-  
win64/chromedriver-win64/chromedriver.exe");
```

```
// Initialize webDriver
```

```
WebDriver driver = new ChromeDriver();
```

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

```
driver.get("https://accounts.google.com/signup");
```

```
Thread.sleep(2000);
```

```
WebElement      fn      =  
driver.findElement(By.id("firstName"));
```

```
fn.sendKeys("Pranav");
```

```
WebElement      ln      =  
driver.findElement(By.id("lastName"));
```

```
ln.sendKeys("Joshi");
```

```
WebElement btn =  
driver.findElement(By.xpath("//*[@id=\"collectNameNext\"]/div/button/span));
```

```
btn.click();
```

```
Thread.sleep(2000);
```

```
WebElement monthDropdown =  
driver.findElement(By.id("month"));
```

```
monthDropdown.click();
```

```
driver.findElement(By.xpath("//*[@id=\"month\"]/div/div[2]/ul/li[2]")).click();
```

```
WebElement day =  
driver.findElement(By.name("day"));
```

```
day.sendKeys("18");
```

```
WebElement year =  
driver.findElement(By.name("year"));
```

```
year.sendKeys("2006");
```

```
driver.findElement(By.id("gender")).click();
```



```
driver.findElement(By.xpath("//*[@id=\"gender\"]/div/div[2]/ul/li[2]")).click();
```

```
WebElement btn2 =  
driver.findElement(By.xpath("//*[@id=\"birthdaygenderNext\"]/div/button/span"));  
btn2.click();
```

```
Thread.sleep(3000);
```

```
WebElement username =  
driver.findElement(By.name("Username"));  
username.sendKeys("pranavjoshi1824");
```

```
Thread.sleep(3000);
```

```
WebElement btn3 =  
driver.findElement(By.xpath("//*[@id='next']/div/button/span"));  
btn3.click();
```

```
Thread.sleep(3000);
```

```
WebElement pass =  
driver.findElement(By.name("Passwd"));  
pass.sendKeys("Pranav@12345");
```

```
WebElement cpass =  
driver.findElement(By.name("PasswdAgain"));  
cpass.sendKeys("Pranav@12345");
```

```
WebElement btn4 = driver.findElement(By.xpath("  
//*[@id=\"createpasswordNext\"]/div/button/span"));  
btn4.click();
```

//note:From this point,CAPTCHA and phone
verification appear_cant be bypassed

```
Thread.sleep(5000);
```

```
System.out.println("Filled Gmail sign-up from  
(CAPTCH & verification pending).");
```

```
// driver.quit();
```

```
}
```

```
}
```

5. W.A.J. Script To perform the radio button to select one by one in loop <https://demo.automationtesting.in/Register.html>.

```
package Assignment;
```

```
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;
```

```
public class RadioButton {
```

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

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

```
        String path = System.getProperty("user.dir");
```

```
        System.out.println(path);
```

```
        String fullpath = path +  
        "\\src\\main\\java\\webdriver\\chromedriver.exe";
```

```
        System.out.println("full path "+fullpath);
```

```
        System.setProperty("webdriver.chrome.driver",fullpath);
```

```
//System.setProperty("webdriver.chrome.driver",  
"C:/Users/Lenovo/Downloads/chromedriver-  
win64/chromedriver-win64/chromedriver.exe");
```

```
// Initialize webDriver
```

```
WebDriver driver = new ChromeDriver();
```

```
// Open the target URL
```

```
driver.get("https://demo.automationtesting.in/Register.ht  
ml");
```

```
//Maximize window
```

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

```
List<WebElement> radioButtons =  
driver.findElements(By.name("radiooptions"));
```

```
System.out.println("Total radio buttons found: " +  
radioButtons.size());
```

```
// Loop through and click each one
```

```
for (int i = 0; i < radioButtons.size(); i++) {
```

```
    WebElement rb = radioButtons.get(i);
```

```

        // Click the radio button
        rb.click();

        System.out.println("Selected: " +
rb.getAttribute("value"));

        // Small pause so you can see the selection
        Thread.sleep(1000);
    }

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

```

6. W.A.J. script to write the script for image of logo Facebook using xpath.

```

package Assignment;

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

```

```

public class FacebookLogo {
    public static void main(String[] args) {
        // TODO Auto-generated method stub

        String path = System.getProperty("user.dir");
        System.out.println(path);

        String      fullpath      =      path      +
        "\\src\\main\\java\\webdriver\\chromedriver.exe";

        System.out.println("full path "+fullpath);

        System.setProperty("webdriver.chrome.driver",fullpath);

        //System.setProperty("webdriver.chrome.driver",
        "C:/Users/Lenovo/Downloads/chromedriver-
        win64/chromedriver-win64/chromedriver.exe");

        // Initialize webDriver
        WebDriver driver = new ChromeDriver();

        // Open the target URL
        driver.get("https://www.facebook.com/");

        //Maximize window
        driver.manage().window().maximize();
    }
}

```

```

WebElement fbLogo =
driver.findElement(By.xpath("//*[@id=\"content\"]/div/div/div/div[1]/div/img"));

// Verify logo is displayed
if (fbLogo.isDisplayed()) {
    System.out.println("Facebook logo is displayed ✓");
} else {
    System.out.println("Facebook logo is NOT displayed ✗");
}

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

```

7. W.A.J. Script To write a script for drop down. <https://demo.automationtesting.in/Register.html>.

package Assignment;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

```

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

public class DropDown_7 {
    public static void main(String[] args) {
        // TODO Auto-generated method stub

        String path = System.getProperty("user.dir");
        System.out.println(path);

        String fullpath = path +
"\src\main\java\webdriver\chromedriver.exe";

        System.out.println("full path "+fullpath);

        System.setProperty("webdriver.chrome.driver",fullpath);

        //System.setProperty("webdriver.chrome.driver",
"C:/Users/Lenovo/Downloads/chromedriver-
win64/chromedriver-win64/chromedriver.exe");

        // Initialize webDriver
        WebDriver driver = new ChromeDriver();

        //Maximize window
        driver.manage().window().maximize();
    }
}

```



```

        // Open the target URL

        driver.get("https://demo.automationtesting.in/Register.html");

        Select drpskill = new Select
(driver.findElement(By.id("Skills")));

        drpskill.selectByValue("Adobe Photoshop");

        driver.quit();
    }
}

```

8. W.A.J Script To use Mouse and Keyboard event using Action class.

1. Mouse Hover Event 2. Keyboard event

```

package Assignment;

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;
import org.openqa.selenium.interactions.Actions;

```

```

public class MouseKeyboardEvents {
    public static void main(String[] args) throws
InterruptedException {
        // TODO Auto-generated method stub

        String path = System.getProperty("user.dir");
        System.out.println(path);

        String fullpath = path +
"\\src\\main\\java\\webdriver\\chromedriver.exe";
        System.out.println("full path "+fullpath);

        System.setProperty("webdriver.chrome.driver",fullpath);
        //System.setProperty("webdriver.chrome.driver",
"C:/Users/Lenovo/Downloads/chromedriver-
win64/chromedriver-win64/chromedriver.exe");

        // Initialize webDriver
        WebDriver driver = new ChromeDriver();

        //Maximize window (optional)
        driver.manage().window().maximize();

        // ----- Mouse Hover Event -----
        -----

```

```
        // Open the target URL
driver.get("https://demo.automationtesting.in/Register.html");
```

```
        // Locate "Widgets" menu

WebElement mouse =
driver.findElement(By.xpath("//*[@id=\"header\"]/nav/div/div
[2]/ul/li[5]/a"));
```

```
Actions actions = new Actions(driver);
```

```
System.out.println("Widgets: " +
mouse.getCssValue("background-color"));
```

```
// Hover on "Widgets"
```

```
actions.moveToElement(mouse).perform();
```

```
Thread.sleep(2000);
```

```
// ----- Keyboard Event -----
```

```
WebElement a =
driver.findElement(By.xpath("//*[@id=\"header\"]/nav/div/div
[2]/ul/li[5]/a"));
a.click();
```

```
WebElement b =  
driver.findElement(By.xpath("//*[@id=\"header\"]/nav/div/div  
[2]/ul/li[5]/ul/li[2]/a"));
```

```
b.click();
```

```
actions.moveToElement(driver.findElement(By.xpath("/h  
tml/body/section/div[1]/div[2]/div[1]/div"))).click().keyDown  
(Keys.SHIFT).sendKeys("Ahemedabad").build().perform();
```

```
Thread.sleep(3000);
```

```
actions.sendKeys(Keys.BACK_SPACE).sendKeys(Keys.  
BACK_SPACE).build().perform();
```

```
driver.quit();
```

```
}
```

```
}
```

9. W.A.J. Script How to handled Alert in selenium <https://demo.automationtesting.in/Alerts.html> .

package Assignment;

```
import org.openqa.selenium.Alert;
```

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

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

```

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

public class HandleAlert {

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

        // TODO Auto-generated method stub

        String path = System.getProperty("user.dir");
        System.out.println(path);

        String fullpath = path +
"\src\main\java\webdriver\chromedriver.exe";

        System.out.println("full path "+fullpath);

        System.setProperty("webdriver.chrome.driver",fullpath);

        //System.setProperty("webdriver.chrome.driver",
"C:/Users/Lenovo/Downloads/chromedriver-
win64/chromedriver-win64/chromedriver.exe");

        // Initialize webDriver

        WebDriver driver = new ChromeDriver();

        //Maximize window (optional)

```

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

```
// Open the target URL
```

```
driver.get("https://demo.automationtesting.in/Register.html");
```

```
WebElement swi =  
driver.findElement(By.xpath("//*[@id=\"header\"]/nav/div/div  
[2]/ul/li[4]/a"));
```

```
swi.click();
```

```
WebElement ale =  
driver.findElement(By.xpath("//*[@id=\"header\"]/nav/div/div  
[2]/ul/li[4]/ul/li[1]/a"));
```

```
ale.click();
```

```
// ----- Alert with OK -----
```

```
driver.findElement(By.xpath("/html/body/div[1]/div/div/  
div/div[1]/ul/li[1]/a")).click();
```

```
// just to see alert
```

```

WebElement btn =
driver.findElement(By.xpath("//*[@id=\"OKTab\"]/button"));
    btn.click();
    Thread.sleep(1000);
    Alert alert1 = driver.switchTo().alert();
    System.out.println("Alert Text: " + alert1.getText());
    alert1.accept();

```

// ----- Alert with OK & Cancel -----

```

driver.findElement(By.xpath("/html/body/div[1]/div/div/div/div[1]/ul/li[2]/a")).click();

WebElement btn2 =
driver.findElement(By.xpath("//*[@id=\"CancelTab\"]/button"
));
    btn2.click();
    Thread.sleep(1000);
    Alert alert2 = driver.switchTo().alert();
    System.out.println("Alert Text: " + alert2.getText());
    alert2.dismiss(); // cancel
    // alert2.accept(); // use accept() if you want to click OK

```

// ----- Alert with Textbox -----

```
driver.findElement(By.xpath("/html/body/div[1]/div/div/div/div[1]/ul/li[3]/a")).click();
```

```
WebElement btn3 =  
driver.findElement(By.xpath("//*[@id=\"Textbox\"]/button"));
```

```
btn3.click();
```

```
Thread.sleep(1000);
```

```
Alert alert3 = driver.switchTo().alert();
```

```
System.out.println("Prompt text: " + alert3.getText());
```

```
alert3.sendKeys("Avani Joshi"); // Type text
```

```
alert3.accept();
```

```
driver.quit();
```

```
}
```

```
}
```


10. W.A.J. Script To find the total hyperlink from this web page <https://qavbox.github.io/demo/webtable/>.

package Assignment;

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;

public class CountHyperlinks {

 public static void main(String[] args) {

 // **TODO** Auto-generated method stub

 String path = System.getProperty("user.dir");

 System.out.println(path);

 String fullpath = path +
 "\\src\\main\\java\\webdriver\\chromedriver.exe";

 System.out.println("full path "+fullpath);

 System.setProperty("webdriver.chrome.driver",fullpath);

```
//System.setProperty("webdriver.chrome.driver",  
"C:/Users/Lenovo/Downloads/chromedriver-  
win64/chromedriver-win64/chromedriver.exe");
```

```
// Initialize webDriver
```

```
WebDriver driver = new ChromeDriver();
```

```
//Maximize window (optional)
```

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

```
// Open the target URL
```

```
driver.get("https://qavbox.github.io/demo/webtable/");
```

```
// find all <a> tags (hyperlinks)
```

```
List<WebElement> links =  
driver.findElements(By.tagName("a"));
```

```
// print total count
```

```
System.out.println("Total hyperlinks on page: " +  
links.size());
```

```
// print each hyperlink text and URL
```

```
for(WebElement link : links) {
```

```
        System.out.println(link.getText() + "--> URL: " +  
link.getAttribute("href"));  
    }  
  
    driver.quit();  
}  
}
```

11. W.A.Junit program to handled Assert class with all method to check its pass or fail.

```
package Assignment;  
  
import static org.testng.Assert.assertEquals;  
import org.junit.After;  
import org.junit.Before;  
import org.junit.Test;  
  
class Calculator {  
    int add(int a,int b) {  
        return (a+b);  
    }  
    int sub(int a,int b) {  
        return(a-b);  
    }  
}
```

```
}  
}
```

```
public class Assert {  
    @Before  
    public void before() {  
        System.out.println("Before");  
    }  
  
    @Test  
    public void testAdd() {  
        Calculator c = new Calculator();  
        int res = c.add(2,3);  
        System.out.println("Addition");  
        assertEquals(5, res, "Addition of 2 and 3 should be  
5");  
    }  
  
    @Test  
    public void testSub() {  
        Calculator c = new Calculator();  
        int res = c.sub(5,2);  
        System.out.println("Subtraction");  
    }  
}
```

```
        assertEquals(3,res, "Subtraction of 5 and 2 should be  
3");  
    }
```

```
    @After  
    public void after() {  
        System.out.println("After");  
    }  
}
```

12. W.A.Junit program to perform test with WebDriver to login process of Facebook.

```
package Assignment;
```

```
import org.junit.After;  
import org.junit.Before;  
import org.junit.Test;  
import org.openqa.selenium.By;  
import org.openqa.selenium.WebDriver;  
import org.openqa.selenium.WebElement;  
import org.openqa.selenium.chrome.ChromeDriver;  
  
public class FacebookLogin {
```

```
WebDriver driver;
```

```
@Before
```

```
public void setUp() {
```

```
    // Launch Chrome
```

```
        driver = new ChromeDriver();
```

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

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

```
    }
```

```
@Test
```

```
public void loginTest() {
```

```
    // Enter email/phone
```

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

```
        email.sendKeys("dummyemail@example.com");
```

```
    // Enter password
```

```
        WebElement password =
driver.findElement(By.id("pass"));
        password.sendKeys("dummyPassword123");
```

```
        // Click on login button
```

```
        WebElement loginBtn =
driver.findElement(By.name("login"));
        loginBtn.click();
    }
```

@After

```
    public void tearDown() {
        // Close browser
        driver.quit();
    }
}
```

13. W.A.Junit program to check Gmail login using with @before,@after,@Test.

```
package Assignment;
```

```
import org.junit.After;
```

```
import org.junit.Before;
import org.junit.Test;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
```

```
public class Annotation_Gmail {
```

```
    WebDriver driver;
```

```
    @Before
```

```
    public void setup() {
```

```
        driver = new ChromeDriver();
```

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

```
        driver.get("https://mail.google.com/");
```

```
    }
```

```
    @Test
```

```
    public void Login() {
```

```
        WebElement email =
```

```
driver.findElement(By.id("identifierId"));
```

```
        email.sendKeys("dummyemail@example.com");
```

```
        WebElement btn =
```

```
driver.findElement(By.xpath("//*[@id=\"identifierNext\"]/div/button/span"));
```



```

        btn.click();
    }

    @After
    public void tearDown() {
        driver.quit();
    }
}

```

14. W.A.Junit program to use parameterized demo with multiple parameter of Facebook login in Junit.

```

package Assignment;

import java.util.Arrays;
import java.util.Collection;
import org.junit.After;
import org.junit.Before;
import org.junit.Test;
import org.junit.runner.RunWith;
import org.junit.runners.Parameterized;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;

```

```

@RunWith(Parameterized.class)
public class FacebookLoginTest {
    String email, password;
    WebDriver driver;
    // Constructor for parameter
    public FacebookLoginTest(String email, String password) {
        this.email = email;
        this.password = password;
    }

    // Test Data
    @Parameterized.Parameters
    public static Collection<Object[]> testData() {
        return Arrays.asList(new Object[][] {
            { "validuser@gmail.com", "validpass123" },
            { "invaliduser@gmail.com", "wrongpass" },
            { "test@gmail.com", "123456" }
        });
    }

    @Before
    public void setUp() {
        System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Avani\\Joshi\\eclipse-

```

```
workspace\\SeleniumWebDriver\\src\\main\\java\\WebDriver\\  
chromedriver.exe");
```

```
    driver = new ChromeDriver();
```

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

```
}
```

```
@Test
```

```
public void loginTest() {
```

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

```
    driver.findElement(By.id("email")).sendKeys(email);
```

```
    driver.findElement(By.id("pass")).sendKeys(password);
```

```
    driver.findElement(By.name("login")).click();
```

```
    //Thread.sleep(2000);
```

```
}
```

```
@After
```

```
public void tearDown() {
```

```
    driver.quit();
```

```
}
```

```
}
```

```
public void setUp() {  
    System.setProperty("webdriver.chrome.driver",  
        "C:\\Users\\Avani Joshi\\eclipse-  
workspace\\SeleniumWebDriver\\src\\main\\java\\WebDriver\\  
chromedriver.exe");  
  
    driver = new ChromeDriver();  
  
    driver.manage().window().maximize();  
}
```

```
driver.get("https://www.facebook.com/");  
}
```

```
@Test
```

```
public void loginTest() {
```

```
    driver.findElement(By.id("email")).sendKeys("testuser@  
gmail.com");
```

```
    driver.findElement(By.id("pass")).sendKeys("testpasswor  
d");
```

```
        driver.findElement(By.name("login")).click();
```

```
    // Pass Simple message
```

```
    System.out.println("Login test executed successfully!");  
}
```

```
@AfterMethod
```

```
public void tearDown() {
```

```
    //driver.quit();
```

```
}
```

```
}
```

16. W.A.TestNG program to check Gmail login using with @beforetest, @aftertest, @Test.

```
package Assignment;
```

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

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

```
import org.openqa.selenium.WebElement;
```

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

```
import org.testng.annotations.AfterMethod;
```

```
import org.testng.annotations.BeforeTest;
```

```
import org.testng.annotations.Test;
```

```
public class Gmail_TestNG {
```

```
    WebDriver driver;
```

```
    @BeforeTest
```

```
    public void setup() {
```

```
        driver = new ChromeDriver();
```

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

```
        driver.get("https://mail.google.com/");
```

```
    }
```

```

    @Test
    public void Login() {
        WebElement email =
driver.findElement(By.id("identifierId"));
        email.sendKeys("yourtestemail@gmail.com");

        driver.findElement(By.xpath("//*[@id=\"identifierNext\"
]/div/button/span")).click();

    }

    @AfterMethod
    public void closeBrowser() {
        //driver.quit();
    }
}

```

17. W.A.TestNG program to use parameterized demo with multiple parameter of Facebook login with TestNG.

FacebookTestNG:-

```

<suite name="FacebookLoginSuite">
    <test name="FacebookLoginTest">

```

```

    <parameter name="username" value="testuser123" />
    <parameter name="password" value="pass@123" />
    <classes>
        <class name="Assignment.Facebook_Login_TestNG"
/>
    </classes>
</test>
</suite>

```

Facebook_Login_TestNG: -

```
package Assignment;
```

```
import org.testng.annotations.Parameters;
```

```
import org.testng.annotations.Test;
```

```

public class Facebook_Login_TestNG {
    @Test
    @Parameters({"username", "password"})
    public void loginTest(String uname, String pass) {
        System.out.println("Username: " + uname);
        System.out.println("Password: " + pass);
    }
}

```


18. W.A.TestNG program to create group with testing.xml file.

TestNG.xml

```
<suite name="MyTestSuite" parallel="methods" thread-count="2">
```

```
  <test name="LoginTests">
```

```
    <classes>
```

```
      <class name="Assignment.LoginTest">
```

```
        <methods>
```

```
          <include name="testValidLogin"/>
```

```
          <exclude  
name="testInvalidLoginWithEmptyPassword"/>
```

```
        </methods>
```

```
      </class>
```

```
    </classes>
```

```
  </test>
```

```
  <test name="ProductTests">
```

```
    <classes>
```

```
      <class name="Assignment.ProductSearchTest"/>
```

```
      <class name="Assignment.ProductDetailsTest"/>
```

```
    </classes>
```

```
  </test>
```

```
  <test name="ParameterizedLoginTest">
```

```
<parameter name="username" value="testUser"/>
<parameter name="password" value="testPass"/>
<classes>
    <class name="Assignment.LoginTest"/>
</classes>
</test>
</suite>
```

Login Test.java: -

```
package Assignment;
```

```
import org.testng.annotations.Optional;
import org.testng.annotations.Parameters;
import org.testng.annotations.Test;
```

```
public class LoginTest {
```

```
    @Test
```

```
    public void testValidLogin() {
```

```
        System.out.println("Executing test Valid Login");
```

```
    }
```

```
    @Test
```

```
    public void testInvalidLoginWithEmptyPassword() {
```

```

        System.out.println("Executing test Invalid Login
With Empty Password");
    }

    @Test
    @Parameters({"username", "password"})
    public void
testLoginWithParameters(@Optional("default_username")
String username,@Optional("default_password") String
password) {
        System.out.println("Executing test Login With
Parameters with username: " + username + " and password: " +
password);
    }
}

```

Product Details Test: -

```

package Assignment;

import org.testng.annotations.Test;

public class ProductDetailsTest {

    @Test
    public void testViewProductDetails() {
        System.out.println("Executing test View Product
Details");
    }
}

```

Product Search Test: -

```
package Assignment;

import org.testng.annotations.Test;

public class ProductSearchTest {

    @Test

    public void testSearchProduct() {

        System.out.println("Executing test Search Product");

        // Add actual product search logic

    }

}
```

19. W.A.TestNG program to create dataprovider.

```
package Assignment;

import org.testng.annotations.DataProvider;
import org.testng.annotations.Test;

public class DataProviderTestNG {

    @DataProvider(name = "loginData")
    public Object[][] provideLoginData(){

        return new Object[][] {

            {"user1","pass1"},

            {"user2","pass2"},

        }

    }

}
```

```
        {"user3","pass3"}
    };
}
@Test(dataProvider = "loginData")
public void testLogin(String username, String password)
{
    System.out.println("Testing login with username: " +
username + " and password: " + password);
}
}
```