Phase – 5 Practice Project: Assisted Practice

3. Locating Elements through CSS and XPath.
- **Code**
- ✓ **AdvancedLocatingElements.java**

```java
package com.ecommerce.test;

import java.time.Duration;
import java.util.List;
import java.util.concurrent.TimeUnit;

import org.openqa.selenium.Alert;
import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.WindowType;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.ExpectedConditions;
import org.openqa.selenium.support.ui.Select;
import org.openqa.selenium.support.ui.WebDriverWait;

public class AdvancedLocatingElements {

    public static void main(String[] args) throws InterruptedException
{
        // Basic configuration
        WebDriver driver = new ChromeDriver();

        demoAdvancedXPathCSSSelector(driver);

    }

    static void demoAdvancedXPathCSSSelector(WebDriver driver) {

        String baseUrl = "File:///D:\\Eclipse Projects\\hello-
selenium\\src\\main\\resources\\test.html";

        // String baseUrl =
        //
"https://github.com/awtraining1/sl/blob/main/PHASE5/afternoon/hello-
selenium/src/main/resources/test.html";

        driver.get(baseUrl);

        List<WebElement> inputAdminElements =
driver.findElements(By.xpath("//input[contains(@id, 'admin')]"));

        System.out.println("inputAdminElements has " +
inputAdminElements.size());

        // Same as above but using CSS selectors
        List<WebElement> inputAdminElementsUsingCSSSelectors = driver
                .findElements(By.cssSelector("input[id*='admin']"));
```

```java
            System.out.println("inputAdminElementsUsingCSSSelectors has "
+ inputAdminElementsUsingCSSSelectors.size());// 3

            List<WebElement> inputAdminElementsUsingCSSSelectors2 =
driver.findElements(By.cssSelector("input[id$='xyz']"));
            System.out.println("input  whose ids end with xyz " +
inputAdminElementsUsingCSSSelectors2.size()); // 2

            WebElement h4SecondChildInsideDiv =
driver.findElement(By.cssSelector("div[id='eCommerce'] h4:nth-
child(2)"));
            System.out.println("h4SecondChildInsideDiv text is " +
h4SecondChildInsideDiv.getText()); // h4 second

            // Locate and Process multi select list
            WebElement selectMonthElement =
driver.findElement(By.id("month"));
            Select selectMonth = new Select(selectMonthElement);

            System.out.printf("\n selectMonth.isMultiple() = %s",
selectMonth.isMultiple());

            selectMonth.selectByIndex(0);
            selectMonth.selectByIndex(3);
            selectMonth.selectByIndex(6);

            List<WebElement> allMonthsSelected =
selectMonth.getAllSelectedOptions();
            for (WebElement monthOption : allMonthsSelected) {
                System.out.printf("\n option selected = %s",
monthOption.getText());
            }

    }
```

✓ **test.html**

```html
<html>
<head>
<title>Hello</title>
<script>
    function myDblClickFunction() {
        document.getElementById("demo-messages").textContent = "You
double clicked me!";
        document.getElementById("demo-messages").style.color = "red";
    }

    function mySglClickFunction() {
        document.getElementById("demo-messages").textContent = "You
single clicked me!";
        document.getElementById("demo-messages").style.color = "blue";
    }
</script>
</head>
<body bgcolor="#ffeeee">
```

```html
    DEMO-MESSAGES:
    <span id="demo-messages">GETTING STARTED</span>

      <p id="xyz">Hello world!</p>
    <!-- <span id="xyz">Hello world!</span> -->


    Alerts The simplest of these is referred to as an alert, which
shows a
    custom message, and a single button which dismisses the alert,
labelled
    in most browsers as OK. It can also be dismissed in most browsers
by
    pressing the close button, but this will always do the same thing
as
    the OK button.
    <a href="javascript:alert('hello alerts!')">See an example
alert</a>

    <br>
    <br>
    <div id="modal">
        <iframe id="myframe" name="myframe"
src="https://seleniumhq.github.io"
            width=1200 height=400> </iframe>
    </div>

    <br>
    <br>

    <button id="dblButton" ondblclick="myDblClickFunction()"
        onclick="mySglClickFunction()">Double-click me</button>

    <h3>0 Some h3 text</h3>
    <form>
        <input type="text" id="admin"> <br> <input type="text"
            id="admin123"> <br> <input type="text" id="adminxyz">
        <br> <input type="text" id="adm"> <br>

    </form>
    <h3>1 Some h3 text</h3>
    <h3>2 Some h3 text</h3>
    <h3>3 Some h3 text</h3>

    <div id='eCommerce'>
        <h4>h4 first</h4>
        <h4>h4 second</h4>
    </div>

    <select multiple aria-label="Month" name="birthday_month"
id="month"
        title="Month" class="_9407 _5dba _9hk6 _8esg" size="12">
        <option value="1">Jan</option>
        <option value="2">Feb</option>
        <option value="3">Mar</option>
        <option value="4">Apr</option>
```

```html
        <option value="5">May</option>
        <option value="6">Jun</option>
        <option value="7" selected="1">Jul</option>
        <option value="8">Aug</option>
        <option value="9">Sep</option>
        <option value="10">Oct</option>
        <option value="11">Nov</option>
        <option value="12">Dec</option>
    </select>

    <input type="text" id="WWWWxyz">

</body>
</html>
```

- **Output**