

Phase – 5 Practice Project: Assisted Practice

3. Locating Elements through CSS and XPath.

- Code

✓ **AdvancedLocatingElements.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 inputAdminElements =
driver.findElements(By.xpath("//input[contains(@id, 'admin')]"));

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

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

```

        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>
<head>
<title>Hello</title>
<script>
    function myDbClickFunction() {
        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">

```

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="myDbClickFunction()"
  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>
```

```

        <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="WWWxyz">

</body>
</html>

```

• Output

The screenshot displays the Selenium IDE interface. The top pane shows the console output of a Java application, which includes Selenium logs and test results for a script named 'AdvancedLocatingElements'. The bottom pane shows a web browser window displaying a test page. The page contains a 'Double-click me' button, several h3 text elements, and a month selector dropdown menu. The dropdown menu is currently set to 'Jul'.

Console Output:

```

<terminated> AdvancedLocatingElements [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (18-Jul-2023, 8:17:31 pm - 8:17:39 pm) [pid: 19492]
Jul 18, 2023 8:17:32 PM org.openqa.selenium.remote.service.DriverService$Builder getLogOutput
INFO: Driver logs no longer sent to console by default; https://www.selenium.dev/documentation/webdriver/drivers/service/#setting-log-output
SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
SLF4J: Defaulting to no-operation (NOP) logger implementation
SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder for further details.
inputAdminElements has 3
inputAdminElementsUsingCSSSelectors has 3
input whose ids end with xyz 2
h4SecondChildInsideDiv text is h4 second

selectMonth.isMultiple() = true
option selected = Jan
option selected = Apr
option selected = Jul

```

Browser Output:

Double-click me

0 Some h3 text

1 Some h3 text

2 Some h3 text

3 Some h3 text

h4 first

h4 second

Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec