

Phase – 5 Practice Project: Assisted Practice

4. Handling Various Web Elements.

- 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();

        demoTableDetails(driver);

        // Demo Alerts, IFrames
        demoExternalElements(driver);

        demoExternalElementsNewTab(driver);

        demoExternalElementsIFrame(driver);
    }

    private static void demoExternalElementsIFrame(WebDriver driver)
    throws InterruptedException {
        String baseUrl = "File:///D:\\Eclipse Projects\\hello-
selenium\\src\\main\\resources\\test.html";
        driver.get(baseUrl);

        // driver.manage().timeouts().implicitlyWait(10,
        TimeUnit.SECONDS);
        Thread.sleep(10000);

        driver.switchTo().frame("myframe");

        driver.findElement(By.cssSelector("#docsearch > button >
span.DocSearch-Button-Container > span")).click();
    }
}
```

```
        driver.findElement(By.cssSelector("#docsearch-  
input")).sendKeys("hello");
```

```
    }
```

```
    private static void demoExternalElementsNewTab(WebDriver driver)  
throws InterruptedException {  
        String baseUrl = "File:///D:\\Eclipse Projects\\hello-  
selenium\\src\\main\\resources\\test.html";  
        driver.get(baseUrl);  
  
        // driver.manage().timeouts().implicitlyWait(10,  
TimeUnit.SECONDS);  
        Thread.sleep(10000);  
  
        driver.switchTo().newWindow(WindowType.TAB);  
        driver.navigate().to("https://www.google.com?q=flowers");  
    }
```

```
    static void demoExternalElements(WebDriver driver) throws  
InterruptedException {  
  
        String baseUrl = "File:///D:\\Eclipse Projects\\hello-  
selenium\\src\\main\\resources\\test.html";  
        driver.get(baseUrl);  
  
        // driver.manage().timeouts().implicitlyWait(10,  
TimeUnit.SECONDS);  
        Thread.sleep(10000);  
  
        driver.findElement(By.linkText("See an example  
alert")).click();  
  
        // alert will appear now, may be in 10 secs  
        WebDriverWait wait = new WebDriverWait(driver,  
Duration.ofSeconds(10));  
  
        // Wait for the alert to be displayed  
        wait.until(ExpectedConditions.alertIsPresent());  
  
        // Store the alert in a variable  
        Alert alert = driver.switchTo().alert();  
  
        System.out.printf("\n alert text is %s \n", alert.getText());  
  
        Thread.sleep(10000);  
  
        alert.accept();  
    }  
  
    // Locate and Process Table (no of rows, no of columns, particular  
cell data,  
    // etc)  
    static void demoTableDetails(WebDriver driver) {  
        String baseUrl = "https://www.nyse.com/ipo-center/recent-ipo";
```

```

        driver.get(baseUrl);

        driver.manage().timeouts().implicitlyWait(10,
TimeUnit.SECONDS);

        String tableXPath =
"/html/body/div[1]/div[4]/div[2]/div[3]/div[1]/div[4]/table";
        String tableXPathRow =
"/html/body/div[1]/div[4]/div[2]/div[3]/div[1]/div[4]/table/tbody/tr";

        List<WebElement> rowList =
driver.findElements(By.xpath(tableXPathRow));

        System.out.printf("\n No of rows in IPO table = %s",
rowList.size());

        // Column count
        String tableHeadingXPath =
"/html/body/div[1]/div[4]/div[2]/div[3]/div[1]/div[4]/table/thead/tr/th"
;
        List<WebElement> colList =
driver.findElements(By.xpath(tableHeadingXPath));

        System.out.printf("\n No of columns in IPO table = %s",
colList.size());

        // Finding cell value at 4th row and 3rd column
        WebElement cellAddress =
driver.findElement(By.xpath(tableXPath + "/tbody/tr[4]/td[3]"));
        String value = cellAddress.getText();
        System.out.println("The Cell Value is : " + value);

        // Change the cell contents using JS
        // JS Executor
        JavascriptExecutor js = (JavascriptExecutor) driver;
        String cssSelectScriptForCell3_3 = "var e
=document.querySelector(\"body > div:nth-child(1) > div:nth-child(4) >
div:nth-child(2) > div:nth-child(3) > div:nth-child(1) > div:nth-
child(9) > table > tbody > tr:nth-child(3) > td:nth-child(3) >
strong\"); e.textContent='Bharat Gas'";
        js.executeScript(cssSelectScriptForCell3_3);
    }
}

```

✓ 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>

```

```

    <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 or Single
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

Markers

Console

Servers

Internal Web Browser

Terminal

JUnit

Results of running class FBRegistration

Properties

Snippets

Progress

<terminated> AdvancedLocatingElements [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (19-Jul-2023, 8:04:39 pm – 8:04:54 pm) [pid: 19896]

Jul 19, 2023 8:04:41 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.

No of rows in IPO table = 8

No of columns in IPO table = 9The Cell Value is : Kodiak Gas Services, LLC

IPO Data | Recent IPO Filings

nyse.com/ipo-center/recent-ipo

Chrome is being controlled by automated test software.

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Cookies Settings

Accept All Cookies

6/28/2023	12/22/2021	Savers Value Village, Inc	Consumer Services	JPM, JEFFER, GS, UBS, RBAIRD, CIBCINC, GUGGEN, PIPERSAND	273	372	Above	\$401,249,988
7/13/2023	6/22/2023	Bharat Gas	Healthcare	JEFFER, TDSEC, STFL, GUGGEN	24.9	21.8	Within	\$300,050,000
6/28/2023	3/31/2023	Kodiak Gas Services, LLC	Energy	GS, JPM, BRCLY, BAML, RAYMND, RBC, STFL, TFC, PRLLAWNBG	-1.9	2.7	Below	\$294,400,000
6/28/2023	4/14/2023	Fidelis Insurance Holdings, LTD	Financials	JPM, BRCLY, JEFFER, BMOBMON, CITI, STFL, UBS	-7.9	-2.3	Within	\$210,000,000
7/13/2023	6/23/2023	Sagimet Biosciences Inc.	Healthcare	GS, TDSEC, PIPERSAND	-0.3	-0.1	Within	\$85,000,000
6/28/2023	5/26/2023	SPH	Healthcare	GS, TDSEC, PIPERSAND	-0.3	-0.1	Within	\$100,000,000

```
Markers Console Servers Internal Web Browser Terminal JUnit TestNG Properties Snippets Progress
<terminated> AdvancedLocatingElements [Java Application] C:\Program Files\Java\jdk-17\bin\javaw.exe (19-Jul-2023, 8:09:28 pm) [pid: 2456]
Jul 19, 2023 8:09:00 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.

alert text is hello alerts!
```



