**Automate an E-Commerce Web Application**

**Ecommerce.java**

package AutomateEcommerce.AutomateEcommerce;

import org.openqa.selenium.By;

import org.openqa.selenium.JavascriptExecutor;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.chrome.ChromeDriver;

import org.testng.Assert;

import org.testng.annotations.AfterMethod;

import org.testng.annotations.BeforeMethod;

import org.testng.annotations.Test;

public class Ecommerce {

private WebDriver driver;

*@BeforeMethod*

public void setup() {

System.*setProperty*("webdriver.chrome.driver", "D:\\Working Software\\Salenium\\seleniumjars\\chromedriver.exe");

driver = new ChromeDriver();

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

}

*@Test*

public void ecommerce\_test() throws InterruptedException {

// Calculate page load time

long start = System.*currentTimeMillis*();

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

long finish = System.*currentTimeMillis*();

Assert.*assertEquals*(driver.getCurrentUrl(), "https://www.flipkart.com/");

long totalTime = finish - start;

System.***out***.println("Total Time for page load: " + totalTime + " milliseconds");

// Close the login popup if present

try {

WebElement popupCloseButton = driver.findElement(By.*xpath*("/html/body/div[2]/div/div/button"));

if (popupCloseButton.isDisplayed() && popupCloseButton.isEnabled()) {

popupCloseButton.click();

}

} catch (Exception e) {

// Ignore exception if the popup is not present

}

// Verify page title

String expectedTitle = "Online Shopping Site for Mobiles, Electronics, Furniture, Grocery, Lifestyle, Books & More. Best Offers!";

Assert.*assertEquals*(driver.getTitle(), expectedTitle);

System.***out***.println("The page Title is: " + driver.getTitle());

// Search for "iPhone 13"

WebElement searchBox = driver.findElement(By.*xpath*("//\*[@id='container']//input[@type='text']"));

searchBox.sendKeys("iPhone 13");

Thread.*sleep*(1000);

WebElement searchButton = driver.findElement(By.*xpath*("//\*[@id='container']//button[@type='submit']"));

Assert.*assertTrue*(searchButton.isEnabled());

searchButton.click();

Thread.*sleep*(2000);

// Check if the image is loaded on the page

WebElement iphoneImage = driver.findElement(By.*xpath*("//img[@alt='APPLE iPhone 13 (Starlight, 128 GB)']"));

Boolean isImageLoaded = (Boolean) ((JavascriptExecutor) driver).executeScript(

"return arguments[0].complete && typeof arguments[0].naturalWidth != \"undefined\" && arguments[0].naturalWidth > 0",

iphoneImage);

if (isImageLoaded) {

System.***out***.println("Image Loaded");

} else {

System.***out***.println("Image not Loaded");

}

// Page scroll feature

JavascriptExecutor js = (JavascriptExecutor) driver;

driver.navigate().refresh();

js.executeScript("window.scrollBy(0, -500)", "");

Thread.*sleep*(6000);

System.***out***.println("Page Scrolling Working");

Thread.*sleep*(6000);

// Page scroll to bottom

driver.navigate().refresh();

js.executeScript("window.scrollTo(0, document.body.scrollHeight)");

System.***out***.println("Navigating to Bottom of Page");

// Image loading while scrolling

driver.navigate().refresh();

js.executeScript("window.scrollBy(0, 500)", "");

Thread.*sleep*(3000);

WebElement pinkIphoneImage = driver.findElement(By.*xpath*("//img[@alt='APPLE iPhone 13 (Pink, 128 GB)']"));

Boolean isImageLoadingWhileScrolling = (Boolean) ((JavascriptExecutor) driver).executeScript(

"return arguments[0].complete && typeof arguments[0].naturalWidth != \"undefined\" && arguments[0].naturalWidth > 0",

pinkIphoneImage);

if (isImageLoadingWhileScrolling) {

System.***out***.println("Image downloading while scrolling");

} else {

System.***out***.println("Image not Loaded");

}

}

*@AfterMethod*

public void tearDown() {

if (driver != null) {

driver.quit();

}

}

}

**testng.xml**

<?**xml** version=*"1.0"* encoding=*"UTF-8"*?>

<**suite** name=*"Test-Suite"*>

<**test** name=*"Flipkarttest"*>

<**classes**>

<**class** name=*"AutomateEcommerce.AutomateEcommerce.Ecommerce"*>

</**class**>

</**classes**>

</**test**>

</**suite**>

**Pom.xml**

<?xml version="1.0" encoding="UTF-8"?>

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<groupId>AutomateEcommerce</groupId>

<artifactId>AutomateEcommerce</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>AutomateEcommerce</name>

<!-- FIXME change it to the project's website -->

<url>http://www.example.com</url>

<properties>

<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>

<maven.compiler.source>1.7</maven.compiler.source>

<maven.compiler.target>1.7</maven.compiler.target>

</properties>

<dependencies>

<dependency>

<groupId>junit</groupId>

<artifactId>junit</artifactId>

<version>4.11</version>

<scope>test</scope>

</dependency>

<!-- https://mvnrepository.com/artifact/org.seleniumhq.selenium/selenium-java -->

<dependency>

<groupId>org.seleniumhq.selenium</groupId>

<artifactId>selenium-java</artifactId>

<version>3.141.59</version>

</dependency>

<!-- https://mvnrepository.com/artifact/io.github.bonigarcia/webdrivermanager -->

<dependency>

<groupId>io.github.bonigarcia</groupId>

<artifactId>webdrivermanager</artifactId>

<version>5.4.0</version>

</dependency>

</dependencies>

<build>

<pluginManagement><!-- lock down plugins versions to avoid using Maven defaults (may be moved to parent pom) -->

<plugins>

<!-- clean lifecycle, see https://maven.apache.org/ref/current/maven-core/lifecycles.html#clean\_Lifecycle -->

<plugin>

<artifactId>maven-clean-plugin</artifactId>

<version>3.1.0</version>

</plugin>

<!-- default lifecycle, jar packaging: see https://maven.apache.org/ref/current/maven-core/default-bindings.html#Plugin\_bindings\_for\_jar\_packaging -->

<plugin>

<artifactId>maven-resources-plugin</artifactId>

<version>3.0.2</version>

</plugin>

<plugin>

<artifactId>maven-compiler-plugin</artifactId>

<version>3.8.0</version>

</plugin>

<plugin>

<artifactId>maven-surefire-plugin</artifactId>

<version>2.22.1</version>

</plugin>

<plugin>

<artifactId>maven-jar-plugin</artifactId>

<version>3.0.2</version>

</plugin>

<plugin>

<artifactId>maven-install-plugin</artifactId>

<version>2.5.2</version>

</plugin>

<plugin>

<artifactId>maven-deploy-plugin</artifactId>

<version>2.8.2</version>

</plugin>

<!-- site lifecycle, see https://maven.apache.org/ref/current/maven-core/lifecycles.html#site\_Lifecycle -->

<plugin>

<artifactId>maven-site-plugin</artifactId>

<version>3.7.1</version>

</plugin>

<plugin>

<artifactId>maven-project-info-reports-plugin</artifactId>

<version>3.0.0</version>

</plugin>

</plugins>

</pluginManagement>

</build>

</project>