SOURCE CODE:

package com;

import java.time.Duration;

import java.util.concurrent.TimeUnit;

import org.openqa.selenium.By;

import org.openqa.selenium.JavascriptExecutor;

import org.openqa.selenium.Keys;

import org.openqa.selenium.NoSuchElementException;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.edge.EdgeDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

import org.openqa.selenium.support.ui.ExpectedConditions;

import org.openqa.selenium.support.ui.FluentWait;

import org.openqa.selenium.support.ui.Wait;

import org.openqa.selenium.support.ui.WebDriverWait;

import org.testng.annotations.AfterClass;

import org.testng.annotations.AfterMethod;

import org.testng.annotations.BeforeClass;

import org.testng.annotations.BeforeMethod;

import org.testng.annotations.Test;

import com.google.common.base.Function;

@Test

public class application {

WebDriver wd;

@BeforeClass

public void startBrowser() throws InterruptedException{

System.setProperty("webdriver.chrome.driver", "C:\\Users\\hp\\Downloads\\chromedriver\_win32\\chromedriver.exe");

wd = new ChromeDriver();

// System.setProperty("webdriver.gecko.driver", "C:\\Users\\hp\\Downloads\\geckodriver-v0.31.0-win64\\geckodriver.exe");

// wd = new FirefoxDriver();

// System.setProperty("webdriver.edge.driver", "C:\\Users\\hp\Downloads\\edgedriver\_win64\\msedgedriver.exe");

// wd = new EdgeDriver();

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

wd.manage().window().maximize();

}

@AfterClass

public void closeBrowser() throws InterruptedException {

wd.close();

}

@Test(priority = 1)

public void loadtime() throws InterruptedException {

long s = System.currentTimeMillis();

WebDriverWait wait = new ~~WebDriverWait~~(wd, 40);

wait.until(ExpectedConditions.elementToBeClickable(By.className("L0Z3Pu")));

long e = System.currentTimeMillis();

long r = e - s;

System.out.println("----------------------------------------------------------------");

System.out.println("TEST 1 - Display page load time.\n");

System.out.println("Page load time in milliseconds: " + r);

System.out.println("----------------------------------------------------------------\n\n");

}

@Test(priority = 2)

public void search() throws InterruptedException {

// Search

wd.findElement(By.cssSelector(".\_2IX\_2-.VJZDxU")).sendKeys(Keys.ESCAPE);

Thread.sleep(2000);

wd.findElement(By.className("\_3704LK")).sendKeys("iPhone 13");

Thread.sleep(2000);

wd.findElement(By.className("\_3704LK")).sendKeys(Keys.ENTER);

Thread.sleep(2000);

// Check if image loaded

try {

boolean image3 = wd.findElement(By.xpath("//img[contains(@src, 'https://rukminim1.flixcart.com/image/312/312/ktketu80/mobile/a/m/7/iphone-13-mlpj3hn-a-apple-original-imag6vpyk3w4zarg.jpeg?q=70')]")).isDisplayed();

// WebElement image3 = wd.findElement(By.xpath(

// "/html/body/div[1]/div/div[3]/div[1]/div[2]/div[4]/div/div/div/a/div[1]/div[1]/div/div/img"));

//

System.out.println("----------------------------------------------------------------");

System.out.println("TEST 2 - Check if only visible images are loaded.\n");

System.out.println("Image 3 is loaded.");

System.out.println("----------------------------------------------------------------\n\n");

} catch (org.openqa.selenium.NoSuchElementException e) {

System.out.println("----------------------------------------------------------------");

System.out.println("TEST 2 - Check if only visible images are loaded.\n");

System.out.println("Image 3 is not loaded.");

System.out.println("----------------------------------------------------------------\n\n");

}

}

@Test(priority = 3)

public void scroll() throws InterruptedException {

String JS\_ELEMENT\_IS\_SCROLLABLE = "return arguments[0].scrollHeight > arguments[0].offsetHeight;";

JavascriptExecutor jse = (JavascriptExecutor) wd;

WebElement container = wd.findElement(By.xpath("//div[@id='container']"));

Boolean isScrollable = (Boolean) jse.executeScript(JS\_ELEMENT\_IS\_SCROLLABLE, container);

if (isScrollable == true) {

System.out.println("----------------------------------------------------------------");

System.out.println("TEST 3 - Check if scroll bar is present.\n");

System.out.println("Scroll bar is present");

System.out.println("----------------------------------------------------------------\n\n");

} else {

System.out.println("----------------------------------------------------------------");

System.out.println("TEST 3 - Check if scroll bar is present.\n");

System.out.println("Scroll bar is absent.");

System.out.println("----------------------------------------------------------------\n\n");

}

// Checking frequency of refresh

Wait<WebDriver> wait = new FluentWait<WebDriver>(wd).withTimeout(Duration.ofSeconds(10))

.pollingEvery(Duration.ofMillis(500)).ignoring(NoSuchElementException.class);

WebElement foo = wait.until(new Function<WebDriver, WebElement>() {

public WebElement apply(WebDriver wd) {

return wd.findElement(By.cssSelector(".\_396cs4.\_3exPp9"));

}

});

System.out.println("----------------------------------------------------------------");

System.out.println("TEST 4 - Frequency of Refresh.\n");

System.out.println("Checking the frequency of refresh every 5s for 30s.");

System.out.println("----------------------------------------------------------------\n\n");

// Verify image is downloaded just before scrolling

WebElement element = wd.findElement(By.xpath("//img[contains(@src, 'https://rukminim1.flixcart.com/image/312/312/ktketu80/mobile/a/m/7/iphone-13-mlpj3hn-a-apple-original-imag6vpyk3w4zarg.jpeg?q=70')]"));

boolean dispBefore = element.isDisplayed();

System.out.println("----------------------------------------------------------------");

System.out.println("TEST 5 - Image download just before scrolling.\n");

if (dispBefore == true) {

System.out.println("Before Scrolling : Image downloaded.");

}

else {

System.out.println("Before Scrolling : Image not downloaded.");

}

jse.executeScript("arguments[0].scrollIntoView(true);",element);

boolean dispAfter = element.isDisplayed();

if (dispAfter == true) {

System.out.println("After Scrolling : Image downloaded.");

}

else {

System.out.println("After Scrolling : Image not downloaded.");

}

System.out.println("----------------------------------------------------------------\n\n");

Thread.sleep(2000);

// scroll to the bottom

Thread.sleep(2000);

System.out.println("----------------------------------------------------------------");

System.out.println("TEST 6 - Scroll to the bottom.\n");

System.out.println("Navigating to the bottom of the page.");

System.out.println("----------------------------------------------------------------\n\n");

jse.executeScript("window.scrollBy(0,document.body.scrollHeight)");

Thread.sleep(2000);

}

}