Phase-5 Assessment Projects.

Automate an E-Commerce Web Application

Source Code:

1.FlipkartTestChrome.java:

```java
package com.demo;

import org.testng.annotations.AfterClass;
import org.testng.annotations.Test;
import org.testng.annotations.BeforeClass;
import org.testng.annotations.Test;

import java.io.File;
import java.io.IOException;
import java.util.concurrent.TimeUnit;
import java.util.function.Function;

import org.apache.commons.io.FileUtils;
import org.openqa.selenium.By;
import org.openqa.selenium.Dimension;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.NoSuchElementException;
import org.openqa.selenium.OutputType;
import org.openqa.selenium.TakesScreenshot;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.FluentWait;
import org.openqa.selenium.support.ui.Wait;
import org.testng.annotations.AfterClass;
import org.testng.annotations.BeforeClass;
import org.openqa.selenium.TakesScreenshot;


public class FlipkartTestChrome {
WebDriver driver;

@BeforeClass
public void beforeClass() {
System.setProperty("webdriver.chrome.driver","C:\\Users\\HP\\Downloads\\SeleniumJar\\95\\chrome
driver.exe");
```

```java
driver = new ChromeDriver();
driver.get("https://www.flipkart.com/");
driver.manage().window().maximize();
}

@AfterClass
public void afterClass() {
driver = null;
}

@Test(priority = 1)

public void closeLogin() throws InterruptedException {

try {
System.out.println("\nChrome Browser Result:\n");
System.out.println(driver.getTitle());
driver.findElement(By.cssSelector("body > div._2Sn47c > div > div > button")).click();
Thread.sleep(1000);
} catch (NoSuchElementException e) {
e.printStackTrace();
}
screenshot(driver,"closelogin");
}

@Test(priority = 2)

public void scroll() throws InterruptedException {

Thread.sleep(2000);
JavascriptExecutor js = (JavascriptExecutor) driver;
js.executeScript("window.scrollBy(0,document.body.scrollHeight)");
System.out.println("\nNavigated to bottom of the page");
Thread.sleep(2000);
js.executeScript("window.scrollBy(0,-document.body.scrollHeight)", "");
System.out.println("\nScroll Feature available");
Thread.sleep(2000);
screenshot(driver,"scroll");
}

@Test(priority = 3)

public void searchProduct() throws InterruptedException {
Thread.sleep(1000);
driver.findElement(By.name("q")).sendKeys("iPhone 13");
Thread.sleep(1000);
```

```java
By search = By.cssSelector("#container > div > div._1kfTjk > div._1rH5Jn > div._2Xfa2_ > div._1cmsER >
form > div > button > svg");
driver.findElement(search).click();

Thread.sleep(3000);
By load = By.cssSelector("#container > div > div._36fx1h._6t1WkM._3HqJxg > div._1YokD2._2GoDe3 >
div:nth-child(2) > div:nth-child(9) > div > div");
long start = System.currentTimeMillis();
driver.findElement(load).click();
long finish = System.currentTimeMillis();
long totalTime = finish - start;
System.out.println("\nTime to load page in millisecs - " + totalTime);
screenshot(driver,"searchproduct");
}

@Test(priority = 4)

public void loadImage() throws InterruptedException {

String url = "https://www.flipkart.com/apple-iphone-13-blue-256-
gb/p/itmd68a015aa1e39?pid=MOBG6VF566ZTUVFR&lid=LSTMOBG6VF566ZTUVFR2RQLVU&marketplac
e=FLIPKART&q=iPhone+13&store=tyy%2F4io&srno=s_1_8&otracker=search&otracker1=search&fm=org
anic&iid=1c0c7402-fe4f-4f45-9aa8-
cc59dffe8503.MOBG6VF566ZTUVFR.SEARCH&ppt=hp&ppn=homepage&ssid=i4t60bsv4g000000166537
5424769&qH=c3d519be0191fbf8";
driver.get(url);
Thread.sleep(3000);
//driver.navigate().refresh();

Wait<WebDriver> wait = new FluentWait<WebDriver>(driver).withTimeout(10, TimeUnit.SECONDS)
.pollingEvery(2, TimeUnit.SECONDS).ignoring(NoSuchElementException.class);
wait.until(new Function<WebDriver, WebElement>() {

@Test
public WebElement apply(WebDriver driver) {
WebElement img = driver.findElement(By.xpath(
"//*[@id=\"container\"]/div/div[3]/div[1]/div[2]/div[9]/div[4]/div[3]/div/div/div/div[1]/img"));

if (img.isDisplayed()) {
System.out.println("\nImage Loaded");
return img;
} else {
System.out.println("\nFluent Wait Fail!, Element Not Loaded Yet");
return null;
}
}
});
screenshot(driver,"pageLoad");
```

```java
    }

    @Test(priority = 5)

    public void scrollFrequency() throws InterruptedException {
    Thread.sleep(2000);
    long start = System.currentTimeMillis();
    WebElement element = driver.findElement(By.cssSelector(
    "#container > div > div._2c7YLP.UtUXW0._6t1WkM._3HqJxg > div._1YokD2._2GoDe3 >
    div._1YokD2._3Mn1Gg.col-8-12 > div._1YokD2._3Mn1Gg > div:nth-child(7) > div > div:nth-child(3) > div >
    div > div:nth-child(1)"));
    ((JavascriptExecutor) driver).executeScript("arguments[0].scrollIntoView(true);", element);
    long stop = System.currentTimeMillis();
    long totalTime = stop - start;
    System.out.println("\nScroll Frequency in millisecs - " + totalTime);
    screenshot(driver,"scrollfrequency");

    }

    @Test(priority = 6)

    public void downloadImages() throws InterruptedException {
    WebElement img = driver.findElement(By
    .xpath("//*[@id=\"container\"]/div/div[3]/div[1]/div[2]/div[9]/div[4]/div[3]/div/div/div/div[1]/img"));
    Boolean p = (Boolean) ((JavascriptExecutor) driver).executeScript("return arguments[0].complete "
    + "&& typeof arguments[0].naturalWidth != \"undefined\" " + "&& arguments[0].naturalWidth > 0",
    img);

    if (p) {
    System.out.println("\nImage present");
    } else {
    System.out.println("\nImage not present");
    }
    screenshot(driver,"downloadImages");
    }

    @Test(priority = 7)

    public void screenResolution() throws InterruptedException {
    Thread.sleep(1000);
    Dimension dimension = new Dimension(720, 1080);
    driver.manage().window().setSize(dimension);
    Thread.sleep(3000);

    Dimension dimension1 = new Dimension(1280, 800);
    driver.manage().window().setSize(dimension1);
    Thread.sleep(3000);
```

```java
Dimension dimension2 = new Dimension(2256, 1504);
driver.manage().window().setSize(dimension2);

JavascriptExecutor js = (JavascriptExecutor) driver;
int contentHeight = ((Number) js.executeScript("return window.innerHeight")).intValue();
int contentWidth = ((Number) js.executeScript("return window.innerWidth")).intValue();
System.out.println("\nHeight: " + contentHeight + " Width: " + contentWidth + "\n");
screenshot(driver,"screenshotResolution");

}

public static void screenshot(WebDriver driver,String screenshotName){
TakesScreenshot ts = (TakesScreenshot)driver;
File scr = ts.getScreenshotAs(OutputType.FILE);
try {
FileUtils.copyFile(scr, new File(screenshotName+".png"));
System.out.println("Screenshot taken");
} catch (IOException e) {
e.printStackTrace();
}
}
}
```

2. FlipkartTestEdge.java:

```java
package com.demo;

import org.testng.annotations.AfterClass;
import org.testng.annotations.Test;
import org.testng.annotations.BeforeClass;
import java.io.File;
import java.io.IOException;
import java.util.concurrent.TimeUnit;
import java.util.function.Function;

import org.apache.commons.io.FileUtils;
import org.openqa.selenium.By;
import org.openqa.selenium.Dimension;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.NoSuchElementException;
import org.openqa.selenium.OutputType;
import org.openqa.selenium.TakesScreenshot;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
```

```java
import org.openqa.selenium.edge.EdgeDriver;
import org.openqa.selenium.support.ui.FluentWait;
import org.openqa.selenium.support.ui.Wait;
import org.testng.annotations.AfterClass;
import org.testng.annotations.BeforeClass;
import org.testng.annotations.Test;


public class FlipkartTestEdge {

WebDriver driver;

@BeforeClass
public void beforeClass() {
System.setProperty("webdriver.edge.driver","C:\\Users\\HP\\Downloads\\seleniumjar\\95\\msedgedriver.exe");
driver = new EdgeDriver();
driver.get("https://www.flipkart.com/");
driver.manage().window().maximize();
}

@AfterClass
public void afterClass() {
driver = null;
}

@Test(priority = 1)

public void closeLogin() throws InterruptedException {

try {
System.out.println("\nEdge Browser Result:\n");
System.out.println(driver.getTitle());
driver.findElement(By.cssSelector("body > div._2Sn47c > div > div > button")).click();
Thread.sleep(1000);
} catch (NoSuchElementException e) {
e.printStackTrace();
}
screenshot(driver,"closeloginedge");
}

@Test(priority = 2)

public void scroll() throws InterruptedException {

Thread.sleep(2000);
JavascriptExecutor js = (JavascriptExecutor) driver;
```

```java
js.executeScript("window.scrollBy(0,document.body.scrollHeight)");
System.out.println("\nNavigated to bottom of the page");
Thread.sleep(2000);
js.executeScript("window.scrollBy(0,-document.body.scrollHeight)", "");
System.out.println("\nScroll Feature available");
Thread.sleep(2000);
screenshot(driver,"scrolledge");
}

@Test(priority = 3)

public void searchProduct() throws InterruptedException {
Thread.sleep(1000);
driver.findElement(By.name("q")).sendKeys("iPhone 13");
Thread.sleep(1000);
By search = By.cssSelector(
"#container > div > div._1kfTjk > div._1rH5Jn > div._2Xfa2_ > div._1cmsER > form > div > button > svg");
driver.findElement(search).click();

Thread.sleep(3000);
By load = By.cssSelector(
"#container > div > div._36fx1h._6t1WkM._3HqJxg > div._1YokD2._2GoDe3 > div:nth-child(2) > div:nth-child(9) > div > div");
long start = System.currentTimeMillis();
driver.findElement(load).click();
long finish = System.currentTimeMillis();
long totalTime = finish - start;
System.out.println("\nTime to load page in millisecs - " + totalTime);
screenshot(driver,"searchProductedge");
}

@Test(priority = 4)

public void loadImage() throws InterruptedException {

String url = "https://www.flipkart.com/apple-iphone-13-blue-256-gb/p/itmd68a015aa1e39?pid=MOBG6VF566ZTUVFR&lid=LSTMOBG6VF566ZTUVFR2RQLVU&marketplace=FLIPKART&q=iPhone+13&store=tyy%2F4io&srno=s_1_8&otracker=search&otracker1=search&fm=organic&iid=1c0c7402-fe4f-4f45-9aa8-cc59dffe8503.MOBG6VF566ZTUVFR.SEARCH&ppt=hp&ppn=homepage&ssid=i4t60bsv4g0000001665375424769&qH=c3d519be0191fbf8";
driver.get(url);
Thread.sleep(3000);
//driver.navigate().refresh();

Wait<WebDriver> wait = new FluentWait<WebDriver>(driver).withTimeout(10, TimeUnit.SECONDS)
.pollingEvery(2, TimeUnit.SECONDS).ignoring(NoSuchElementException.class);
wait.until(new Function<WebDriver, WebElement>() {
```

```java
@Test
public WebElement apply(WebDriver driver) {
WebElement img = driver.findElement(By.xpath(
"//*[@id=\"container\"]/div/div[3]/div[1]/div[2]/div[9]/div[4]/div[3]/div/div/div/div[1]/img"));

if (img.isDisplayed()) {
System.out.println("\nImage Loaded");
return img;
} else {
System.out.println("\nFluent Wait Fail!, Element Not Loaded Yet");
return null;
}
}
});
screenshot(driver,"Loadimageedge");
}

@Test(priority = 5)

public void scrollFrequency() throws InterruptedException {
Thread.sleep(2000);
long start = System.currentTimeMillis();
WebElement element = driver.findElement(By.cssSelector(
"#container > div > div._2c7YLP.UtUXW0._6t1WkM._3HqJxg > div._1YokD2._2GoDe3 >
div._1YokD2._3Mn1Gg.col-8-12 > div._1YokD2._3Mn1Gg > div:nth-child(7) > div > div:nth-child(3) > div >
div > div:nth-child(1)"));
((JavascriptExecutor) driver).executeScript("arguments[0].scrollIntoView(true);", element);
long stop = System.currentTimeMillis();
long totalTime = stop - start;
System.out.println("\nScroll Frequency in millisecs - " + totalTime);
screenshot(driver,"scrollFrequencyedge");

}

@Test(priority = 6)

public void downloadImages() throws InterruptedException {
WebElement img = driver.findElement(By
.xpath("//*[@id=\"container\"]/div/div[3]/div[1]/div[2]/div[9]/div[4]/div[3]/div/div/div/div[1]/img"));
Boolean p = (Boolean) ((JavascriptExecutor) driver).executeScript("return arguments[0].complete "
+ "&& typeof arguments[0].naturalWidth != \"undefined\" " + "&& arguments[0].naturalWidth > 0",
img);

if (p) {
System.out.println("\nImage present");
} else {
System.out.println("\nImage not present");
```

```java
    }
    screenshot(driver,"downloadImagesedge");
    }

    @Test(priority = 7)

    public void screenResolution() throws InterruptedException {
    Thread.sleep(1000);
    Dimension dimension = new Dimension(720, 1080);
    driver.manage().window().setSize(dimension);
    Thread.sleep(3000);

    Dimension dimension1 = new Dimension(1280, 800);
    driver.manage().window().setSize(dimension1);
    Thread.sleep(3000);

    Dimension dimension2 = new Dimension(2256, 1504);
    driver.manage().window().setSize(dimension2);

    JavascriptExecutor js = (JavascriptExecutor) driver;
    int contentHeight = ((Number) js.executeScript("return window.innerHeight")).intValue();
    int contentWidth = ((Number) js.executeScript("return window.innerWidth")).intValue();
    System.out.println("\nHeight: " + contentHeight + " Width: " + contentWidth + "\n");
    screenshot(driver,"screenshotResolutionedge");

    }
    public static void screenshot(WebDriver driver,String screenshotName){
    TakesScreenshot ts = (TakesScreenshot)driver;
    File scr = ts.getScreenshotAs(OutputType.FILE);
    try {
    FileUtils.copyFile(scr, new File(screenshotName+".png"));
    System.out.println("Screenshot taken");
    } catch (IOException e) {
    e.printStackTrace();
    }

    }

    }
```

3. pom.xml

```xml
<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>
```

```xml
<groupId>com.demo</groupId>
<artifactId>AutomateEcommerce</artifactId>
<version>0.0.1-SNAPSHOT</version>
<packaging>jar</packaging>

<name>AutomateEcommerce</name>
<url>http://maven.apache.org</url>

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

<dependencies>
<dependency>
<groupId>junit</groupId>
<artifactId>junit</artifactId>
<version>3.8.1</version>
<scope>test</scope>
</dependency>

<dependency>
<groupId>org.testng</groupId>
<artifactId>testng</artifactId>
<version>7.5</version>
<scope>test</scope>
</dependency>

<dependency>
<groupId>org.seleniumhq.selenium</groupId>
<artifactId>selenium-java</artifactId>
<version>3.5.1</version>
</dependency>
</dependencies>
</project>
```

4. testng.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE suite SYSTEM "https://testng.org/testng-1.0.dtd">
<suite name="Suite">
<test thread-count="5" name="Test">
<classes>
<class name="com.demo.FlipkartTestChrome"/>
<class name="com.demo.FlipkartTestEdge"/>
<class name="com.demo.AppTest"/>
</classes>
```

```xml
  </test> <!-- Test -->
</suite> <!-- Suite -->
```