**Automate an E-Commerce Web Application**

**Source code:**

**package** com.test;

**import** org.testng.annotations.Test;

**import** org.testng.annotations.BeforeMethod;

**import** org.testng.annotations.Ignore;

**import** org.testng.annotations.AfterMethod;

**import** org.testng.annotations.BeforeClass;

**import** java.time.Duration;

**import** java.util.concurrent.TimeUnit;

**import** java.awt.Toolkit;

**import** java.io.File;

**import** java.io.IOException;

**import** org.openqa.selenium.By;

**import** org.openqa.selenium.Dimension;

**import** org.openqa.selenium.JavascriptExecutor;

**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.edge.EdgeDriver;

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

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

**import** org.testng.annotations.AfterClass;

**public** **class** flipkart {

WebDriver chrome;

String url;

@Test(priority = 1)

**public** **void** loadTime() {

JavascriptExecutor js=(JavascriptExecutor)chrome;

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

**long** navstart=(Long) js.executeScript("return window.performance.timing.navigationStart");

**long** respstart=(Long) js.executeScript("return window.performance.timing.responseStart");

**long** domcomp=(Long) js.executeScript("return window.performance.timing.domComplete");

**long** backendper=respstart-navstart;

**long** frontendper=domcomp-respstart;

System.***out***.println("Load Time of the website:");

System.***out***.println("\nBackend performance : "+ backendper);

System.***out***.println("\nFrontend performance : "+frontendper);

}

@Test(priority = 2)

**public** **void** search()

{

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

WebElement cancle= chrome.findElement(By.*cssSelector*("button[class='\_2KpZ6l \_2doB4z']"));

cancle.click();

WebElement searchbar= chrome.findElement(By.*name*("q"));

searchbar.sendKeys("iphone 13");

chrome.manage().timeouts().~~implicitlyWait~~(2, TimeUnit.***SECONDS***);

WebElement searchbuton= chrome.findElement(By.*cssSelector*("button[class='L0Z3Pu']"));

searchbuton.click();

**this**.url=chrome.getCurrentUrl();

}

@Test(priority = 3)

**public** **void** scroll()

{

chrome.get(**this**.url);

JavascriptExecutor scrollBarPresent = (JavascriptExecutor) chrome;

Boolean test = (Boolean) (scrollBarPresent.executeScript("return document.documentElement.scrollHeight>document.documentElement.clientHeight;"));

**if** (test == **true**) {

System.***out***.println("Scrollbar is present.");

} **else** **if** (test == **false**){

System.***out***.println("Scrollbar is not present.");

}

}

@Test(priority=4)

**public** **void** contentRefresh()

{

chrome.get(**this**.url);

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

**long** startTime = System.*currentTimeMillis*();

JavascriptExecutor refresh = (JavascriptExecutor) chrome;

refresh.executeScript("window.scrollBy(0,1000)", "");

**new** WebDriverWait(chrome, Duration.*ofMinutes*(10)).until(ExpectedConditions.*presenceOfElementLocated*(By.*xpath*("//div[@class='CXW8mj']")));

**long** endTime = System.*currentTimeMillis*();

**long** totalTime = endTime - startTime;

System.***out***.println(" \nLoad Time after scrolling " + totalTime);

}

@Test(priority=5)

**public** **void** imageDisplay() **throws** Exception

{

chrome.get(**this**.url);

WebElement image = chrome.findElement(By.*xpath*("//div[@class='CXW8mj']"));

**if** (image.isDisplayed())

{

System.***out***.println(" \nImage is not present before scrolling the page");

}

System.***out***.println("scrolling");

Thread.*sleep*(2000);

JavascriptExecutor scroll = (JavascriptExecutor) chrome;

scroll.executeScript("window.scrollBy(0,710)");

WebElement img1 = chrome.findElement(By.*xpath*("//div[@class='CXW8mj']"));

**if**(img1.isDisplayed()) {

System.***out***.println(" \n Image is present after scrolling the page");

}

}

@Test(priority = 6)

**public** **void** bottomScroll()

{

chrome.get(**this**.url);

chrome.manage().timeouts().~~implicitlyWait~~(12, TimeUnit.***SECONDS***);

**try** {

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

System.***out***.println("\n Page is completely scrolled to bottom");

} **catch** (Exception e) {

// **TODO** Auto-generated catch block

System.***out***.println(" \n Page is not completely scrolled to bottom");

}

// System.out.println(s);

}

@Test(priority = 8)

**public** **void** diffBrowChrome()

{

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

System.***out***.println("\n\n\*\*\*\*\*\*\*\*\*\*\*chrome\*\*\*\*\*\*\*\*\*\*\*\*");

Dimension d= chrome.manage().window().getSize();

System.***out***.println( "height : "+d.getHeight() +"\n width : "+d.getWidth());

chrome.manage().window().setSize(**new** Dimension(702, 613));

d= chrome.manage().window().getSize();

System.***out***.println(" \n After changing resoulution");

System.***out***.println( "height : "+d.getHeight() +"\n width : "+d.getWidth());

}

@Test(priority = 7)

**public** **void** imgHeight()

{

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

// WebElement cancle= chrome.findElement(By.cssSelector("button[class='\_2KpZ6l \_2doB4z']"));

//cancle.click();

java.awt.Dimension screenSize = Toolkit.*getDefaultToolkit*().getScreenSize();

**int** width = (**int**) screenSize.getWidth();

**int** height = (**int**) screenSize.getHeight();

System.***out***.println("Resoultion of the device : Screen width "+ width+" Screen Height "+height );

chrome.manage().timeouts().~~implicitlyWait~~(5, TimeUnit.***SECONDS***);

**int** wid=chrome.findElement(By.*cssSelector*("img[class='\_396cs4 \_3exPp9']")).getSize().getWidth();

**int** h=chrome.findElement(By.*cssSelector*("img[class='\_396cs4 \_3exPp9']")).getSize().getHeight();

System.***out***.println("Resoultion of the image : Image width "+ wid+" Image Height "+h );

WebElement img = chrome.findElement(By.*cssSelector*("img[class='\_396cs4 \_3exPp9']"));

**if**(img.isDisplayed()){

**if** (h<height)

{

System.***out***.println("Image is visible till the screen height itself");

}

}

}

@Test(priority = 9)

**public** **void** diffBrowEdge()

{

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

WebDriver edge= **new** EdgeDriver();

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

System.***out***.println("\n\n\*\*\*\*\*\*\*\*\*\*\*edge\*\*\*\*\*\*\*\*\*\*\*\*");

Dimension d= edge.manage().window().getSize();

System.***out***.println( "height : "+d.getHeight() +"\n width : "+d.getWidth());

edge.manage().window().setSize(**new** Dimension(702, 613));

d= edge.manage().window().getSize();

System.***out***.println("\nAfter changing resoulution");

System.***out***.println( "height : "+d.getHeight() +"\n width : "+d.getWidth());

}

@BeforeMethod

**public** **void** beforeMethod() {

chrome.manage().window().maximize();

}

@AfterMethod

**public** **void** afterMethod() {

}

@BeforeClass

**public** **void** beforeClass() {

System.*setProperty*("webdriver.chrome.driver","C:\\Users\\Pradeepa saravanan\\Downloads\\chromedriver\_win32/chromedriver.exe");

chrome= **new** ChromeDriver();

}

@AfterClass

**public** **void** afterClass() {

}

}