

# Automated Testing Tool (Selenium)

## 1. Download and install JDK with JRE

### Java SE Development Kit 18.0.2 downloads

Thank you for downloading this release of the Java™ Platform, Standard Edition Development Kit (JDK™). The JDK is a development environment for building applications and components using the Java programming language.

The JDK includes tools for developing and testing programs written in the Java programming language and running on the Java platform.

Linux macOS Windows


Product/file description	File size	Download
x64 Compressed Archive	172.79 MB	<a href="https://download.oracle.com/java/18/latest/jdk-18_windows-x64_bin.zip">https://download.oracle.com/java/18/latest/jdk-18_windows-x64_bin.zip</a> (sha256 <a href="#">🔗</a> )
x64 Installer	153.37 MB	<a href="https://download.oracle.com/java/18/latest/jdk-18_windows-x64_bin.exe">https://download.oracle.com/java/18/latest/jdk-18_windows-x64_bin.exe</a> (sha256 <a href="#">🔗</a> )
x64 MSI Installer	152.25 MB	<a href="https://download.oracle.com/java/18/latest/jdk-18_windows-x64_bin.msi">https://download.oracle.com/java/18/latest/jdk-18_windows-x64_bin.msi</a> (sha256 <a href="#">🔗</a> )

#### JDK Script-friendly URLs

The URLs listed above will remain the same for JDK update releases to allow their use in scripts.

[Learn more about automating the downloads of JDK](#)

## 2. Download & Install Eclipse IDE



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Eclipse Installer 2022-09 R

The Eclipse Installer 2022-09 R now includes a JRE for macOS, Windows and Linux.

Try the Eclipse **Installer** 2022-09 R

The easiest way to install and update your Eclipse Development Environment.

👤 1,653,916 Installer Downloads


📦 1,087,854 Package Downloads and Updates

**Download**

macOS [x86\\_64](#) | [AArch64](#)

Windows [x86\\_64](#)


Linux [x86\\_64](#) | [AArch64](#)



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The Eclipse Installer 2022-09 R now includes a JRE for macOS, Windows and Linux.

### 3. Download Chrome Driver

The screenshot shows the ChromeDriver download page. The page title is 'ChromeDriver - WebDriver for Chro...'. The main heading is 'Current Releases'. Below it, there are several bullet points listing different versions of ChromeDriver and the Chrome versions they support. A yellow arrow points to the link for 'ChromeDriver 104.0.5112.29'. Below this link, it says 'Supports Chrome version 104' and lists a resolved issue. The page also includes links for 'ChromeDriver 103.0.5060.53' and 'ChromeDriver 102.0.5005.61'.

### 4. Installing selenium

The screenshot shows a Command Prompt window with the following text:

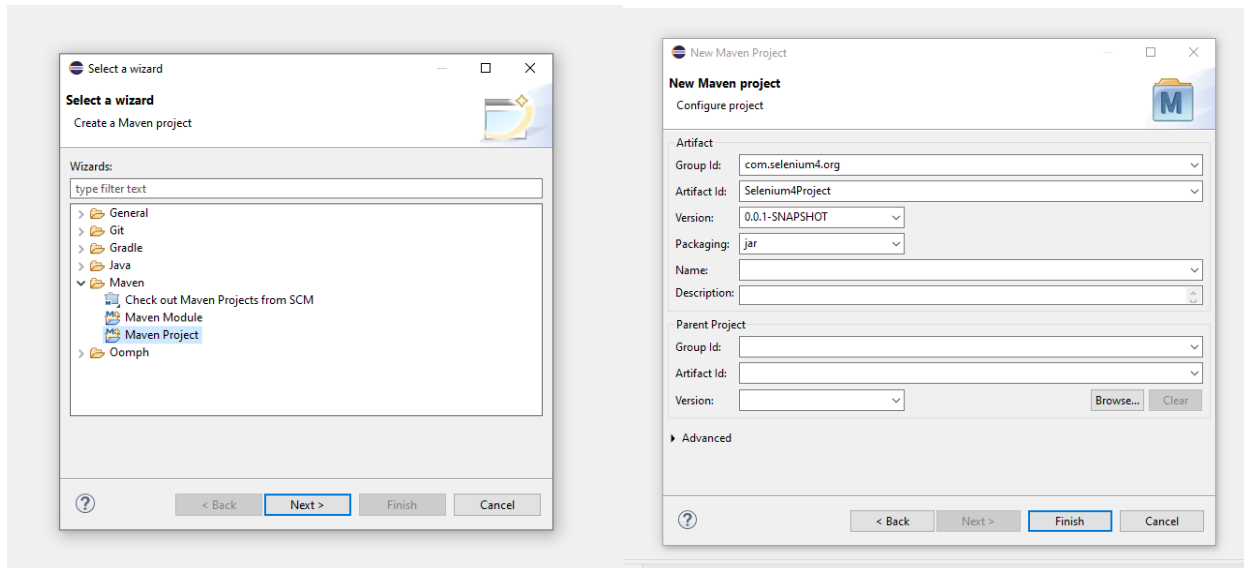
```
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Asif>pip install selenium
Requirement already satisfied: selenium in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (4.5.0)
Requirement already satisfied: certifi<=2021.10.8 in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from selenium) (2021.10.8)
Requirement already satisfied: trio-websocket<=0.9 in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from selenium) (0.9.2)
Requirement already satisfied: trio<=0.17 in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from selenium) (0.22.0)
Requirement already satisfied: urllib3[socks]>=1.26 in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from selenium) (1.26.11)
Requirement already satisfied: wsproto>=0.14 in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from trio-websocket<=0.9->selenium) (1.2.0)
Requirement already satisfied: async-generator>=1.10 in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from trio-websocket<=0.9->selenium) (1.10)
Requirement already satisfied: sniffio in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from trio<=0.17->selenium) (1.2.0)
Requirement already satisfied: exceptiongroup<=1.0.0rc9; python_version < "3.11" in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from trio<=0.17->selenium) (1.0.0)
Requirement already satisfied: idna in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from trio<=0.17->selenium) (3.3)
Requirement already satisfied: outcome in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from trio<=0.17->selenium) (1.2.0)
Requirement already satisfied: sortedcontainers in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from trio<=0.17->selenium) (2.4.0)
Requirement already satisfied: cffi>=1.14; os_name == "nt" and implementation_name != "pypy" in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from trio<=0.17->selenium) (1.15.1)
Requirement already satisfied: attrs>=19.2.0 in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from trio<=0.17->selenium) (22.1.0)
Requirement already satisfied: PySocks<=1.5.7, <2.0, >=1.5.6; extra == "socks" in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from urllib3[socks]>=1.26->selenium) (1.7.1)
Requirement already satisfied: h11<1, >=0.9.0 in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from wsproto>=0.14->trio-websocket<=0.9->selenium) (0.14.0)
Requirement already satisfied: pyparsing in c:\users\asif\appdata\local\programs\python\python39\lib\site-packages (from cffi>=1.14; os_name == "nt" and implementation_name != "pypy"->trio<=0.17->selenium) (2.2.1)

WARNING: You are using pip version 20.2.3; however, version 22.3 is available.
You should consider upgrading via the 'c:\users\asif\appdata\local\programs\python\python39\python.exe -m pip install --upgrade pip' command.

C:\Users\Asif>
```

## 5. Create a new Maven Project



## 6. Adding Dependencies for Selenium:

**MVN REPOSITORY** Search for groups, artifacts, categories Search

Home » org.seleniumhq.selenium » selenium-java » 4.0.0

**Selenium Java » 4.0.0**

Selenium provides support for the automation of web browsers. It provides extensions to emulate user interaction with browsers, a distribution server for scaling browser allocation, and the infrastructure for implementations of the W3C WebDriver specification.

License: Apache 2.0

Categories: Web Testing

Tags: selenium, testing, web

HomePage: <https://selenium.dev/>

Date: Oct 13, 2021

Files: pom (4 KB) | jar (740 bytes) View All

Repositories: Central Xceptance

Ranking: #270 in MvnRepository (See Top Artifacts)  
#1 in Web Testing

Used By: 1,569 artifacts

Note: There is a new version for this artifact

New Version: 4.6.0

Maven Gradle Gradle (Short) Gradle (Kotlin) SBT Ivy Grape Leiningen Buildr

```
<!-- https://mvnrepository.com/artifact/org.seleniumhq.selenium/selenium-java -->
<dependency>
  <groupId>org.seleniumhq.selenium</groupId>
  <artifactId>selenium-java</artifactId>
  <version>4.0.0</version>
</dependency>
```

☒ Include comment with link to declaration

Eclipse workspace - SeleniumProject/pom.xml - Eclipse IDE

Package Explorer: SeleniumProject, src/main/java, src/main/resources, src/test/java, src/test/resources, JRE System Library [J2SE-1.5], target, pom.xml

Editor: SeleniumProject/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>com.selenium4.org</groupId>
  <artifactId>Selenium4Project</artifactId>
  <version>0.0.1-SNAPSHOT</version>
  <dependencies>
    <dependency>
      <groupId>org.seleniumhq.selenium</groupId>
      <artifactId>selenium-java</artifactId>
      <version>4.0.0</version>
    </dependency>
  </dependencies>
</project>
```

Outline: Grammars, Binding: xsischemaLocation, Cache, File: C:\Users\Aulfi\emmins\cache\https\maven.apac, project, modelVersion, groupId, artifactId, version, dependencies, dependency, artifactId, version

## 7. Adding web driver manager dependency

The screenshot shows the Maven Repository website for the `io.github.bonigarcia:webdrivermanager` artifact. The page displays the version `5.0.3` and provides a table of metadata including license (Apache 2.0), tags (github), homepage, date, files, repositories, ranking, and used by. A note indicates a new version `5.3.1` is available. Below the metadata, there are tabs for different build tools: Maven, Gradle, Gradle (Short), Gradle (Kotlin), SBT, Ivy, Grape, Leiningen, and Buildr. The Maven tab is selected, showing the XML snippet for adding the dependency to a `pom.xml` file. The IDE window shows the `pom.xml` file with the following content:

```
1<?xml version="1.0" encoding="UTF-8"?>
2<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">
3  <groupId>com.selenium4project</groupId>
4  <artifactId>Selenium4Project</artifactId>
5  <version>0.0.1-SNAPSHOT</version>
6  <dependencies>
7    <!-- https://mvnrepository.com/artifact/org.seleniumhq.selenium/selenium-java -->
8    <dependency>
9      <groupId>org.seleniumhq.selenium</groupId>
10     <artifactId>selenium-java</artifactId>
11     <version>4.0.0</version>
12   </dependency>
13
14   <!-- https://mvnrepository.com/artifact/io.github.bonigarcia/webdrivermanager -->
15   <dependency>
16     <groupId>io.github.bonigarcia</groupId>
17     <artifactId>webdrivermanager</artifactId>
18     <version>5.0.3</version>
19   </dependency>
20 </dependencies>
21 </project>
```

## 8. Now, set up the browser driver

```
public class FirstTest {

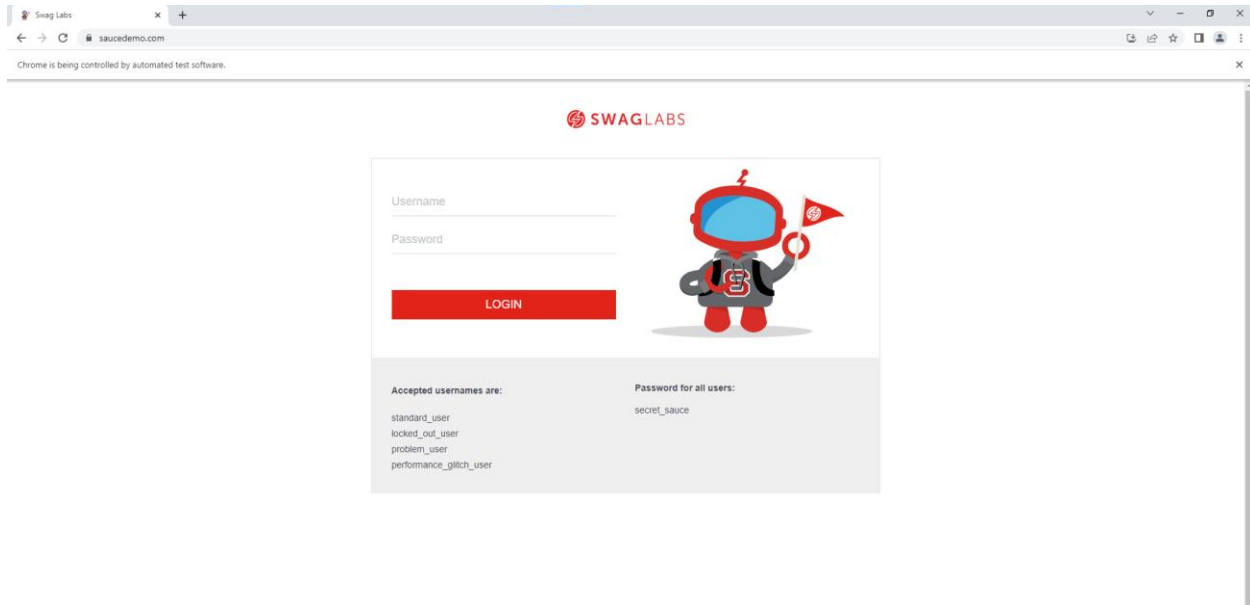
    public static void main(String[] args) throws InterruptedException {

        //Setting Browser Driver
        System.setProperty("webdriver.chrome.driver", "./drivers/chromedriver.exe");
        WebDriverManager.chromedriver().setup();
        WebDriver driver = new ChromeDriver();
```

9. Then, we opened the web application in the driver

```
//Targeted Application
```

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



10. Now, testing the Login Module:

```
//***** Login Testing
```

```
//For login - User Name input
```

```
driver.findElement(By.id("user-name")).sendKeys("standard_user");
```

```
Thread.sleep(2000);
```

```
//For login - Password input
```

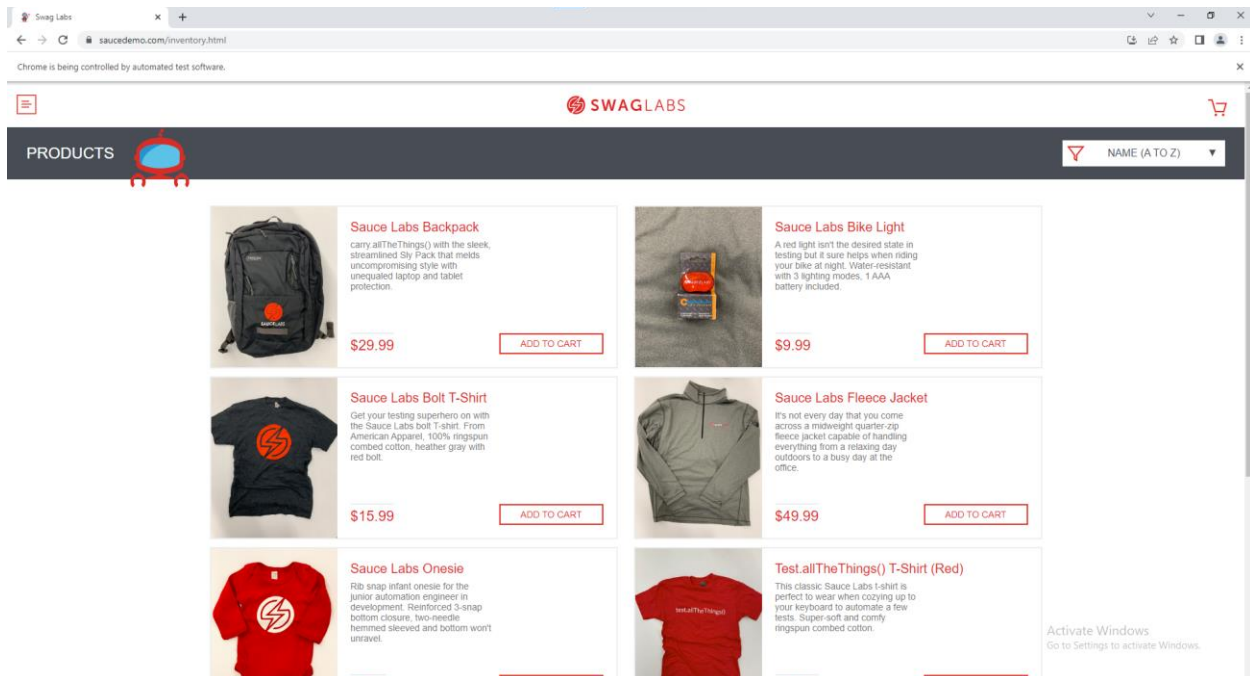
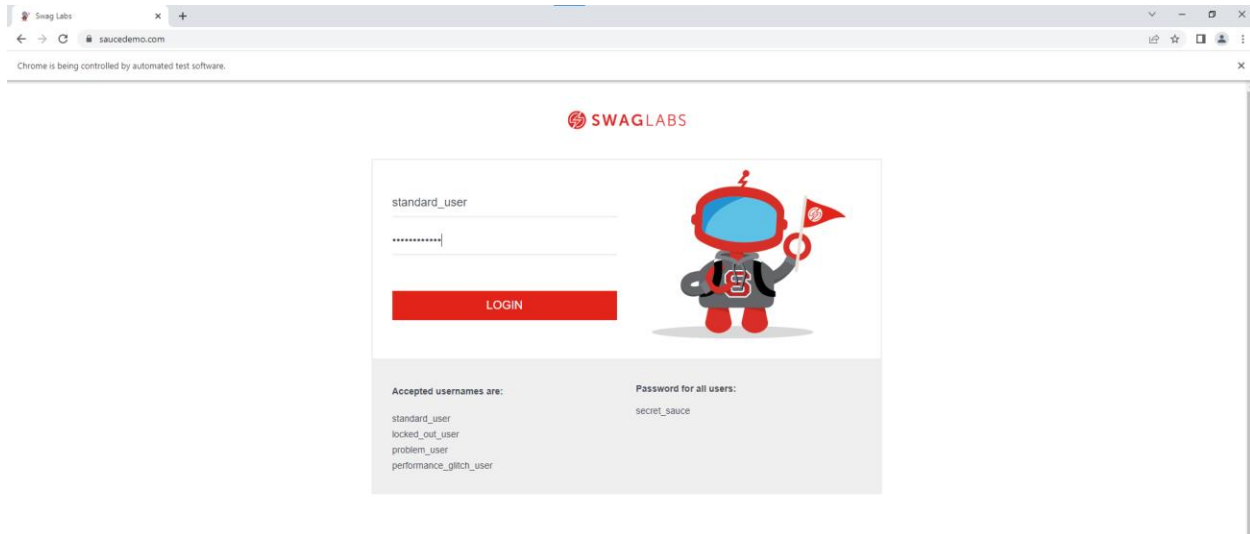
```
driver.findElement(By.id("password")).sendKeys("secret_sauce");
```

```
Thread.sleep(2000);
```

```
//For login - Click Login
```

```
driver.findElement(By.id("login-button")).click();
```

```
Thread.sleep(2000);
```



## 11. Then testing the Add to Cart Module:

//\*\*\*\*\*Add to Cart Testing

//Choosing item for Add to Cart

```
driver.findElement(By.id("add-to-cart-sauce-labs-backpack")).click();
Thread.sleep(2000);
driver.findElement(By.id("add-to-cart-sauce-labs-fleece-jacket")).click();
Thread.sleep(2000);
```

//Navigating to Cart Processing Page


```
driver.navigate().to("https://www.saucedemo.com/cart.html");
```

Swag Labs


saucedemo.com/inventory.html

Chrome is being controlled by automated test software.

PRODUCTS



NAME (A TO Z)




Sauce Labs Backpack

carry allTheThings() with the sleek, streamlined Sly Pack that melds uncompromising style with unequalled laptop and tablet protection.

\$29.99

REMOVE




Sauce Labs Bolt T-Shirt

Get your testing superhero on with the Sauce Labs bolt T-shirt. From American Apparel, 100% ringspun combed cotton, heather gray with red bolt.


\$15.99

ADD TO CART



Sauce Labs Onesie

Rib snap infant onesie for the junior automation engineer in development. Reinforced 3-snap bottom closure, two-needle hemmed sleeves and bottom won't unravel.




Sauce Labs Bike Light

A red light isn't the desired state in testing but it sure helps when riding your bike at night. Water-resistant with 3 lighting modes, 1 AAA battery included.

\$9.99

ADD TO CART




Sauce Labs Fleece Jacket

It's not every day that you come across a midweight quarter-zip fleece jacket capable of handling everything from a relaxing day outdoors to a busy day at the office.

\$49.99

REMOVE



Test.allTheThings() T-Shirt (Red)

This classic Sauce Labs t-shirt is perfect to wear when cozying up to your keyboard to automate a few tests. Super-soft and comfy ringspun combed cotton.

Activate Windows  
Go to Settings to activate Windows.

YOUR CART

QTY	DESCRIPTION
<div>CONTINUE SHOPPING</div>	
<div>CHECKOUT</div>	

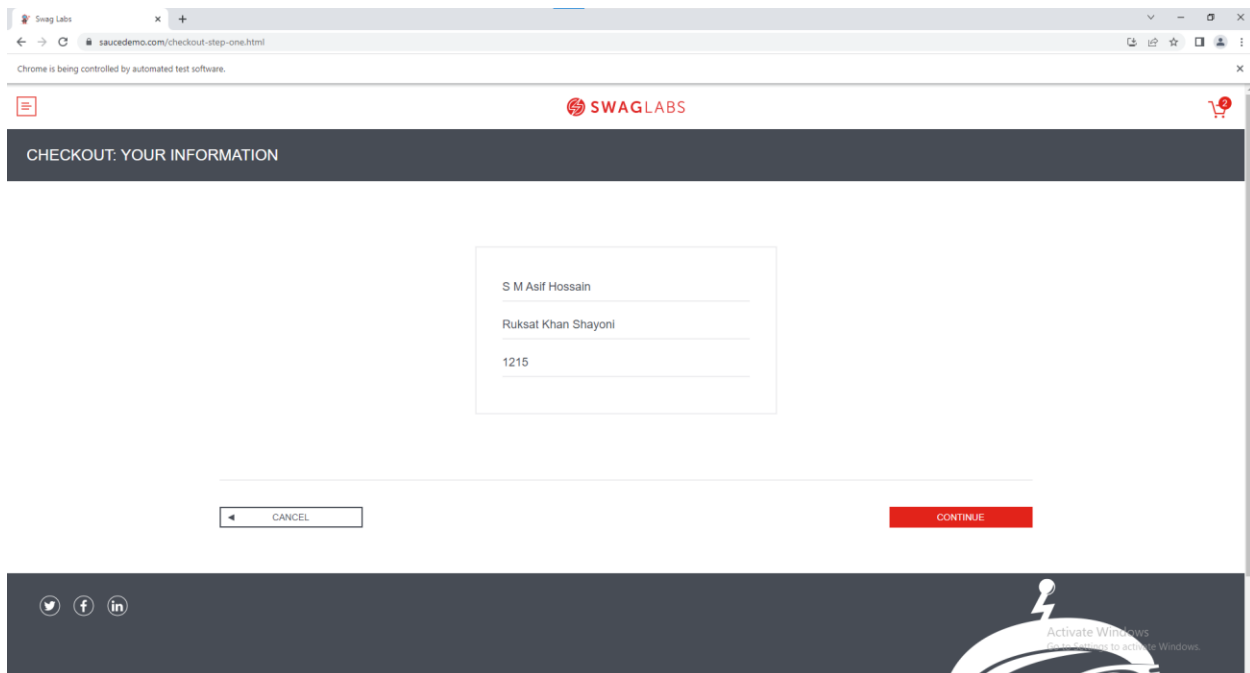
8

## 12. Then, testing the Order Confirmation Module:

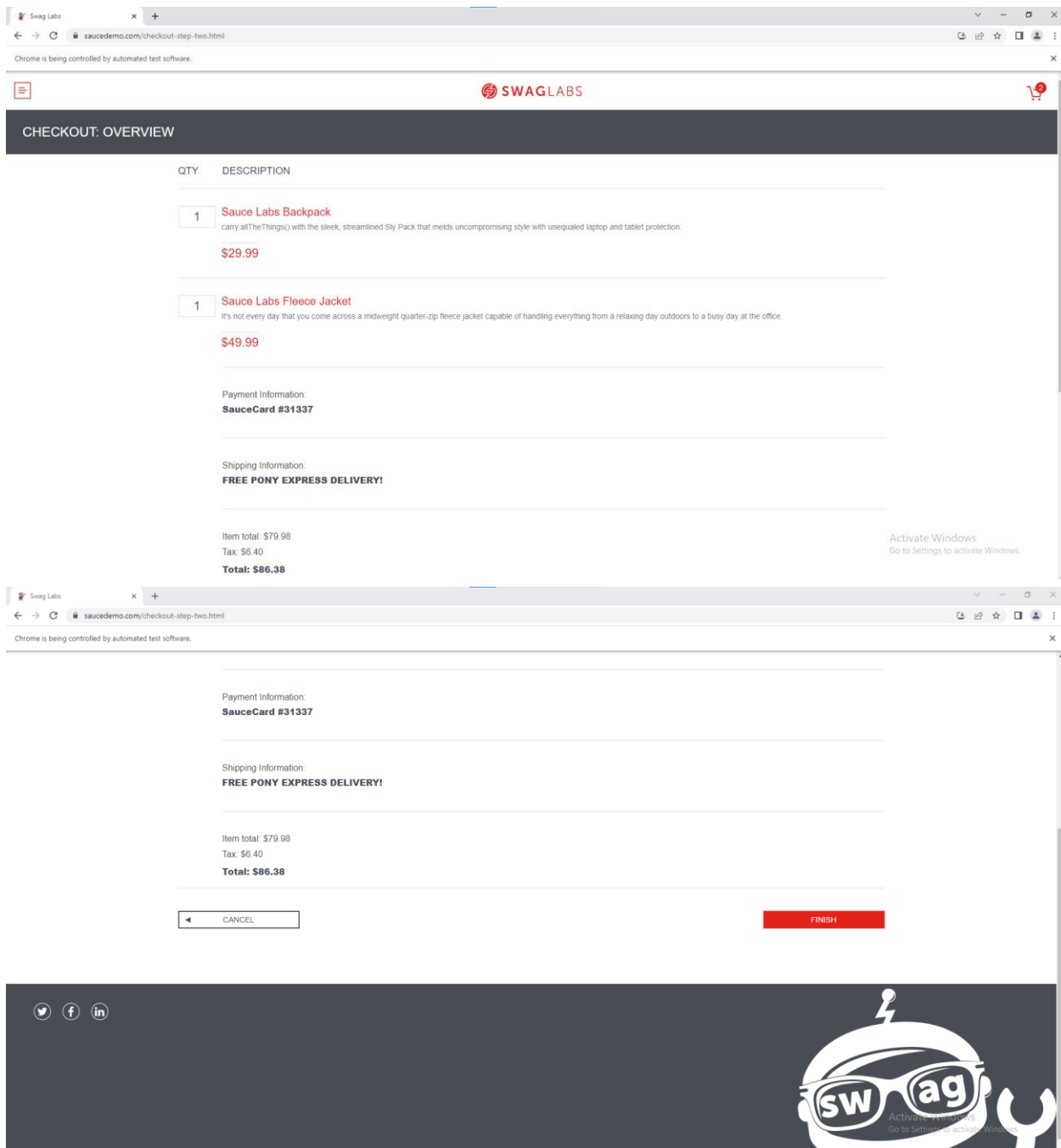
```
//***** Order Confirmation Testing
driver.findElement(By.id("checkout")).click();
Thread.sleep(2000);

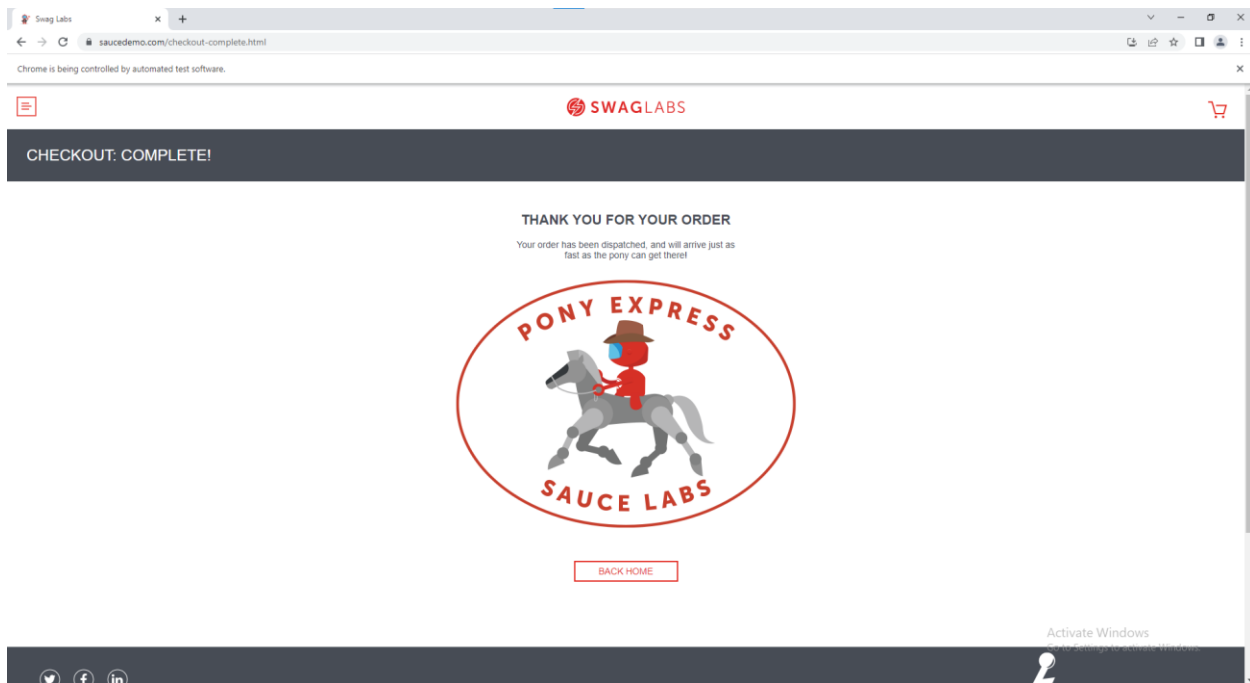
//Filling personal details to Confirm Order
driver.findElement(By.id("first-name")).sendKeys("S M Asif Hossain");
Thread.sleep(2000);
driver.findElement(By.id("last-name")).sendKeys("Ruksat Khan Shayoni");
Thread.sleep(2000);
driver.findElement(By.id("postal-code")).sendKeys("1215");
Thread.sleep(2000);

//Order Confirmation Button hitting
driver.findElement(By.id("continue")).click();
Thread.sleep(2000);
driver.findElement(By.id("finish")).click();
Thread.sleep(2000);
```



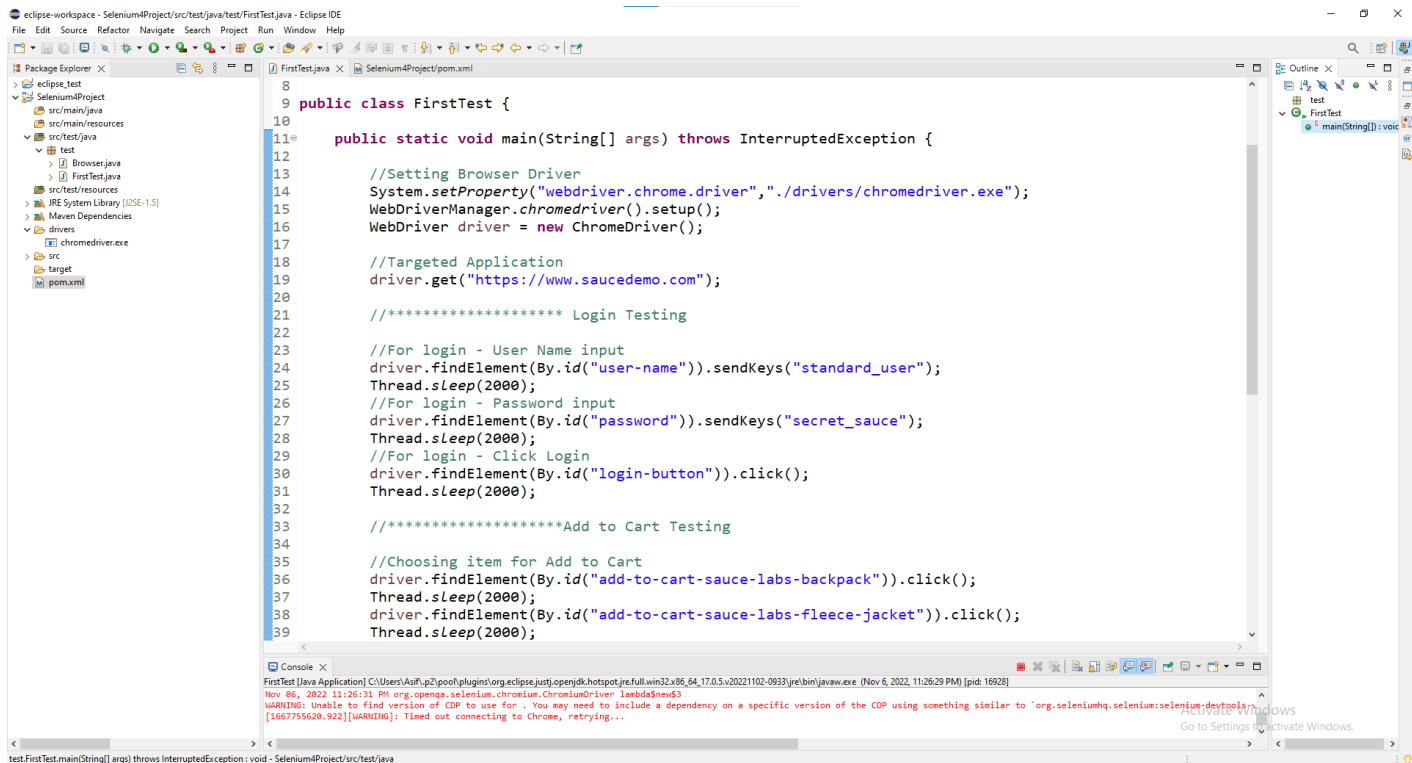


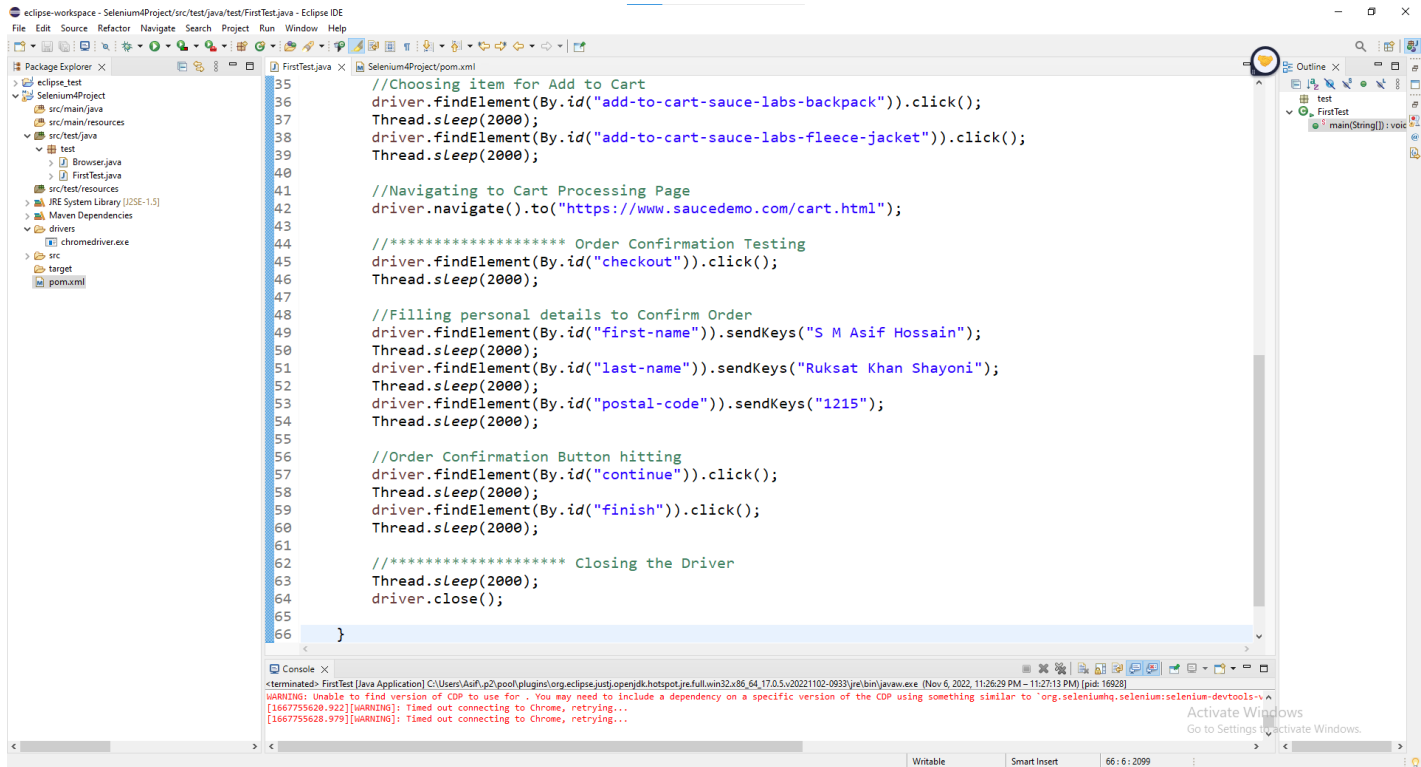




### 13. Lastly, closing our Driver:

```
//***** Closing the Driver
Thread.sleep(2000);
driver.close();
```





-----The End-----