



Assignment Cover Sheet

Assignment Title:	Documentation of Selenium Installation and Testing Process Flowchart		
Assignment No:	01	Date of Submission:	17 July 2022
Course Title:	Software Quality and Testing		
Course Code:	CSC 4271	Section:	A
Semester:	Summer	2021-22	Course Teacher: Abhijit Bhowmik

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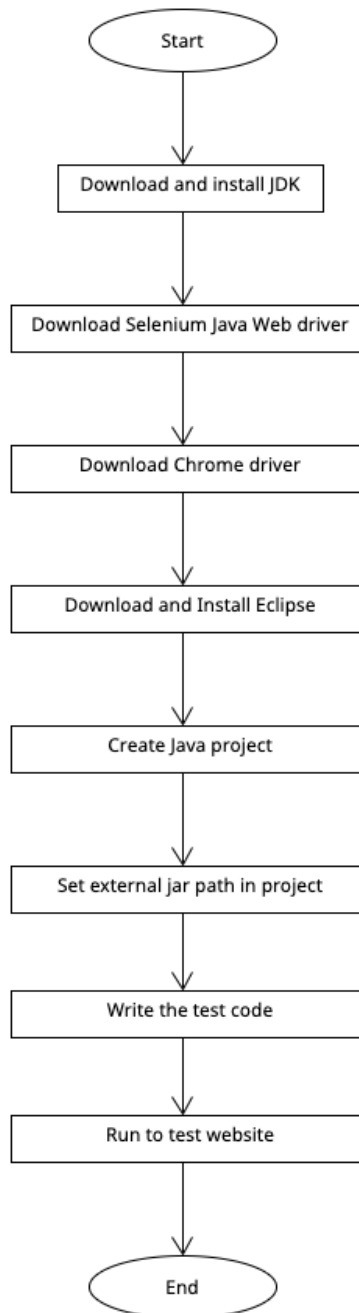
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10			Choose an item.	

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FACULTY COMMENTS	Marks Obtained	
	Total Marks	

Selenium is an automated testing framework used to validate web applications across different browsers and platforms. The Selenium download and installation process as well as how the system can be prepared to test a project have been demonstrated through a flowchart and step by step description along with the screenshots, which will be able to guide a new user who is interested in downloading and installing Selenium and using it for testing a project.

Flowchart :



1. Download and install JDK

Step-1:

Java downloads Tools and resources Java archive

Java 17 LTS is the latest long-term support release for the Java SE platform. JDK 18 and JDK 17 binaries are free to use in production and free to redistribute, at no cost, under the [Oracle No-Fee Terms and Conditions](#). [Learn about Java SE Subscription](#)

JDK 18 will receive updates under these terms, until September 2022 when it will be superseded by JDK 19

JDK 17 will receive updates under these terms, until at least September 2024.

Java 18 Java 17

Java SE Development Kit 18.0.1.1 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
Arm 64 Compressed Archive	168.42 MB	https://download.oracle.com/java/18/latest/jdk-18_macos-aarch64_bin.tar.gz (sha256 [link])
Arm 64 DMG Installer	167.81 MB	https://download.oracle.com/java/18/latest/jdk-18_macos-aarch64_bin.dmg (sha256 [link])
x64 Compressed Archive	170.47 MB	https://download.oracle.com/java/18/latest/jdk-18_macos-x64_bin.tar.gz (sha256 [link])
x64 DMG Installer	169.86 MB	https://download.oracle.com/java/18/latest/jdk-18_macos-x64_bin.dmg (sha256 [link])

Visit the <https://www.oracle.com/java/technologies/downloads/> page and click the Arm 64 Compressed Archive file to download it.

Note: Download the file which is compatible with the operating system that is being used.

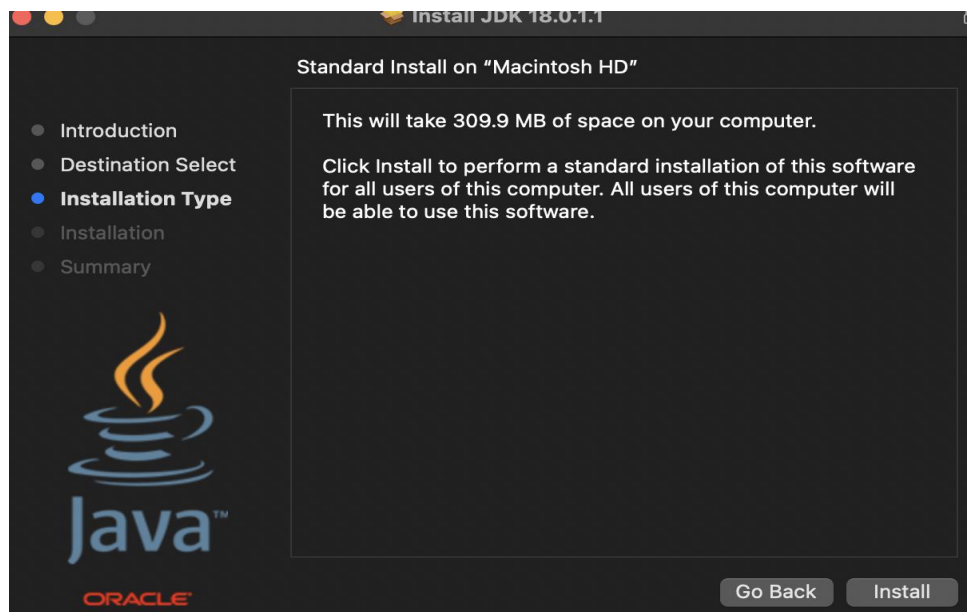
Step-2:



Run the installer to start the installation of JDK.

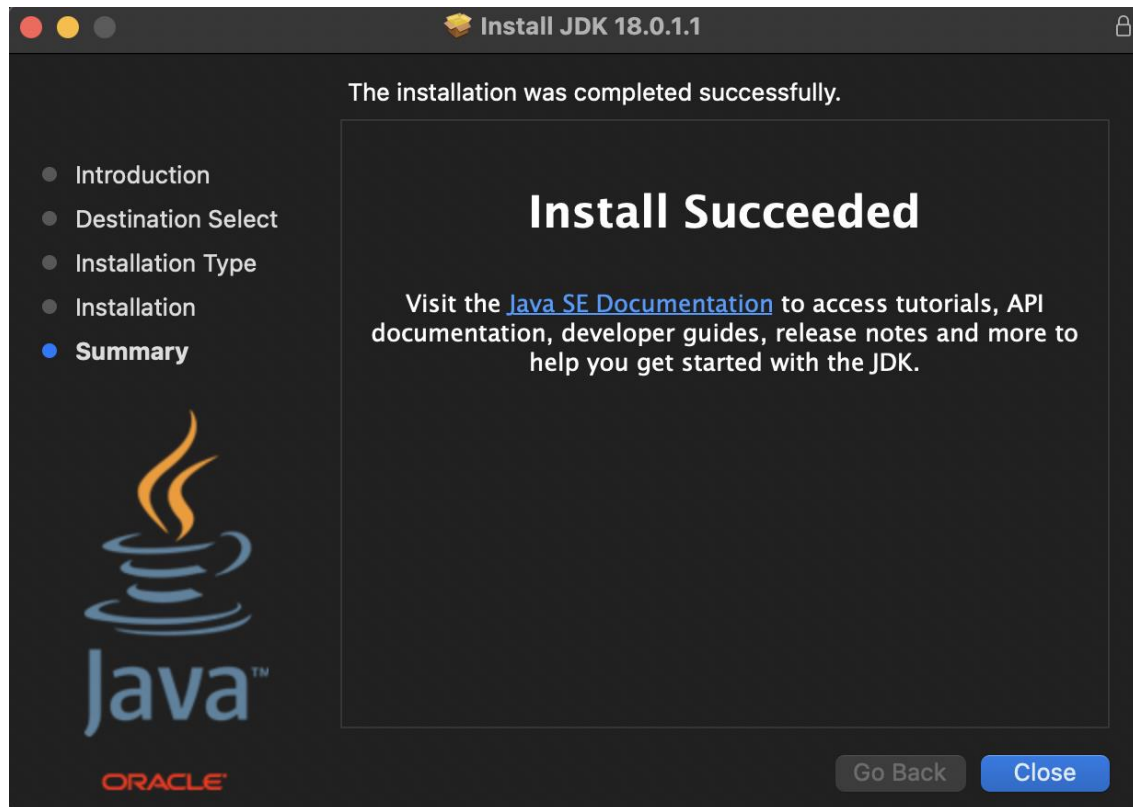
Note: The JDK installation process that has been demonstrated is for Mac OS.

Step-3:



Select the file installation destination and click install.

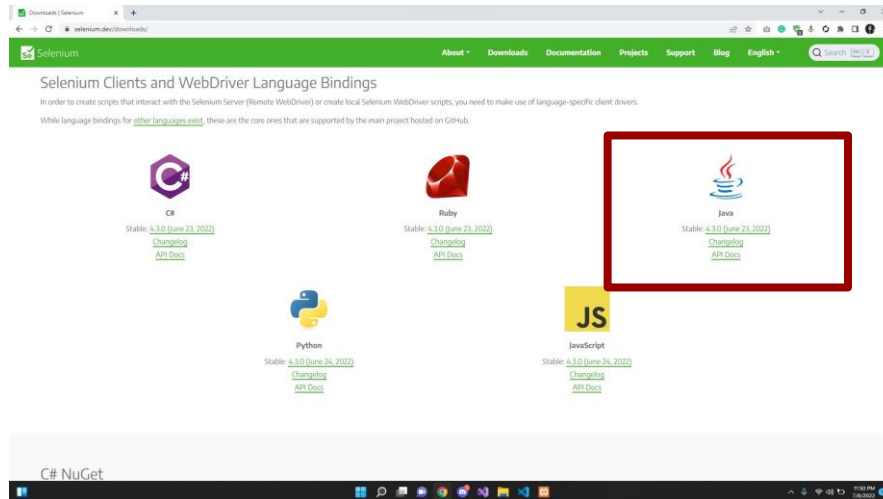
Step-4:



After completion of the JDK installation process, close the installer window.

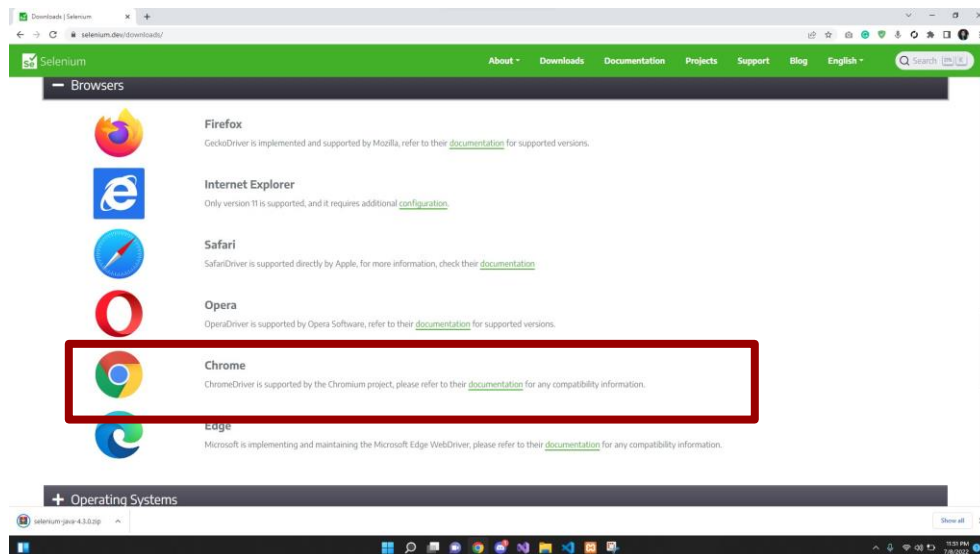
2. Download Selenium Java Web driver

Step-5:



Visit <https://www.selenium.dev/downloads/> and click Java because the Java web driver will be used for Selenium.

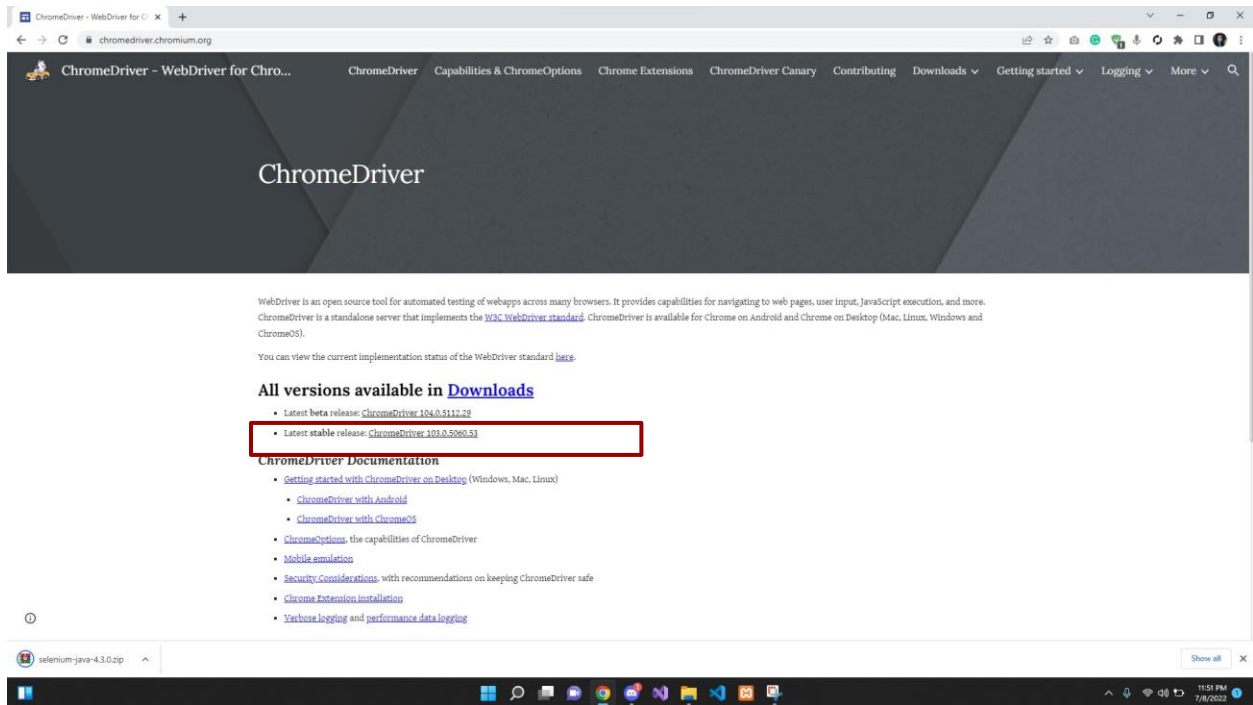
Step-6:



Scroll down and among the browsers list, select Chrome Driver because the testing process will run the website on Google Chrome.

3. Download Chrome driver

Step-7:



Visit <https://chromedriver.chromium.org/> and click the latest stable release link.

Step-8:

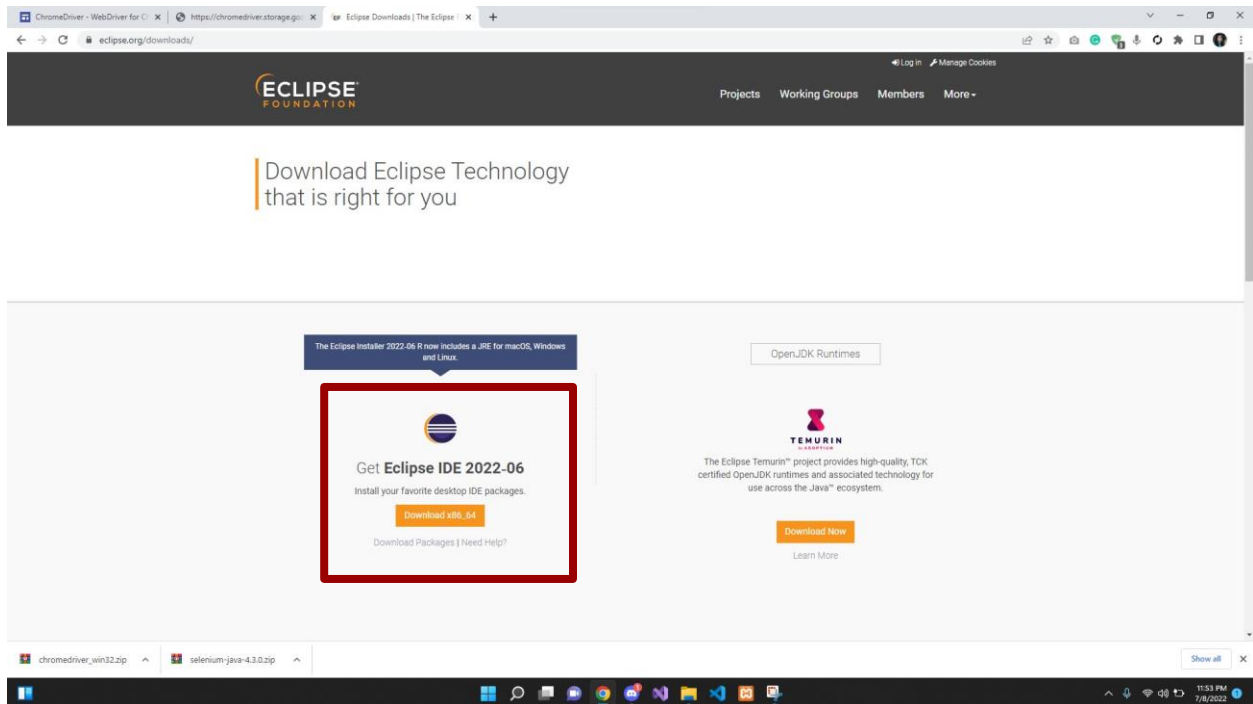
A screenshot of the ChromeDriver storage page (https://chromedriver.storage.googleapis.com/index.html?path=103.0.5060.53/). The page shows the "Index of /103.0.5060.53/" with a table of files. The table has four columns: Name, Last modified, Size, and ETag. The files listed are: Parent Directory, chromedriver_linux64.zip, chromedriver_mac64.zip, chromedriver_mac64_m1.zip, chromedriver_win32.zip, and notes.txt. The file names are highlighted with a yellow background.

Name	Last modified	Size	ETag
Parent Directory	-	-	-
chromedriver_linux64.zip	2022-06-22 08:40:24	6.73MB	7024d17105fd68cd6a9dae9d7c184ff8
chromedriver_mac64.zip	2022-06-22 08:40:27	7.99MB	b36af7477b93a3dd5e9d8a2eddc9cba
chromedriver_mac64_m1.zip	2022-06-22 08:40:29	7.28MB	c4261b81ac647c38541ee728301718e5
chromedriver_win32.zip	2022-06-22 08:40:32	6.12MB	797244dcadc6012093c8955463c1c949
notes.txt	2022-06-22 08:40:38	0.00MB	266a503f3ac359d6ddcbab9122c3354

Download the file according to the operating system that is being used.


4. Download and Install Eclipse

Step-9:





Visit <https://www.eclipse.org/downloads/> and download the Eclipse IDE.


Step-10:


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type filter text




Eclipse IDE for Java Developers

The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Maven and Gradle integration




Eclipse IDE for Enterprise Java and Web Developers

Tools for developers working with Java and Web applications, including a Java IDE, tools for JavaScript, TypeScript, JavaServer Pages and Faces, Yaml, Markdown, Web...




Eclipse IDE for C/C++ Developers

An IDE for C/C++ developers.



Eclipse IDE for Embedded C/C++ Developers

An IDE for Embedded C/C++ developers. It includes managed cross build plug-ins (Arm and RISC-V) and debug plug-ins (SEGGER J-Link, OpenOCD, pyocd, and QEMU),...




Eclipse IDE for PHP Developers


The essential tools for any PHP developer, including PHP language support, Git client and editors for JavaScript, TypeScript, HTML, CSS and XML.
[Click here to report an issue...](#)

Select the Eclipse IDE for Java Developers.

Step-11:

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Eclipse IDE for Java Developers


[details](#)

The essential tools for any Java developer, including a Java IDE, a Git client, XML Editor, Maven and Gradle integration.

Java 11+ VM


tps://download.eclipse.org/justj/jres/17/updates/release/17.0.3

▼




Installation Folder

C:\Users\ASUS\eclipse\java-2022-06



☒ create start menu entry

☒ create desktop shortcut

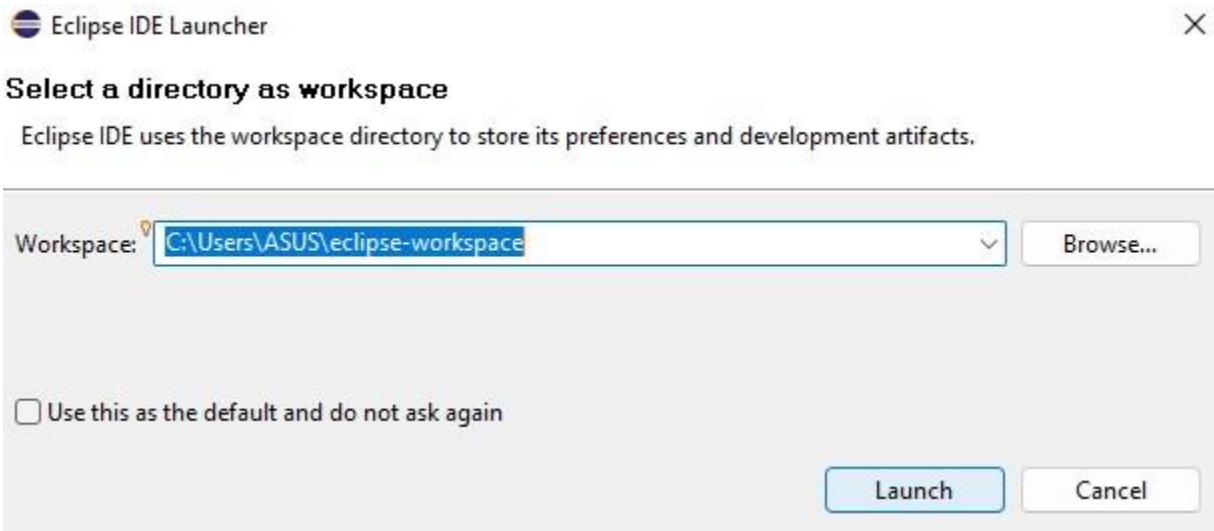
 **INSTALLING**

[✕ Cancel Installation](#)

[← BACK](#)

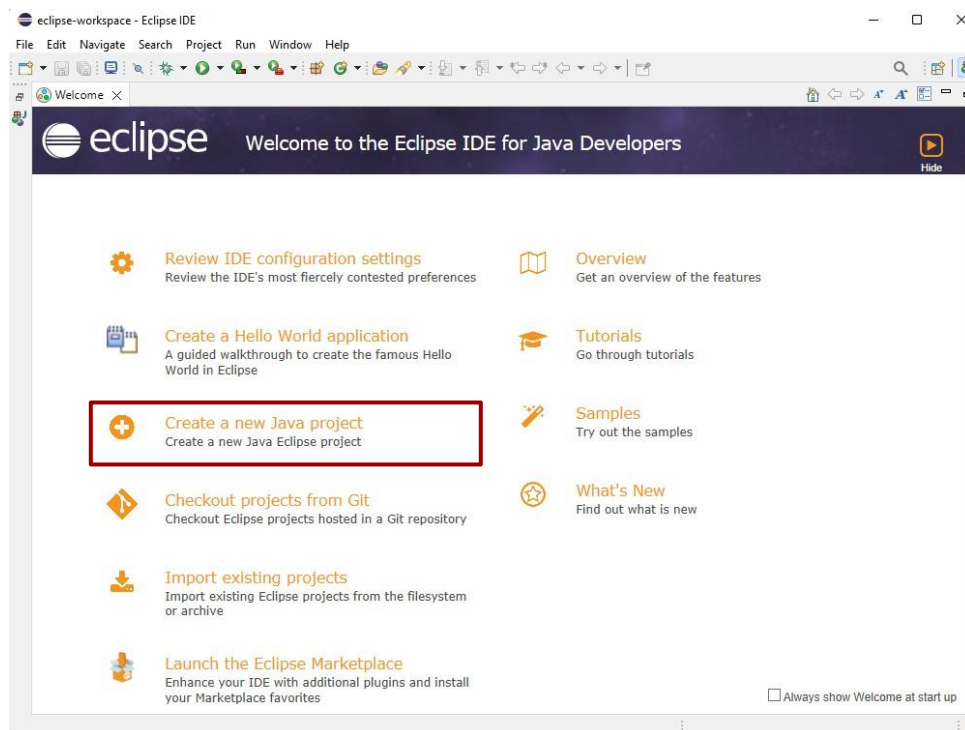
Select the installation folder and click Install to start the Eclipse IDE installation process.

Step-12:



Choose the workspace and click launch.

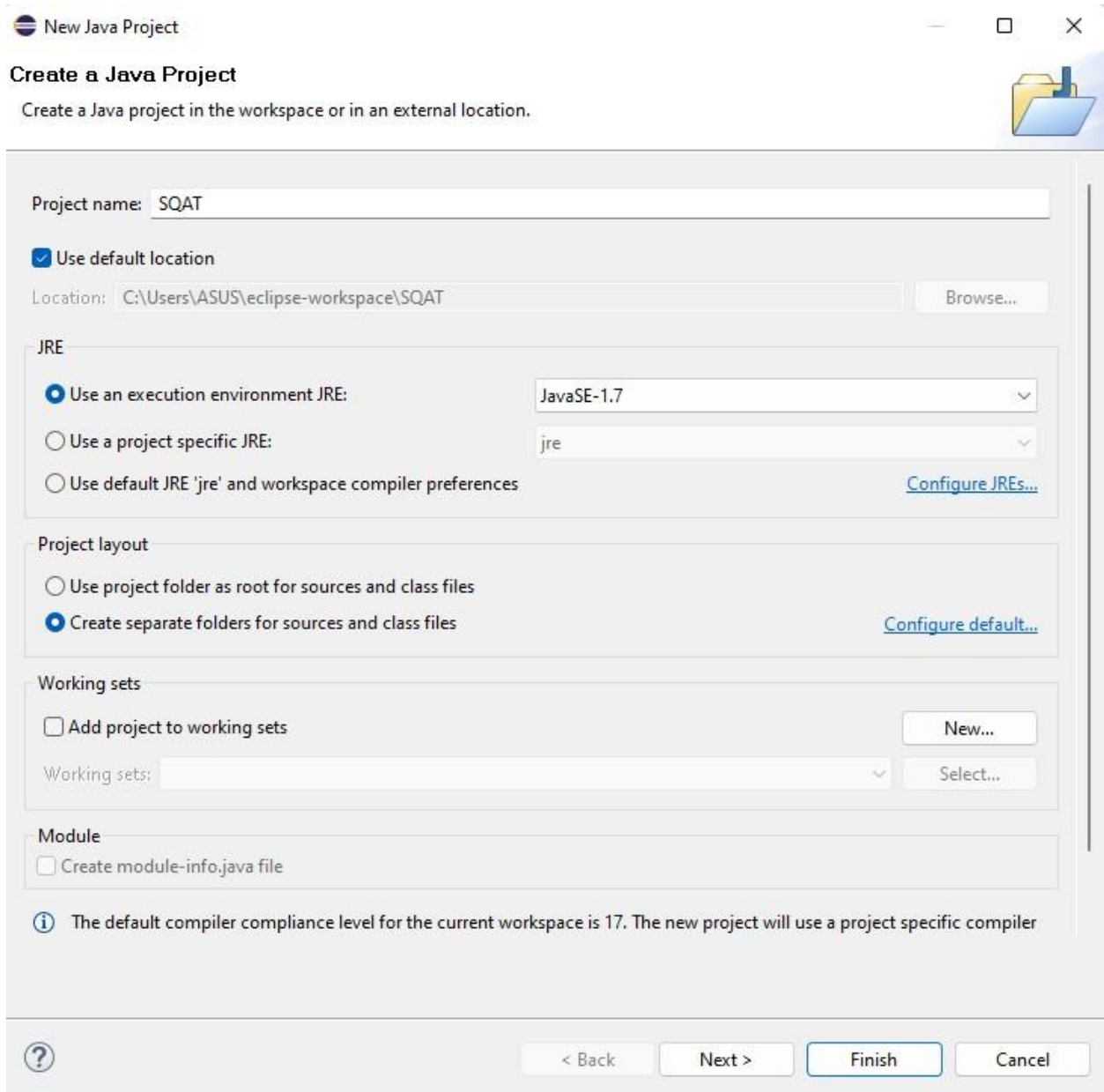
Step-13:



After the completion of installation, Eclipse will display the home page. Now, select Create a new Java project.

5. Create Java project

Step-14:



The screenshot shows the 'New Java Project' dialog box in the Eclipse IDE. The title bar reads 'New Java Project'. Below the title bar, the text 'Create a Java Project' is followed by the instruction 'Create a Java project in the workspace or in an external location.' and a folder icon. The dialog is divided into several sections:

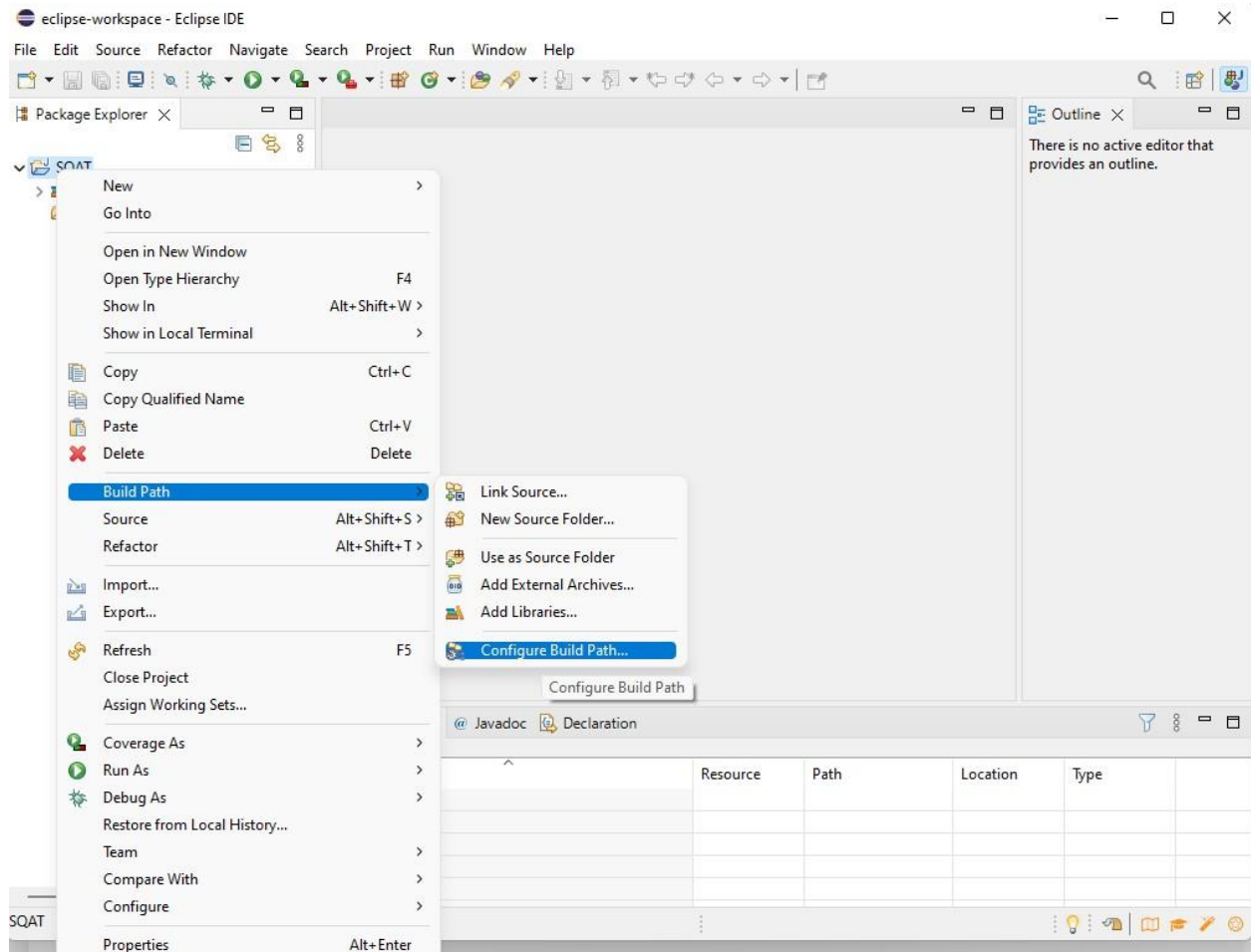
- Project name:** A text field containing 'SQAT'.
- Use default location:** A checked checkbox. Below it, the 'Location' field shows 'C:\Users\ASUS\eclipse-workspace\SQAT' with a 'Browse...' button to its right.
- JRE:** A section with three radio buttons:
 - ☒ Use an execution environment JRE: A dropdown menu showing 'JavaSE-1.7'.
 - ☐ Use a project specific JRE: A dropdown menu showing 'jre'.
 - ☐ Use default JRE 'jre' and workspace compiler preferences.A link 'Configure JREs...' is located to the right of the third option.
- Project layout:** A section with two radio buttons:
 - ☐ Use project folder as root for sources and class files.
 - ☒ Create separate folders for sources and class files.A link 'Configure default...' is located to the right of the second option.
- Working sets:** A section with a checkbox 'Add project to working sets' and a 'New...' button. Below it, a 'Working sets:' dropdown menu and a 'Select...' button are visible.
- Module:** A section with a checkbox 'Create module-info.java file'.

At the bottom, an information icon (i) is followed by the text: 'The default compiler compliance level for the current workspace is 17. The new project will use a project specific compiler'.

The bottom of the dialog features a row of buttons: a help icon (?), '< Back', 'Next >', 'Finish' (highlighted with a blue border), and 'Cancel'.

Write the project name and select JavaSE-1.7 as the execution environment JRE.
Click Finish.

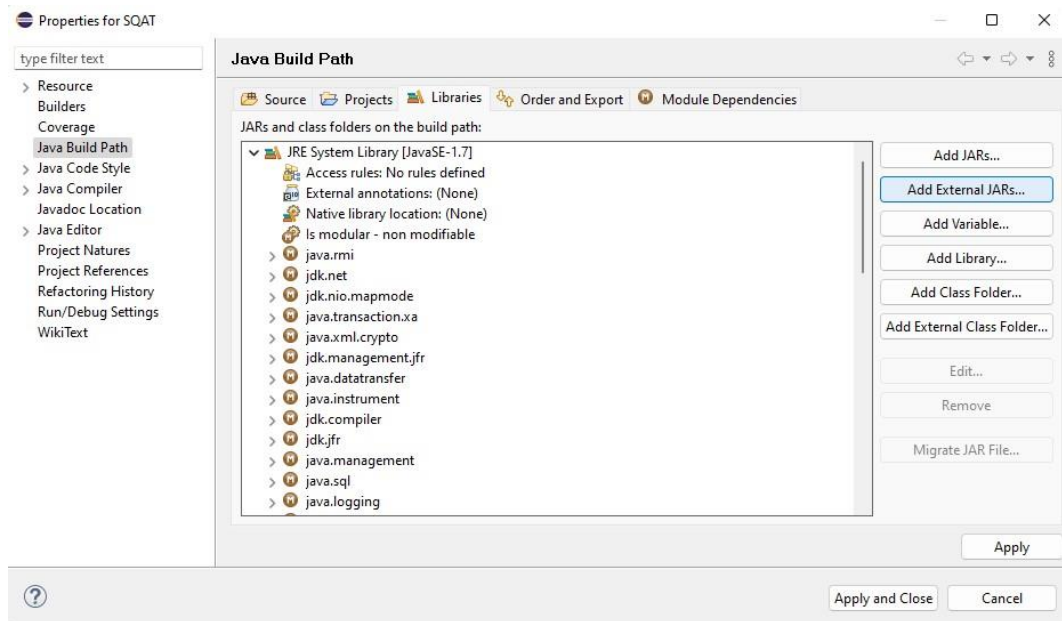
Step-14:



Right click on the project name and select Build Path and then select Configure Build Path.

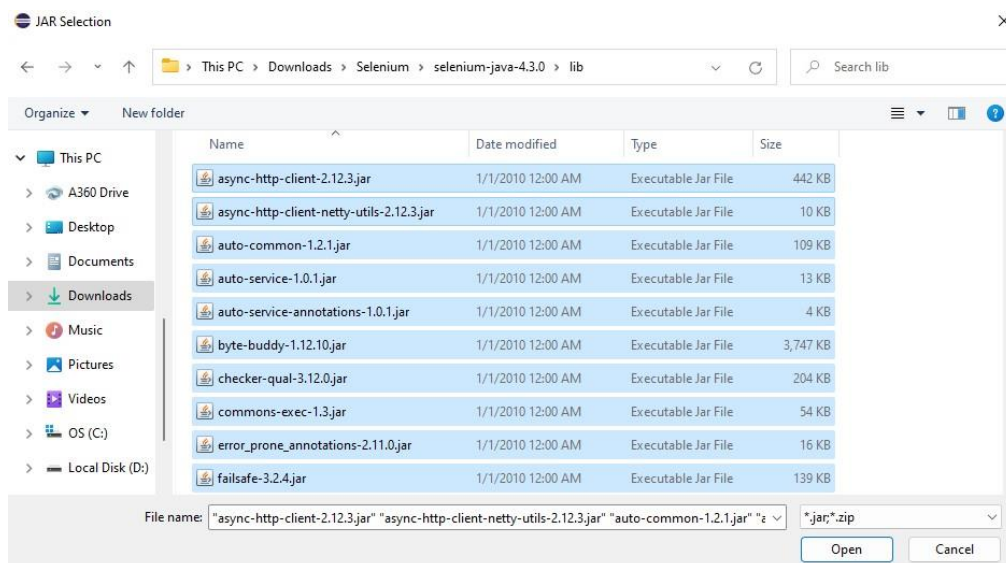
6.Set external JAR path in project

Step-15:



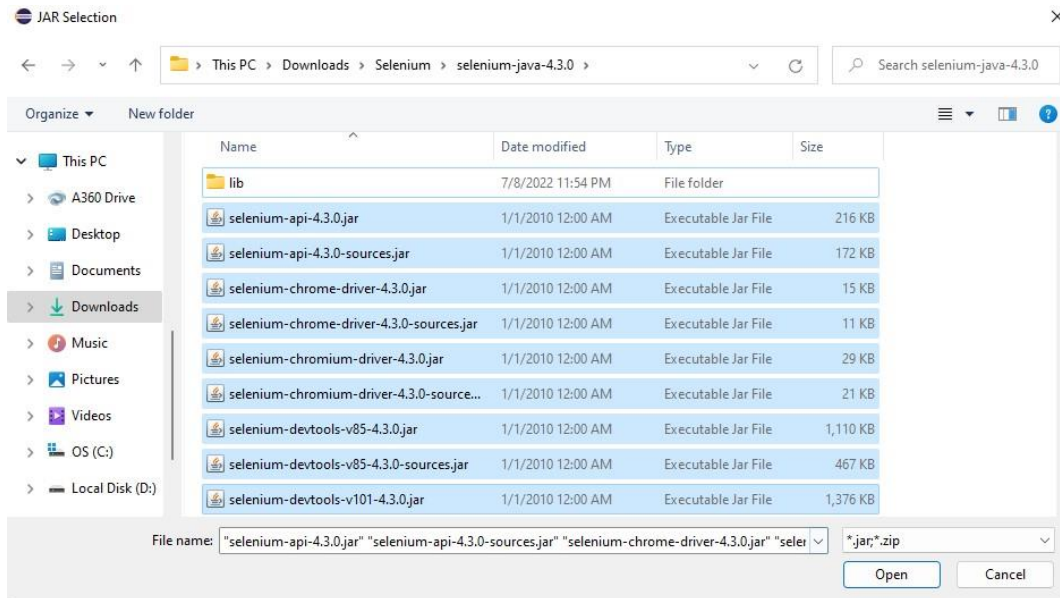
Click Add External JARs to add the jar files.

Step-16:



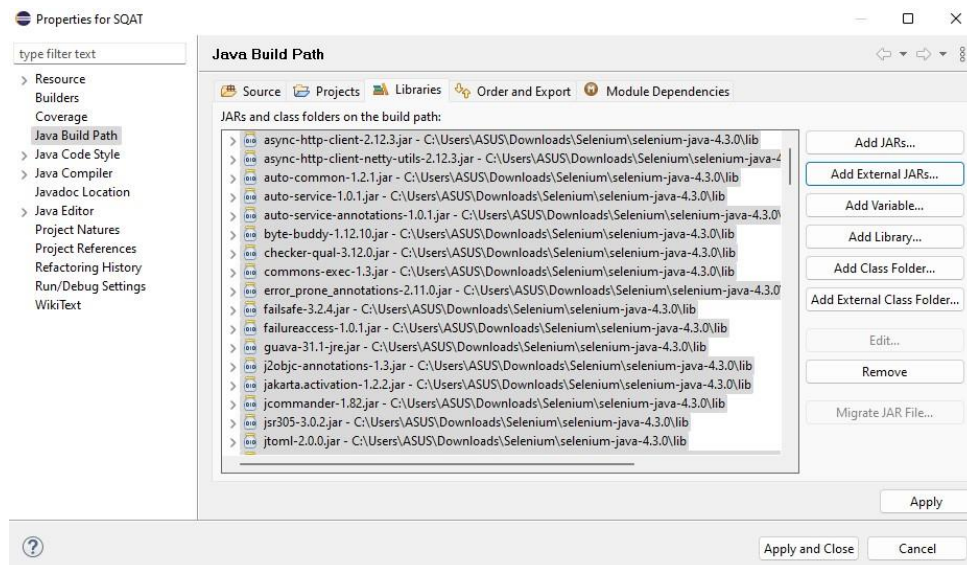
Select the jar files from the lib folder from the downloaded Selenium Java folder.

Step-17:



Select jar files from the downloaded Selenium Java folder.

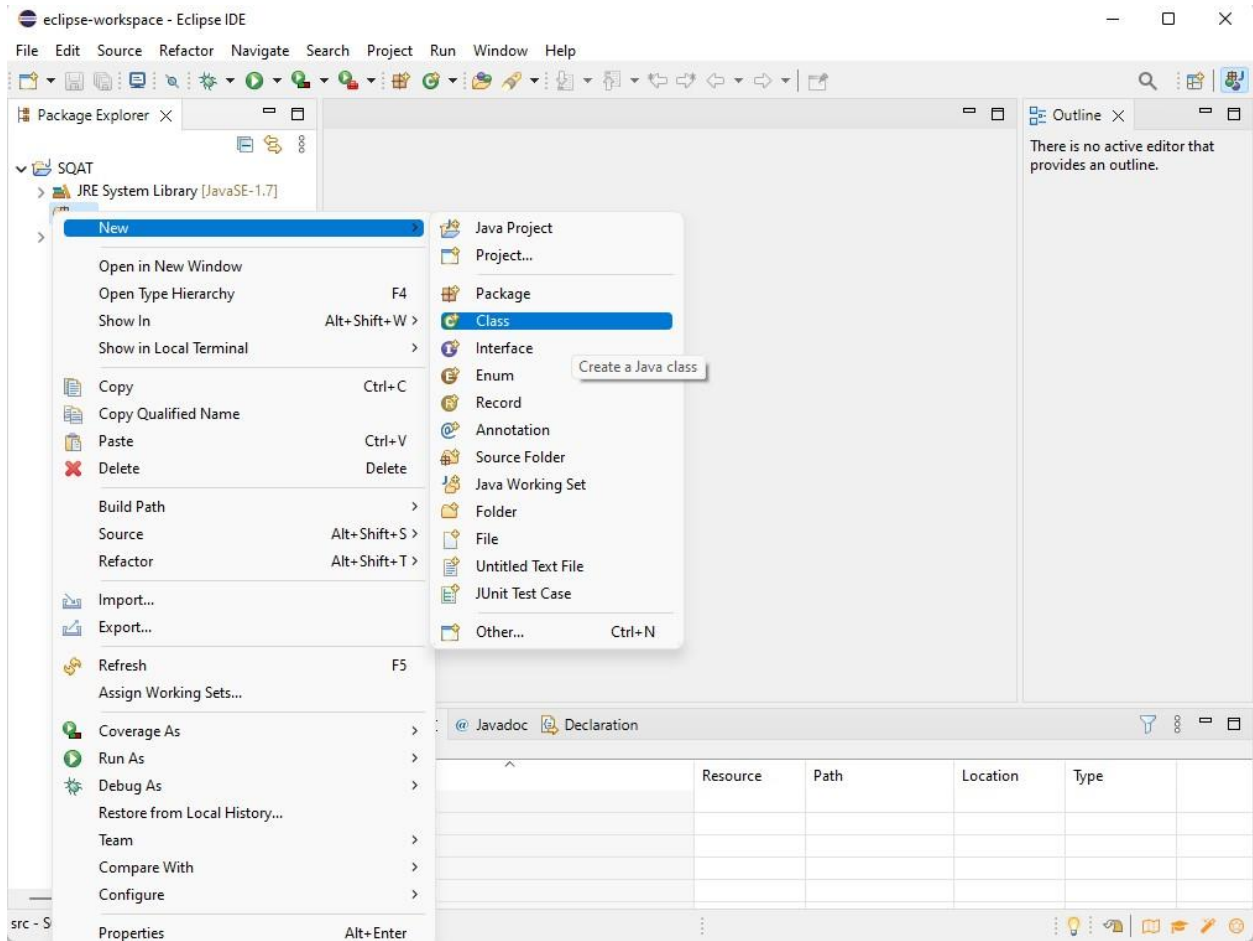
Step-18:



After adding the JARs, click Apply and Close.

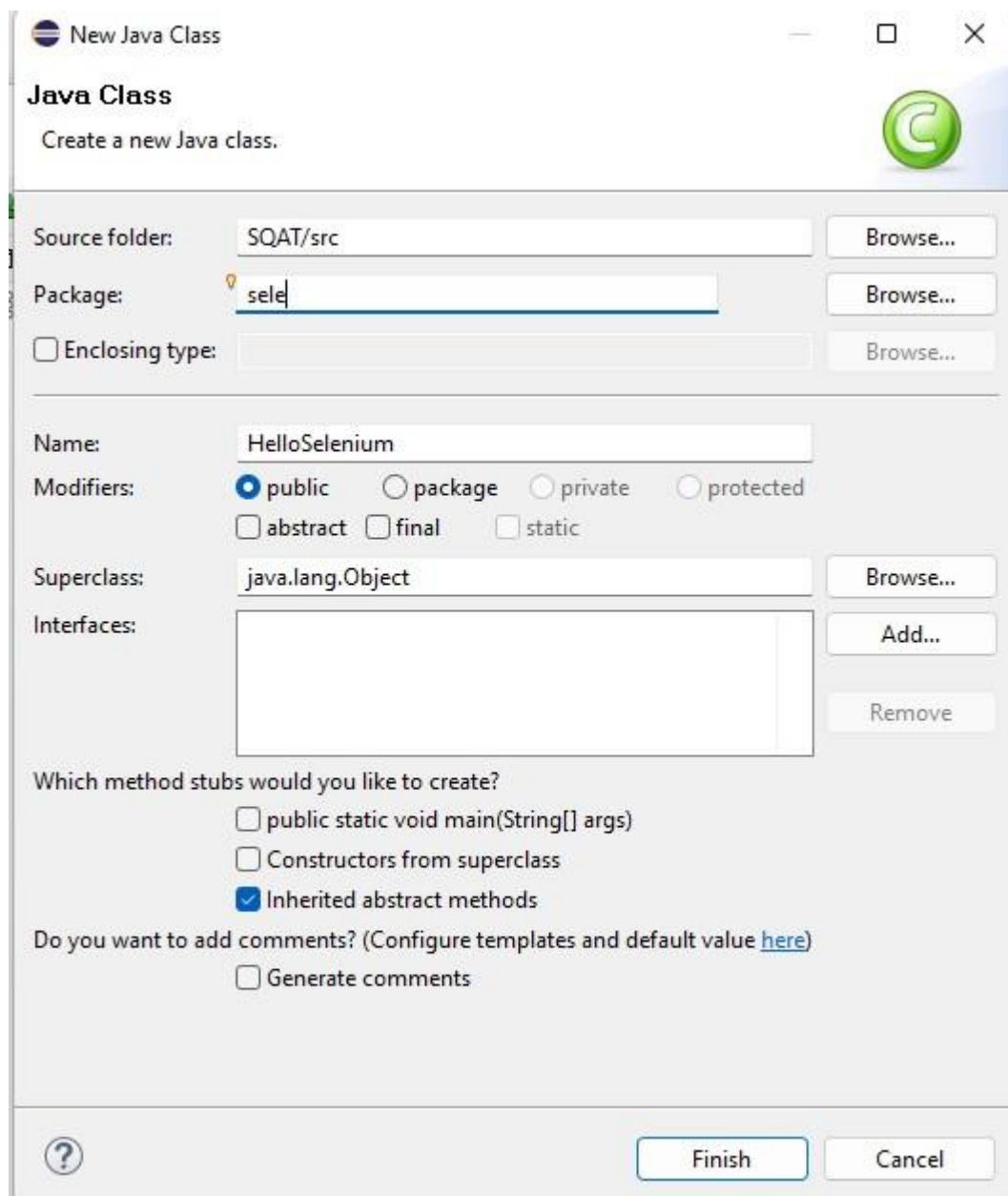
7. Write the test code

Step-19:



Right click on the src and click New, then choose Class to create a New Java Class.

Step-20:



New Java Class

Create a new Java class.

Source folder:

Package:

☐ Enclosing type:

Name:

Modifiers: ☒ public ☐ package ☐ private ☐ protected
☐ abstract ☐ final ☐ static

Superclass:

Interfaces:

Which method stubs would you like to create?

☐ public static void main(String[] args)

☐ Constructors from superclass

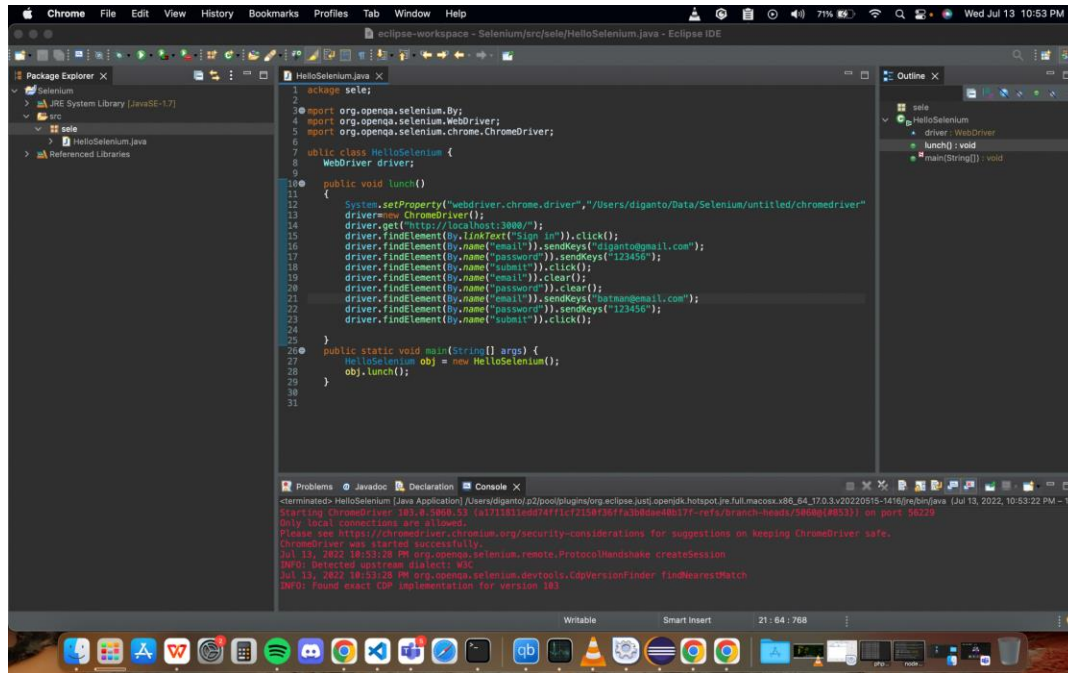
☒ Inherited abstract methods

Do you want to add comments? (Configure templates and default value [here](#))

☐ Generate comments

Write the package name and the class name. Then click Finish.

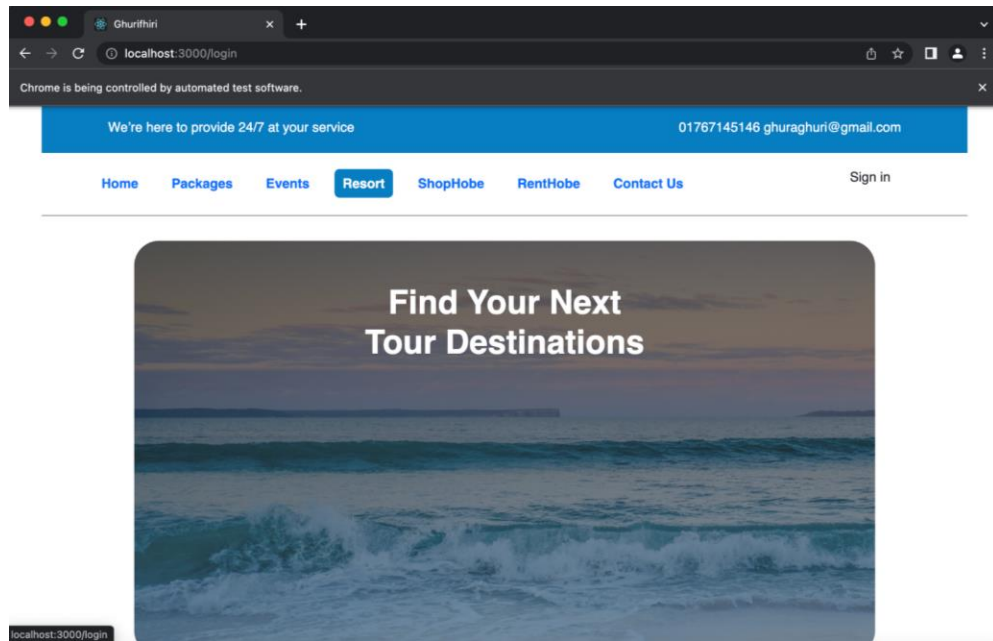
Step-21:



Write testing code in order to test an existing project.

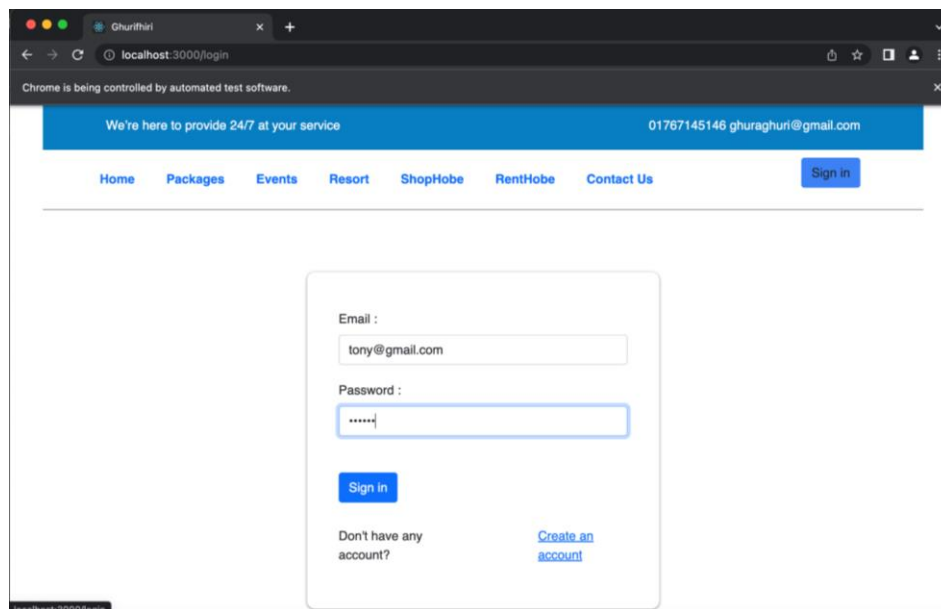
Firstly, set property for chromedriver. Then add the website link which will be tested. Here, provide the email and password for sign in. At first, wrong email and password which doesn't exist in the database were given that didn't let the user log in and finally correct email and password were given which let the user log in successfully.

Step-22:



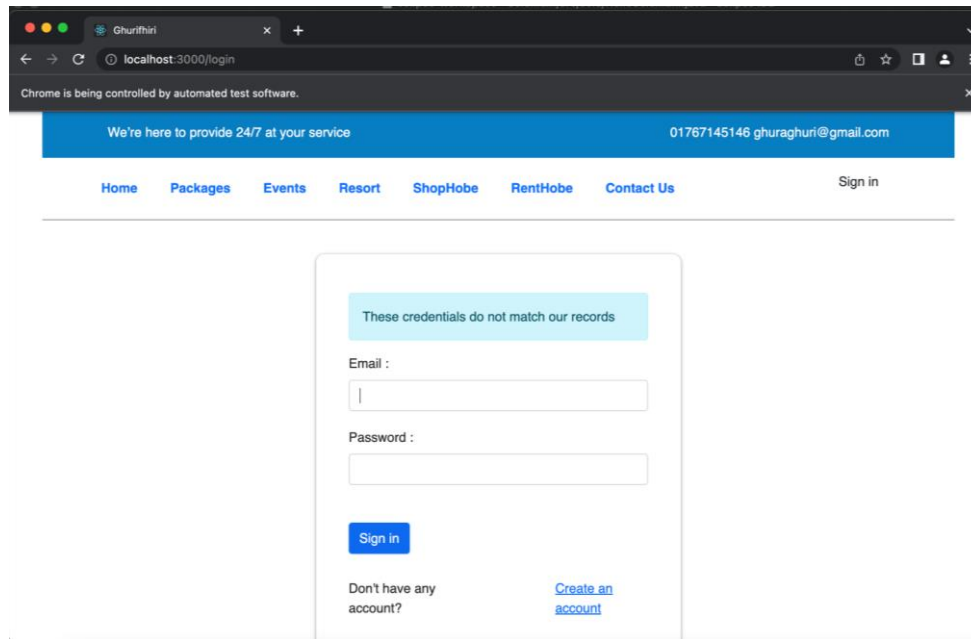
After running the code, initially it takes to the website that is being tested.

Step-23:

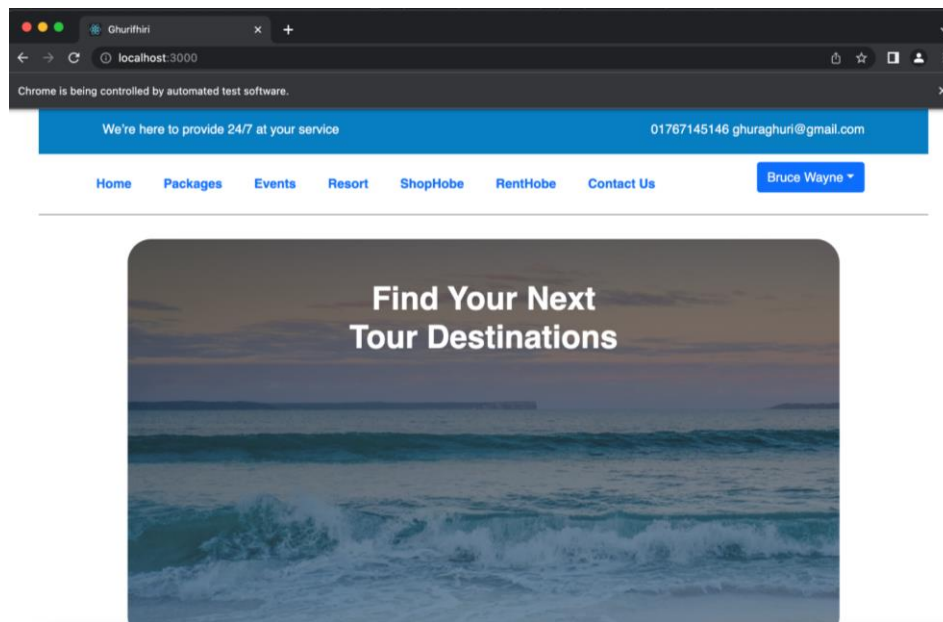


Here, wrong email and password were provided, which gave an error message in the next step.

Step-24:



The wrong email and password caused an error message for providing wrong information that does not exist in the database..



Finally, the user has been logged in successfully with the correct email and password. The username is visible on the screen.