

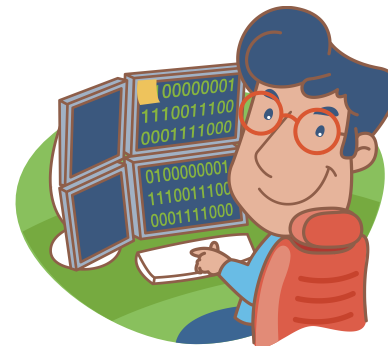
소프트웨어 테스트

실습 08#: Selenium

CSE4061
2023

설계 목표

- Selenium 설치
- Selenium 실행
- 설계 문제
 - 웹 테스트 자동화 파일 참고



Selenium 설치

- Selenium 설치 단계

1. Java → 스크립트를 작성하기 위한 프로그래밍 언어



2. Eclipse → 스크립트를 컴파일하고 실행할 환경



3. Selenium → 웹 응용 프로그램 테스트 프레임워크



Selenium 설치

- Selenium 설치 방법
- 링크로 들어가 Selenium Server를 다운로드
<https://www.selenium.dev/downloads/>

Selenium Server (Grid)

The Selenium Server is needed in order to run Remote Selenium WebDriver (Grid).

Latest stable version [4.9.0](#)

To use the Selenium Server in a Grid configuration see the [documentation](#).

- Selenium 설치 방법

- 앞선 링크에 밑으로 내려가
Platforms Supported by Selenium
에서 +Browser를 클릭

+ Browsers

- 본인 컴퓨터에 맞는
브라우저 드라이버 선택

Platforms Supported by Selenium

— Browsers



Firefox

GeckoDriver is implemented and supported by Mozilla, refer to their [documentation](#) for supported versions.



Internet Explorer

Only version 11 is supported, and it requires additional [configuration](#).



Safari

SafariDriver is supported directly by Apple, for more information, check their [documentation](#)



Opera

OperaDriver is supported by Opera Software, refer to their [documentation](#) for supported versions.



Chrome

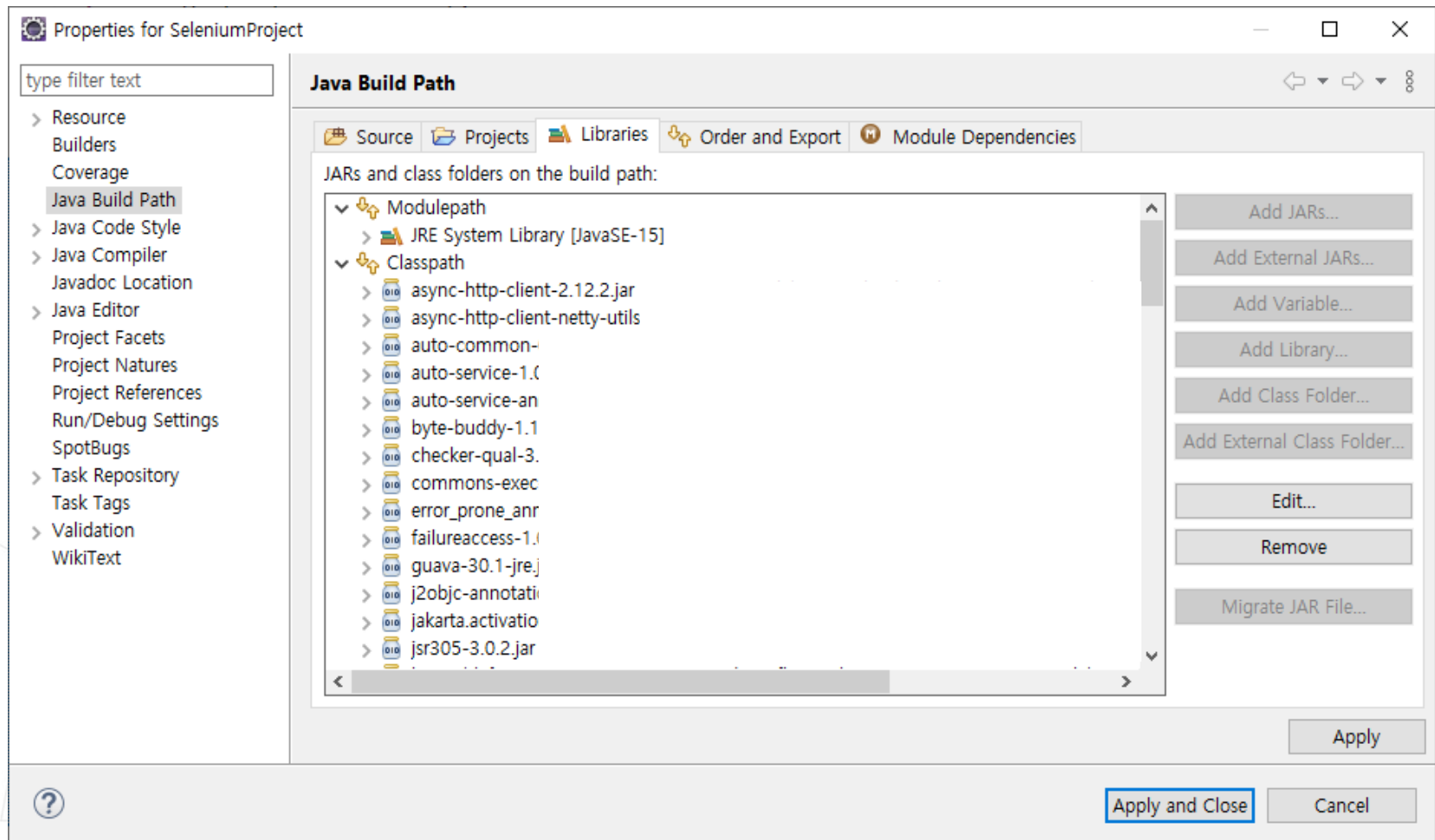
Chromedriver is supported by the Chromium project, please refer to their [documentation](#) for any compatibility information.



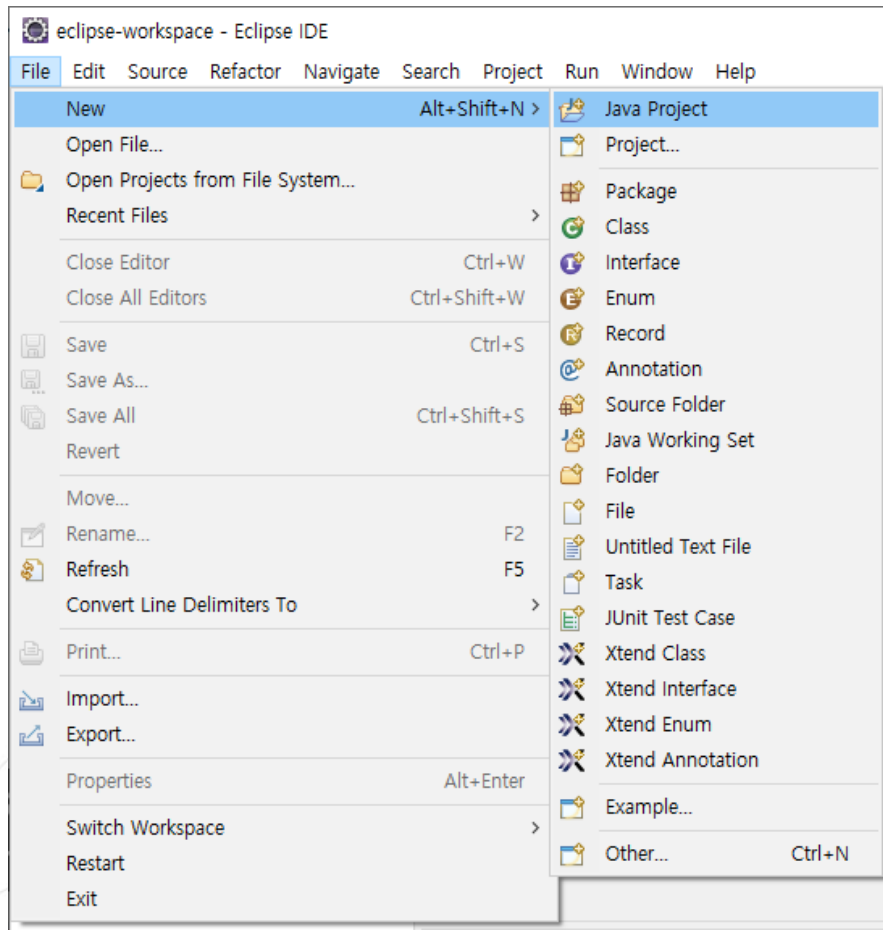
Edge

Microsoft is implementing and maintaining the Microsoft Edge WebDriver, please refer to their [documentation](#) for any compatibility information.

● Selenium 설치 적용

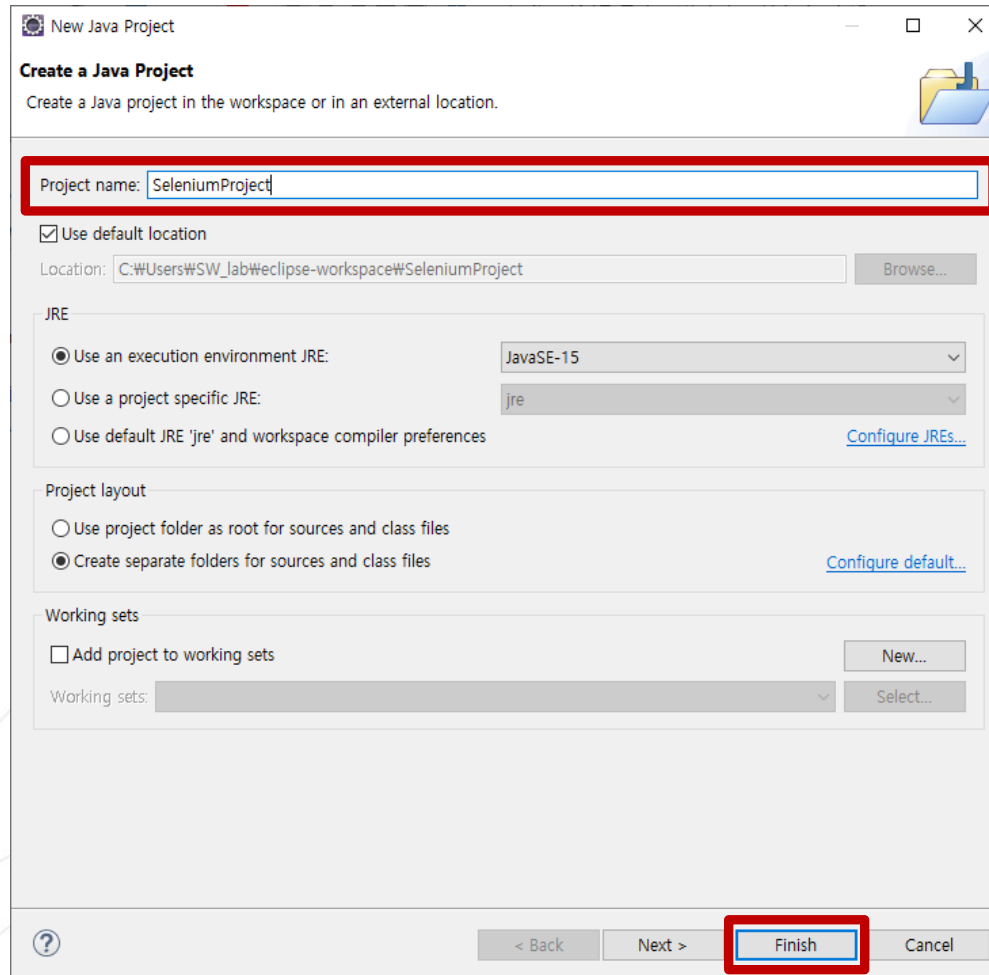


- File – New – Java Project - Next

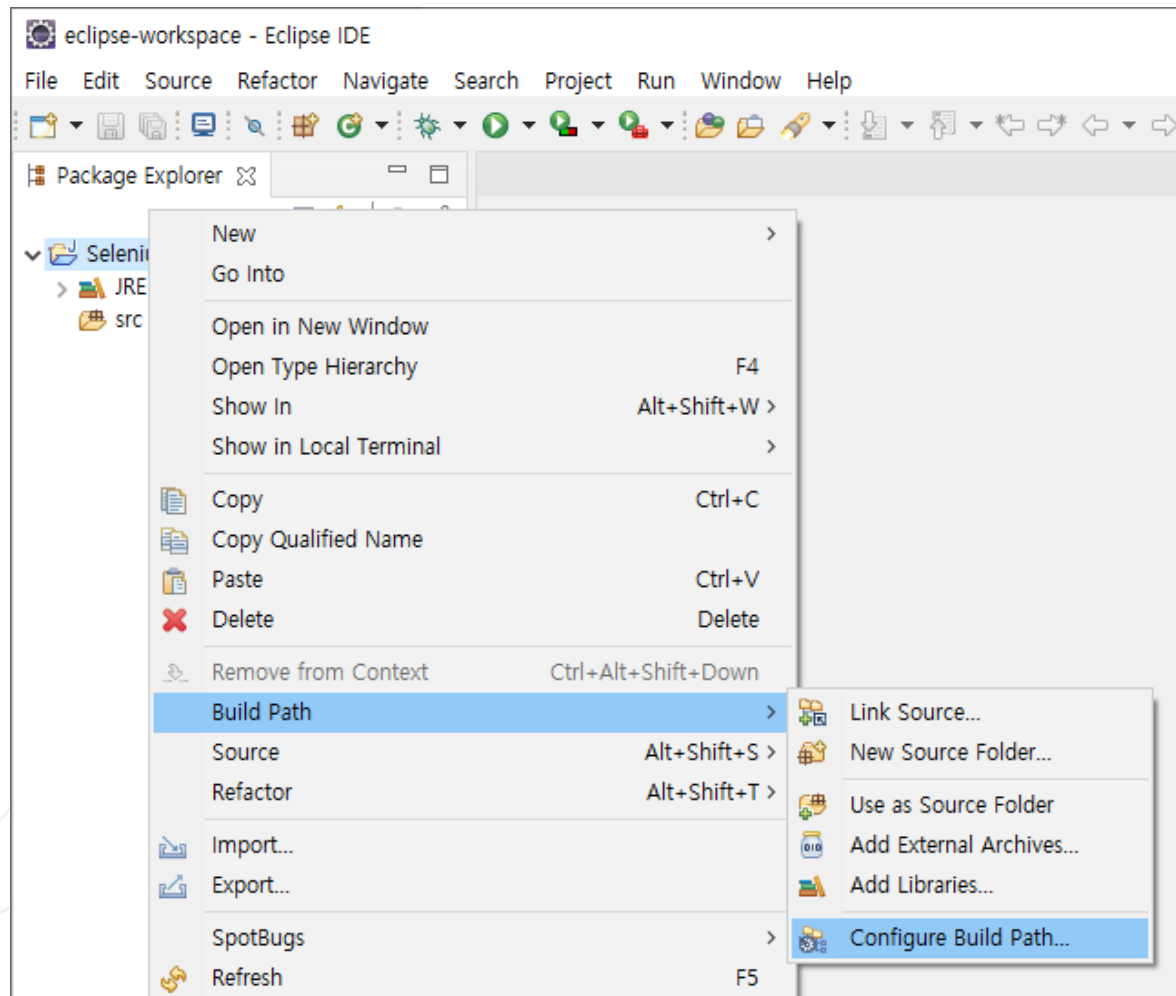


Selenium 실행

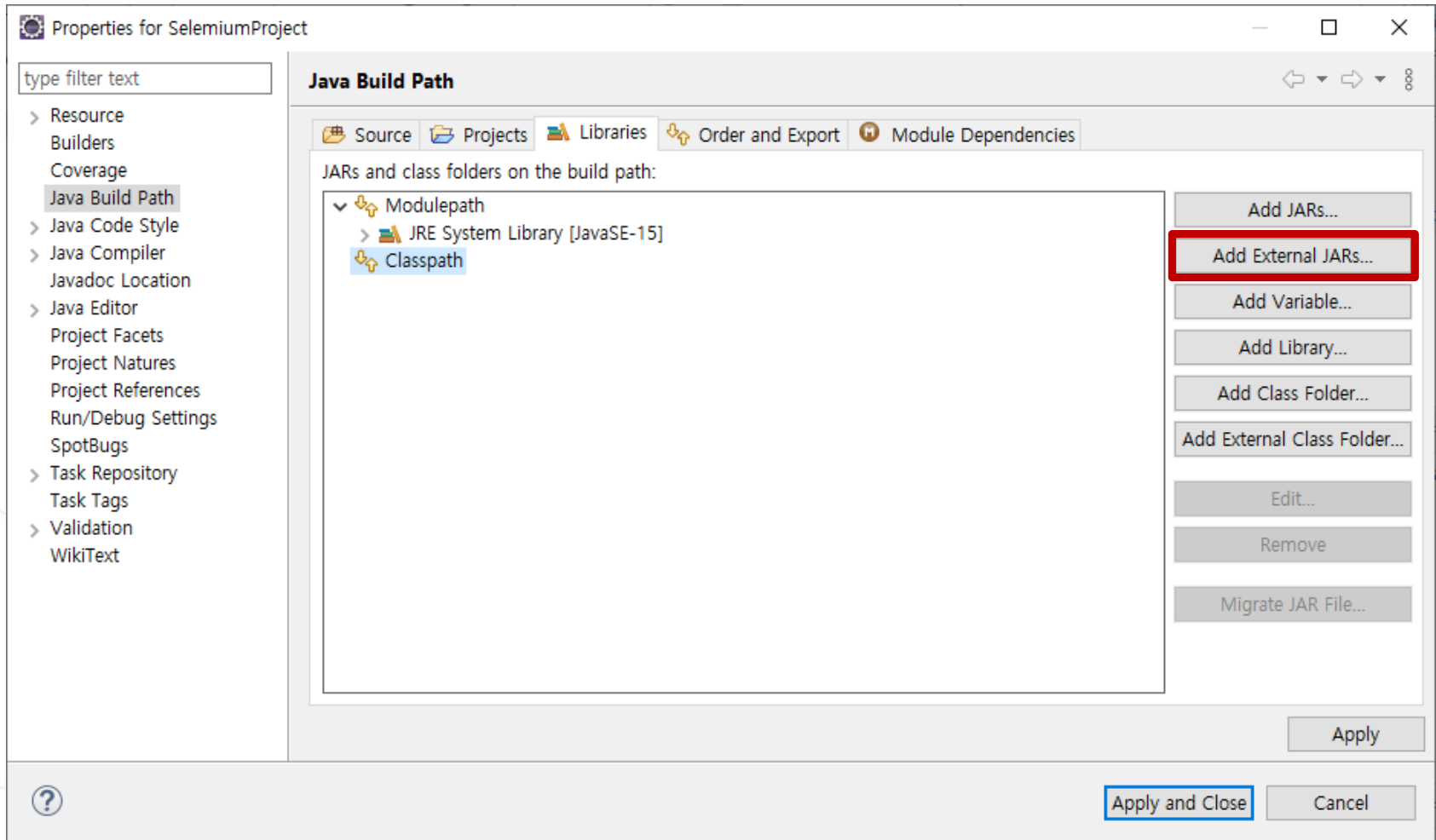
- Project name : SeleniumProject -> Click Finish



- Build Path – Configure Build Path

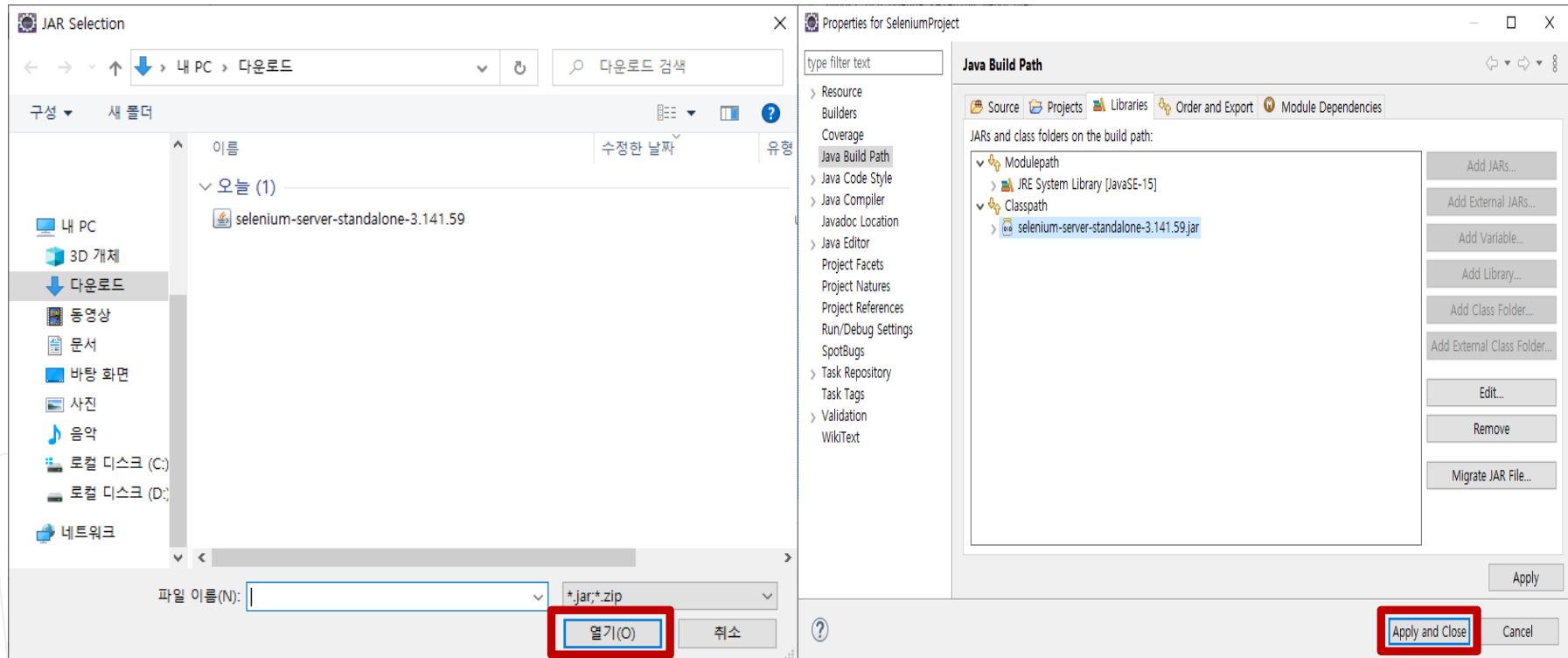


- Libraries(Tab) – Classpath(click) – Add External JARs



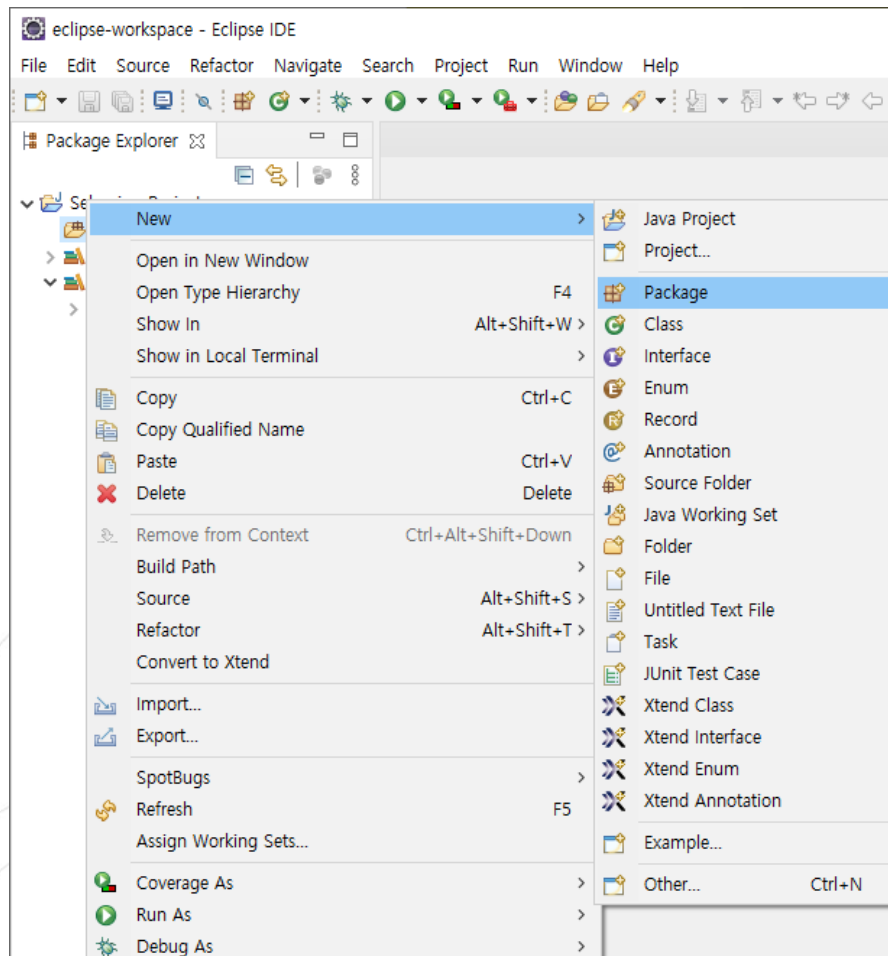
Selenium 실행

- JAR File(select) – 열기(click)
- Classpath(확인) – Apply and Close



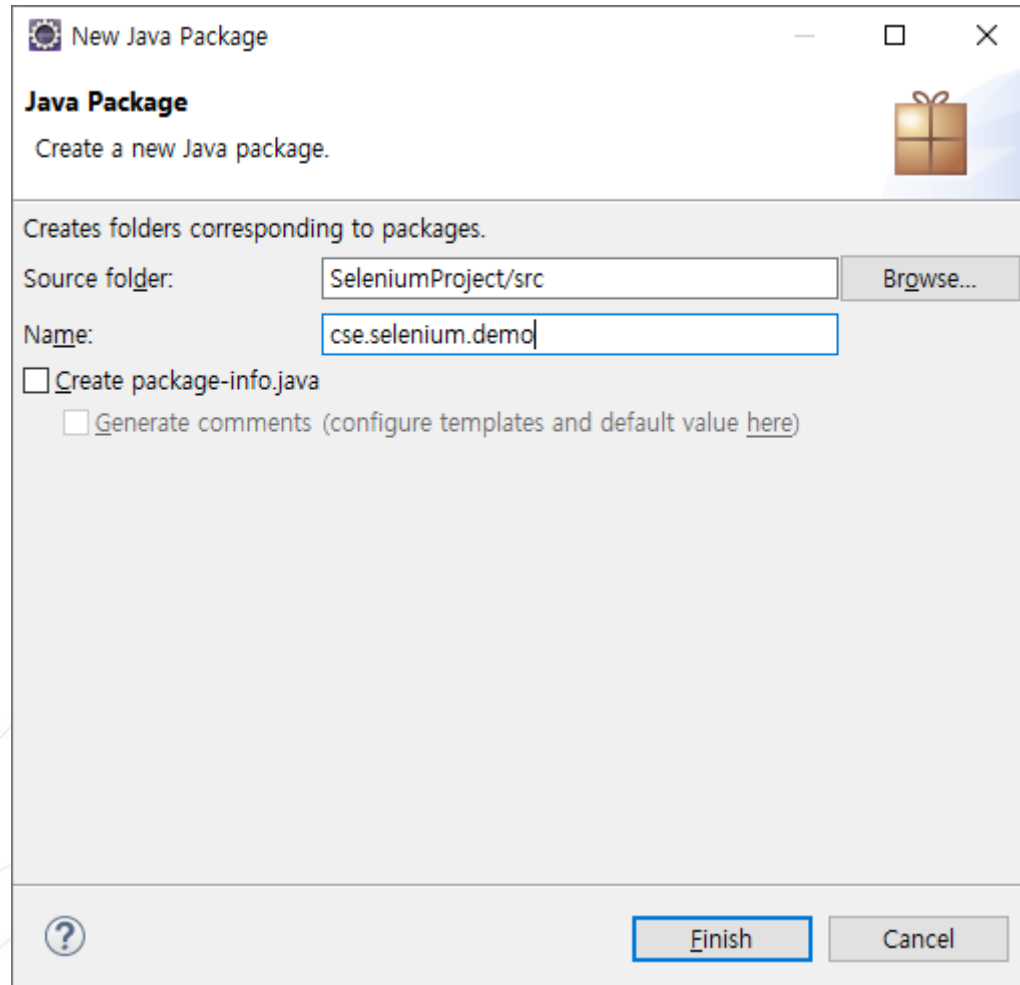
Selenium 실행

- src(right click) – New – Package

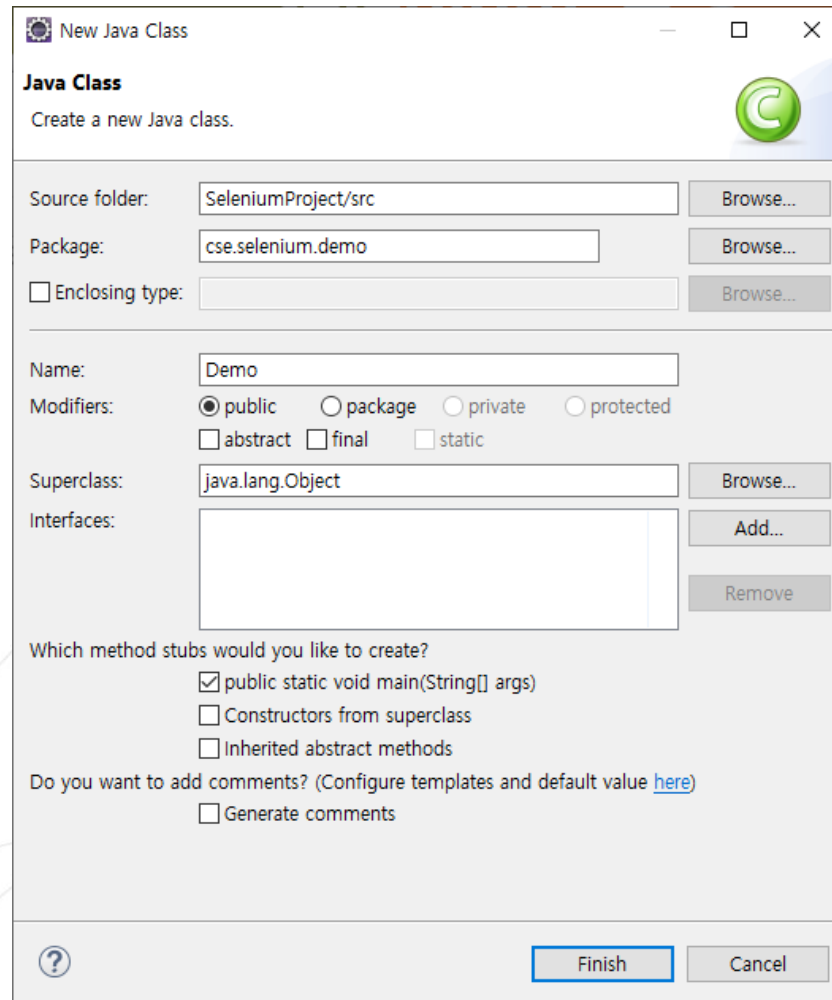


Selenium 실행

- PackageName : cse.selenium.demo – Finish



- Package(right click) – New – Class – Finish



New Java Class

Java Class
Create a new Java class.

Source folder: SeleniumProject/src Browse...

Package: cse.selenium.demo Browse...

☐ Enclosing type: Browse...

Name: Demo

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

Superclass: java.lang.Object Browse...

Interfaces: Add... Remove

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

? Finish Cancel

● Input Code

```
Demo.java X
1 package cse.selenium.demo;
2
3 import org.openqa.selenium.By;
4 import org.openqa.selenium.WebDriver;
5 import org.openqa.selenium.edge.EdgeDriver;
6
7 public class Demo {
8     public static void main(String[] args) throws InterruptedException {
9         System.setProperty("webdriver.edge.driver", "C:\\\\msedgedriver
10         WebDriver driver = new EdgeDriver();
11         driver.get("http://www.gmail.com/");
12         driver.manage().window().maximize();
13         driver.findElement(By.id("identifierId")).sendKeys("sid.aka.beacon@gmail.com");
14         Thread.sleep(2000);
15         driver.findElement(By.xpath("//*[@id=\"identifierNext\"]/div/button")).click();
16         Thread.sleep(2000);
17         String at = driver.getTitle();
18         String et = "gmail";
19         driver.close();
20         if (at.equalsIgnoreCase(et)) {
21             System.out.println("Test Successful");
22         } else {
23             System.out.println("Test Failure");
24         }
25     }
26 }
```



● Input Code(Edge driver 사용)

```
package cse.selenium.demo;

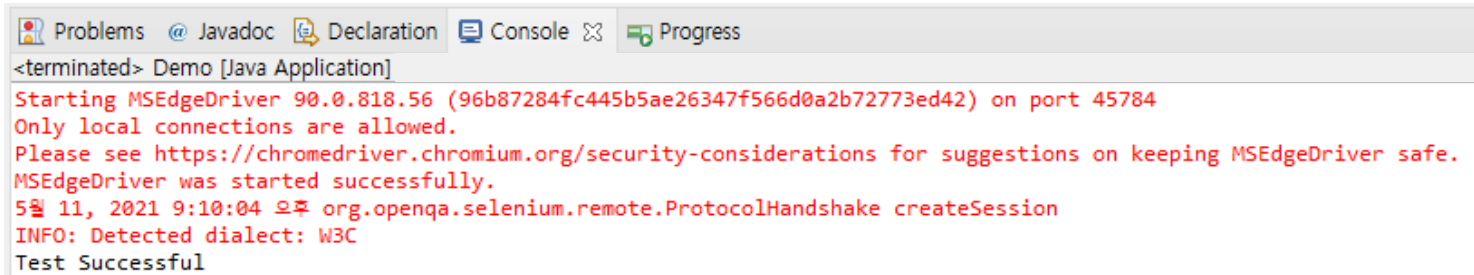
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.edge.EdgeDriver;

public class Demo {

    public static void main(String[] args) throws InterruptedException {
        System.setProperty("webdriver.edge.driver", "드라이버 설치되어있는 절대경로");
        WebDriver driver = new EdgeDriver();
        driver.get("http://www.gmail.com/");
        driver.manage().window().maximize();
        driver.findElement(By.id("identifierId")).sendKeys("sid.aka.beacon@gmail.com");
        Thread.sleep(2000);
        driver.findElement(By.xpath("버튼 경로(xpath)")).click();
        Thread.sleep(2000);
        String at = driver.getTitle();
        String et = "gmail";
        driver.close();
        if(at.equalsIgnoreCase(et))
        {
            System.out.println("Test Successful");
        }
        else
        {
            System.out.println("Test Failure");
        }
    }
}
```


Selenium 실행

● 실행 시 Console



The screenshot shows an IDE console window with the following text:

```
<terminated> Demo [Java Application]
Starting MSEDgeDriver 90.0.818.56 (96b87284fc445b5ae26347f566d0a2b72773ed42) on port 45784
Only local connections are allowed.
Please see https://chromedriver.chromium.org/security-considerations for suggestions on keeping MSEDgeDriver safe.
MSEDgeDriver was started successfully.
5월 11, 2021 9:10:04 오후 org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
Test Successful
```

● 실행 시 웹 화면

