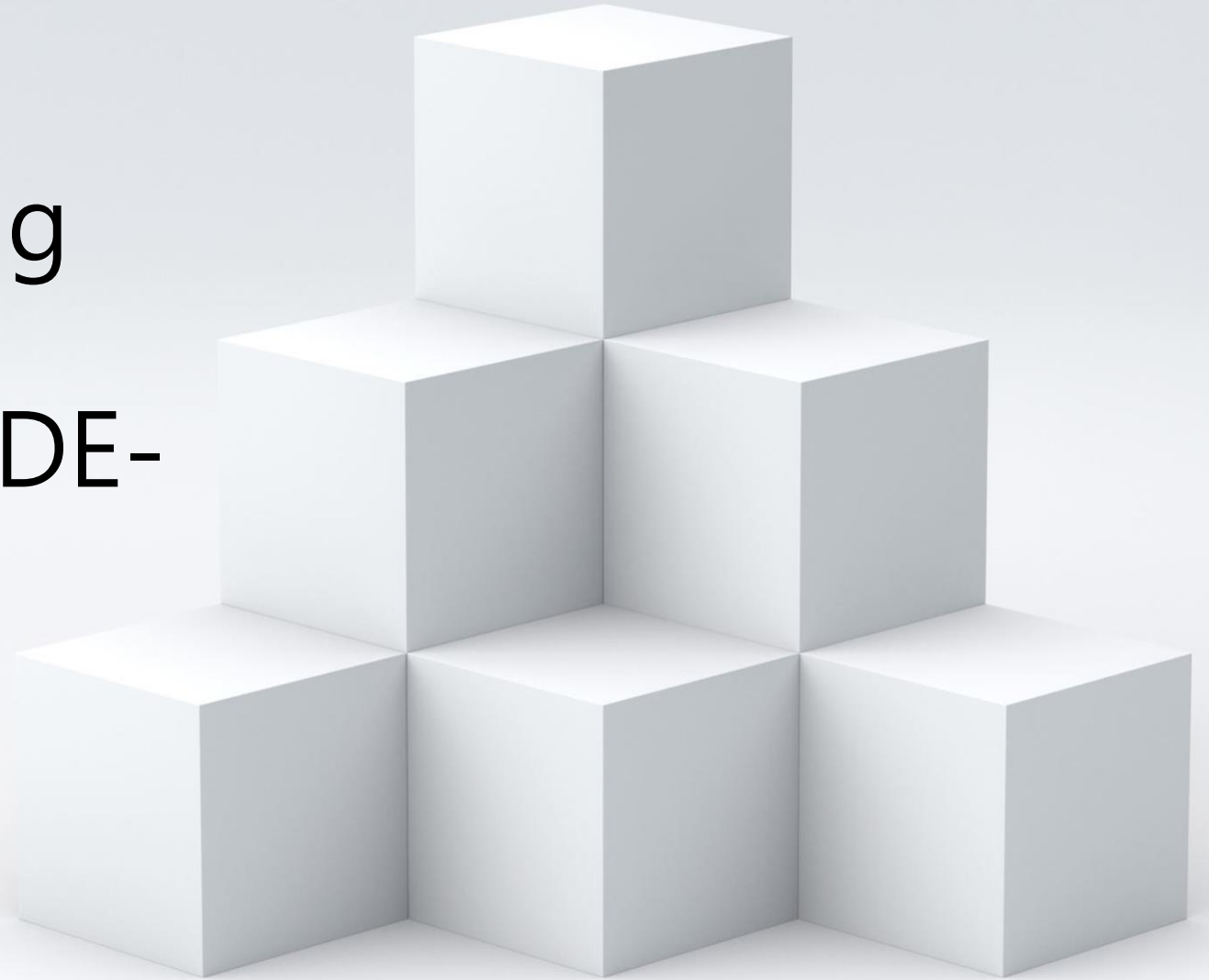


Software Engineering

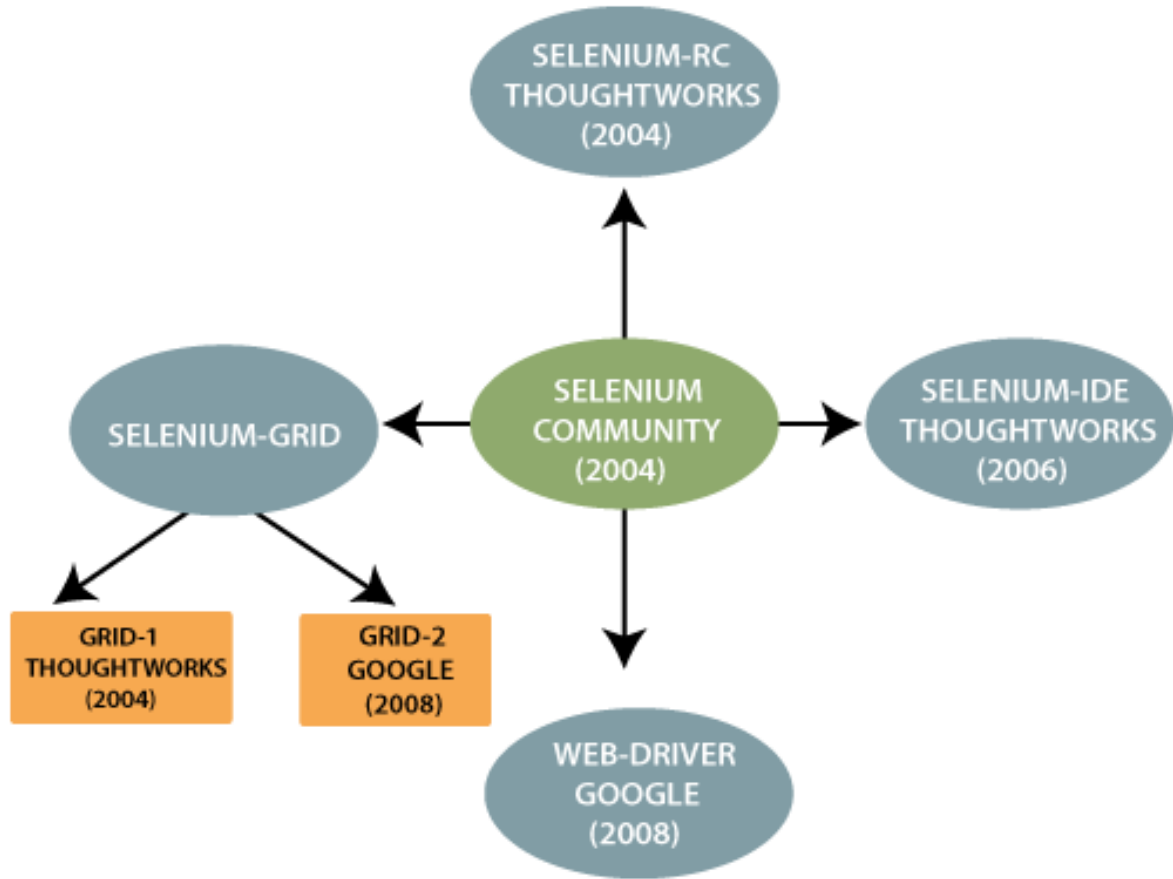
- Selenium IDE-

Professor Han-gyoo Kim

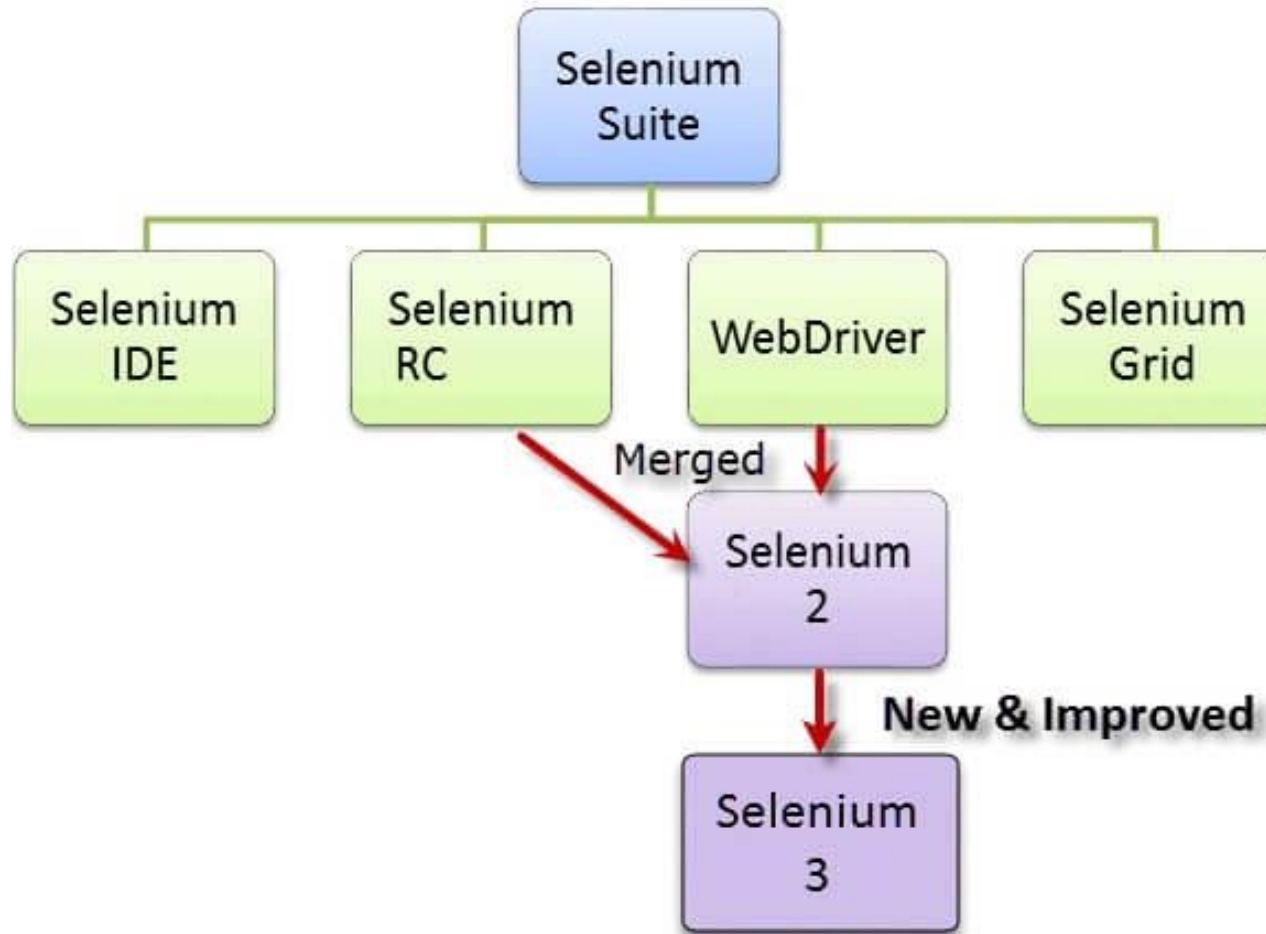
2022



History of Selenium – 왜 이름이 Se?



Selenium 4



Selenium 4

2021년 10월

Selenium 4

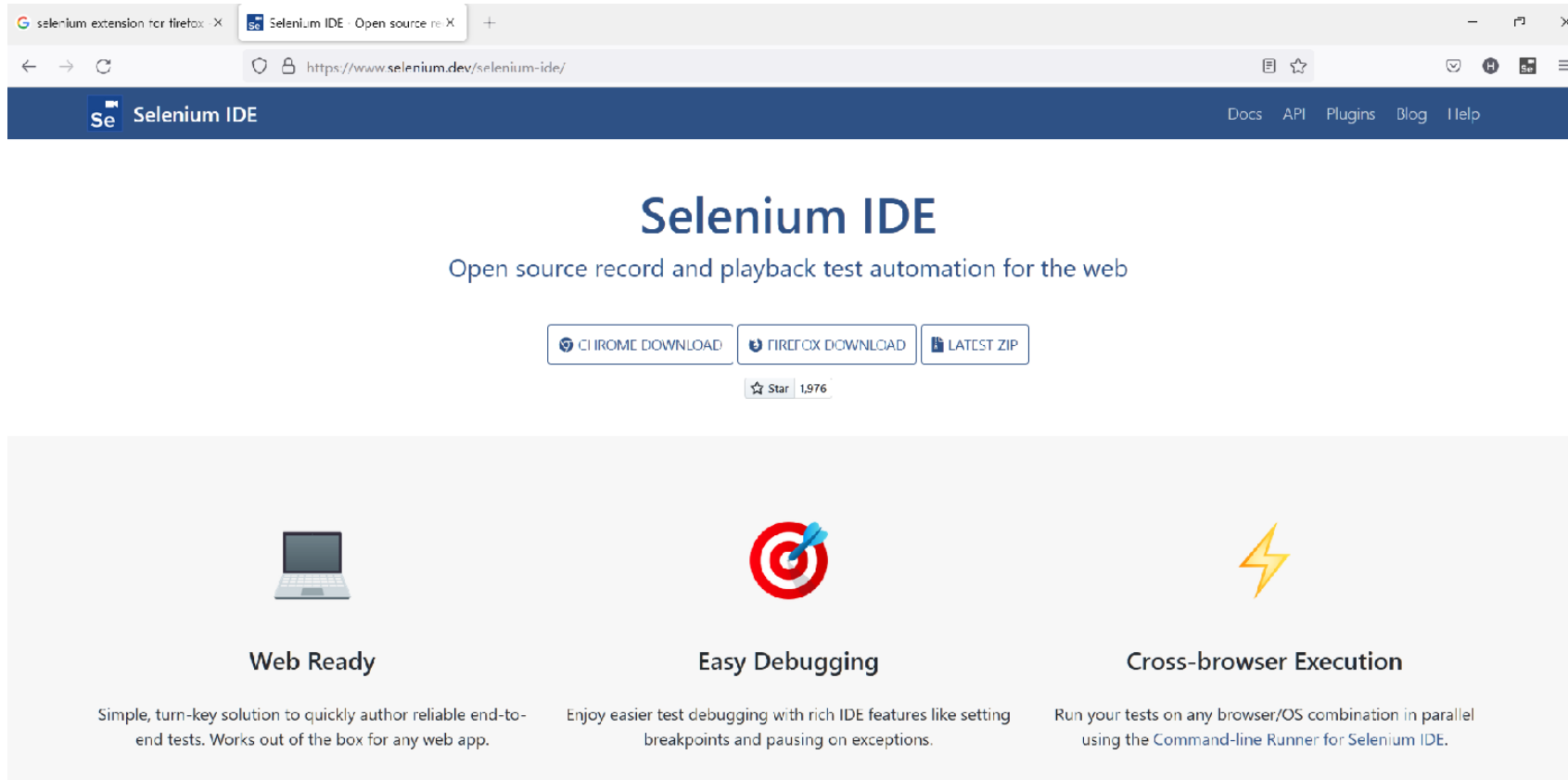
- W3C compliant
 - No more JSON wire protocol – direct comm. between selenium testing code and webdriver – faster comm.
- Relative Locators
- Better Window/Tab Management
- Improved Selenium Grid
- Upgraded Selenium IDE
- New APIs for Chrome DevTools Protocol
- 몇 가지 기능 지원 중단
- Action Class 수정

Selenium IDE

- 테스트 케이스를 생성하고 실행하는 firefox 용 pug-in으로 시작
- 브라우저 사용자의 모든 interaction을 기록하고 재생
 - Record/play tool
- Extension to many browsers
- <https://www.selenium.dev/selenium-ide/>
- <https://microsoftedge.microsoft.com/addons/detail/selenium-ide/ajdpfmkffanmkhejnopppegokpogffp>
- <https://chrome.google.com/webstore/detail/selenium-ide/mooikfkahbdckldjjndioackbalphokd>

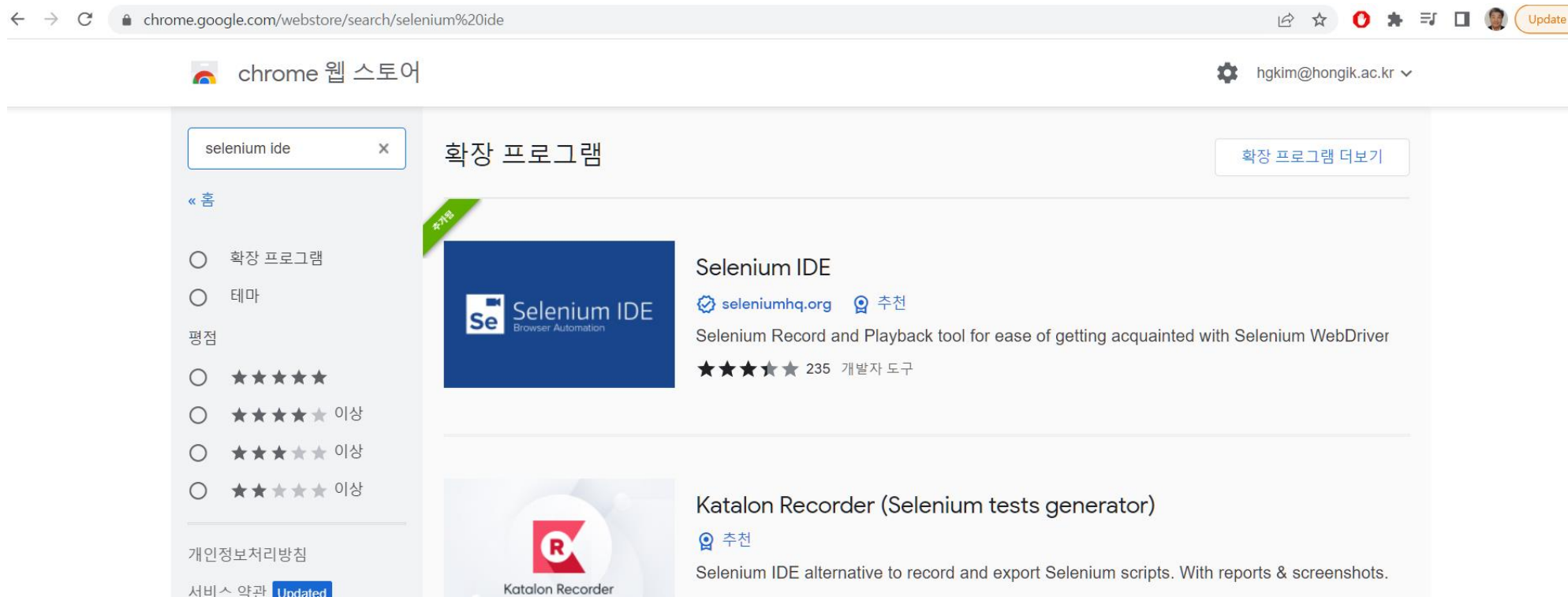
Selenium IDE

- <https://www.selenium.dev/selenium-ide/>
- Open source record and playback test automation for the web
- JavaScript 엔지니어들이 생각해 낸 기발한 아이디어로서 Web Testing Automation의 기본 – 2022년 5월 firefox, chrome, IE 7+, Edge, Safari, Opera,

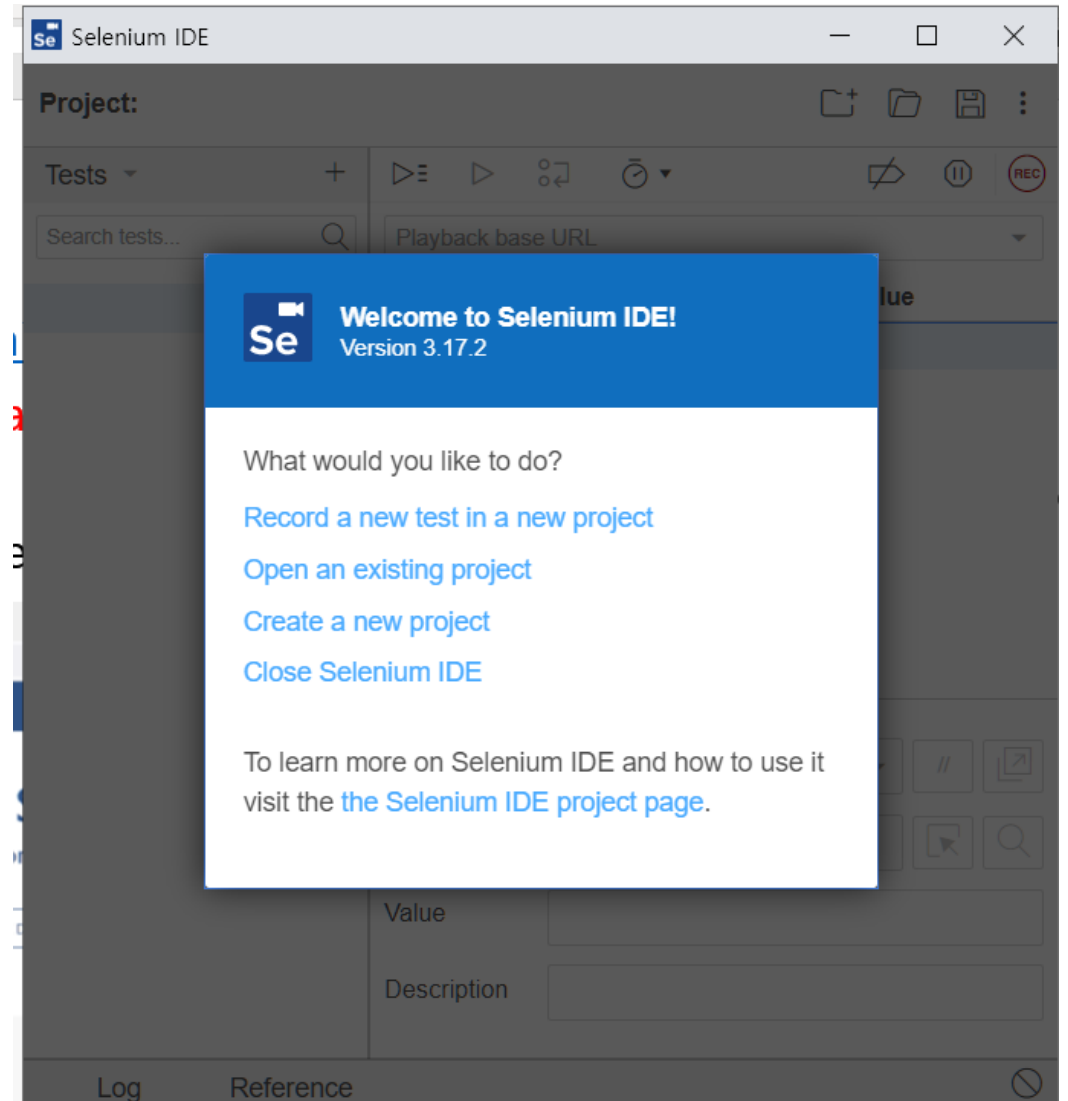
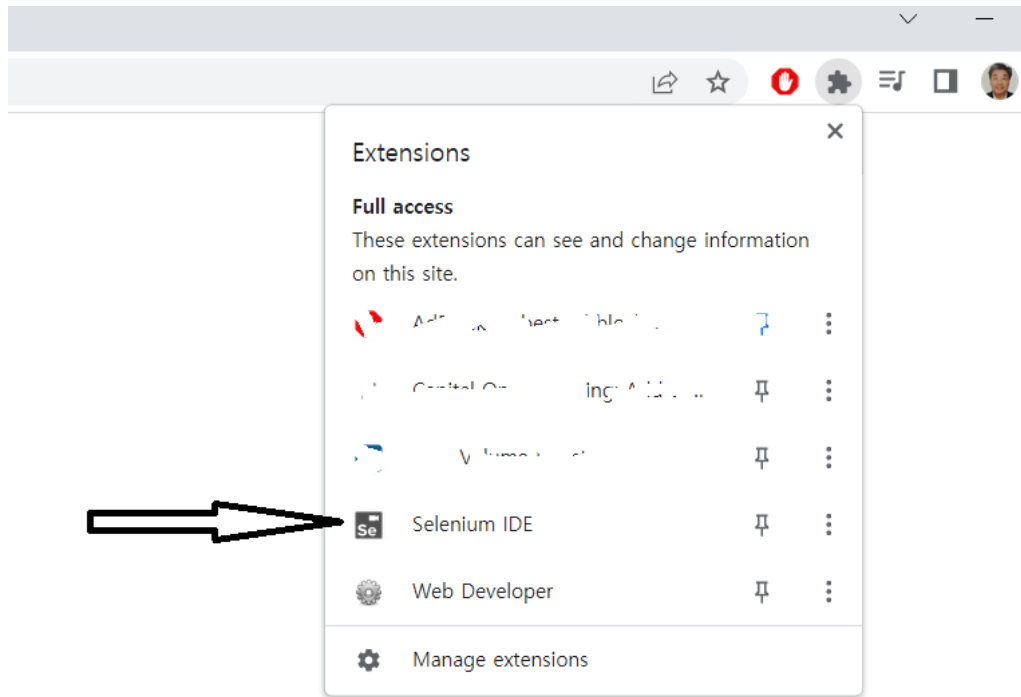


Selenium IDE extension 설치

- Selenium IDE extension을 브라우저에 설치
- Chrome 브라우저에는 chrome 웹 스토어로 가서 찾기에 selenium ide 입력

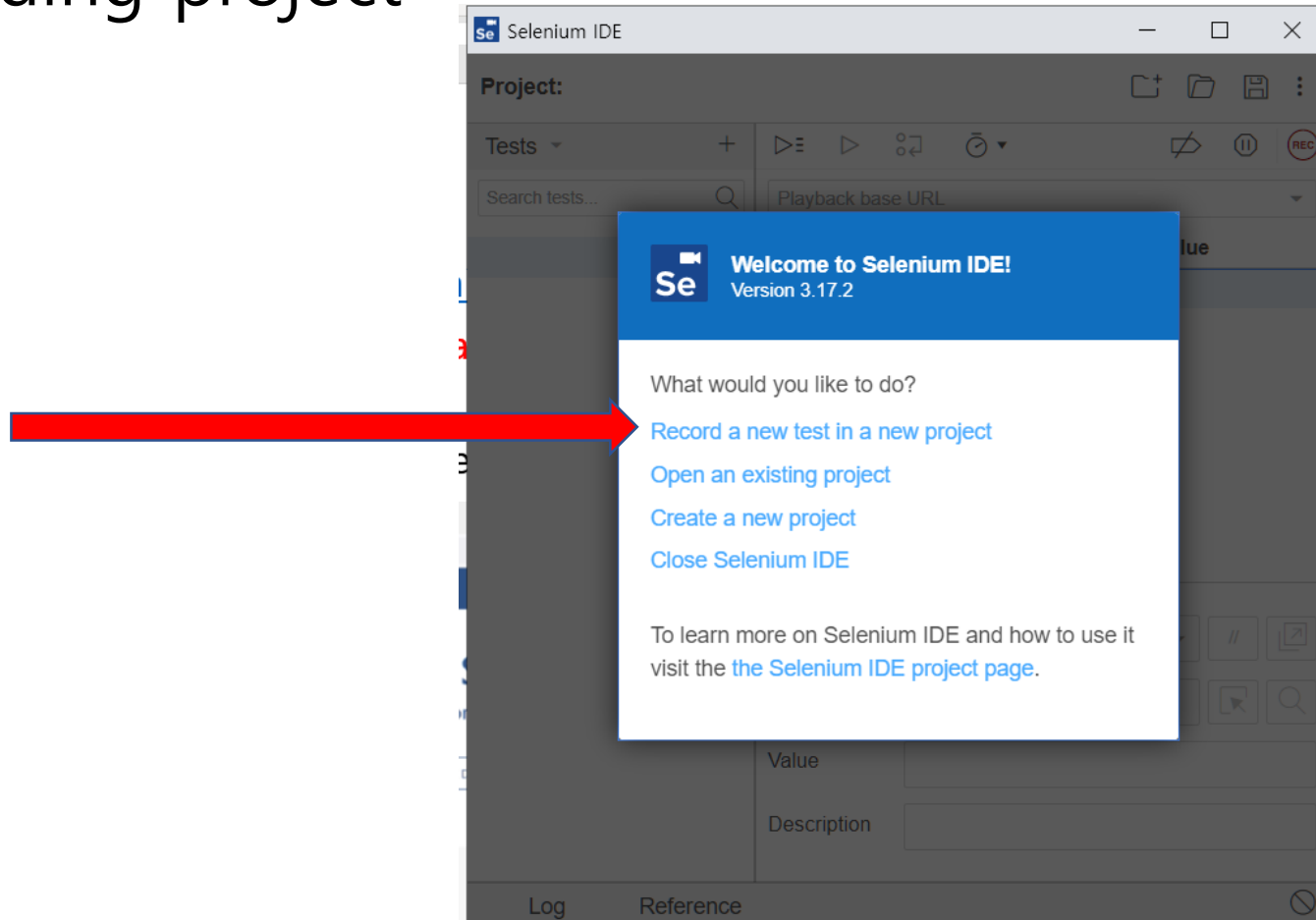


Selenium IDE extension 클릭하여 시작



Demo Scenario

- 1) Click "record a new test in a new project" to start new recording project

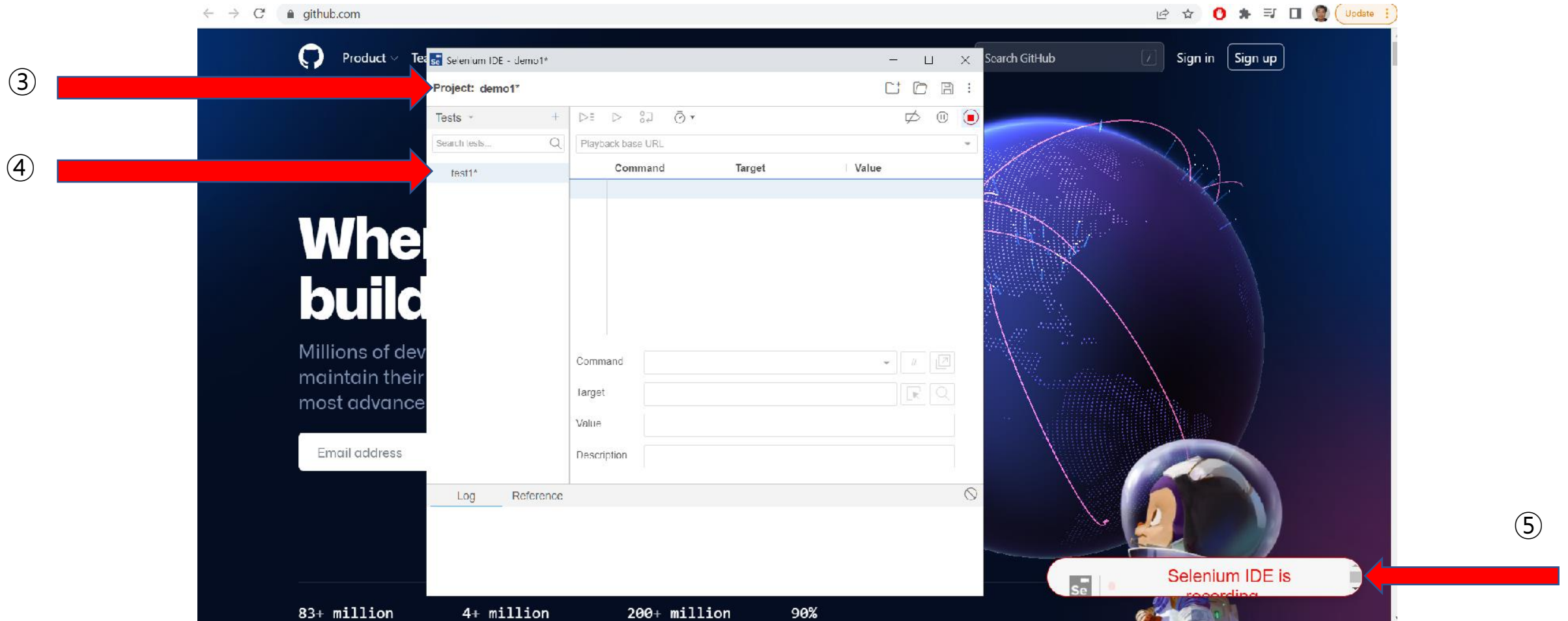


2) 원하는 웹 사이트 url 입력 – 데모에서는 <https://github.com>

3) Project 이름 적절히 입력

4) Selenium IDE에 “test” 선택하여 이름 적절히 입력

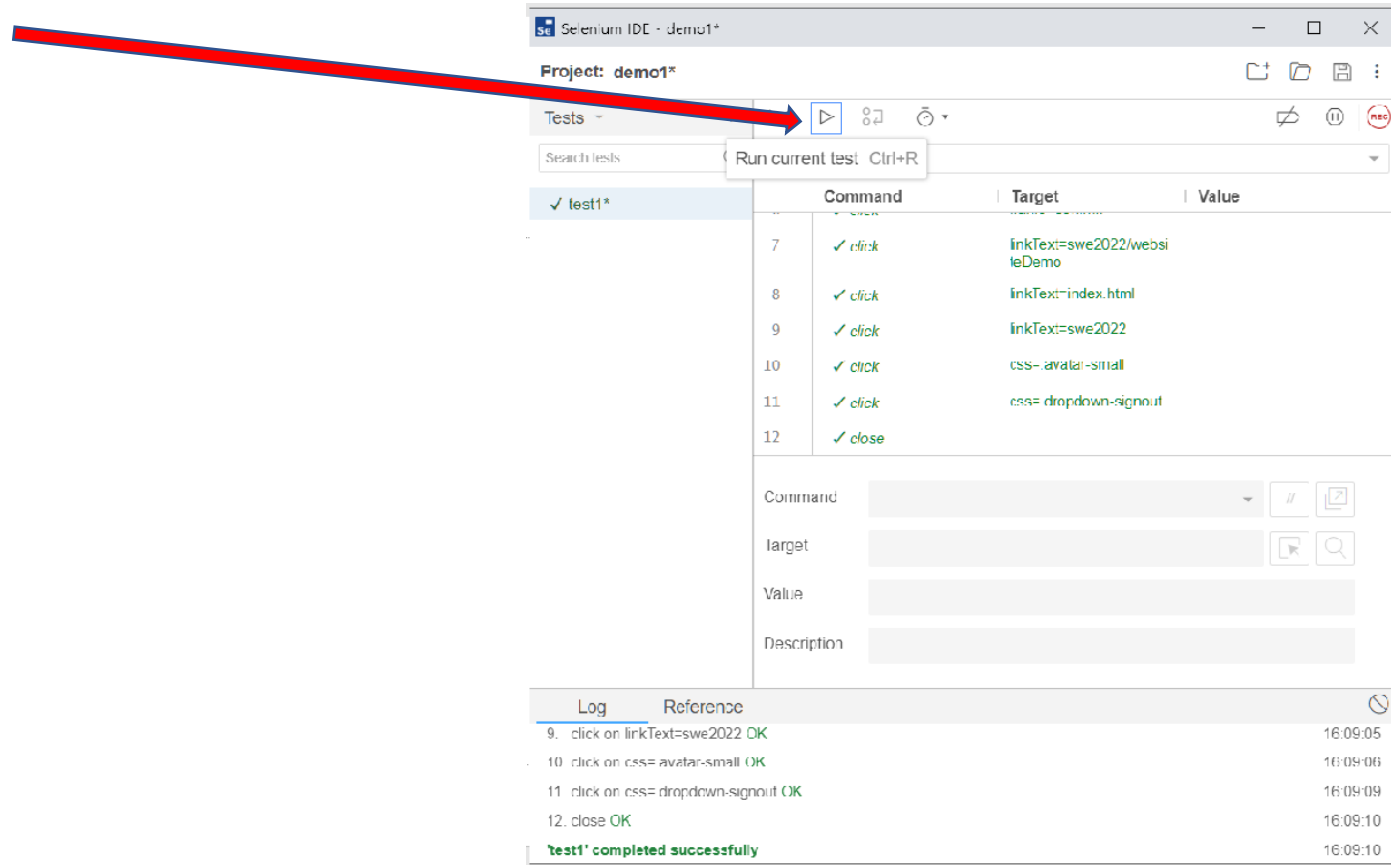
5) Recording project이므로 pop up된 사이트의 아래 쪽에 “Selenium IDE is recording”



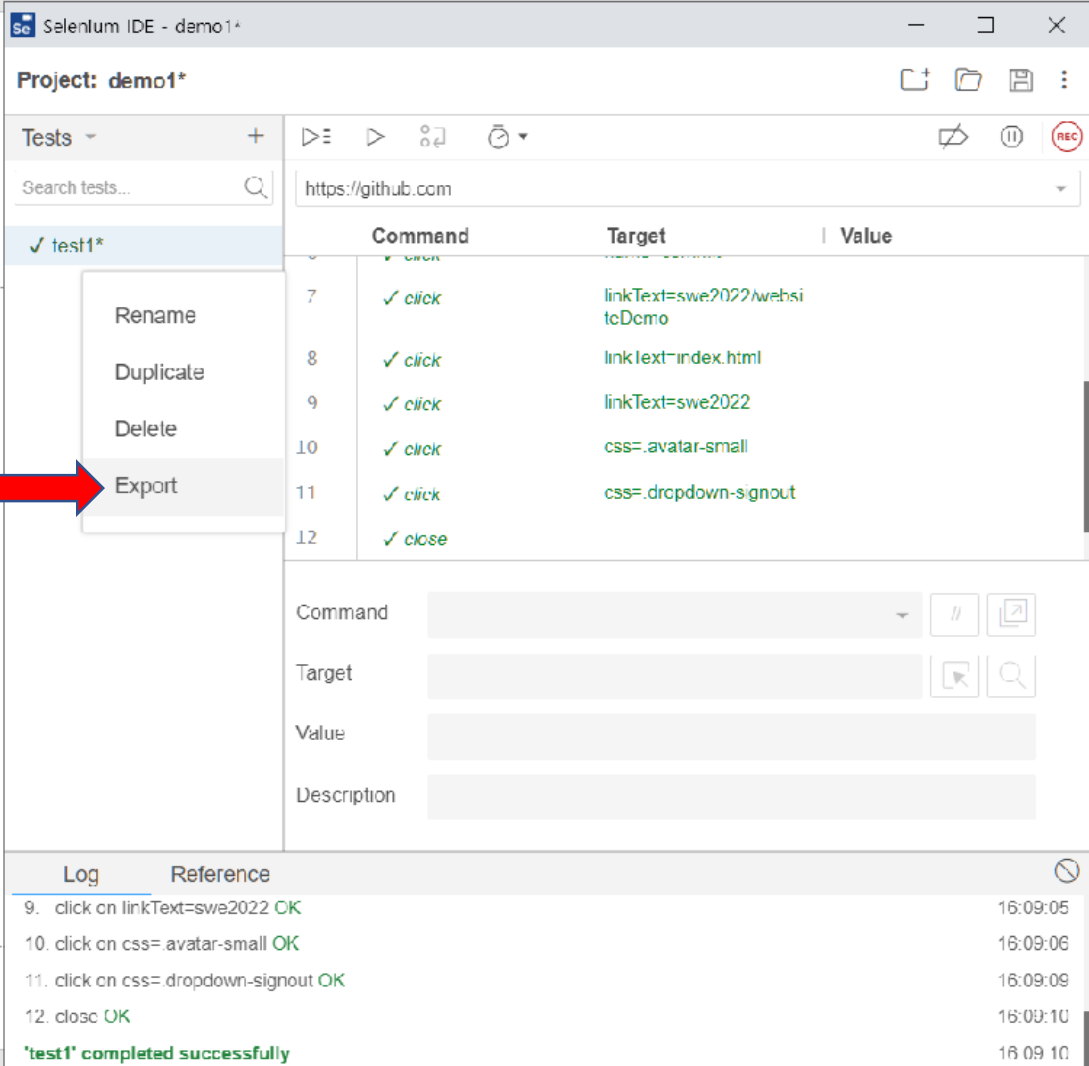
6) 브라우저에서 원하는 작업 연속적으로 수행

7) 브라우저 클릭하기를 멈추고 selenium IDE 에서 recording 멈추기 클릭하여 recording 끝냄

8) IDE 에서 "run current test" 클릭하여 녹화된 것을 재생해 봄



9) IDE에서 "export" 클릭하여 테스트 케이스를 원하는 언어로 export 해 보기

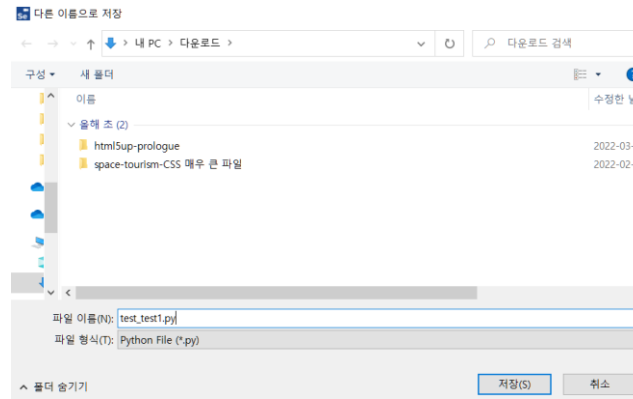
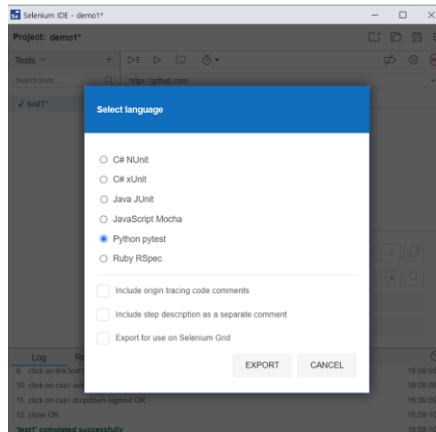


The screenshot shows the Selenium IDE interface with a project named 'demo1*'. A context menu is open for the test case 'test1*', and the 'Export' option is highlighted by a red arrow. The main table displays the test steps for 'test1*':

	Command	Target	Value
7	✓ click	linkText=swe2022/webst	toDemo
8	✓ click	linkText=index.html	
9	✓ click	linkText=swe2022	
10	✓ click	css=.avatar-small	
11	✓ click	css=.dropdown-signout	
12	✓ close		

Below the table, there are input fields for Command, Target, Value, and Description. At the bottom, the Log tab shows the execution results:

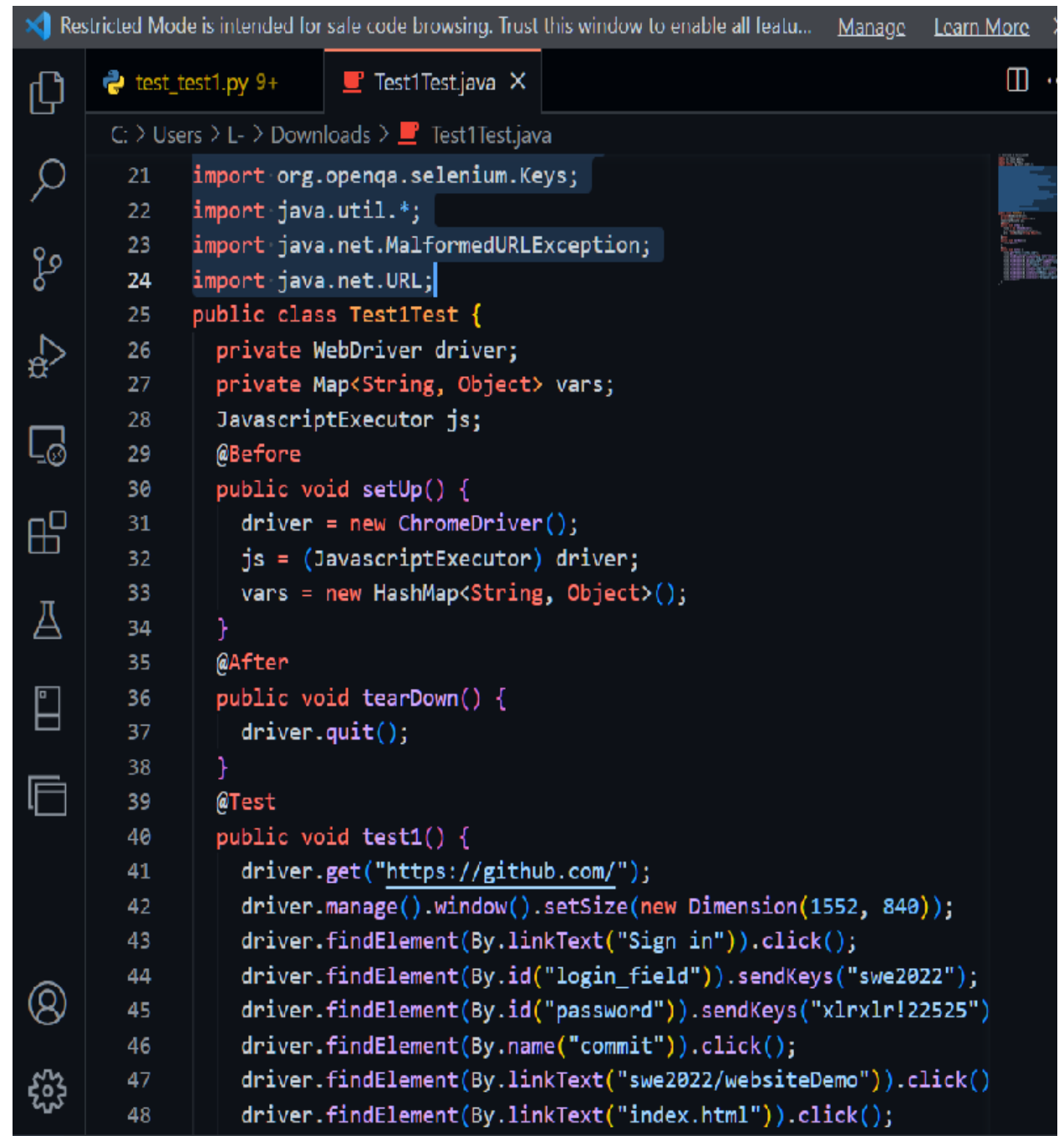
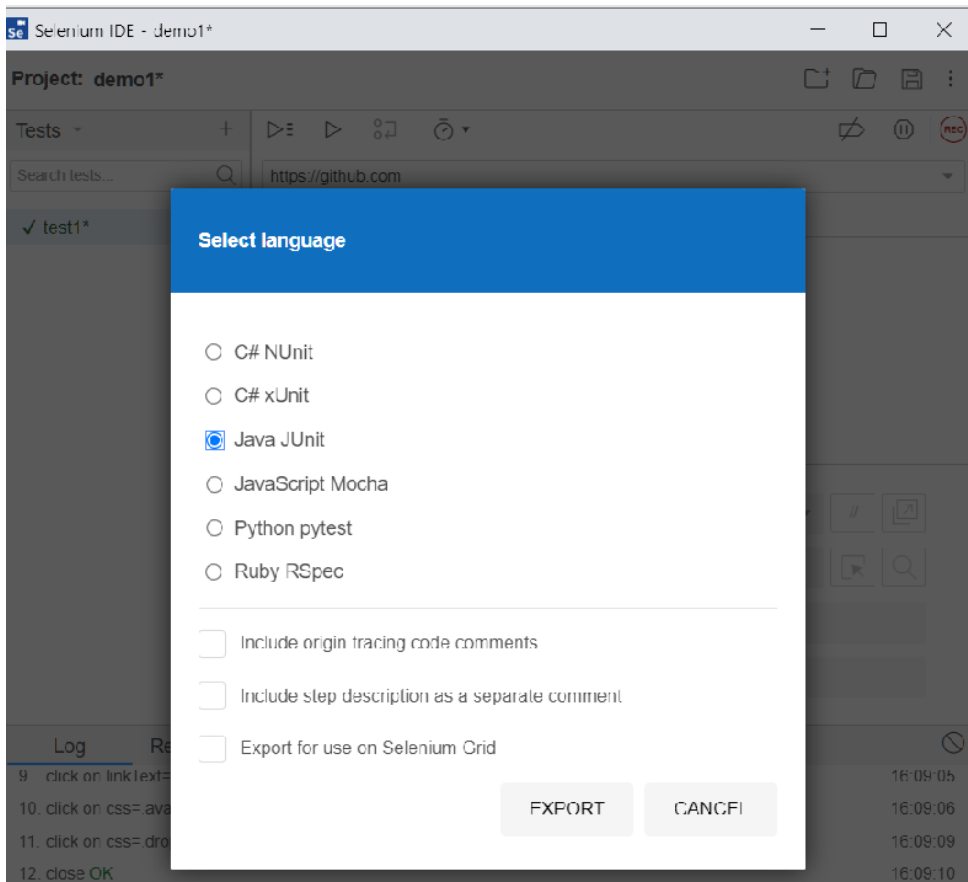
Log	Reference
9. click on linkText=swe2022 OK	16:09:05
10. click on css=.avatar-small OK	16:09:06
11. click on css=.dropdown-signout OK	16:09:09
12. close OK	16:09:10
'test1' completed successfully	16:09:10



10) 저장된 테스트 케이스 파일을 확인해 보기

```
File Edit Selection View Go ... test_test1.py - Visual S...
Restricted Mode is intended for safe code browsing. Trust this window to enable all featu... Manage Learn More

test_test1.py 9+ x
C: > Users > L- > Downloads > test_test1.py > ...
4 import json
5 from selenium import webdriver
6 from selenium.webdriver.common.by import By
7 from selenium.webdriver.common.action_chains import ActionChains
8 from selenium.webdriver.support import expected_conditions
9 from selenium.webdriver.support.wait import WebDriverWait
10 from selenium.webdriver.common.keys import Keys
11 from selenium.webdriver.common.desired_capabilities import DesiredCapabilities
12
13 class TestTest1():
14     def setup_method(self, method):
15         self.driver = webdriver.Chrome()
16         self.vars = {}
17
18     def teardown_method(self, method):
19         self.driver.quit()
20
21     def test_test1(self):
22         self.driver.get("https://github.com/")
23         self.driver.set_window_size(1552, 840)
24         self.driver.find_element(By.LINK_TEXT, "Sign in").click()
25         self.driver.find_element(By.ID, "login-field").send_keys("user2
```



Selenium IDE 를 보니...

- WebDriver – 프로그램 속에서 웹 브라우저를 구동하는 드라이버 – device driver 와 마찬가지로
- JUnit, NUnit, xUnit, pytest 등의 test framework와 자동으로 연동한 테스트 소스 코드 생성
- 다양한 언어로 WebDriver를 사용하여 다양한 테스트는 물론 웹 사이트에 원하는 어떤 작업도 수행하는 프로그램 작성