

### Lab Exercise - Selenium

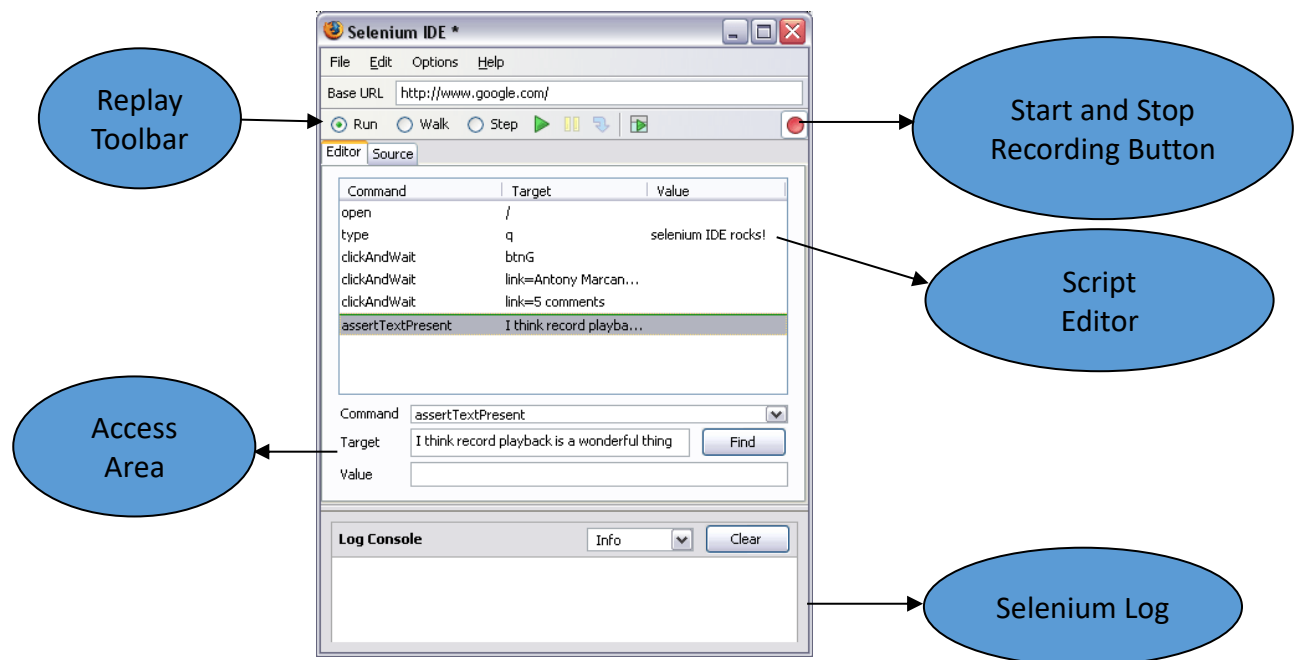
**IT3040 – IT Project Management**

**Semester 1**

Selenium is an automated testing tool for web applications. It is an open source project that allows both testers and developers for developing functional tests in the browser. It allows developers to record the workflows, so that they can prevent future regressions of code. In addition, it works on any browser that supports JavaScript.

#### Selenium Integrated Development Environment (IDE)

Selenium Integrated Development Environment (IDE) is one of the simplest components in the Selenium automation testing suite.



#### Features of Selenium:

- Supports for cross-browser testing.
- Supports several languages including Java, C#, PHP, and Python.
- Provides an efficient way of comparing expected and actual results.
- Inbuilt reporting mechanism.

#### How to get?

- Use Selenium-Core or get a Firefox plug-in "Selenium-IDE". The plugin helps you to record test cases.
- **Reference:** <https://www.seleniumhq.org//>

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### Installation Details for Firefox

- Download IDE from the SeleniumHQ official downloads page (Refer figure 1).

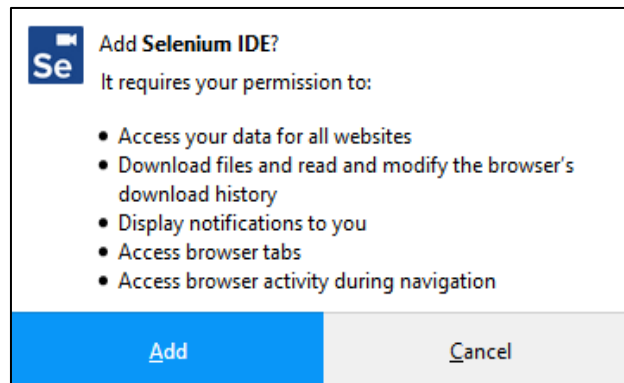


Figure 1: Adding Selenium in Firefox – Step 1

- Click on "Add" button. Then Firefox Add-ons window will pop up to show that you have added Selenium IDE to Firefox (Refer figure 2).

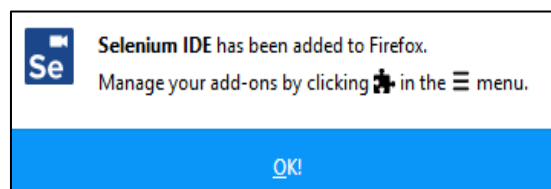


Figure 2: Adding Selenium in Firefox - Step 2

- Run Selenium by clicking on the "Selenium" icon which appears near the search bar of the browser. Otherwise, you can run it by selecting it from "Tools" menu of Firefox.
- Then Selenium window will open as an empty script-editing window.
- There is a menu for loading or creating new test cases.

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### Installation Details for Chrome

- Download IDE from the SeleniumHQ official downloads page (Refer figure 3).

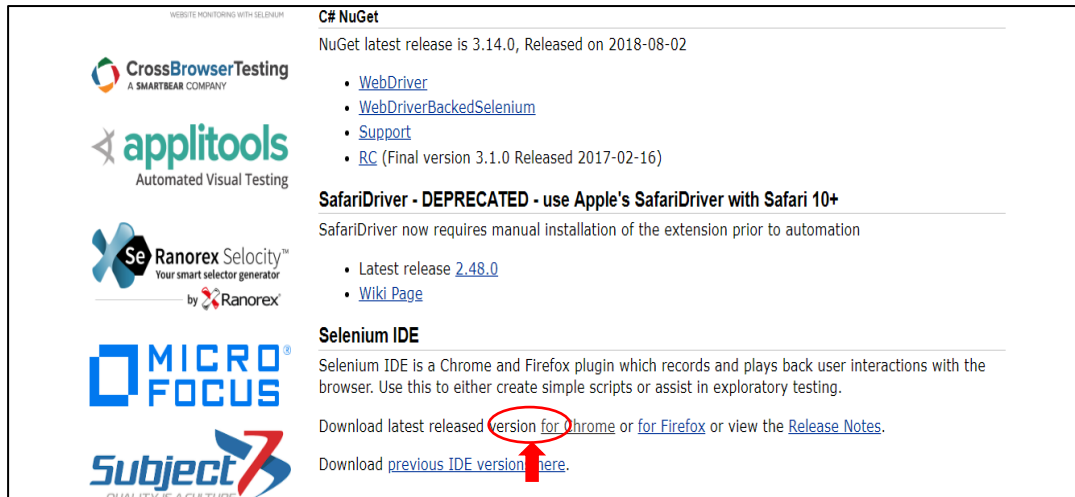


Figure 3: Adding Selenium in Chrome – Step 1

- Click on “Add to Chrome” button (Refer figure 4).

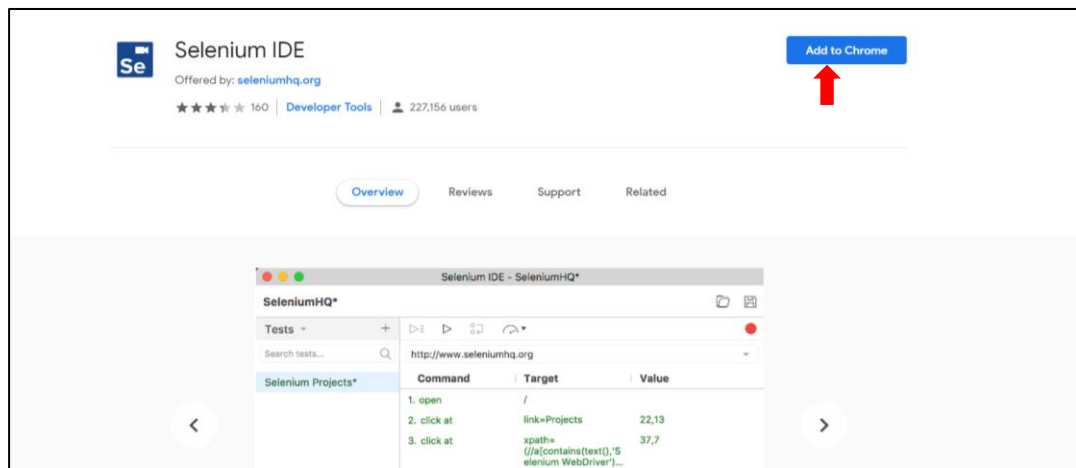


Figure 4: Adding Selenium in Chrome – Step 2

- Click on “Add extension” button (Refer figure 5).

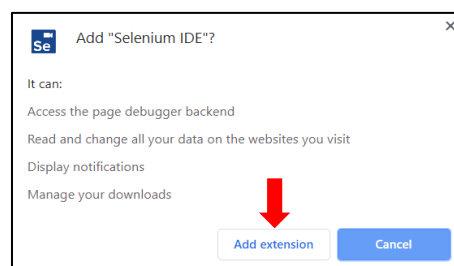


Figure 5: Adding Selenium in Chrome – Step 3

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- Then Chrome Add-ons window will pop up to show that you have added Selenium IDE to Chrome (Refer figure 6).



Figure 6: Adding Selenium in Chrome - Step 4

- Run Selenium by clicking on the “Selenium” icon which appears near the search bar of the browser (Refer figure 7).

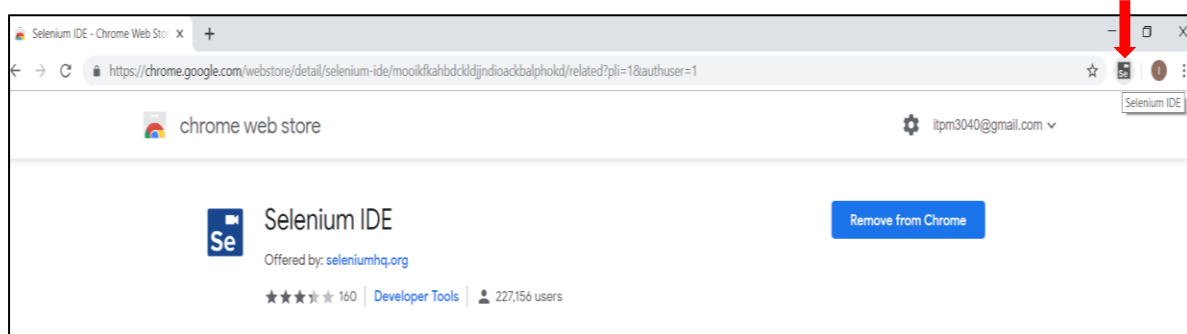


Figure 7: Adding Selenium in Chrome - Step 5

### Working with a Selenium Test Case

1. Open a web browser.

**Note:** Chrome web browser have been used to demonstrate the remaining steps.

2. Open Selenium IDE by clicking on the Selenium icon (Refer figure 8).



Figure 8: Selenium Icon

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3. Click on “Record a new test in a new project” (Refer figure 9).

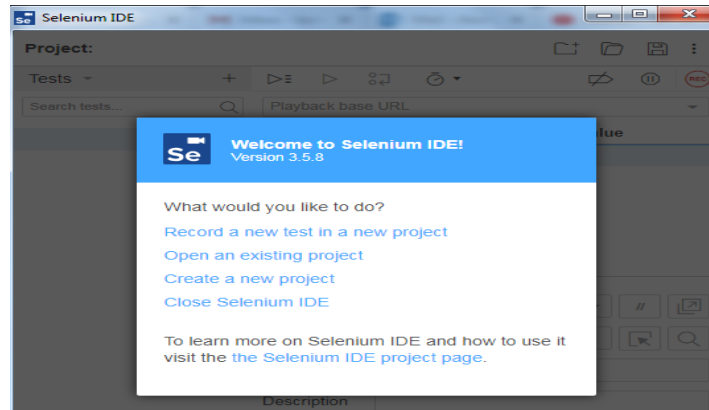


Figure 9: Recording a New Test Case

4. Give a name for the project (Refer figure 10). Then click “OK”.

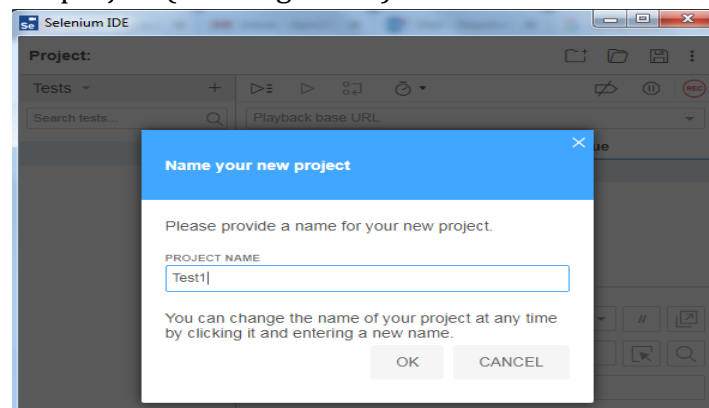


Figure 10: Adding a Project Name

5. Give the web address that you want to monitor (Refer figure 11). Click on “Start Recording”.

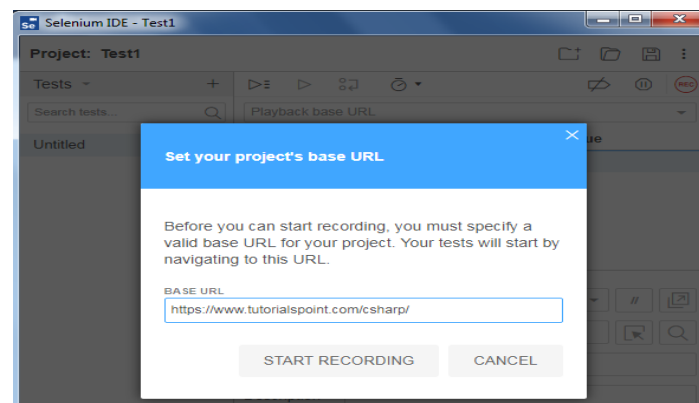


Figure 11: Adding a Website Link

***Now the web address will be opened, and recording will get started. You can navigate through different tabs of the webpage.***

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6. Click on “Stop Recording” button (Refer figure 12).

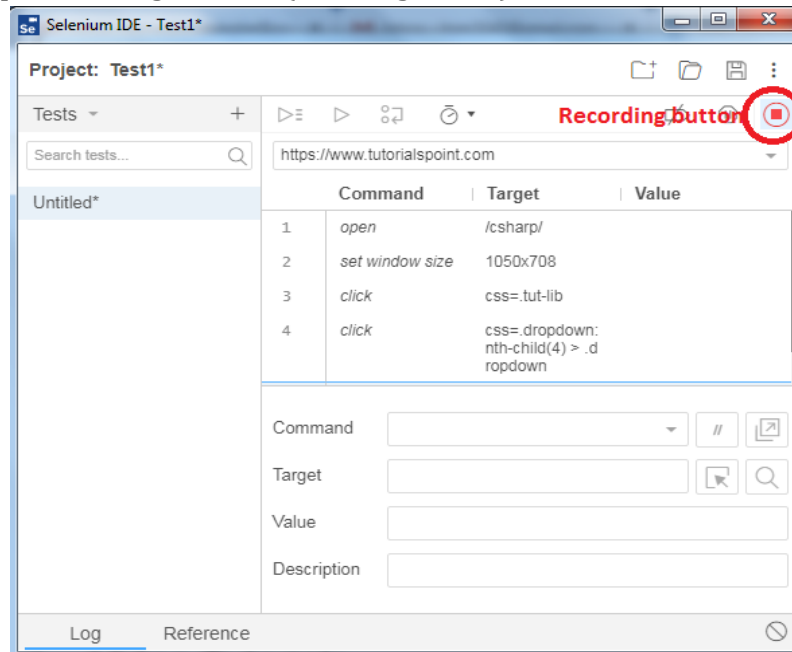


Figure 12: Stopping Recording

7. Give a name to your test case and click “OK” (Refer figure 13).

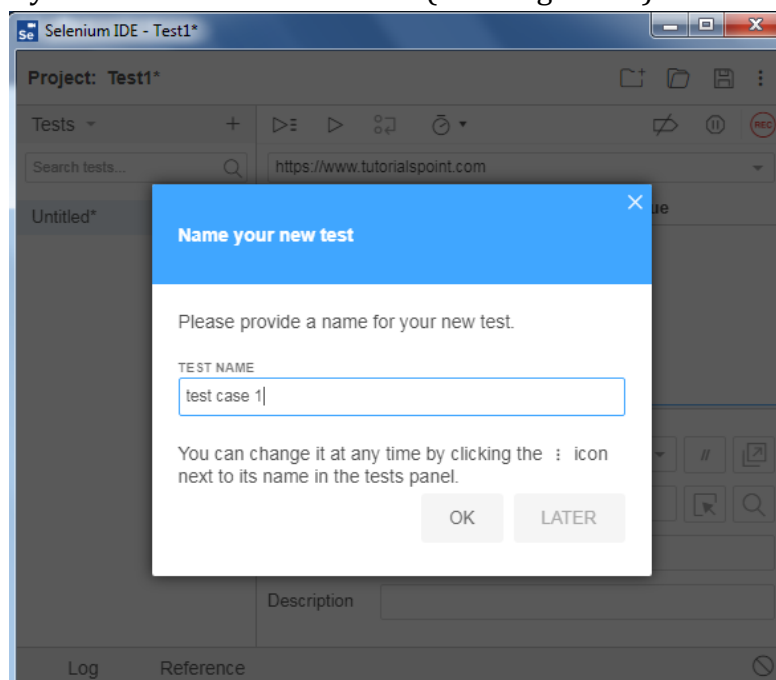


Figure 13: Adding a Test Case Name

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8. Click on the save button to save the test case (Refer figure 14) and save it.

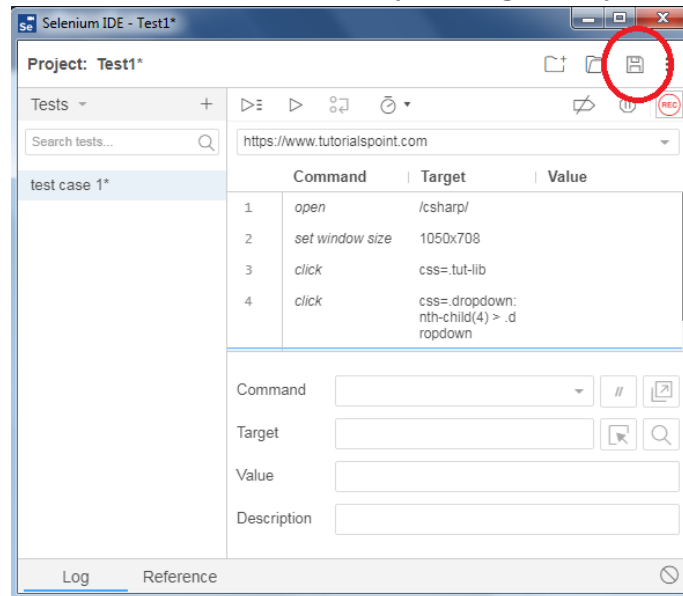


Figure 14: Saving the Test Case

9. You can open the saved test case in future and create a new project using the icons in the toolbar of the Selenium IDE.
10. Based on your choice you can either execute one test case at a time or all the test cases together (Refer figure 15).

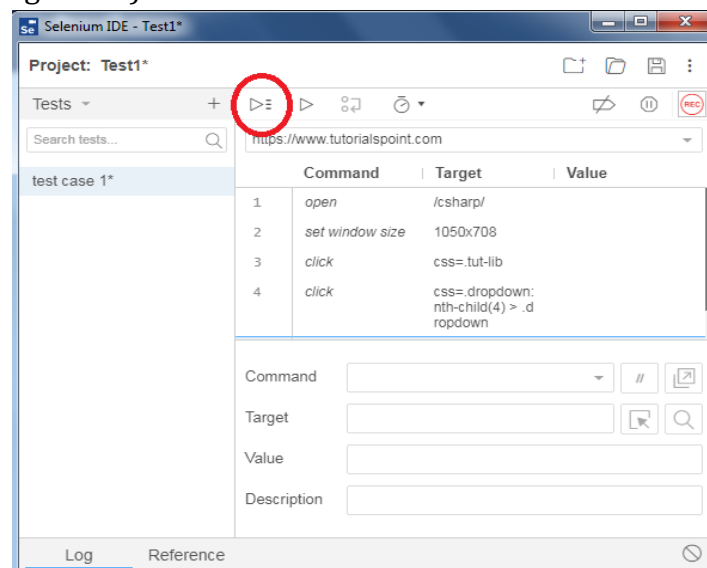


Figure 15: Executing Test Cases

11. You can monitor the commands and issues related to all the test cases.