

### Lab Exercise - Selenium

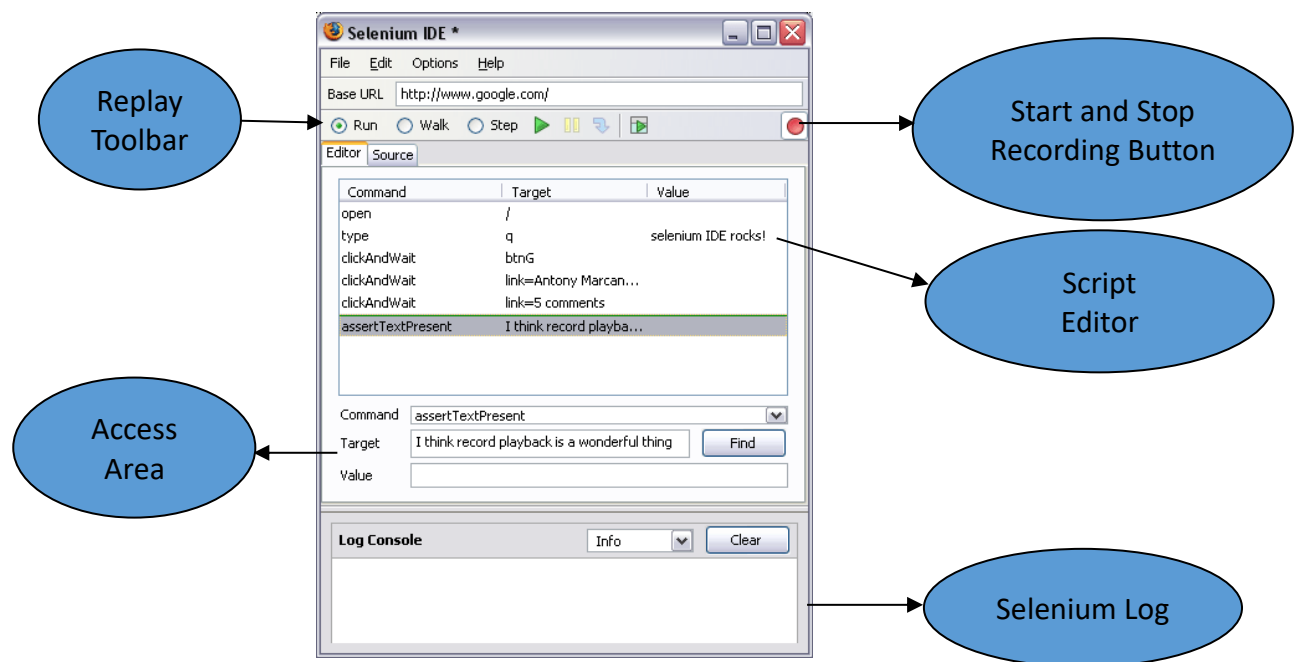
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**Selenium** is an automated testing tool for web applications. It is an open source project that allows both testers and developers for developing functional tests in the browser. It allows developers to record the workflows, so that they can prevent 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/>

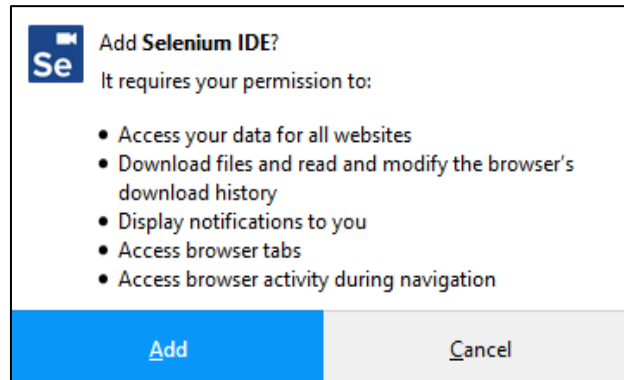
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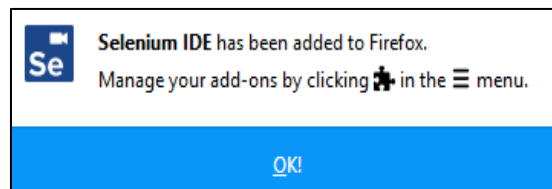
#### Installation Details for Firefox

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



*Fig. 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 fig. 2).



*Fig. 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 fig. 3).

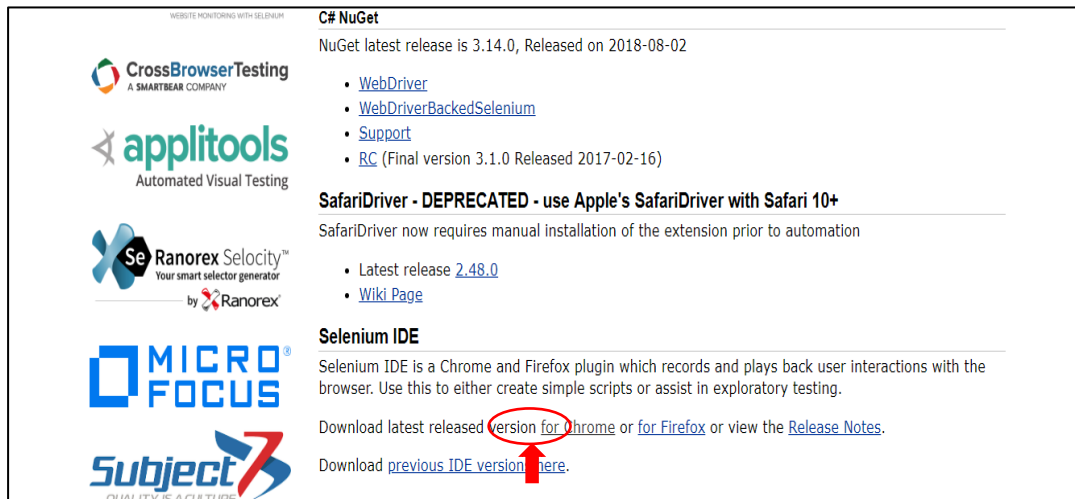


Fig. 3: Adding Selenium in Chrome – Step 1

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

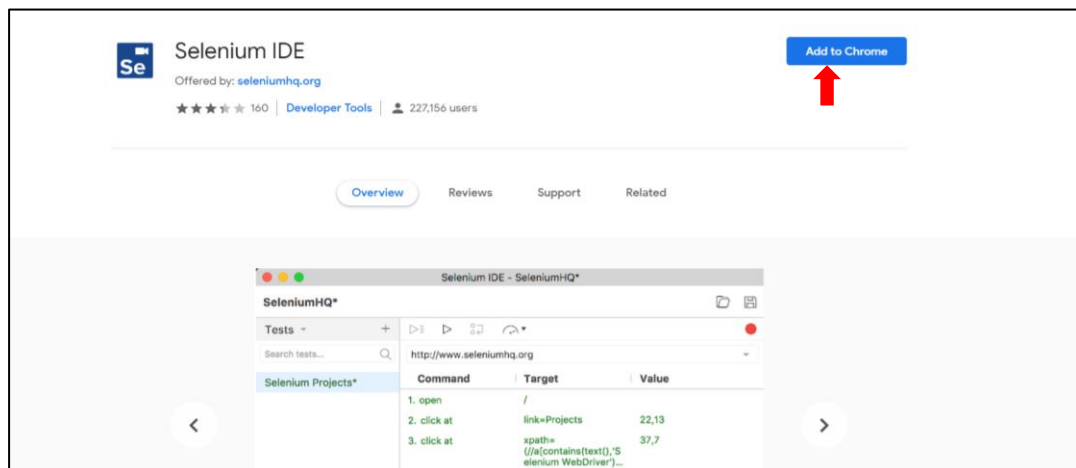


Fig. 4: Adding Selenium in Chrome – Step 2

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

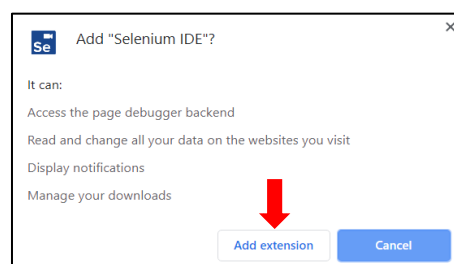


Fig. 5: Adding Selenium in Chrome – Step 3

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



Fig. 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 fig. 7).

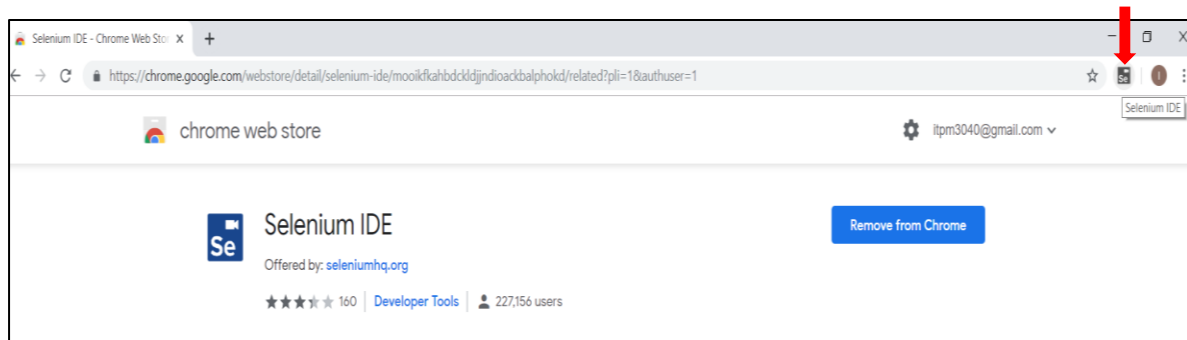


Fig. 7: Adding Selenium in Chrome - Step 5

#### Working with a Selenium Test Case

- Open a web browser.

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

- Open Selenium IDE by clicking on the Selenium icon (Refer fig. 8).



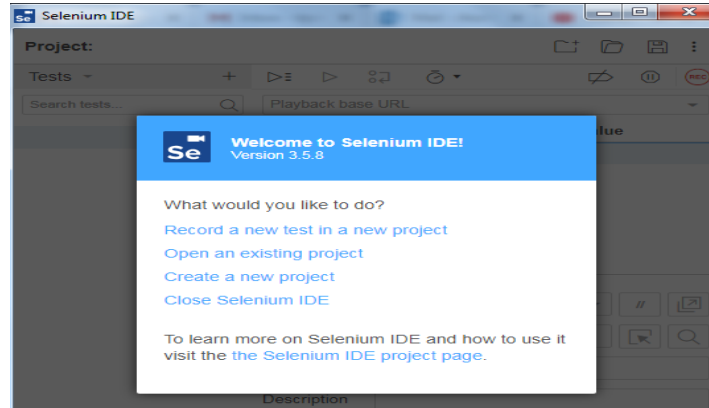
Fig. 8: Selenium Icon

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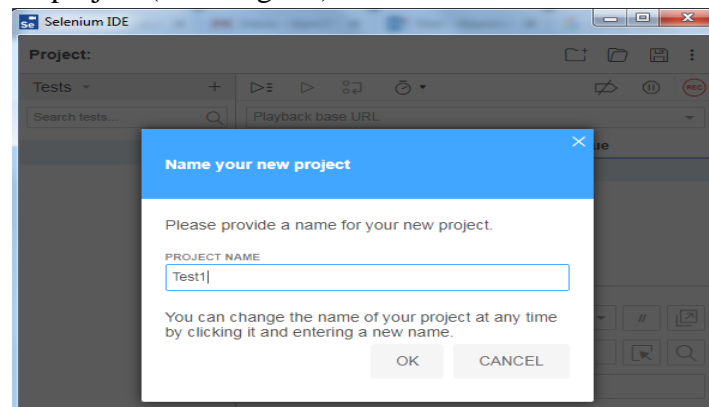
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3. Click on “Record a new test in a new project” (Refer fig. 9).



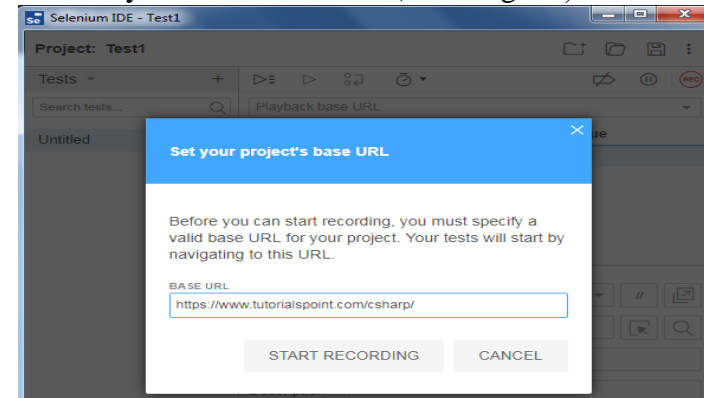
*Fig. 9: Recording a New Test Case*

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



*Fig. 10: Adding a Project Name*

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



*Fig. 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 fig. 12).

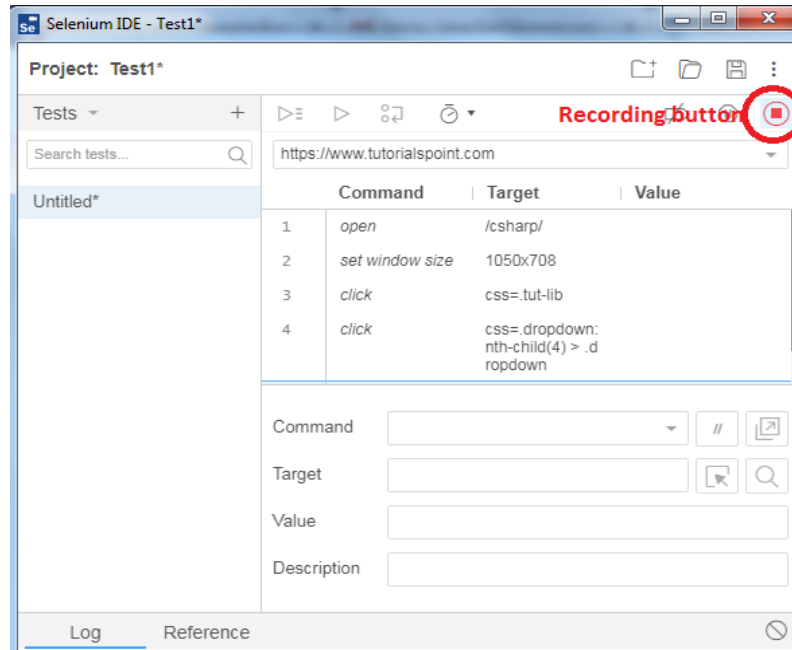


Fig. 12: Stopping Recording

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

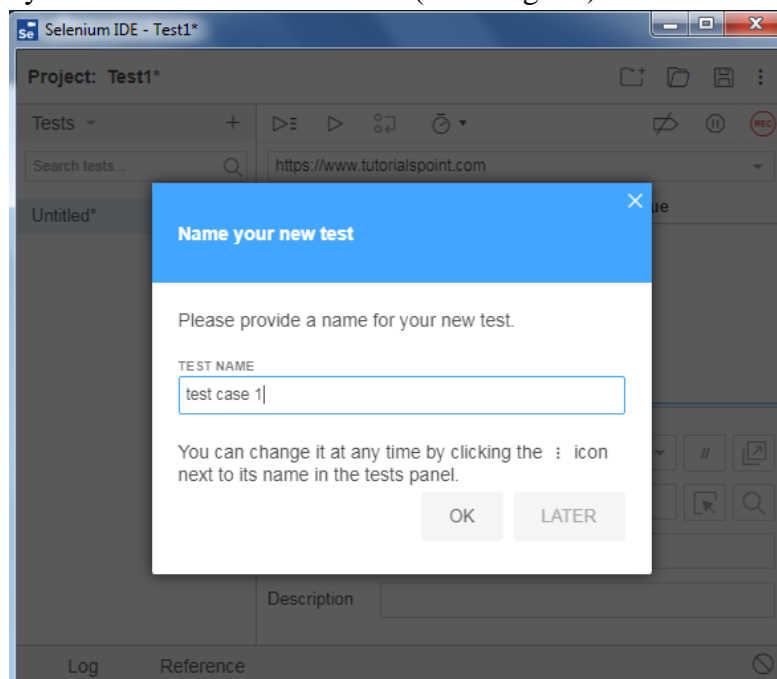


Fig. 13: Adding a Test Case Name

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

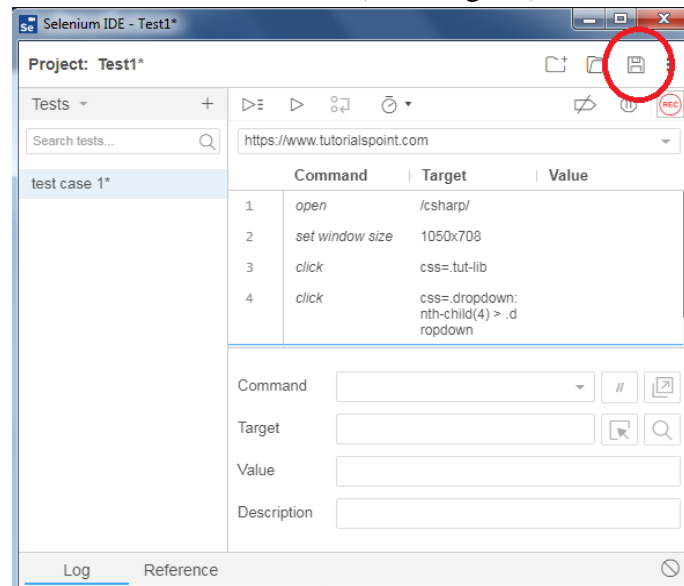


Fig. 14: Saving the Test Case

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 fig. 15).

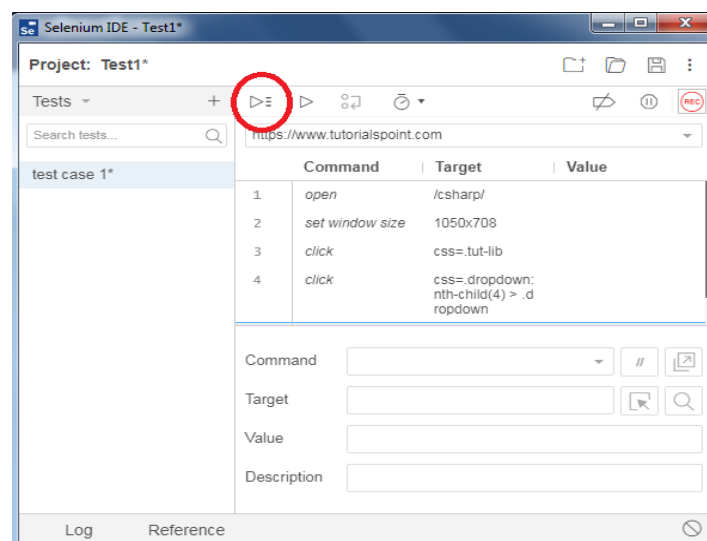


Fig. 15: Executing Test Cases

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