

Automation Concepts

Test Automation – Why?

- ▶ To avoid repetition
- ▶ More accuracy.
- ▶ Compatibility testing
- ▶ In case of regression testing.

Solution needed

- ▶ Quicker execution than the speed of manual testing.
- ▶ Execution without error.
- ▶ Full coverage during execution
- ▶ Automated report.

Test Automation could be answer.

- ▶ What is test automation?
 - Let's machine work instead of a person.
 - A machine in this context is a "Testing Tool".


Concept of Automation

- ▶ Manual testing uses the tester's knowledge about application and his/her hand-eye-brain co-ordination.
 - Navigate a page
 - Insert a data (in text box)
 - Select a value (from checkbox, list box or dropdownlist)
 - Take a action (Click a button)
 - Check actual result v/s expected result.
 - Mark a test case as Pass or Fail

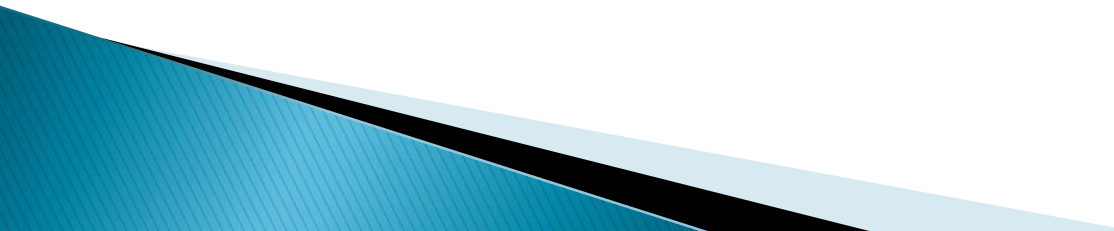
Concept of Automation cont..

- ▶ Automation means execute above actions by automation tool without any human intervention.
- ▶ Tool understands a specific language.
 - Instructions needs to be provided using any one of the supporting language.

When to automate?

- ▶ System is under maintenance & has frequent release.
 - ▶ System is developed using incremental / iterative model.
 - ▶ High volume of test data needed for test case.
 - ▶ Frequent execution cycle.
 - ▶ Shorter frame for regression testing.
 - ▶ Multiple sets of test data.
 - ▶ Multiple configuration to be tested.
- 

Tool Analysis – which tool to be used?

- ▶ Application technology & Tool supported.
 - ▶ Ease of tool and flexibility.
 - ▶ Error handling, report generating.
 - ▶ Support availability for tool.
 - ▶ Integration with other tools.
 - ▶ Budget.
 - ▶ Market presence.
 - ▶ Human resources availability for the tool.
 - ▶ Ex. QTP, HP function tester, Selenium, Silk Test and many more.
- 

Selenium Components

- ▶ Selenium IDE
 - Record and playback mechanism on Mozilla Firefox only.
- ▶ Selenium Grid
 - Parallel execution on multiple browsers.
- ▶ Selenium RC (Remote Control)
 - Playback on multiple browsers. **Depricated.**
- ▶ Selenium WebDriver
 - In replacement with Selenium RC.

Selenium IDE

- ▶ This is Integrated Development Environment for Selenium tests.
 - ▶ Implemented as Firefox Extension.
 - ▶ Gives Record & Playback mechanism.
 - ▶ History
 - Invented by Jason Huggins
 - Original name was JSFT (Javascript Functional Tester)
 - Developed using HTML & JavaScript
 - Built as open source tool for testing browser based applications only.
- 

Installing IDE

File Edit View History Bookmarks Tools Help

Downloads x +

https://www.seleniumhq.org/download/

[SeleniumConf Chicago] Tickets are on sale and CFP is open NOW! Go [HERE](#) for details

SafariDriver - DEPRECATED - use Apple's SafariDriver with Safari 10+
SafariDriver now requires manual installation of the extension prior to automation

- Latest release [2.48.0](#)
- [Wiki Page](#)

Selenium IDE
Selenium IDE is a Chrome and Firefox plugin which records and plays back user interactions with the browser. Use this to either create simple scripts or assist in exploratory testing.

Download latest released version [for Chrome](#) or [for Firefox](#) or view the [Release Notes](#).

Download [previous IDE versions here.](#)

Third Party Drivers, Bindings, and Plugins
Selenium can be extended through the use of plugins. Here are a number of plugins created and maintained by third parties. For more information on how to create your own plugin or have it listed, consult the docs.

Please note that these plugins are not supported, maintained, hosted, or endorsed by the Selenium project. In addition, be advised that the plugins listed below are not necessarily licensed under the Apache License v.2.0. Some of the plugins are available under another free and open source software license; others are only available under a proprietary license. Any questions about plugins and their license of distribution need to be raised with their respective developer(s).

Third Party Browser Drivers NOT DEVELOPED by seleniumhq

Browser

Mozilla GeckoDriver	latest	change log	issue tracker	Implementation Status
Google Chrome Driver	latest	change log	issue tracker	selenium wiki page selenium wiki

LAN Messenger mandar.jog is online.

13:54 02-06-2018

Installing IDE

The screenshot shows a web browser window displaying the Selenium IDE download page. The browser's address bar shows the URL <https://addons.mozilla.org/en-GB/firefox/addon/selenium-ide/>. The page lists two versions of the add-on:

- Version 3.0.0.0**
Released April 11, 2018 · 3.3 MiB
Works with Firefox 56.0 and later
Source code released under [Custom Licence](#) · [What's this?](#)
+ Add to Firefox
- Version 2.9.1.1-signed**
Released March 15, 2015 · 796.5 KiB
Works with Firefox 17.0 - 56.*
Selenium IDE v2.9.1
Merged all the official language exporters into the main add-on and eliminated having a multi-xpi.
Source code released under [Custom Licence](#) · [What's this?](#)
+ Add to Firefox

A red rectangular box highlights the '+ Add to Firefox' button for Version 2.9.1.1-signed. A message box states: 'This add-on is not compatible with your version of Firefox. Download Anyway'. The bottom of the page features a blue navigation bar with links: 'get to know ADD-ONS', 'About »', 'Blog »', 'Developer Hub »', 'FAQ »', and 'Forum »'. A decorative illustration of tools is in the bottom right corner. The Windows taskbar at the bottom shows the time as 13:58 on 02-06-2018.

Installing IDE

File Edit View History Bookmarks Tools Help

Selenium IDE :: Versions :: Ad x +

Mozilla Foundation (US) | <https://addons.mozilla.org/en-GB/firefox/addc> Search

addons.mozilla.org
This site would like to install an add-on in Firefox:
Selenium IDE
[Learn more...](#)

Install Cancel

Released March 15, 2015 · 796.5 KiB
Made with Firefox 47.0 · 55%

+ Add to Firefox

This add-on is not compatible with your version of Firefox.
[Download Anyway](#)

Selenium IDE v2.9.1
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Firefox Download Firefox Android Browser iOS Browser Focus Browser Desktop Browser Beta, Nightly, Developer Edition

https://addons.mozilla.org/firefox/downloads/file/303844/selenium_ide-2.9.1-fx-xpi?src=version-history

13:59 02-06-2018

Installing IDE

The screenshot shows the Selenium IDE add-on page on the Mozilla Add-ons website. The browser window has a single tab titled "Selenium IDE :: Versions :: Ad". The address bar shows the URL "https://addons.mozilla.org/en-GB/firefox/addc". A notification box from "addons.mozilla.org" is displayed, stating "Selenium IDE will be installed after you restart Firefox." and contains two buttons: "Restart Now" (highlighted with a red rectangle) and "Not Now". To the right of the notification, a message states "This add-on is not compatible with your version of Firefox." with a "Download Anyway" link. Below the notification, the add-on details for "Version 2.9.1.1-signed" are shown, including the release date (March 15, 2015), size (796.5 KiB), and compatibility (Works with Firefox 17). A yellow "Add to Firefox" button is visible. The page footer includes links for "get to know ADD-ONS", "About", "Blog", "Developer Hub", "FAQ", and "Forum". The Windows taskbar at the bottom shows various application icons and the system clock indicating 14:00 on 02-06-2018.

File Edit View History Bookmarks Tools Help

Selenium IDE :: Versions :: Ad

Mozilla Foundation (US) https://addons.mozilla.org/en-GB/firefox/addc Search

addons.mozilla.org
Selenium IDE will be installed after you restart Firefox.

Restart Now Not Now

This add-on is not compatible with your version of Firefox.
[Download Anyway](#)

Version 2.9.1.1-signed
Released March 15, 2015 · 796.5 KiB
Works with Firefox 17. [Permanent link to this version](#)

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https://addons.mozilla.org/en-GB/firefox/addon/selenium-ide/versions/2.9.1.1-signed

14:00
02-06-2018

Installing IDE

File Edit View History Bookmarks Tools Help

Selenium IDE :: Versions :: Add-ons

Mozilla Foundation (US)

Works with Firefox 56.0 and later

Source code released under [Custom Licence](#)

Downloads Ctrl+J

Add-ons Ctrl+Shift+A

Sign In To Sync...

Web Developer

Page Info

Options

Selenium IDE Ctrl+Alt+S

This add-on is not compatible with your version of Firefox.

[Download Anyway](#)

Version 2.9.1.1-signed

Released March 15, 2015 · 796.5 KiB

Works with Firefox 17.0 - 56.*

[+ Add to Firefox](#)

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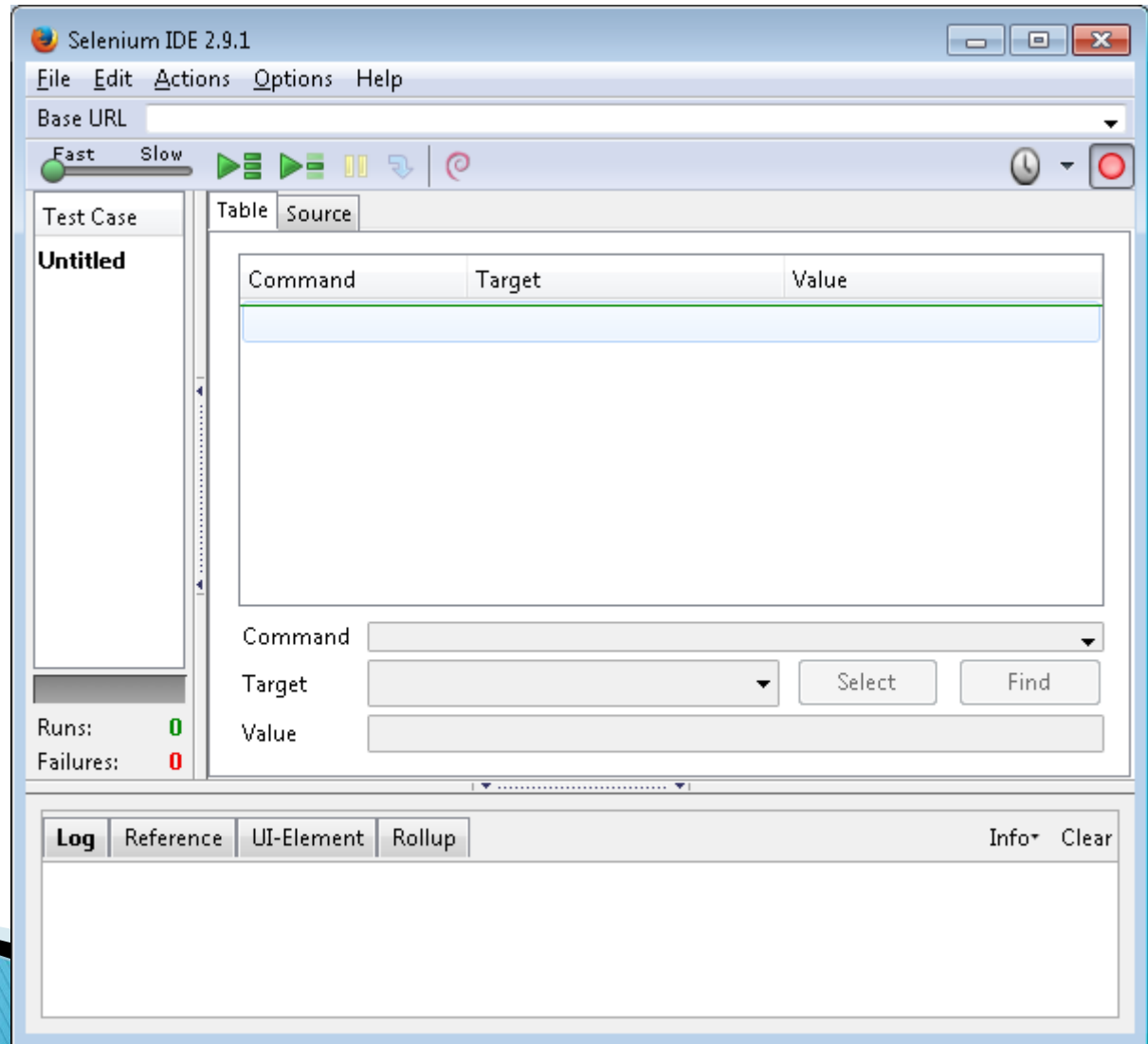
get to know **ADD-ONS**

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Firefox Download Firefox Android Browser iOS Browser Focus Browser Desktop Browser Beta, Nightly, Developer Edition

14:04 02-06-2018

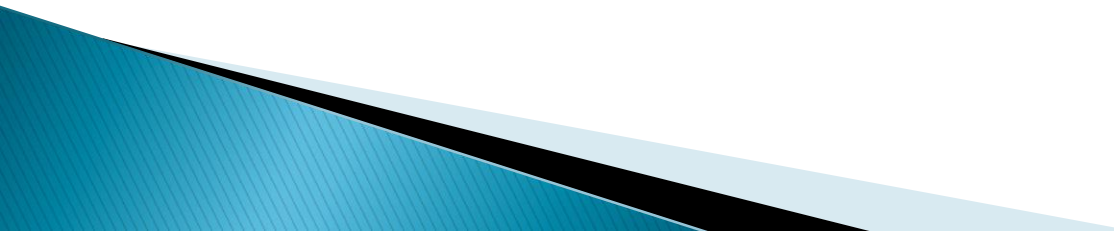
Selenium IDE



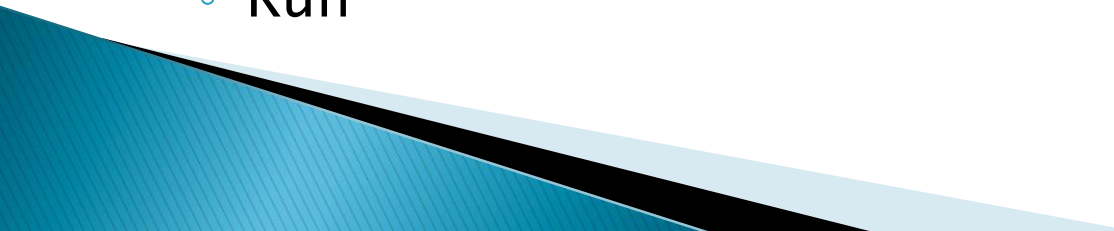
Record and Playback

- ▶ Record & Playback Demo
- ▶ Save the script
- ▶ Open the saved script and run again

Synchronization

- ▶ Synchronization is process of adjusting speed of tool with speed of application.
 - ▶ Commands used for Synchronization
 - pause
 - clickAndWait
 - waitForPageToLoad
- 

Test Suite

- ▶ Test suites are collection of related test cases.
 - ▶ Use of Test Suite
 - Can execute multiple test cases on single click.
 - Can test end-to-end scenario.
 - Can test dependency testing
 - Saves time
 - ▶ Demo
 - Create
 - Save
 - Run
 - Close
 - Open again
 - Run
- 

Selenium Locators

- ▶ Locator is the way in which selenium locates a particular control on page.
- ▶ Selenium supports 5 locators.
 - ID
 - Name
 - CSS
 - DOM
 - XPath

Selenium Commands

- ▶ Selenium command is what tells Selenium what to do?
 - ▶ There are three types of Selenium commands
 - Actions – commands to browser to do something
 - Accessors – Store / Retrieve data from Selenium
 - Asserts – verify that the particular control is present or not.
- 