## Hands-on review – Katalon Automation Recorder (Selenium IDE for Chrome and Firefox)

**Many testers have been worried since Selenium IDE** has stopped working from Firefox 55 onwards. They would be no longer worried thank to this good news:

The Katalon Studio team has recently introduced **Katalon Automation Recorder** that has been developed for the users who are no longer able to continue the automation testing using obsolete Selenium IDE.

It can be added as an extension in Firefox and Chrome and supported by the latest versions of these browsers (and will be supported by the upcoming versions as well). Katalon Automation Recorder is a perfect alternative for the Selenium IDE and other similar open source frameworks.

This extension was the champion project of **Katalon Studio** (<u>https://www.katalon.com/</u>) Hackathons contest.

Katalon Automation Recorder is a very handy and powerful test steps recorder which is ported from Selenium IDE to Chrome and Firefox with major functions preserved.

In the below figure, you can observe that all the features that were presented in Selenium IDE are also available in Katalon Automation Recorder. In fact, Katalon Automation Recorder has two more export languages – Robot Framework and Katalon Studio. It is also compatible with the Groovy programming language.



| Function                                    | Selenium IDE                | Katalon Automation Recorder                               |
|---|-----------------------------|---|
| Record and playback                         | Easy and Simple             | Easy and Simple   |
| Intelligent Locators<br>(IDs, Names, Xpath) | Yes                         | Yes   |
| Autocomplete Commands                       | Yes                         | Yes   |
| Test Execution                              | Step, Test case, Test suite | Step, Test case, Test suite                               |
| Export Languages                            | C#, Java, Ruby, Python      | C#, Java, Ruby, Python<br>Robot Framework, Katalon Studio |
| Assertion functions                         | Yes                         | Yes   |
| Supporting Browser                          | Firefox 54 and prior        | Firefox and Chrome  |

Katalon Automation Recorder is a great help for the teams who have been depended heavily on Selenium IDE. It has a powerful IDE to record, debug and play tests in Chrome & Firefox browser.

#### Installation:

Below are the links to download Katalon Automation Recorder for both Chrome & Firefox:

Chrome Web Store Firefox Add-on Store

It is very easy and quick to get this tool installed. I will show you how:





You just need to click the 'Add to Firefox' button as seen in the above screenshot and the Katalon Automation Recorder will appear on your Firefox toolbar in a jiffy (it will not take more than 10 seconds to get installed).

| 🗲 🕽 🏚 🖀 Mozilla Foundation (US)   https://addons.mozilla.org/en-US/firefox/addon/katalon-automation-record/ | ▼ 🖾 🤇 🤇 Search | ☆  自 🔸 合 🛡 🐼 🚺 🚍 |
|---|----------------|------------------|

And this is how it looks:



| www.51testing.com | ۱ |
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| moz-extension://fb14e543-298d- | 4285-8260-25e9077f0c0e - Katalon Automation Recorder - Mozilla Firefox — |       |
|--------------------------------|--|-------|
| + New O Record                 | Play     { } Export  | ?     |
| Test Cases                     | Command Target Value   |       |
|                                |  | _     |
|                                |  |       |
|                                |  |       |
|                                |  | _     |
|                                |  | _     |
|                                | Add Delete Delete All Select Find  |       |
|                                | Command  | ~     |
|                                | Target   | ~     |
| P: 0 F: 0                      | Value  |       |
| Console Reference              |  | Clear |
|                                |  |       |
|                                |  | _     |
|                                |  |       |

### A quick demo:

Click on the 'New' button and provide the test case name in the dialog box. Then, Click 'OK'



| moz-extension://fb14e543-298d-4 | 4285-8260-25e9077f0c0e - Katalon Automation Recorder - Mozilla Firefox — |  |
|---------------------------------|--|--|
| + New O Record                  | Play     { } Export  |  |
| Test Cases                      | Command Target Value   |  |
|                                 |  |  |
|                                 | Please enter the Test Case's title                                       |  |
|                                 | Demo Test Case   |  |
|                                 | OK Cancel  |  |
|                                 | Add Delete Delete All Select Find  |  |
|                                 | Command  |  |

Click on 'Add' button and give the command you want to get executed:



|   |  |   |  | 8                                      |
|---|--|---|--|--|
| moz-extension://fb14e543-298d-4   | 285-8260-25e90   | 77f0c0e - Katalon Automation F  | Recorder - Mozilla Firefox                                     | – 🗆 X                                  |
| + New O Record  | <b>⊳</b> Play {  | } Export  |  | ?                                      |
| Test Cases  | Command  | Target  | Value  |  |
| Untitled Test Suite *   | open   | https://www.google  | .co.in/  |  |
| Demo Test Case *  |  |   |  |  |
|   | Add Dele<br>Command                                    | ete Delete All Cancel   | Find   | ~                                      |
|   | Target   | https://www.google.co.in/   |  | ~                                      |
| P: 1 F: 0   | Value  |   |  |  |
| Console Reference<br>open(url)<br>Arguments:<br>• url - the URL to open;<br>Opens an URL in the test fram<br>load before proceeding, ie. th | may be relative<br>ne. This accepts<br>e "AndWait" suf | e or absolute<br>both relative and absolute UI<br>ffix is implicit. <i>Note</i> : The URL r | RLs. The "open" command wait:<br>must be on the same domain as | s for the page to<br>s the runner HTML |
| due to security restrictions in<br>Selenium Server to start a nev   | the browser (Sa<br>w browser sessi                     | ame Origin Policy). If you need<br>on on that domain.                                       | i to open an UKL on another do                                 | main, use the                          |

In the Reference section as seen above, you will get the details of what the particular command does.

Similarly, give subsequent commands to complete your test case:



| moz-extension://fb14e543-298d-4 | 285-8260-25e9077f0c0e - | Katalon Automation Recorder - Mozilla | Firefox — 🗆 X         |
|---------------------------------|-------------------------|---------------------------------------|-----------------------|
| + New O Record                  | > Play { } Expor        | t                                     | ?                     |
| Test Cases                      | Command                 | Target                                | Value                 |
| Untitled Test Suite *           | open                    | https://www.google.co.in/             | jkgkjg                |
| Demo Test Case *                | type                    | //*[@id="lst-ib"]                     | Software Testing help |
|                                 | sendKeys                | //*[@id="lst-ib"]                     | \${KEY_ENTER}         |
|                                 |                         |                                       |                       |
|                                 |                         |                                       |                       |
|                                 |                         |                                       |                       |
|                                 |                         |                                       |                       |

### Once completed, click on the 'Play' button to execute the test case.

| moz-extension://fb14e543-298d-4   | 285-8260-25e907  | 77f0c0e - Katalon Automation Recorder - Mozilla Firefox — 🛛   | ×     |
|---|--|---|-------|
| + New O Record  | >Play {  | Export  | ?     |
| Test Cases  | Command  | Target Value  |       |
| Untitled Test Suite *   | open   | https://www.google.co.in/   |       |
| Demo Test Case *  | type   | //*[@id="lst-ib"] Software Testing Help   |       |
|   | sendKeys   | //*[@id="lst-ib"] \${KEY_ENTER}   |       |
| P: 1 F: 0   | Add Dele<br>Command<br>Target<br>Value                     | tte Delete All Execute Select Find<br>sendKeys<br>//*[@id="lst-ib"]<br>\${KEY_ENTER}                  | ~     |
| Console Reference   |  |   | Clear |
| [info] Executing:   oper<br>[info] Executing:   type<br>[info] Wait for all ajax<br>[info] Executing:   senc<br>[info] Test case passed | https://w<br>  //*[@id="<br>: requests to<br> Keys   //*[@ | ww.google.co.in/    <br>lst-ib"]   Software Testing Help  <br>be done<br>id="lst-ib"]   \${KEY_ENTER} |       |



As seen in the above screenshot, the steps executed successfully are turned into green and the execution info along with Test case passed/ failed status has appeared in the Console area.

#### Main features:

- With Katalon Automation Recorder, you can capture the web elements and record the actions performed on the web app. It allows you to create (new test cases), edit (existing test cases) and play automated test cases. And, all this can be done very fast and easily.
- All the <u>Selenese commands</u> are supported by this tool.
- Existing Selenium IDE tests can be imported into Katalon Automation Recorder (using Script mode) and can be exported to below languages & frameworks:

| Language | Corresponding Framework                  |
|----------|--|
| Groovy   | Katalon Studio                           |
| Java     | WebDriver + TestNG                       |
| Java     | WebDriver + Junit                        |
| Java     | WebDriver-backend Remote Control + Junit |
|          | Robot Framework                          |
| C#       | WebDriver + Nunit                        |
| Ruby     | WebDriver + Rspec                        |
| Python2  | WebDriver + unittest                     |

- Katalon Automation Recorder is compatible with latest versions of Firefox and Chrome browsers.
- It works on Selenium 3 core engine.
- Multiple test cases can be combined and arranged inside a test suite and can be executed as a complete test suite.
- Test cases can be imported into <u>Katalon Studio</u> a completely free automation testing solution which is key- driven and data-driven, supports TDD/BDD Testing, API Testing, Page Object Model, test management, test case recording, advanced scripting, parallel execution, CI integrations and much more!
- Allows not only Katalon Studio users but also users of the obsolete Selenium IDE and other popular open source frameworks to record and playback automation tests.

#### Features discussed in detail:



## **1. Toolbar:** The toolbar consists of 6 buttons namely New, Record, Play, Export, Help, and Settings:



- New: Clicking on this button will allow you to add a new test case inside the test suite.
- **Record:** This will let you record the test steps.
- **Play:** This button is to execute the existing test case.
- **Export:** Clicking on this button taken you to the script mode where you can choose the Language & Framework. By default, 'Katalon Studio' is selected.

| Expor           | rt Test Case as Script  |     |
|-----------------|---|-----|
| Langu           | uage & Framework Katalon Studio   |     |
| Katalo<br>autor | on Studio is a Free Automation tool includes all required features to makes Selenium and Appium nation easy for teams with limited coding capability to apply GUI, Mobile and API testings. |     |
| 1               | <pre>import static com.kms.katalon.core.checkpoint.CheckpointFactory.findCheckpoint</pre>   |     |
| 2               | <pre>import static com.kms.katalon.core.testcase.TestCaseFactory.findTestCase</pre>   |     |
| з               | <pre>import static com.kms.katalon.core.testdata.TestDataFactory.findTestData</pre>   |     |
| 4               | <pre>import static com.kms.katalon.core.testobject.ObjectRepository.findTestObject</pre>  |     |
| 5               | <pre>import com.kms.katalon.core.checkpoint.Checkpoint as Checkpoint</pre>  |     |
| 6               | <pre>import com.kms.katalon.core.checkpoint.CheckpointFactory as CheckpointFactory</pre>  |     |
| 7               | <pre>import com.kms.katalon.core.mobile.keyword.MobileBuiltInKeywords as</pre>  |     |
|                 | MobileBuiltInKeywords   |     |
| 8               | <pre>import com.kms.katalon.core.model.FailureHandling as FailureHandling</pre>   |     |
| 9               | <pre>import com.kms.katalon.core.testcase.TestCase as TestCase</pre>  |     |
| 10              | <pre>import com.kms.katalon.core.testcase.TestCaseFactory as TestCaseFactory</pre>  |     |
| 11              | import com.kms.katalon.core.testdata.TestData as TestData   |     |
| 12              | <pre>import com.kms.katalon.core.testdata.TestDataFactory as TestDataFactory</pre>  |     |
| 13              | <pre>import com.kms.katalon.core.testobject.ObjectRepository as ObjectRepository</pre>  |     |
| 14              | import com.kms.katalon.core.testobject.TestObject as TestObject   |     |
| 15              | <pre>import com.kms.katalon.core.webservice.keyword.WSBuiltInKeywords as</pre>  |     |
|                 | WSBuiltInKeywords   |     |
| 16              | <pre>import com.kms.katalon.core.webui.driver.DriverFactory as DriverFactory</pre>  |     |
| 17              | <pre>import com.kms.katalon.core.webui.keyword.WebUiBuiltInKeywords as</pre>  |     |
|                 | WebUiBuiltInKeywords  | - 1 |
| 18              | import internal.GlobalVariable as GlobalVariable  |     |
| 19              | import com.kms.katalon.core.webui.keyword.WebUiBuiltInKeywords as WebUI   |     |
| 20              | import com.kms.katalon.core.mobile.kevword.MobileBuiltInKevwords as Mobile  |     |
|                 |   |     |
|                 |   |     |
|                 |   |     |
|                 | Copy to Clipboard Save As File Close  | 1   |
|                 |   |     |

Here you can save the script. Clicking on **Save As File** button in the above screenshot will allow you to save the script as a Groovy file.

| tes | ting                 |   |   |
|-----|----------------------|---|---|
| 件测  | 刂试 网                 | www.51testing.com   |   |
|     |                      | V 2   |   |
|     | File name:           | DemoTestCase.groovy   |   |
|     | Save as type:        | All Files (*.*)   |   |
|     | ∧ Hide Folders       | Save  |   |
|     | 17 import<br>WebUiBu | com.kms.katalon.core.webui.keyword.WebUiBuiltInKeywords as<br>iltInKeywords | 5 |

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软

You can also observe here that corresponding to the commands you gave on the front end, you have got the code generated here:

| Katalo                    |  |     |
|---------------------------|--|-----|
| auton                     | on Studio is a Free Automation tool includes all required features to makes Selenium and Appium  |     |
|                           | hation easy for teams with limited coding capability to apply GOI, Mobile and API testings.  |     |
| 16                        | import com.kms.katalon.core.webui.driver.DriverFactory as DriverFactory  | 1   |
| 1/                        | Import com.kms.kataion.core.webul.keyword.webulbulltinkeywords as  |     |
| 18                        | import internal GlobalVariable as GlobalVariable   |     |
| 19                        | import com.kms.katalon.core.webui.keyword.WebUiBuiltInKeywords as WebUI  |     |
| 20                        | <pre>import com.kms.katalon.core.mobile.keyword.MobileBuiltInKeywords as Mobile</pre>  |     |
| 21                        | import com.kms.katalon.core.webservice.keyword.WSBuiltInKeywords as WS   |     |
| 22                        | import com.thoughtworks.selenium.Selenium;   |     |
| 23                        | import org.openqa.selenium.firefox.FirefoxDriver;  |     |
| 24                        | <pre>import org.openqa.selenium.WebDriver;</pre>   |     |
| 25                        | <pre>import com.thoughtworks.selenium.webdriven.WebDriverBackedSelenium;</pre>   |     |
| 26                        | <pre>import static org.junit.Assert.*;</pre>   | - 1 |
| 27                        | <pre>import java.util.regex.Pattern;</pre>   |     |
| 28                        | <pre>import static org.apache.commons.lang3.StringUtils.join;</pre>  |     |
| 29                        |  |     |
| <b>&gt;</b> <sup>30</sup> | WebUI.openBrowser('https://www.katalon.com/')  |     |
| 31                        | <pre>def driver = DriverFactory.getWebDriver()</pre>   |     |
| 32                        | <pre>String baseUrl = "https://www.katalon.com/";<br/>selenium</pre>   |     |
| 22                        | <pre>selenium = new webbriverBackedSelenium(driver, basebri); colonium ener("https://www.google.co.in/");</pre>  |     |
| 35                        | <pre>selenium.open( nttps://www.google.co.in/ );<br/>selenium_type("//*[@id=\"]st_ib\"]" _"Software_Testing_belo");</pre>  |     |
| 36                        | <pre>selenium.sendKevs("//*[@id=\"lst-ib\"l", "\${KEV_ENTER}");</pre>  |     |
| 50                        | Secondaria Secondaria ( 1961), Secondaria ( 19 |     |

This is similar to the 'Source' section which we had in Selenium IDE.

You can switch to different Languages & Frameworks below:





Changing the Language & Framework will automatically change your code in the script accordingly:

Export Test Case as Script Language & Framework Java (WebDriver + JUnit)  $\sim$ 9 import org.openqa.selenium.firefox.FirefoxDriver; 10 import org.openqa.selenium.support.ui.Select; 11 12 public class DemoTestCase { 13 private WebDriver driver; private String baseUrl; 14 15 private boolean acceptNextAlert = true; 16 private StringBuffer verificationErrors = new StringBuffer(); 17 18 @Before 19 public void setUp() throws Exception { 20 driver = new FirefoxDriver(); 21 baseUrl = "https://www.katalon.com/"; 22 driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS); 23 } 24 25 @Test 26 public void testDemoTestCase() throws Exception { 27 driver.get("https://www.google.co.in/"); 28 driver.findElement(By.xpath("//\*[@id=\"lst-ib\"]")).clear(); 29 driver.findElement(By.xpath("//\*[@id=\"lst-ib\"]")).sendKeys("Software Testing help"); 30 driver.findElement(By.xpath("//\*[@id=\"lst-ib\"]")).sendKeys(Keys.ENTER); 31 } 32 33 @After 34 public void tearDown() throws Exception { 25 defuse suit().



- **Help:** This will take you to the <u>Katalon Automation Recorder User Guide</u> page where various features are explained in detailed.
- Settings: This will take you to the port and configuration setting.

#### 2. Test Case Explorer:



Test case explorer contains test suites. In a test suite, you can have multiple test cases. Right-clicking on Test case gives you three options – 'Add New Test Case', 'Remove Test Case', and 'Rename Test Case'.





Right-clicking on Test Suite gives you six options – 'Open Test Suites', 'Add New Test Suite', 'Save Test Suite As', 'Close Test Suite', 'Add New Test Case', and 'Rename Test Suite'.

#### 3. Test Case Window:

| Command   | Target                    | Value                 |
|-----------|---------------------------|-----------------------|
| open      | https://www.google.co.in/ |                       |
| type      | //*[@id="lst-ib"]         | Software Testing help |
| sendKeys  | //*[@id="lst-ib"]         | \${KEY_ENTER}         |
|           |                           |                       |
|           |                           |                       |
|           |                           |                       |
|           |                           |                       |
| Add Delet | Delete All Execute Select | Find                  |
| Command   | type                      | ~                     |
| Target    | //*[@id="lst-ib"]         | ~                     |
| Value     | Software Testing help     |                       |

This area allows you to add, delete, edit and execute test steps. Each test step contains Command, Target, and Value. You can also drag and drop to change the order of test steps.

4. Console & Reference:

| Console                   | Reference  |              |  |
|---------------------------|--|--------------|--|
|                           |  | $\mathbf{h}$ |  |
| type(locate               | type(locator, value)   |              |  |
| Arguments:                |  |              |  |
| • loc                     | locator - an element locator   |              |  |
| value - the value to type |  |              |  |
| Sets the va               | Sets the value of an input field, as though you typed it in.   |              |  |
|                           |  |              |  |
| Can also be               | Can also be used to set the value of combo boxes, check boxes, etc. In these cases, value should be the value of the |              |  |
| option sele               | ected, not the visible text.   | ¥            |  |



ConsoleReferenceClear[info] Executing: | open | https://www.google.co.in/ | |[info] Executing: | type | //\*[@id="1st-ib"] | Software Testing help |[info] Wait for all ajax requests to be done[info] Executing: | sendKeys | //\*[@id="1st-ib"] | \${KEY\_ENTER} |[info] Test case passed

#### Limitations:

Along with all the above-discussed pros, there are certain cons as well which I observed in the tool.

For example,

- There are certain commands which are experimental as of now. For example, 'sendKeys' command is experimental. In the future, this might get replaced with typeKeys command. So, we will have to update our test scripts accordingly in future in case we are using any experimental commands.
- The option to specify base URL is also not presented anywhere on the tool. This was a useful option in Selenium IDE allowing test cases to be run across different domains.
- In Firefox, I found the 'Settings' button missing in the toolbar of Katalon Automation Recorder:



There are only 5 buttons present here as compared to 6 buttons in Chrome.

• There are certain other bugs as well which are presented in the tool. Visit <u>Katalon Automation</u> <u>Recorder Bugs and Suggestions</u> section to check more on existing issues & their suggested resolutions.

#### Explore more about this tool:

A quick guide on Katalon Automation Recorder is available at the below link: <u>Katalon Automation Recorder</u>



Takeaways:

- Katalon Automation Recorder can be installed very easily and quickly.
- This tool is absolutely free.
- Easy to use. The Reference section is very helpful as it tells you in detail about how each command works and when it should be used.
- Multiple languages & frameworks support make this tool more useful.
- Almost all the features that were present in Selenium IDE are preserved in this tool.
- In fact, I could see few new commands added which were not available in Selenium IDE. This makes Katalon Automation Recorder even more powerful.
- This tool is a benefit for the testing teams which relied heavily on Selenium IDE for their automation testing work.
- Found this better than other substitutes for Selenium IDE. For example, unlike Kantu for Chrome, Katalon Automation Recorder supports all the commands that were there in Selenium IDE.
- Compatible with latest Firefox and Chrome browsers and will be supported in upcoming versions as well.
- A few small bugs exist in the tool. However, these bugs they stand nowhere at front of the great features, ease of use & the capabilities offered by this tool.

# Overall, Katalon Automation Recorder is a great tool for automation testing and a perfect substitute for Selenium IDE.

#### About Katalon team:

*Katalon team involves test automation enthusiasts who are passionate in providing the best yet free automation testing tool to the community.*