

Selenium - Open Source Test Automation Framework Quick Start Guide

Version 1.0

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1 Keyword-Driven Scripting

This document drives the settings and describes how to get started with keyword-driven scripting in the Selenium tool.



2 Creating New Test

a. The test suite, test script, object repository, and report folder location should be mentioned in Selenium_Utility excel.

File\Folder Name	Location
Test Suite	C:/Innovez/Selenium_Automation/Test_Suite.xls
Test Script	C:/Innovez/Selenium_Automation/Test_Scripts/
Object Repository	C:/Innovez/Selenium_Automation/Test_Data/Object_Repository.xls
Environment File	C:/Innovez/Selenium_Automation/Test_Data/Environment_Variable.xls
Summary Report	C:/Innovez/Selenium_Automation/Test_Reports/
Screen Shot	
Report	C:/Innovez/Selenium_Automation/Test_Reports/ScreenShot_Report/
Detailed Report	C:/Innovez/Selenium_Automation/Test_Reports/Detailed_Report/

Note: The selenium utility Excel file should be placed in

C:\Documents and Settings\Mantis\Demo-Selenium\Selenium_Utility.xls

b. Collect the properties of objects and define them in Object_Repository.xls like below

ObjectName	ObjectIdentification	ObjectType
Username	username	TextBox
Password	password	TextBox
Login	//input[@value='Login']	Button
Manage	link=Manage	link
Manage Projects	link=Manage Projects	link

c. Define the test scripts in the test suite excel like below

Run	Test Driver				
r	Mantis_Create Project				
r	Mantis_Report Issue				
r	Mantis_View Issue and Delete Project				
r	Mantis_Fail				
r	Call Tariff Addition and Amendment				

d. Write the keywords for the test script like below

Step	Operation	Object	Action
r	callaction	C:\Documents and Settings\Mantis\Demo- Selenium\Innovez\Selenium_Automation\Test_Scripts\Login Action.xls	
r	perform	link;Manage Projects	click
r	wait	3	
r	perform	Button;Create New Project	click
r	perform	Textbox;Project Name	set:Selenium





3. Selenium RC - Server up

After creating all the necessary files, then start up the Selenium server by the below command

Starting the server:

java -jar selenium-server.jar -interactive

🕿 C:\WINDOWS\system32\cmd.exe - java -jar selenium-server.jar -interactive -multiwindow 📃 🗖 🗙
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\029893>cd
C:\Documents and Settings>cd\
C:\>cd selenium-remote-control-1.0-beta-2
C:\selenium-remote-control-1.0-beta-2>cd selenium-server-1.0-beta-2
C:\selenium-remote-control-1.0-beta-2\selenium-server-1.0-beta-2>java -jar selen ium-server.jar -interactive -multiwindow 12:04:22.854 INFO - Java: Sun Microsystems Inc. 1.6.0-b105 12:04:22.886 INFO - OS: Windows XP 5.1 x86 12:04:22.886 INFO - v1.0-beta-2 [2571], with Core v1.0-beta-2 [2330] 12:04:23.511 INFO - Version Jetty/5.1.x 12:04:23.542 INFO - Started HttpContext[/selenium-server/driver,/selenium-server /driver] 12:04:23.558 INFO - Started HttpContext[/selenium-server,/selenium-server] 12:04:23.558 INFO - Started HttpContext[/selenium-server,/selenium-server] 12:04:23.558 INFO - Started HttpContext[/,/]
12:04:23.636 INFO - Started org.mortbay.jetty.Server@201f9 Entering interactive mode type Selenium commands here (e.g: cmd=open&1=http://www.yahoo.com)

Figure 1: Selenium RC server up and running



4 Call to Framework

The Main.rb should be opened in the SciTE. Press F5 and this will call the framework file associated with the test and perform the actions by interpreting the keywords specified in the data table.

User can the run the main.rb by command ruby main.rb

🌑 Main	in.rb - SciTE	\mathbf{X}						
<u>F</u> ile <u>E</u> dit	dit Search View Tools Options Language Buffers Help							
1 Main.rb	rb							
1	require "selenium"							
2	require "test/unit"	Ξ.						
3	require 'importdata.rb'							
4	\$Status = nil							
5	\$Exp = nil							
6	\$Act = nil							
7								
8	- class NewTest < Test::Unit::TestCase							
9								
10	- def setup							
11	<pre>@verification_errors = []</pre>							
12	- if \$selenium							
13 14	@selenium = \$selenium else							
14	@selenium = Selenium::SeleniumDriver.new("localhost", 4444, "							
16	@selenium.start							
17	end							
18	#@selenium.set_context("test_new", "info")							
19	end							
20								
21	def teardown							
22	#@selenium.stop unless \$selenium							
23	assert_equal [], @verification_errors							
24	@@excel.Quit							
25	@@excel = nil							
26 27	end							
28	- def test_new							
29	#puts "Call Import Data"							
30	#@selenium.open @@add							
31	importdata()							
32	end							
33	end							
34								
35	– class Report							
36	 def ReportEvent (stepstatus, expected, actual) 							
37 38	\$Status =stepstatus	~						
.38	\$Exn = exnected	-						



Figure 4: Call to Framework



5 Usage of Keywords

The keywords should be entered in Sheet1 of Microsoft Excel placed in the Test Scripts folder. The syntax for the keywords can be found in the Selenium Keywords Reference Dictionary Document. Below is an example of a simple keyword-driven scripting.

KEYWORD SYNTAX FOR SAMPLE AUT							
Run option	Operation	ObjectDetails	Input / Properties				
r	check	textbox;UserName	editable				
r	perform	textbox;UserName	set;Data_UserName				
r	perform	textbox;password	set;Data_Password				
r	check	button;login	textpresent;Log In				
r	perform	button;login	button;click				
r	perform	button;verify	button;click				
r	perform	link;Account_Link	link;click				
r	perform	link;Options_link	Link;click				
r	perform	button;Reset	button;click				

Figure 5: Using the Keyword



6 Test Results for a Keyword-Driven Script

Test execution results can be viewed and analyzed as soon as the run session ends. To access the test results, go to the Test_Reports folder customized using the test automation framework. Two folders will be available: one showing the summary report for test suite execution, and anoter folder called Detailed_Report that displays the detailed stepwise test results for each test script. A screenshot will be available for the failure scripts under ScreenShot_Report.

🖧 🖉 Auton		_			
Maton	nation Test Results			🟠 🔹 🖾 👘 🖶 🌚 Page 🕶 🍈	T <u>o</u> ols
	Auto	omation T	est Results		
st Details					
n Date	27 Aug 2009				
n Start Time	27 Aug 2009 14:35:04				
n End Time	27 Aug 2009 14:37:06				
er Requested	Client Name				
vironment	Production				
ease	R2.1				
Doon 1					
	0.0%	100.0%			
al Pass : 4 al Fail : 0 etailed Re	•	100.0%			
alFail : 0	•	100.0%	Screen Shot	Run Time	
al Fail : 0 tailed Re	port :		Screen Shot Not Available	Run Time 27 Aug 2009 14:35:04	
al Fail : 0 tailed Re st Script#	port : Test Case Name	Status			
al Fail : 0 tailed Re st Script# 1	port : Test Case Name <u>Mantis_Create Project</u>	Status Passed	Not Available	27 Aug 2009 14:35:04 27 Aug 2009 14:35:28 27 Aug 2009 14:36:09	
al Fail : 0 tailed Re st Script# 1 2	port : Test Case Name <u>Mantis_Create Project</u> <u>Mantis_Report Issue</u>	Status Passed Passed	Not Available Not Available	27 Aug 2009 14:35:04 27 Aug 2009 14:35:28	
al Fail : 0 tailed Re st Script# 1 2 3	port : Test Case Name <u>Mantis_Create Project</u> <u>Mantis_Report Issue</u> <u>Mantis_View Issue and Delete Project</u>	Status Passed Passed Passed	Not Available Not Available Not Available	27 Aug 2009 14:35:04 27 Aug 2009 14:35:28 27 Aug 2009 14:36:09	
al Fail : 0 tailed Re st Script# 1 2 3	port : Test Case Name <u>Mantis_Create Project</u> <u>Mantis_Report Issue</u> <u>Mantis_View Issue and Delete Project</u>	Status Passed Passed Passed	Not Available Not Available Not Available	27 Aug 2009 14:35:04 27 Aug 2009 14:35:28 27 Aug 2009 14:36:09	

Figure 6: Test results summary for a test suite



🕑 - 🚺	C:\Innove:	$\lambda = 1 $	is_Create Project_27_08_200! 💙 🛠 Live Search		
🛠 🌈 D	etailed Test R	tesults	🟠 🔹 🔝 🕤 🖶 Page 🕶 🍈 T <u>o</u> ol:		
		Detalled Report - Mantis			
st Deta	ils :				
n Date		27 Aug 2009 14:35:04			
er Reques	ted	Client Name			
vironment		Production			
lease		R2.1			
lease		R2.1			
tailed F	Report :				
ep/Row#	Status	Expected Result	Actual Result		
2	Done	Application should be Launched	Application Launched Successfully		
3	Done	Should wait for 5 seconds	Waited for 5 seconds		
4	Done	Value 'sindhu' should be assigned to 'UserName'	Value 'sindhu' has been assigned to 'UserName'		
5	Done	Value 'sindhu' should be assigned to 'Password'	Value 'sindhu' has been assigned to 'Password'		
6	Done	textbox Username should be clicked	textbox Username is clicked		
7	Done	The value in variable UserName should be entered in the Edit Box: Username	The value in variable UserName is entered in the Edit Box: Username		
8	Done	The value in variable Password should be entered in the Edit Box: Password	The value in variable Password is entered in the Edit Box: Password		
9	Done	Button Login should be clicked	Button Login is clicked		
10	Done	Should wait for 3 seconds	Waited for 3 seconds		
11	Done	link Manage should be clicked	link Manage is clicked		
12	Done	Should wait for 3 seconds	Waited for 3 seconds		
13	Done	link Manage Projects should be clicked	link Manage Projects is clicked		
14	Done	Should wait for 3 seconds	Waited for 3 seconds		
	Done	Button Create New Project should be clicked	Button Create New Project is clicked		
15	Done	Should wait for 3 seconds	Waited for 3 seconds		
16	Done Done	Selenium - should be entered in the Edit Box: Project Name	Selenium - is entered in the Edit Box: Project Name		
16 17		New project for Test - should be entered in the Edit Box: Description	New project for Test - is entered in the Edit Box: Description		
16 17 18		Button Add Project should be clicked	Button Add Project is clicked Waited for 3 seconds		
16 17 18 19	Done	Chauld writ for 2 seconds	Waited for 5 seconds		
16 17 18 19 20	Done Done	Should wait for 3 seconds	The text Selenium is present		
16 17 18 19	Done	Should wait for 3 seconds The text Selenium should be present Button logout should be clicked	The text Selenium is present Button logout is clicked		

Figure 7: Detailed test results for a test script



7 Resource Files

The resource files such as Framework Files, Shared Object Repositories, and Environment Variables that are associated with the test can be stored in the user's machine and obtained during test execution.

Function libraries of the file type .rb, environment variables of file type .excel, and object repositories of file type .excel can be placed in the folder specified in the Utility Excel.

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