Automatic Comparing of Different Web-Applications for Finding Feasible Solution of the Product

E. Durga¹, P. Karthikeyan²

¹Department of MCA, Siddharth Institute of Engineering & Technology, Puttur

²Assistant Professor, Siddharth Institute of Engineering & Technology, Puttur

Abstract: The scope & nature of this paper is to deliver the feasible solutions to the end user. The function automated approach is to verify the fields such as the web application, functionality of the features, titles of the web pages and providing feasible solution at present in the world. Now-a-days everyone is purchase the products from the e-commerce websites like Amazon, E-Bay, Snapdeal, etc. because e-commerce is the most trending one. One should verify the prices of the product in all the sites manually and purchase it which is having less price. For them, we are provide this automated approach for finding the feasible product- price to the end user. Parallel to it, we test the application with different verification conditions.

Keywords: WebDriver, Selenium WebDriver, Selenese commands, TestNG Framework

1. Introduction

Nowadays, more and more business transactions are carried out on the Internet through web pages built by people. Some websites are simple enough that they can be set up by one or two people, but some websites are so complex that they are built by hundreds or even thousands of developers. Before each release, the site must be tested to make sure it is free of critical bugs. It is time-consuming to test the whole site manually, and as the site grows, so does the cost of testing. More than that, as time passes, a new feature that was welltested when it first became available may be forgotten about later we risk of a loss of consistency and quality, and as a result bugs in what we thought were solid pieces of functionality creep in. In the textile industry, manual labour dominated the process of making clothes for a long time. When weaving machines were invented, productivity improved dramatically. The same thing is happening in software testing. Just as weaving machines changed the textile industry, we are now building "automatic testing machines" to replace manual testing, to improve the productivity, quality, and consistency of the software. Since its inception in 2008, Selenium WebDriver (also known as Selenium 2) has established itself as the de facto web automation library. Before Selenium WebDriver, there was Selenium 1.0, which enabled automation by injecting JavaScript into web pages. WebDriver is a re-invention of that idea, but is more reliable, more powerful, and more scalable.

1.1 Problem Definition

Now-a-days everyone is purchase the products from the ecommerce websites like Amazon, E-Bay, Snapdeal, etc. because e-commerce is the most trending one. One should verify the prices of the product in all the sites manually.

Manually, user needs to check the prices of the product on different website and it takes so much time to find the lowest price, based on the problem. This paper is to provide a feasible solution of product price list based on the automation. An Automated scripts will compare the prices in different web site and provide us the feasible solution. We can run automation script at any time, means we will get the feasible price just by triggering the batch file.

2. Modules

In this paper approach the Automatic Comparing of Different Web-Applications for finding feasible Solution of the Product, we require the three modules as follows.

- a) Fetching Product Prices
- b) Comparing product prices
- c) Feasible Solution

3. Modules Description

a) Fetching Product Prices

In this module, by using Selenium WebDriver tool. We are going to fetch the product prices from different web sites, Selenium WebDriver is a web application testing tool and open source freeware. This automation testing framework has gained a wide acceptance as a popular and successful mode of websites. Selenium WebDriver having the set of Selenese commands to perform actions on Web Applications. Those Actions are like launching the URL (Uniform Resource Locator), navigate to different websites, fetching the texts from UI (User Interface), Performing click actions on links, button, checkboxes, radio buttons etc., Please find the below image for all the Selenese Commands. By using Selenese commands, we will fetch the product prices.

Following the different steps to get the product information.

- Navigate to website(Ex: Ebay.in)
- Search for the **product(Ex: iPhone)**
- Click on **product** for description
- Get the **product** price from **website**

Same steps are applicable from different registered web site.

Output of this module: Get product prices from different websites.

As part of this project we will get the details of product prices from 3 different websites (website1, website2 and wbsite3).

b) Selenese Commands:

	Menninger	ounnilary oneer				
= new <driverclass>()</driverclass>		Inspect				
.quit()	WebDriver	WebDriver Finding elements		Interact		
	.gefTitle()	WebDriver	WebElement	SwitchTo.		
<u>Navigate</u>	.getCurrentUrl()	WebElement =	.click()	alertí)		
WebDriver	.getPageSource()	LieldWebElements =	.submit()	(hoTen		
.get("URL")	WebElement	.findElements(BY)	.clear()	.youox()		
.navigate	oelText()	Ву	.sendKeys(String)	.accept()		
.to(Url)	.getAttribute("name")	.id("an_id")	.sendKeys(Keys.x)	.dismiss()		
tor'URL")	.getTagName()	.xpath("xpath")		.sendKeys(String)		
.back()	.isEnabled()	.cssSelector("css")	support.ui.Select	.frame()		
.forward()	.isSelected()	.className("class")	. <methods>()</methods>			
.refresh()	.isDisplayed()	.linkText("lext")		_		
W.	.getSize()	.name("name"	Cookies			
	.getLocation()	.tagName("a_tag")	weburiver			
.getCssValue()		.partialLinkText("");	deleteAllCc	white()		
ynchronise		Support	addConkiel	(Conkie)		
VebDriverWait		ByChaining(By, By)	.deleteCook	ie(Cookie)		
driver, timeout in Seconds) Initil(ExpectedCondition) Cookie		ByldOrName("idName")	.deleteCook	eNamed(String)		
		85	Actions (l <mark>avascriptExecutor)</mark> execute Script		
ExpectedCondition	5 WebD	WebDriver .manage()				
.titlels(String)	.mar			.perform()		
a lot of helper methods		tCookieNamed(String)				
	.ge	tCookies()				

Figure 1: Selenese Commands

c) Comparing Product Prices

In this module, by passing input as first module output (means prices from different applications). We are using Java as a programming language for Selenium script development. With java data types conversions we are converting the String variable in to Integer variables. After conversions automation script is going to compare the prices of different websites. Selenium will launch 3 parallel instances of browsers, this will get the product prices at same time. For this we are integrating with TestNG framework.

d) Feasible Solution

In this module, based on the comparison, Selenium will provide the feasible solution to user in very quick time. This approach is very fast and will provide accurate results to user. This will provide Execution results in .html format to the user and this approach have failed scripts reiterate as well.

4. System Architecture

User giving product information to the excel sheet, the selenium automation testing tool to collect the product information from excel sheet and the same can be tested through selenium automation. Finally, the feasible solution will be given to the users.



Figure 2 Automatic Comparing of Different Web-Applications for Finding Feasible Solution of the Product

5. Results of the Experiment

Screen-1: Input page

This screen short shows that the user filed product details

b	Copy -	Aei Painter		COMMARAS DATA REVEW	VIEW Wrap Test General Marga B. Contar + 🐺 + %	• 50 21 Cond	tional Format as	Cel Inset Dele	te Format	AutoSum - Fill - Clear -	T H	urga Eddala
	Clipboard y	5 X	Fort.	rs Algere	et G Nam	ber 5	Shim	cel		Editin	,	
	A	в	C	D	E		F	G H	1	1 J I		к
ł	Test Case I	D Test Ste	Window Data	Fields Data Values			Action - I	Condition Browser	Field Name	Comments .		
		1	Amazon	Apple Phone 7 (Black	, 32GB)		FUPKART	common				
	1	2	SnapDeal	Apple Phone 7 (Black	, 32GB)		SNAPDEAL	common				
ľ		3	Flipkart	Apple Phone 7 (Black	, 32GB)		AMAZON	common				
ł		4					COMPARING	common				
ł	2	1	Amazon	Sameuro i7 nrima 32	nh mohile		AMAZON					
	2	2	SnanDeal	Samsung i7 prime 32	ab mobile		SNAPOFAL	common				
ß	2	3	Flinkart	Samsung (7 mime 32)	nh mohlie		FLIPKART	000000				
ß	2	4					COMPARING	common				
Ŀ	3	1	Amazon	samsung RT28h3000	SE double door refrigeratori?	(55 brs.silver)	FLIPKART	common				
Ŀ	3	2	SnapDeal	samsung RT26h3000	SE double door refrigerator:	(55 Itrs.silver)	SNAPDEAL	common				
3	3	3	Flipkart	samsung RT26h3000	SE double door refrigerator()	155 ltrs,silver)	AMAZON	common				
3	3	4					COMPARING	common				
	 Te 	emplate Te	tData TestCas	eMaster DataSheet Test	Jata ObjectRepp Temp	E						
										FF (00)	1	-
						_		-				14.00
	O IVI				1 = 2 () (= (B 🔼 B	a 👩 🖾	×		····· ··· ···	04.3057
2							_					012017

Screen-2: Selenium Configuration file

This configuration file to product the option, to select a single product or multiple products

Config - Notepad	٦	×
File Edit Format View Help	_	ĺ.
<testconfigurations></testconfigurations>		\sim
<testconfig run="true"></testconfig>	ce>	
		\sim

Figure 4: Selenium Configuration File

Screen-3: Collected the product information from Amazon



Figure 5: Collected the Product Details from Amazon

Screen-4: Collected the product information from Snapdeal



Figure 6: Collected the Product Details from Snapdeal

Elipkart 🙀 🛯	amsung j7 prime 32 gb mobile	MEN V WOMEN V BABY & KIDS V F	IOME & FURNITURE -	BOOKS & MORE ~ 0	Q 🔤 CART 🛛
Filters	Home > Mobiles & Acc. > Showing 1 - 2 of 2 re	Mobiles sults for "samsung j7 prime 32 gb mobile" Sort By	Relevance Popularity	Price - Low to High F	tice – High to Low Newest Firs
C Mobiles & Accessories Mobiles PRICE Min • to *50000+ @fscurvel	2 Add to Compare	SAMSUNG Galaxy J7 Prim s GB RAM See 4.320 Ratings & 1,525 Revi G BAM 32 GB RAM 124 GB ROM Epand 5.5 shch Full HO Diplay 13MP Primary Camera J BMP Fic 3300 mAh Battery Fupons 7180 Processor 1 Year Manufacturer Warrany	e (Gold, 32 GB) ews able Upto 256 GB int	₹16,5	00 ()2000
BRAND	×	SAMSUNG Galaxy J7 Prim	e (Black, 32 GB)	₹16,9	00

Screen-5: Collected the product information from Flipkart

Screen-6: Feasible solution of given product



Figure 8: Output Details

6. Conclusion

This research gives a lot of benefits to the users. Particularly, the users can get the lowest price of the product with in a short span of time among all the E-commerce web sites. It can be applicable for any sort of operating system. Ultimately, it is highly helpful to users so as find out the feasible solution for their searching. It is also simplify shopping and to provide unbiased price comparison.

7. Future Research

This paper brings the feasible solution of the given product for the registered website on selenium tool based to compare and provided the results, the feasible result to provide eclipse console and excel sheets only and there is no specific website to provide web services to the user. The future enhancement of this paper to create an own website or Application and provide a web service of feasible solution.

References

- [1] Neha Dubey, "Studying and Comparing Automated Testing Tools"; Ranorex and Test Complete" IJECS Volume 3 Issue 5 PageNo.5916- 5923, May 2014.
- [2] Nisha Gogna, "COMPARATIVE STUDY OF BROWSER BASED OPEN SOURCE TESTING TOOLS WATIR AND WET", International Journal on Computer Science and Engineering (IJCSE) ISSN: 0975-3397 Vol. 3 No. 5 May 2011
- [3] Tarannam Bharti, Er Vidhudutt, "Relative Review of Automa ted Testing Tools: (QTP) Quick Test Professional, Selenium and Test Complete International Journal of Computer Science Trends and Technology (IJCST) – Volume 3 Issue 1, Jan-Feb 2015
- [4] Abha Jain, Manish Jain, Sunil Dhankhar, "A Comparison of RANOREX and QTP Automated Testing Tools and their impact on Software Testing", International Journal of Engineering, Management & Sciences (IJEMS) Volume-1, Issue-1, January 2014
- [5] Harpreet Kaur et al, "Comparative Study of Automated Testing Tools: Selenium, Quick Test Professional and Test Complete" Int. Journal of Engineering Research and Applications ISSN: 2248-9622, Vol. 3, Issue 5, pp.1739-1743, Sep-Oct 2013
- [6] Ms. Shikha Maheshwari1 "A Comparative Analysis of Different types of Models in Software Development Life Cycle", International Journal of Advanced Research in Computer Science and Software Engineering Volume 2, Issue 5, May 2012.
- [7] R. Beulah and, Dr. M. Sorana Mages Wari, "Performance and Comparative Study of Functionality Testing Tools: Win Runner and QTP in IT World", International Journal of Advanced research in Computer and Communication Engineering Vol. 4, Issue 7, July 2015
- [8] http://sahipro.com/docs/introduction/index
- [9] https://github.com/watir/watir/wiki/Quick-Start
- [10] http://www.guru99.com/quick-test-professionaltutorial.html
- [11] Saurabh Dwivedi, Ms. Garima Gupta, "Compare of Open Source Tool using in Web Application Testing",

Volume 6 Issue 5, May 2017 <u>www.ijsr.net</u>

Licensed Under Creative Commons Attribution CC BY

IJSRD - International Journal for Scientific Research & Development, Vol. 3, Issue 02, 2015 , ISSN (online): 2321-0613,2015

[12] Tarik Sheth , Dr. Santosh Kumar Singh "Software Test Automation- Approach on evaluating test automation tools", International Journal of Scientific and Research Publications, Volume 5, Issue 8, ISSN 2250-3153 , August 2015.