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

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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 well-tested 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 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.

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:

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

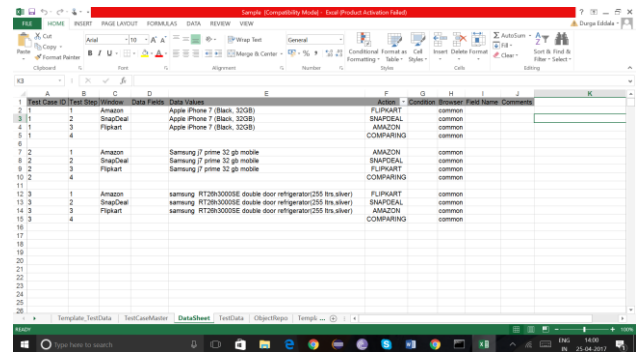This screen short shows that the user filed product details

Figure 3: Input Product Information

Screen-2: Selenium Configuration file

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

Figure 4: Selenium Configuration File

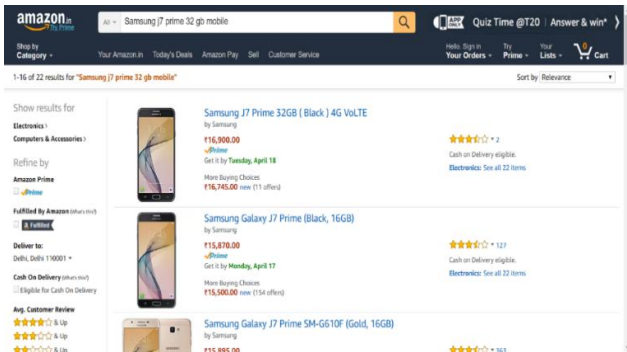**Screen-3:** Collected the product information from Amazon

Figure 5: Collected the Product Details from Amazon

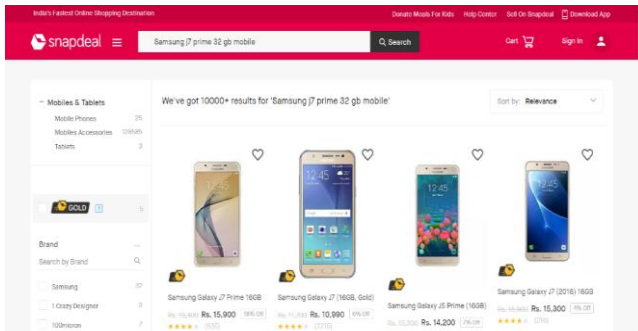**Screen-4:** Collected the product information from Snapdeal

Figure 6: Collected the Product Details from Snapdeal

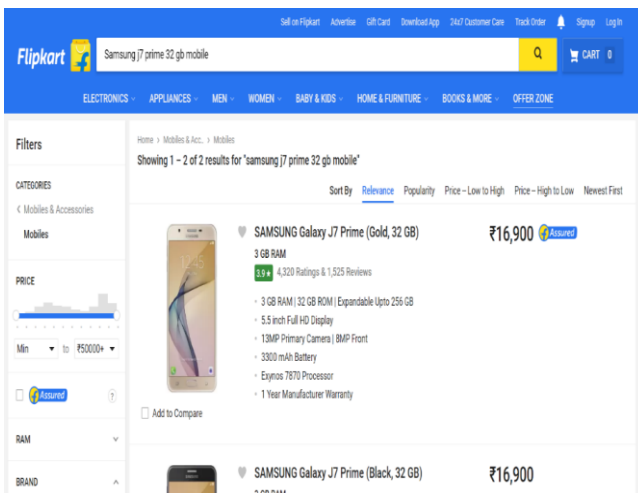**Screen-5**: Collected the product information from Flipkart

Figure 7: Collected the Product Details from Flipkart

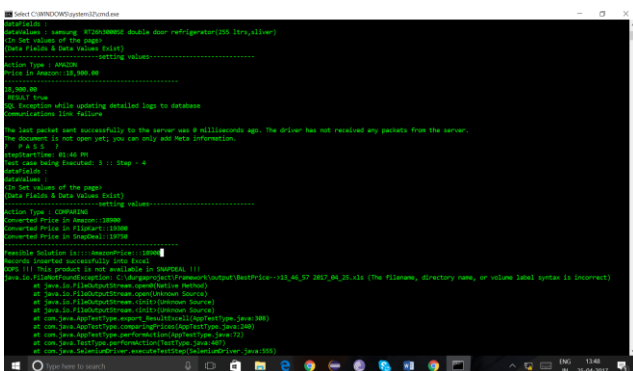**Screen-6:** Feasible solution of given product

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.

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