Improved Testing Automation Framework for Web Application using Selenium Web Driver

M.Parthiban[1], P.Baskaran[2], K.Arunkumar[3], K.Kavin kumar[4]
Department Of Computer Science and Engineering
V.S.B Engineering College, Karur, Tamil Nadu, India.
dr.parthibanvsbcse@gmail.com,

Abstract:
The ceaseless utilization of the web for everyday tasks by organizations, buyers, and the legislature has made an incredible interest for solid web applications and way to deal with testing the usefulness of web applications demonstrates the client session information gathered by web servers. The proposed work centres on the programmed age techniques for test conditions and a model of a computerized testing device for web applications.

Keywords: Selenium web driver, TestNG.

I. INTRODUCTION

The testing procedure goes for finding the flaws in the source code which may prompt bugs in the usefulness of the product. Testing expands the nature of the product. The arrangement of open source Selenium devices proves to be useful with the instruments; engineers can without much of a stretch run acknowledgment tests in their Web programs. Execute of the test robotization structure demonstrates that the test computerization system is helpful to continue the capacity test, execution testing, and stacking test in web applications. It likewise demonstrates that it has better test execution in reusability, extensibility, extensiveness, and achievability. We are altogether realized that Selenium programming testing system instruments work at various dimensions. Selenium works at the client level. So as to simple to carry on various tests for web applications and to share testing techniques and test information between various types of tests, this paper presents one test robotization system by the reconciliation of Selenium. By actualizing the new test mechanization system

demonstrated that the test computerization structure helpful to the web application doing the capacity test, execution testing, and stacking test, to the climb of the test reusability, versatility, far-reaching line, precision has great practicality. The venture of HR additionally lessens with test mechanization. There are different selenium apparatuses are utilized. There are selenium center (Modify and check an Ajax application utilizing directions in Selenium, Selenium's control language), Selenium RC(Remotely control Selenium Core utilizing a typical programming language.),Selenium grid(Use a few remote controls in parallel to speed up testing),Selenium IDE(Capture and replay tests from inside Firefox).

Abirami et al center on computerization testing. Today most of the item applications executed is created as online applications which continue running in a web program. Ramya et al center on testing the web application naturally. Numerous product applications are composed as electronic applications to be kept running in a program. Selenium is a lot of incredible distinctive programming instruments working

with numerous programs, Os, programming dialects, and testing systems each with an alternate way to deal with supporting mechanization test for testing online applications.

Thendral et al exhibited programmed development strategies for test situations for web applications. Furthermore, we additionally presented a model framework as the robotized test framework for web applications dependent on JSP. Future research work is expected to discover a way which improves the exactness of test information dependent on information stream examination. Likewise, we will build up a strategy that produces the test prophet consequently. Maharasi et al center on the Test mechanization, not just the test execution. A test procedure includes a few stages from intending to test determination, execution, and detailing. Experiment configuration can be founded either on human learning or on criteria.

II. PROPOSED WORK

In this paper, we use Java language for scripting the experiments. Comparing driver for that program, we have taken the chrome program for test execution. Since the A base experiment is composed fundamentally which should be stretched out by the various experiments. In this base experiment, we check which program is being utilized and call the execution of the selenium was fundamentally produced for the program Mozilla Firefox, separate drivers for this program need not be downloaded and actualized. We are giving the test information to the web driver. So as to peruse the test information from the records, we have additionally utilized TestNG, which is a trying system in incorporation with Selenium Web driver. It encourages the utilization of explanations in scripting the experiments and furthermore helps in the age of test reports.

It is over and again utilized by designers to depict a bit of code that is embedded into the program or business rationale used to control the progression of strategies in the programming

language Java. These comments assume a noteworthy job in Test Next Generation (TestNG), a mechanization structure generally utilized by Selenium. They administer the succession of execution on the strategies utilized in the experiments that have been scripted. In this paper, we can take the training site for the mechanization procedure. The site name is called mechanization practice.com.
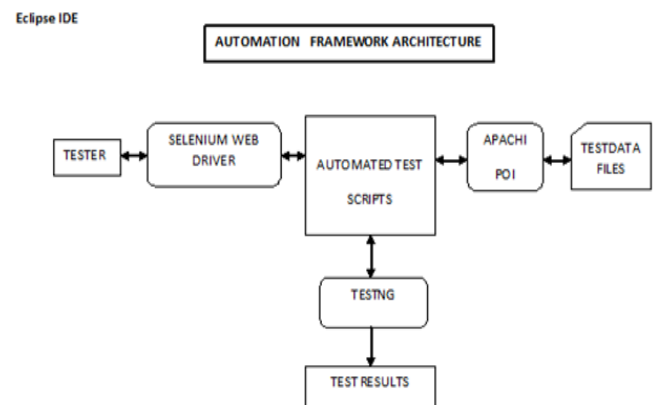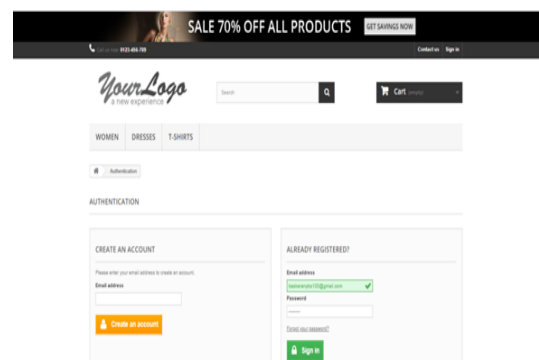

Fig 1:Automation framework Architecture

In this site can check different experiment like login, looking through items in the inquiry box, add to a truck, shipping subtleties, installment subtleties, and conveyance report. The reported age is in the HTML group. We can take the screen capture during the program execution and bombed experiments.

IV. EXPERIMENTAL ANALYSIS

We can perform many experiments in this program execution. Sometimes take a screen capture and reportage. We can step through a portion of the examination cases. The primary

experiment is the login page. In this login page, we have three segments. One for the username, one for secret word and third segment being the login catch or submit.

Presently we have given a few information for the execution of this experiment. In this situation. On the off chance that the username and secret word given aren't right, it will be taken a screen capture.The accompanying code ought to be executed the name of the program to be utilized and the URL of the web application being tried is given.
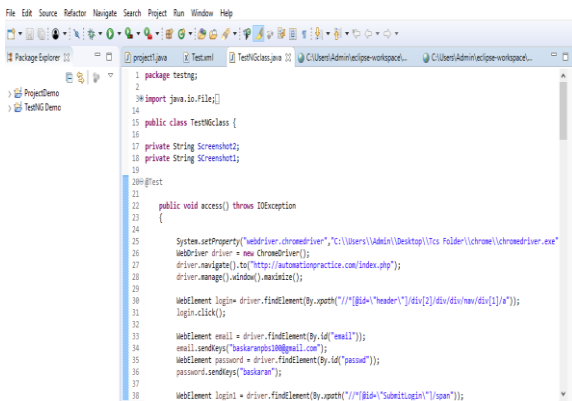

Fig 2: Login page

Fig 3: Coding- Login page and searching product

Searching product in the search box for user requirement they want to add the product in the purchase cart.

Looking through the item in the quest box for client prerequisite they need to include the item in the buy truck.

In the wake of looking through the item, the item can transfer to the truck for acquiring. The picture asset for understanding the reason for what we have done on the experiment.

Fig 4: Search for product

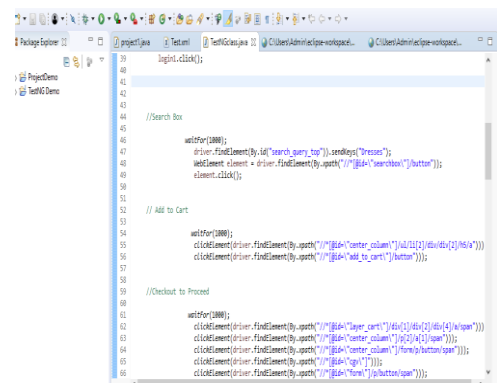The program is given below for test case representation.
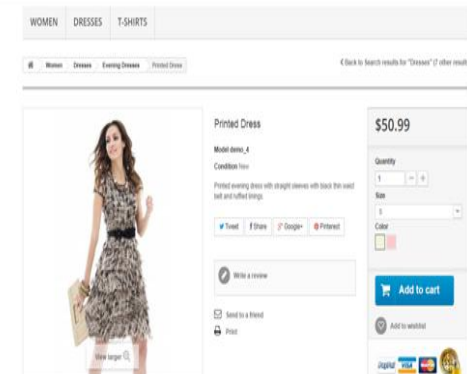

Fig 5: Coding for Add to cart, payment verification

Fig 6: Add to cart

Installment subtleties likewise included as a test execution for the client gets affirmation process. This will help the client for a superior comprehension of the application.
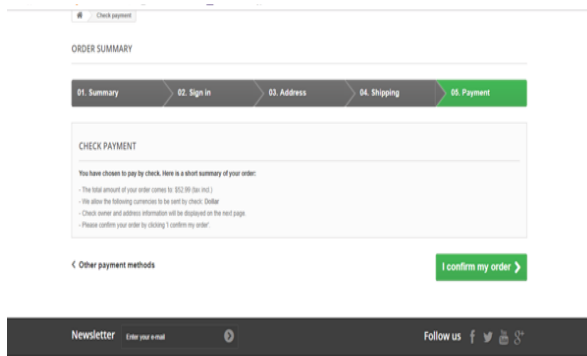
Fig 7: Payment verification

The outcome can appear in the comfort window. This outcome is the general execution of the program. The Order consummation subtleties of programmed web application subtleties are given underneath for getting caution to clients. The disappointment execution or any hinder or obscure clients get to your record subtleties this taken a screen capture for a bombed experiment.
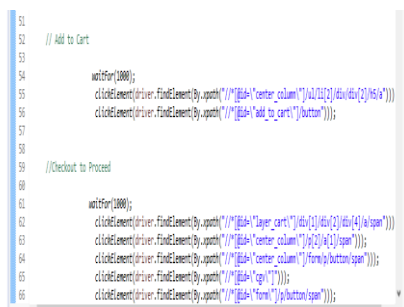

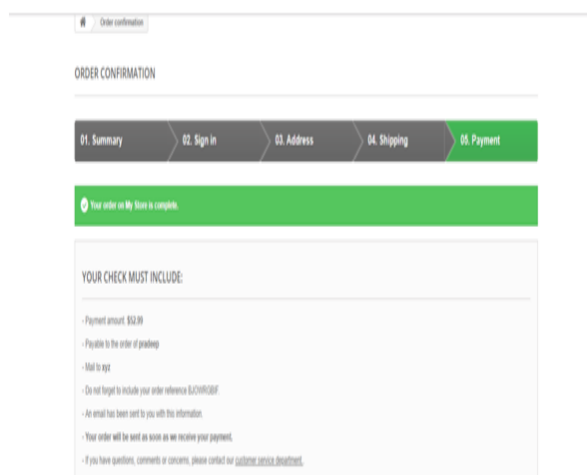Fig 8: Coding for Order confirmation
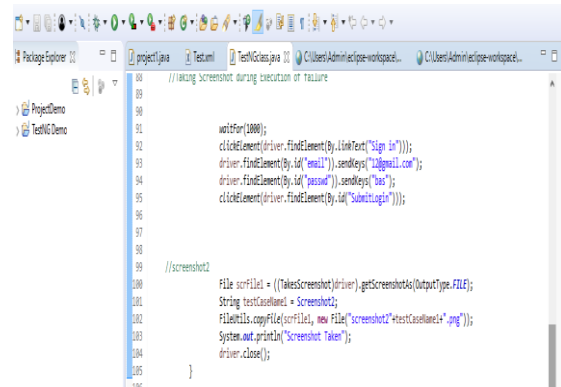

Fig 9:Order confirmation

Fig 10: coding for failure of an execution

At that point, the culmination of all experiments the product should deliver the report to the clients in HTML design. This encourages the client to plainly see what number of experiments are passed and fizzled. This is the HTML report for the general program.
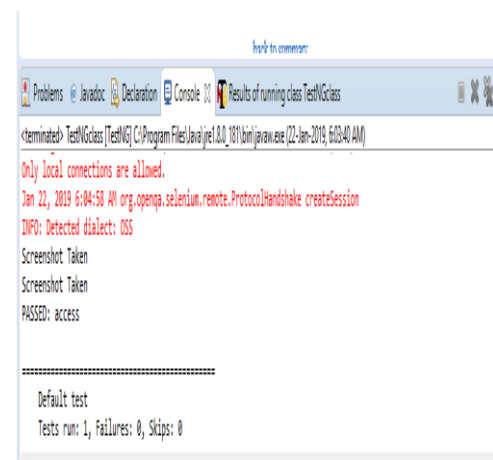
V. RESULT ANALYSIS
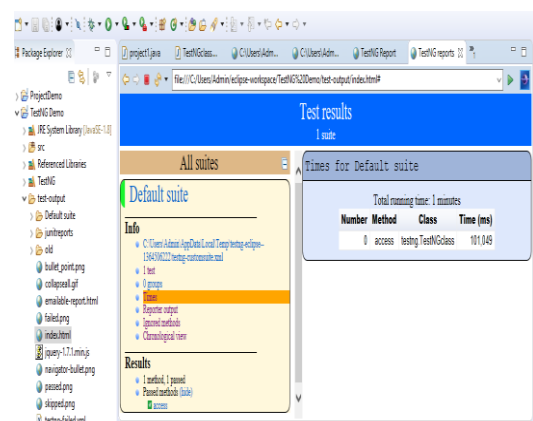

Fig 11: Output in console window

Fig 12: Output-HTML format

That the yield for the default experiment result is given underneath.

Table 1: Testcase table

While testing the application consequently if there is a mistake will happen it will take as screen capture. The screen capture for the blunder report is shown in the diagram.
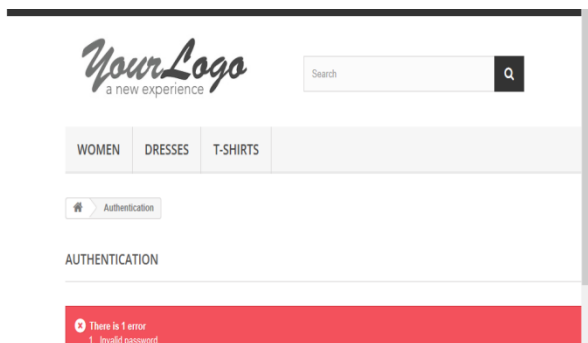

Fig 13: Output- Failed testcase

VI. CONCLUSION

Test computerization is the best and simpler way to deal with performing testing on any product. Additionally, a standout amongst the best favorable circumstances of test mechanization is that the product is reusable and all the test contents can be recorded and kept up exceptional effectively. The utilization of Selenium Web driver for mechanization testing of web applications is extremely proficient, straightforward and the outcomes got are increasingly precise. This task is simpler to test the application with the base measure of time and to give better, solid programming to the clients. In like manner, we can utilize the selenium web driver to test the numerous applications to create a solid report to the clients. The reports are produced by the product are effectively comprehended by the client.

V. REFERENCES

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