

Effective use of TestComplete with Selenium for detecting the level of bug in website creation

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Abstract - The software testing plays the vital role in the development of website. At present the rise of the website had reached to the peak. When someone needs for something the first thing that they would search for is the website. But during the development stage the main thing that every developer would focus is on testing. It plays the major role in IT sector before implementing the website error free, they make use of the fully automated testing tool like Selenium, QTP, TestComplete and so on. But when two tools had been integrated into one then the test that had been missed up in one tool can be found in the another tool and you can rectify it. In this paper the TestComplete and Selenium had been integrated into one and after the integration how can that tool can able to overcome the problems that had been analyzed.

Keywords: TestComplete, Selenium, keyword driven, data driven, cross browser testing and API testing.

I. INTRODUCTION

At present the website after implementation also there arise a lot of problems as like the width, length, color and so on. In order to overcome that many testing team are working behind it to improve the security level higher.

The selenium is an open source testing tool that had been mostly used in all the testing world. It is because through testing it, one can able to easily generate the report that is needed for it. Through using that report the developers can know in which all the part the corrections are required. But even though it can able to find out all the errors. It would create a great challenge for the reliable situations. In order to overcome that inside the Testcomplete can be integrated along with it.

The TestComplete can able to access independently while testing or it can able to support with the other testing tool as like Selenium and work for reducing the bugs. The TestComplete is commercially integrated platform that would support for desktop, web application and mobile which acts all-in-one. It would offers the different key test automation features as like keyword driven, cross browser, data driven, API testing and CI integration testing. This tool can able to support the different languages including the JavaScript, VBScript, C++ Script and C# for writing the test script.

Features of TestComplete: The TestComplete is an automation testing tool that would help to create, run and manage test cases for any windows. It would be easy for anyone to run the test cases and automate it and this would

run faster and increase up its coverage.It can be used for both the functional as well as the database testing.

One can able to easy enhance through using the script free keyword testing even this has a script less capability. This would be easy for you to run the functional UI testing.

This acts as the middle man for finding the right balance between the speed of the application delivery and quality with the affordable cost. Through using both selenium and TestComplete one can able to predict the error that had been find in the website while you are executing.

Aim:

- ✧ **Open TestComplete**
- ✧ **Integrate it with selenium**
- ✧ **Run the script**
- ✧ **Detect bugs through recording**
- ✧ **Find out the missed tests**
- ✧ **Record it**
- ✧ **Overcome that and produce best result**

Why to integrate the TestComplete with Selenium?

Through using them one can able to provide the in depth reports that would allow to test the quality level. It would has the ability for debugging up the failed selenium script quickly using the screen shots. It is used for performing the test case prioritization through checking up the trace-ability between the requirements that is needed, then the manual test cases that had been written, the automated tests for making use of the selenium with its defects.

How could the TestComplete suit for different level of testing?

Mostly all prefer selenium tool for testing but as like that tool TestComplete can able to work effectively. It places the vital role in testing of any kind of software. These tools make use of wide variety of the inbuilt automation capabilities some of them are as follows:

Keyword testing → It is used for the keyword driven framework.

Scripted testing → In this the tester has to write the test scripts for doing the modifications.

Test record & playback → It is used for recording the different level of testing and replay and check it off.

Integration of bug tracking software → It is used when the bug had been find this helps for tracking up the status.

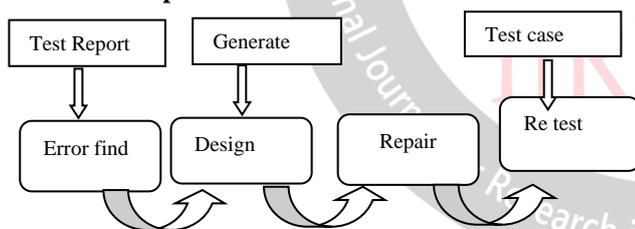
Data driven testing → It is easy for you to extract up different files.

Test visualize → It had been used for capturing the screen shots during the different test executions that would allow for differentiate between the expected and actual screens.

Features of TestComplete

- ✓ It is reliable for you to use that would eliminate the human errors.
- ✓ One can able to reuse the different versions of your applications.
- ✓ You can able to get a better quality of software that would run more tests in less time.
- ✓ It saves your time through processing the tests fast.
- ✓ The cost of the testing is less when compared with the manual testing.

How does the process flow?



The testing flow would be as like this first the test report would be collected. Then from that the error would be fixed up and based on the report the design would be made and the test script would be written based on that. Then the bug would be found and overcome that again after that the re-test would be done in it.

Before starting to integrate check out these features gets satisfied

Before starting to integrate the TestComplete with Selenium there is a need for one to examine that whether the platform and version is correct. Here are the platform and version which your system should hold for integrating them.

For what platforms does the TestComplete Platform supports?

You can able to make use of it effective for the different features as like

- ✓ You can able to record the multiple level of test.
- ✓ It can able to perform the automated test execution.
- ✓ This can be used for object name mapping.
- ✓ It has the data driven testing with data generation wizards.
- ✓ It can perform the object and keyword driven testing.
- ✓ This can be used for test visualizes and for developing the custom extensions.
- ✓ It supports for the database testing support.

For which all the versions one can make use of the TestComplete

- It supports for the TestComplete supports window7, window vista, major win 64 bit apps.
- It supports for the different type of the browser.
- The TestComplete would support different language so one can able to make use of the language that they know for writing the script.
- It supports for the different mobile application as like the android and ios platform support, **client/server support** and window desktop.

How can TestComplete integrated up with the selenium tool?

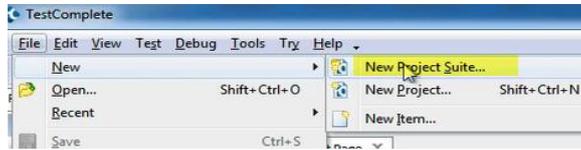
The Selenium is one of the most popular open source tools that had been often used for developers and technical test engineers for running out the automated web tests. But with the help of the TestComplete you can able to re-use your selenium script.

Through using this you can able to build up ultimate test automation solutions that would includes the Selenium, unit and functional tests. The web testing that you do with the TestComplete would be really an easy task for you. The UI of the testing tool would come up with the full support for popular browser and intelligent object recognition across the different technologies. The integration would be build up with the servers, defect management tools and source control system.

You can able to create a selenium tests in any different language after that you can able to import your test scripts into TestComplete IDE and run them in the part of your GUI testing process. After running your selenium framework test you can able to easily analyze the test result that too with real time information. Through this you can able to generate your status of all your automated testing that would efforts in one interface.

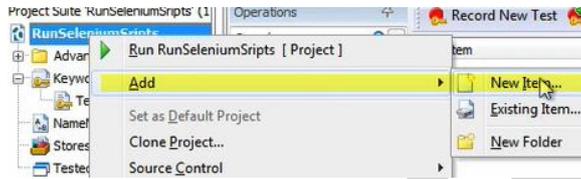
There is a need for you to identify the test script that you want to process, there is a need for the coding in case you use Java then the Java coding must be included.

- After that you have to create a new project: File->New->New Project Suit.



Set the project name ://RunSelenium

- Then in the new form open the “RunSeleniumScripts” -> RunSelenium(Project Name)->Add ->New item.



- There you can able to find out a list of languages click on the JUnit.

The flow of the coading would be

```

Import java.io.IOException;
Import org.junit.After; - Precondition statements.
Import org.junit.Assert;- It is used for forming the bunch
of assertion methods. It would terminate when the test cases
pass or when it get fails.
Import org.junit.Before;- Precondition statements.
Import org.junit.Test;- Processing of the test
Import org.openqa.selenium.By;
Import org.openqa.selenium.webdriver;
Import org.openqa.selenium.firefox.firefoxdriver;
Import org.openqa.selenium.support.ui.Select;
Public class seleniumTest {
Private webdriver driver {
@before
Punlic void openBrowser()
{

```

Then set up the “Name” and next step is to set up the framework.

You can able to find out the two different type of the project choose any one like “Maven”. From there you can able to select up your project.

Then click on the Run test. In that what you had given that test would be run and you can able to find out the result for that.

With its help you can able to check out all the type of the tests and this would help for validate and to find out the information’s.

When the client and the server support are correct then after that one can able to process it safe.

Why there is a need for you to integrate selenium with TestComplete?

Although the selenium would only support for the web browser application through integration up with the TestComplete it would allows the users for automate pretty much on any technology. With the support of the other testing tool the selenium can able to give a perfect support.

Through integrating the Selenium into the TestComplete one can able to implement the website in the error free format. But how does it would be possible this would be a great question mark.

Even though you had automated the testing process there is a occurrence of error that may be minute or major cause of the error. While hosting the site every one would think that it is 100% error free but there are lot of chances for the error to occur.

What are the possible situation that would arise when even after using the automation tool for testing?

This happens due to the proper planning of things before implementing.

The inadequate resources to purchase. But in case of Selenium it is an open source tool that can be accessed by anyone. In case of TestComplete you can able to get them free trail for a month so you can make use of it and check out whether it would suit for your working environment or not.

Why there is a need for integration of TestComplete with Selenium?

To overcome such a kind of challenges when you test through integrating this both stool sure one can able to avoid even that minor part of the bugs and the errors that had been found.

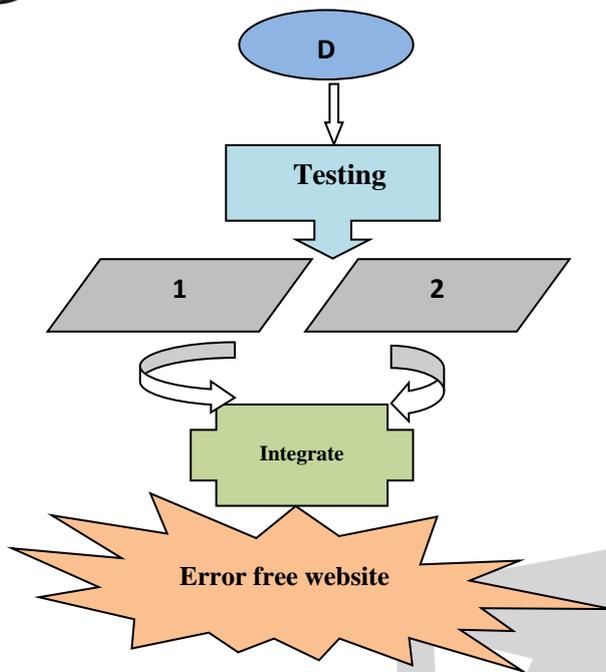
Even in this case there is a need for the proper steps and process that you have to follow.

Step 1: The website had been developed in the different modules and they had been joined as one.

Step 2: The website had been send to the testing team and in that place instead of using the single test automation tool. In that place instead of using the single automation tool the two tools had been integrated.

Step 3: The Open source Selenium and effective TestComplete tool had been integrated into one.

Step 4: Based on the tests that is required the test cases and script had been written in it.



Step 5: Then the test cases had been proceed and the test report had been generated.

D= Developer

1= TestComplete

2= Selenium

After the test report it had been analyzed carefully and the bugs had been noted accurately. Even the test cases that had been skipped from the Selenium had been found in the TestComplete. His would be helpful for forming the “error free website”

In which place this types of testing would be worthy?

When some person is starting his business as a developer in the small level. In that case it is not an easy task for him to go and purchase the software that would be too costly. There in that situation one can able to make use of such a kind of free, trail and open source tool for testing.

Through using as like this one can able to easily bring back the quality of the software higher. This would create a great opportunity for you to produce the error free software which would be effective for you to use.

Features of using the integrated testing tools:

- ✓ It provides for the test automation and you can make use of it 24 x 7.
- ✓ One can able to perform the different level of testing that would suits for the cross browser testing, distributed testing.
- ✓ It is easy for collecting the test report and based on that you can able to easily analyze the bugs that had been found.
- ✓ When you make use of automation tool it would provide you a faster export options.

- ✓ Less manpower is only required for it as well as through using it one can able to increase the quality of the website before implementing it.

II. CONCLUSION

This paper deals up how can you effectively find out the bugs that had been found in the websites and through integrating it one can able to easily overcome the error that had been left in the previous level of testing. Through using it one can able to find the functionality and behaviour of the website before they are hosting up in the online.

With its help the tester can able to run the multiple of the test cases at a time. Which means even the error missed at one end can be find at the other end.

Once the test gets over then the clear report can be taken. The report that you get would be a summary of the website and the work that you do. IT would be given in the detailed format with full clear explanation. Through comparing the report the developer can able to find that and it would be easy for overcoming it.

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