A GENERIC FRAMEWORK FOR AUTOMATION TESTING USING SELENIUM

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Abstract - *Automation testing helps to generate the testing reports in an efficient way rather than tedious manual testing. WE have constructed several framework for this to run the test scripts and validate those scripts using automation tools .Selenium is the most powerful tools for bunch of various browsers ,so here we presents the test cases and test results on various browsers simultaneously on the era of automation testing. It reduces the method of conducting the repetitive tests, also short case study of automation framework. This paper depicts about the cross browser testing and generating the test scripts using them and will helps to gain control over continual repetitive tests.*

Key Words: Web applications , Automation testing , selenium web driver , Automation testing framework. TestNG

1 INTRODUCTION

Software testing is technique of estimating a system or its module with the purpose of finding bugs and errors in the module . The automation testing of web application associate reduction of manual task in today's context. Doing testing manually human error can happen and also can take a lot of time in testing process and generating reports primitive automation testing on one browser may run but may not run on multiple browsers like if it is running on Mozilla Firefox and simultaneously on other browsers like google chrome. But here we present that's the test cases can be automated on the multiple browsers according to users choice If user want to run on Mozilla or Google chrome using cross browsers platform.

2 PROBLEM STATEMENT

The Cross browser testing helps to ensure uniform web application across various browser versions. browsers. Absence of any well-defined automation framework to test various   application   functional/non-functional scenarios lead to huge amount of manual effort of testing the same functional scenarios in multiple browsers. This paper describes a Generic & Reusable Automation Framework for cross browser testing by using selenium. The selenium helps in implementing the reporting features and in cross browser testing and generating reports using testNg that a user is valid or not during sign in procedures .

3 METHODOLOGY

This framework builds automated test scripts with underlying Automation tool Selenium. Selenium is portable software testing tool for Web applications. It supports cross browser, here test cases are splits into various modules, Keywords and data are strung together in an excel sheet to form automated test frameworks. So it facilitates the technique of automation test scripts. It also records the success and failure of test cases and reports generation using testing.
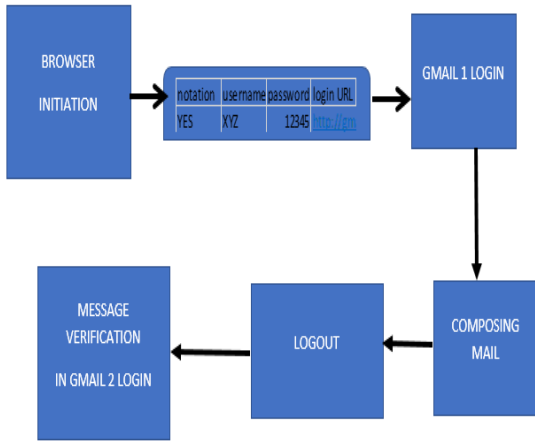
Fig: 1 Architecture of Gmail framework

Following are the modules that make up the Automation framework

- Browser initiation
- Gmail Login
- Compose mail
- Logout
- Add Account
- Message verification

4 SUPPORT LIBRARIES

- It is comprised of generic functions which are reusable and are required for testing the application. This component will also contain the logic for report generation. Few of the sample classes in this component are as follows:
- • ReusableLibrary.java : It is the base class which contains the reusable libraries created by the user. Eg. Selenium, data table.
- • Selenium server standalone jar file which contains the libraries of web drivers to access the html tags either by id, class name or by its path.
- •Selenium Report java and Script helper which determines the test scripts and test cases for functional or not functional test scripts.
- •SeleniumTestParameters.java: Class to encapsulate various input parameters required for each test script. Browser, version, platform.

- •TestNG to generate test scripts results on various browsers

4.1 Run Manager:

This component implements the parallel execution of the test scripts. Run Manager.xls. This file contains the sequence and testing procedure and all the other related information like test case id,description ,browser type, platform for the batch.

5 RESULTS AND SCREENSHOTS

This Framework was tested on the gmail web pages, and Gmail mail compose. Some of the screenshots and results are described as below`

Step1:

On loading selenium driver by gmail link with firefox browser we see the results as
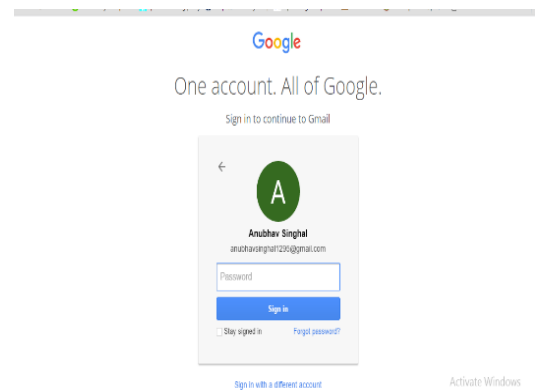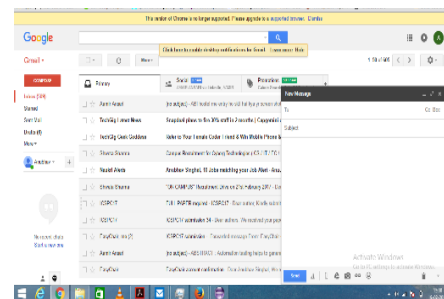

Fig: 2 Gmail Login

Fig: 3 Compose mail

Step2:

After mail compose and auto filling of mail the test reports are generated either success or failure of the test scripts as shown in the execution of test cases.
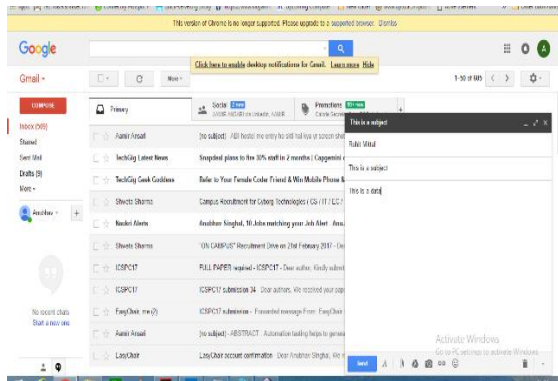

Fig: 4 Sending Mail

Step3: After data entry in the text boxes the Validation process is checked and report generation of this process is accessed.
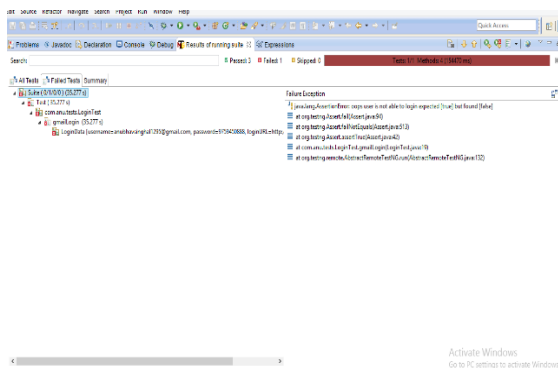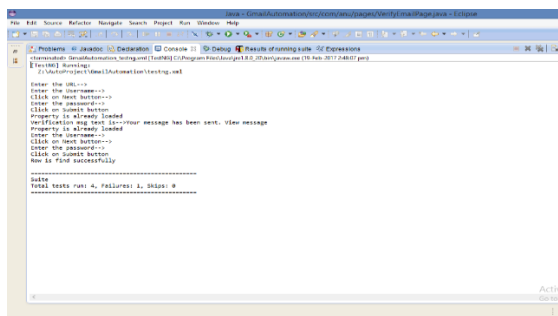

Fig: 5 Report Generation

Fig: 6 Represent success and failed test cases

Step4:

These reports are simultaneously accessed and also generated on multiple browsers to resemble the functional and non-functional scenario of the test scripts.

6 CONCLUSIONS

So Automation testing has absolutely preserved time and money and has allowed Development Team in realizing other significances moving forward, however using test automation does leads its own set of challenges. The significance of automated testing include: saving time and performing testing various modules allowing learning as well as regression testing. In the future tests could be reused to perform more realistic load testing and service availability monitoring. There are many client components that can yield different results based on the web browser they are run in, such as Applets, JavaScript, Flash, AJAX requests and can be run on multiple browsers, and the list goes on and the challenges of an automated testing model include justification of tests scripts. As UIs change, new scripts needs development and updating of existing scripts. The test scripts are going to be reused and maintained then the initial investment in time required writing the scripts may proves too oppressive.

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BIOGRAPHIES

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