INTERNSHIP: PROJECT REPORT

Internship Project Title	Functional Testing using Selenium Webdriver
Name of the Company	TCS-ION
Name of the Industry Mentor	Debashis Roy
Name of the Institute	ICT Academy of Kerala

Start Date	End Date	Total Effort (hrs.)	Project Environment	Tools used
10/10/2022	08/11/2022	90	Chrome, Windows 11	MS EXCEL, MS WORD, Eclipse IDE

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Acknowledgements

I would like to express my deep sense of gratitude to TCS iON for their guidance and constant supervision & also for their support in the completion of this project.
I am also grateful to my parents, spouse, daughter and ICT Academy, for their kind co-operation and encouragement which motivated me to successfully complete this project.

Objective

The objective of this project is to develop an automated functional testing project using java- based Selenium WebDriver API. To perform end to end automated functional testing on the site https://phptravels.net/ and to populate appropriate test design and testcase templates along with effective defect logs.

Introduction

A system that can perform automated functional testing has to be developed using java- based Selenium WebDriver API on the site https://phptravels.net/ available on public domain.
Four parts of the site are to be tested: Customer Front-End, Agent Front-End, Admin Back-End, Supplier Back-End. So, we have to create test documents and based on these test documents Selenium java scripts should be written to automate the code and reports are to be generated.

The automation scripts to be developed for Customer stage should include valid and invalid login testcases, test the links My Bookings, Add Funds, My Profile and Logout, automated payment of USD 50 using PayPal, checking bookings and display voucher, update address in the profile.
The automation scripts to be developed for Agent stage should include valid and invalid login testcases, test the links My Bookings, Add Funds, My Profile and Logout, test the links Home, Hotel, Flights, Tours, Visa, Blog and Offers, search hotels by city, update USD to INR for the account.
The automation scripts to be developed for Admin stage should include valid and invalid login testcases, test Bookings link and display invoice for successful payments, delete a record having booking status cancelled, change Booking status from Pending to Confirmed and verify the count in the dashboard, check website link redirect.
The automation scripts to be developed for Supplier stage should include valid and invalid login testcases, check text Sales Overview and Summary, Check display of Revenue Breakdown, change Booking status from Pending to Confirmed and verify the count in the dashboard, check whether the modules Flights, Tours, Visa, Booking are clickable.

Approach

1. Firstly, we have to visit test site and prepare test documents for all the use cases and functions for 4 stages mentioned in Industry Project Document.
    - User Front-End
    - Agent Front-End
    - Admin Back-End
    - Supplier Back-End
2. Then, we have to create Selenium automation scripts to automate the testcases and their functionalities.
3. Finally test reports are to be generated.

Test Requirements

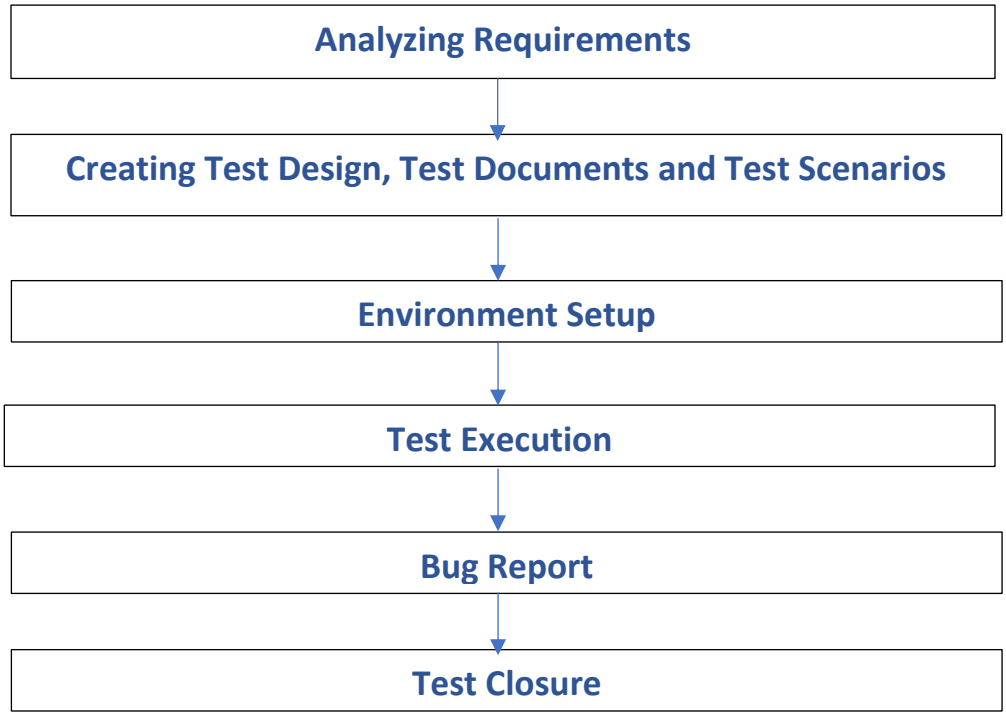
The following documents should be prepared for testing the website.

- Test Design document containing the fields Test Case #, Feature/Function, Test Step, Test Case Description, Test Data, Pre-Requisites Expected Result, Actual Result, Business Priority, Iteration#, Defect[Y/N].
- Test Case document containing the fields Test Case ID, Test Case Description, Application Test Type, Test Priority, Test Designed, Test Executed, Summary, Test Steps, Test Step Description, Pre-Requisites, Test data, Expected Result, Actual Result, Pass/Fail, Remarks
- Test Scenario document containing the fields Req ID, Test Scenario ID, Module Name, Test Scenarios, Expected Results, Priority.

To implement the project, I have set up the following environment

1) Working internet connection
2) Windows OS with Google Chrome and Mozilla Firefox browsers
3) JDK 16.0.1
4) Eclipse IDE
5) Selenium, TestNG Plugins

Workflow



Outcome

1. Automated functional testing on the website is performed.
2. Defects are found and listed in the Test Report.

Enhancement Scope

While working this website, I found a lot of performance issues other than the defects found in functional testing. So, if the website is subjected to performance testing with tools such as Jmeter, the quality of the website can be improved.
Integrating Cucumber framework with Selenium will contribute to easy user acceptance testing.
Including any automation servers such as Jenkins can contribute to continuous and fast testing and deployment of the project.

Link to code and executable file

Link to Selenium-java based automation scripts:
https://github.com/Shruthigvr/TCS-INTERNSHIP-ST.git

Link to complete Internship Documents:
https://github.com/Shruthigvr/TCSION_INTERNSHIP_ST_SHRUTHISURESH.git