Applying Selenium to Test the RoseShop Website

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***Abstract*—This thesis examines the use of Selenium WebDriver for testing the RoseShop website. It reviews manual and automated software testing, describes browser element locators and the Page Object Model, and applies Java-based Selenium scripts to selected website functions. The report presents test cases and screenshots of execution with Selenium WebDriver and Selenium IDE. Its main documented outcomes are a testing workflow for the case website and an account of differences between manual and automated checks. The author does not report a controlled comparison of defect detection, execution time, or test coverage. The conclusion acknowledges that the test cases and code need improvement and that not all WebDriver features were explored. The work is therefore a practical testing demonstration rather than evidence that RoseShop has been comprehensively validated or that automation can replace manual testing.**

***Index Terms*—Selenium WebDriver, web testing, test automation, Java, RoseShop**

I. Introduction

Web applications need repeated checks as their interfaces and functions change. The thesis uses RoseShop as a case for examining how automated browser tests can support this work. It first explains software testing levels and the distinction between manual and automated execution, then introduces Selenium. The report treats automated checks as useful for stable functions and regression testing while recognizing that manual review remains necessary. Its practical objective is to create and run example tests, not to certify every RoseShop feature [1]. Earlier ICTU student work on related designs is included here for context [6], [7], [8], [9], [10]. These contextual works were selected for this English summary; they are not asserted to appear in the original thesis bibliography.

II. Methods

The author studies Selenium WebDriver, Selenium IDE, Java, web element location strategies, and the Page Object Model. The report documents preparation of the test environment, identification of website elements, construction of test cases, and execution of selected RoseShop interactions. It discusses locators such as identifiers, names, CSS selectors, XPath, and link text, then shows execution outputs and reports. The source does not define a randomized experiment or a quantitative benchmark comparing automation against manual testing [1].

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III. Results

The report includes examples of test cases and screenshots produced during Selenium WebDriver and Selenium IDE execution. These materials show that the author configured the tools and exercised selected RoseShop workflows. In the conclusion, the author reports gaining a clearer understanding of automated web testing, WebDriver, Java, and the practical distinction between manual and automated processes. The source does not provide a complete defect inventory, a measured coverage percentage, or a verified time saving for the website [1].

IV. Discussion

The implementation illustrates how reusable page objects and browser locators can organize a test suite, but the author explicitly identifies weaknesses in case design, execution, and code optimization. The report also notes that automation is most appropriate for stable functions and regression checks; a fully automated assessment of every aspect of a website is not realistic. The available evidence supports a working learning exercise rather than a claim that the site is defect free. Broader scenarios and more maintainable scripts would be needed for stronger testing conclusions [1].

V. Conclusion

The thesis documents a Selenium-based testing exercise for RoseShop and explains the supporting concepts, tools, and selected test cases. Its screenshots and execution discussion support that the workflow was tried on the case website. The author recognizes incomplete exploration of WebDriver, imperfect test cases, and unoptimized code. Further work would extend the checks to additional systems and functions and improve the design of the automated suite. No quantitative performance or coverage claim follows from the source [1].

References

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