# Automated Web Testing with Selenium WebDriver: A CoCo Shop Case Study

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***Abstract*—This thesis studies automated web testing with Selenium WebDriver and applies selected test cases to the CoCo Shop website. The author reviews software-testing concepts, compares manual and automated processes, describes Selenium WebDriver commands and Java test setup, then exercises website functions in the practical chapter. The report includes test-case descriptions and execution screenshots. The conclusion states that the author learned to use Selenium and Java and tested some CoCo Shop functions. It also acknowledges that the test cases are imperfect, code is not optimized, and many WebDriver features remain unexplored. The source does not show complete functional coverage, a measured defect-detection rate, or a benchmark establishing superiority over manual testing. Its contribution is a documented educational testing exercise and a starting point for broader, more reliable regression tests.**

***Index Terms*—Selenium WebDriver, Java, automated testing, web application, CoCo Shop**

## I. Introduction

Repeated website checks can be laborious when performed manually. This thesis examines whether browser automation with Selenium WebDriver can support testing of CoCo Shop. It introduces software faults, test processes, and automation concepts before focusing on the selected website. The objective is to build and execute representative test cases and reflect on the testing workflow. The report does not claim comprehensive certification of CoCo Shop quality [1]. Earlier ICTU student work on related designs is included here for context [2], [3], [4], [5], [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 and its Java client, configures browser interaction, and uses commands for navigation, locating elements, input, waits, and assertions. The practical chapter describes CoCo Shop and prepares selected test cases for its functions. Test execution is recorded through screenshots and observations, and the author compares broad steps in manual and automated testing. The source does not define a randomized test sample, complete coverage matrix, or reproducible performance benchmark [1].

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## III. Results

The manuscript presents example CoCo Shop test cases and Selenium execution output. Its conclusion says selected site functions were tested and that the exercise improved the author understanding of Java and WebDriver. It also identifies weak test-case design, unoptimized code, and unused WebDriver capabilities. The observed result is a small automation exercise; the source does not quantify defect discovery, execution-time savings, or full system coverage [1].

## IV. Discussion

Selenium can replay browser actions consistently, but the usefulness of an automated suite depends on assertions, maintained locators, test data, and coverage. The source acknowledges that its test cases and code require improvement. Some screenshots show successful scripts, yet that evidence cannot establish absence of defects elsewhere in the website. A later iteration should expand functional scenarios, document expected outcomes, and compare repeat runs under controlled conditions [1].

## V. Conclusion

The thesis applies Selenium WebDriver with Java to selected CoCo Shop website tests and documents the workflow. It records practical learning and example execution results. The author explicitly notes incomplete feature exploration and imperfect test design. The work is a starting point for expanded automated testing, not a comprehensive audit of the website. Reproducible cases, stronger assertions, and broader coverage remain to be developed [1].

## References

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