Functional Testing of the Gearvn.com Website with Selenium

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***Abstract*—This undergraduate thesis investigates functional testing of the Gearvn.com website. Web commerce functions need repeatable checks for expected user interactions. The student reviews manual and automated testing concepts, surveys Postman and Apache JMeter, and applies Selenium-based automated functional tests to selected website workflows. The thesis also discusses Serenity BDD. The source reports a simulated application of Selenium tests and explains the tested workflow. It does not claim a production-grade enterprise test system. The thesis does not provide a complete test coverage matrix, reproducible defect counts, or measured API and performance test results. The contribution is a documented student study or prototype whose stated scope can guide further testing.**

***Index Terms*—Selenium, website testing, Gearvn, test automation**

I. Introduction

Web commerce functions need repeatable checks for expected user interactions. This thesis investigates functional testing of the Gearvn.com website. It begins from a practical engineering need and explains the technologies and workflow chosen for the case. The objective is to document a student implementation or comparative investigation, together with the evidence available in the manuscript. Broader operational or economic effects require separate measurements and are not assumed from the existence of a prototype [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 student reviews manual and automated testing concepts, surveys Postman and Apache JMeter, and applies Selenium-based automated functional tests to selected website workflows. The thesis also discusses Serenity BDD. The source is summarized through its stated design, implementation material, examples, and conclusion. Features shown in the manuscript are distinguished from proposals for later development. This review does not add a new experiment, fill missing measurements with estimates, or treat a planned capability as an observed result. The source thesis remains the provenance for the reported work [1].

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III. Results

The source reports a simulated application of Selenium tests and explains the tested workflow. It does not claim a production-grade enterprise test system. The report's screens, configurations, examples, or measurements constitute the evidence for this summary. A capability described only as a design intention is not counted as a validated operational outcome. No additional performance, adoption, financial, or safety figure has been introduced here. The result is interpreted within the scope of the student's documented setup [1].

IV. Discussion

The thesis does not provide a complete test coverage matrix, reproducible defect counts, or measured API and performance test results. Further work could formalize assertions and test data, expand coverage, and evaluate API and load tests separately with documented environments. These limitations affect how the evidence should be read. The current manuscript can support understanding of the design and reported demonstration, while independent tests would be needed for stronger claims. Any later deployment should document its environment and separate observed outcomes from intended benefits [1].

V. Conclusion

The thesis documents functional testing of the Gearvn.com website. The source reports a simulated application of Selenium tests and explains the tested workflow. It does not claim a production-grade enterprise test system. The thesis does not provide a complete test coverage matrix, reproducible defect counts, or measured API and performance test results. Further work could formalize assertions and test data, expand coverage, and evaluate API and load tests separately with documented environments. Accordingly, the present contribution is a source-grounded account of the student work and its tested or illustrated scope. Claims about broader effectiveness should be assessed in later work using explicit evaluation conditions [1].

References

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