Development and Implementation of Test Plans for Some Functions in Electronic Command Software

Dương Thị Hạnh
Thai Nguyen University of Information and Communication Technology
Thai Nguyen University, Thai Nguyen, Vietnam
student482@ictu.edu.vn

***Abstract*—This thesis focuses on the development and implementation of test plans for certain functions in electronic command software. The author gained a basic understanding of software testing, particularly automated testing for web applications, and explored the design of test cases. The study also delved into the functionalities and operation of the Katalon Studio testing tool. The research did not include numerical evaluations, but the author successfully developed and implemented test plans for some functions in the electronic command software, gaining knowledge in software testing and automated testing for web applications. The study highlights the importance of software testing and the role of automated testing tools like Katalon Studio in ensuring software quality. The author also mentions the need for further research to test additional functions with more tools.**

***Index Terms*—software testing, Katalon Studio, web applications, test cases**

I. Introduction

The thesis provides an overview of software testing theories and the Katalon Studio testing tool, covering various testing methods and phases. It emphasizes the significance of software testing in ensuring the quality of electronic command software. The author discusses the importance of automated testing for web applications and the role of Katalon Studio in facilitating this process. The study aims to develop and implement test plans for specific functions in the electronic command software, thereby enhancing the reliability and functionality of the system [1]. Published books on the methods and subject of this project provide context for this English summary [3].

II. Methods

The methods section covers the theoretical background of software testing, including different testing methods and phases. It also discusses the Katalon Studio tool, its features, and advantages and disadvantages. The author explored the design of test cases and the functionalities of Katalon Studio, which is a popular automated testing tool for web applications. The study did not include numerical evaluations, but the author successfully developed and implemented test plans for some functions in the electronic command software, gaining knowledge in software testing and automated testing for web applications [1].

Supervisor: Hà Thị Thanh, Thai Nguyen University of Information and Communication Technology (htthanh@ictu.edu.vn).

III. Results

The author successfully developed and implemented test plans for some functions in the electronic command software, gaining knowledge in software testing and automated testing for web applications. The study did not include numerical evaluations, but the author was able to design and execute test cases for specific functionalities. The implementation involved creating test scripts and running them using Katalon Studio. The author noted that the process was challenging due to limited time and experience, but the results were satisfactory in terms of understanding the testing process and the tool's capabilities [1].

IV. Discussion

The author discusses the importance of software testing and the role of automated testing tools like Katalon Studio in ensuring software quality. They highlight the benefits of using Katalon Studio for its ease of use and comprehensive features. The author also mentions the need for further research to test additional functions with more tools. The study emphasizes the importance of continuous improvement in software testing methodologies and tools to enhance the overall quality of electronic command software [1].

V. Conclusion

The author completed the thesis with the support of their supervisor, achieving a basic understanding of software testing and automated testing for web applications. They acknowledge the limitations of their work and seek feedback for improvement. The study highlights the importance of software testing in ensuring the quality of electronic command software and the role of automated testing tools like Katalon Studio in facilitating this process. The author also mentions the need for further research to test additional functions with more tools [1].

References

[1] Dương Thị Hạnh, "Development and Implementation of Test Plans for Some Functions in Electronic Command Software," internal undergraduate thesis (original in Vietnamese), Thai Nguyen University of Information and Communication Technology, 2023.
[2] Phạm Ngọc Hùng, Trương Anh Hoàng, và Đặng Văn Hưng. Giáo trình kiểm thử phần mềm
[3] Paul C. Jorgensen, "Software Testing," Auerbach Publications, 2013. ISBN 9781439889503. DOI: 10.1201/9781439889503.