PROJECT REPORT

AUTOMATIC TESTING WITH BLACK BOX TESTING METHODS AND BOUNDARY VALUE ANALYSIS TECHNIQUES AT PT. HARTONO ISTANA TEKNOLOGI

ANDREAS EDWIN KURNIAWAN
18.K1.0005

Faculty of Computer Science
Soegijapranata Catholic University
2022

HALAMAN PENGESAHAN

Judul Tugas Akhir:	:	Automatic Testing With Black Box Testing Methods And Boundary Value Analysis Techniques At PT. Hartono Istana Teknologi.
Diajukan oleh	:	Andreas Edwin Kurniawan
NIM	:	18.K1.0005
Tanggal disetujui	:	06 Januari 2022
Telah setujui oleh		
Pembimbing	:	Rosita Herawati S.T., M.I.T.
Penguji 1	:	Rosita Herawati S.T., M.I.T.
Penguji 2	:	Hironimus Leong S.Kom., M.Kom.
Penguji 3	:	R. Setiawan Aji Nugroho S.T., MCompIT., Ph.D
Penguji 4	:	Y.b. Dwi Setianto S.T., M.Cs.
Penguji 5	:	Yulianto Tejo Putranto S.T., M.T.
Penguji 6	:	Yonathan Purbo Santosa S.Kom., M.Sc
Ketua Program Studi	:	Rosita Herawati S.T., M.I.T.
Dekan	:	Dr. Bernardinus Harnadi S.T., M.T.

Halaman ini merupakan halaman yang sah dan dapat diverifikasi melalui alamat di bawah ini.

sintak.unika.ac.id/skripsi/verifikasi/?id=18.K1.0005

STATEMENT OF ORIGINALITY

I, the undersigned:

Name : ANDREAS EDWIN KURNIAWAN
Nim : 18.K1.0005
Progdi : Informatics Engineering
Faculty : Computer Science

Certify that this project was made by myself and not copy or plagiarize from other people, except that in writing expressed to the other article. If it is proven that this project was plagiarizes or copy the other, I am ready to accept sanction.

Semarang, January, 06, 2022

ANDREAS EDWIN KURNIAWAN
18.K1.0005

SCIENTIFIC PUBLICATION STATEMENT

PAGE FOR ACADEMIC INTEREST

I, the undersigned:

Name : ANDREAS EDWIN KURNIAWAN

Nim : 18.K1.0005

Progdi : Informatics Engineering

Faculty : Computer Science

Type of Work : Skripsi

Agree to give Soegijapranata Catholic University Semarang the right to non-exclusive royalty free for a scientific work entitled "Automatic Testing With Black Box Testing Method And Boundary Value Analysis Techniques At PT. Hartono Istana Teknologi" along with existing devices. With this Non-exclusice Royalty Free Right, Soegijapranata Catholic University has the right to save, transfer / format media, manage in the form of a database, maintain, and publish this final project as long as I still include my name as the authors / creator and as the copyright owner.

This statement I made in truth

Semarang, January, 06, 2022

ANDREAS EDWIN KURNIAWAN

18.K1.0005

ACKNOWLEDGEMENTS

First of all, thanks you Lord Jesus Christ for his blessing, so that I can finish my final project successfully. The final project is a requirement to take a the Bachelor of Computer Science Exam in Informatic Engineering Study Program at Soegijapranata Catholic University Semarang

The completion of this thesis couldn't be separated from the help of various parties, so that on this occasion the author with respect a big thank you to all parties who have been involved and provided moral and material assistance directly or indirectly to the authors in it's the preparation of this thesis to completion, especially to the parties that I respect :

1. Mrs. Rosita Herawati S.T., M.I.T as a supervisor who has supported and helped very patiently so that this thesis can be completed properly.
2. Especially to my father, mother, brother, and sister who have supported, prayer, sacrifice and helped in completing this thesis.
3. For all 2018 informatics Engineering friends who have accompanied and supported them during the lecture period until the thesis writing is complete.
4. My friends from Badut Panggilan who always beside me and support me when I get tired and all the work piled up

Semarang, January, 06, 2022

ANDREAS EDWIN KURNIAWAN

18.K1.0005

ABSTRACT

This study aims to direct the testing pattern from manual testing to automated testing. Another goal is that the use of manual methods is less effective, efficient, time consuming, expensive and allows for human testing errors. With automated testing, this problem can be solved. Before performing automated testing, must create a test case. Test cases are made using the Boundary Value Analysis (BVA) technique, the boundary value analysis technique is made by determining the upper and lower limits on a data. Automated testing using the selenium tool and the programming language used is python.

In creating automated tests, you must first create a test case that is used to test the ArtemisDev trial server. The first test scenario uses the black box method by testing the functionality of the buttons on the test server, namely the company code menu, site, and location. Next, testing is carried out in certain areas that have been determined, then using boundary value analysis techniques create test cases by determining the upper and lower limits on a data. Then create an automated test program using the Selenium tool and the python programming language. With automated testing, testing is more time-saving, more cost-effective and more efficient.

After performing automated tests using the black box method, boundary value analysis technique, and selenium tools, we got the results. Testing is carried out on the company code menu, site, and location, testing is carried out as many as (180x). The results obtained after testing are kode perusahaan menu and nama perusahaan fields, the success rate is 50% fail and 50%. Next, in the kode perusahaan menu and nama perusahaan fields, the success rate is 25% fail and 75% success. Then, in the site menu and site fields, the success rate is 50% fail and 50% success. In the site menu and kode pos fields, the success rate is 25% fail and 75%. In the lokasi menu and tipe lokasi fields, the success rate is 25% fail and 75%. In the lokasi menu and kode fields, the success rate is 25% fail and 75% success.

Keyword: black box method, boundary value analysis technique, selenium tool, trial server ArtemisDev, python

TABLE OF CONTENTS

LIST OF FIGURE

LIST OF TABLE