ABSTRAK

ANALISIS KINERJA PENGUJIAN MANUAL, SELENIUM DAN *ROBOTIC PROCESS AUTOMATION* PADA LAYANAN DIGITAL PERKULIAHAN

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Penelitian ini bertujuan untuk memberikan solusi mengenai efektifitas kinerja pengujian untuk jaminan kualitas *Super App* Layanan Digital Informatika di Jurusan Teknik Informatika UIN Sunan Gunung Djati Bandung sebagai langkah untuk meminimalisir aplikasi yang tidak optimal digunakan karena terdapat ketidaksesuaian akibat tidak menerapkan *quality assurance* dalam pengembangan aplikasi. Sebagai upaya mengatasi permasalahan tersebut, penelitian ini mencoba menganalisis kinerja pengujian manual, pengujian otomatis dengan *framework Selenium Automation Test* dan pengujian otomatis dengan *tool* UiPath *Robotic Process Automation* (RPA) untuk mendapatkan pengetahuan terkait alternatif paling ideal untuk digunakan pada pengujian *Super App* Layanan Digital Informatika melalui pendekatan metode *The Distance to The Ideal Alternatif* (DIA). Berdasarkan hasil analisis DIA, RPA merupakan alternatif pengujian paling ideal berdasarkan parameter *efficiency* dan *usability*. RPA mengungguli *Selenium Automation Test* dan *Manual Test* dengan nilai $R_i = 0$ menunjukkan bahwa RPA memiliki jarak nol dengan alternatif yang ideal.

Kata kunci: *Super App*, *quality assurance*, *Manual Test*, *Selenium Automation Test*, *UiPath Robotic Process Automation*, *The Distance to the Ideal Alternative*, *efficiency, usability.*

ABSTRACT

PERFORMANCE ANALYSIS OF MANUAL TESTING, SELENIUM AND ROBOTIC PROCESS AUTOMATION ON DIGITAL LECTURE SERVICES

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This research aims to provide a solution to the effectiveness of testing performance for the quality assurance of the Super App of Digital Informatics Services at UIN Sunan Gunung Djati Bandung as a measure to minimize the use of non-optimal applications due to mismatches due to non-application quality assurance in application development To overcome these problems, this study attempted to analyze the performance of manual testing, It also provides automated testing with the Selenium Automation Test framework and automated testing with the UiPath Robotic Process Automation (RPA) tool to gain knowledge about the most ideal alternative to be used in the Digital Informatics Service SuperApp testing through the approach of The Distance to The Ideal Alternative (DIA) method. Based on the results of the DIA analysis, RPA is the most ideal test alternative based on efficiency and usability parameters. RPA outperforms Selenium Automation Test and Manual Test with a value of Ri = 0 indicating that RPA has zero distance with an ideal alternative.

Keywords: Super App, Quality Assurance, Manual Test, Selenium Automation Test, UiPath Robotic Process Automation, The Distance to the Ideal Alternative, efficiency, usability.