

**ANALYSIS OF *WEBSITE* PERFORMANCE USING THE MTBF
APPROACH BASED ON MULTI-AGENT SYSTEM**

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ABSTRACT

Automated testing is the process of writing test code and executing it automatically using the Selenium WebDriver software, which is a framework that can control browser and website activity automatically with the assistance of an agent managing testing activities. This testing is based on a Multi Agent System, which is a framework for coordinating all testing activities. The system is designed to assist users in performing real-time testing to check the links within a website. The system implements the Mean Time Between Failure approach, which refers to the average time between one failure and the next. This approach describes how often failures occur in the system and provides a picture of the system's reliability over a certain period. On the Pustaka Obor Bookstore website, both manual and automated testing is performed. Manual testing is done using black box testing methods, resulting in 0 failed test scenarios, 62 passed test scenarios, and a total of 62 test scenarios. On the other hand, automated testing resulted in 323 invalid links out of 981 links. The broken links resulted in a Mean Time Between Failure of 0.123 seconds, indicating the average failure time during testing. The testing results graph shows that the broken link rate is 33%, while the optimal functioning link rate is 67%.

Keywords: *Testing, Automated Testing, Selenium, Multi-Agent System, Mean Time Between Failure*