

Abstract

The teaching plotting information system is a digital solution developed to replace the manual process of allocating lecturers and courses, which was previously done using Excel. However, in its implementation, the system must be tested in terms of performance and security to ensure optimal operation and protection against external threats. This study aims to evaluate system performance using the Stress Testing method and assess its security through a Vulnerability Assessment based on the OWASP Top 10 standard. Performance testing was carried out using Apache JMeter to simulate user surges and observe the system's response under high load. Meanwhile, security testing was conducted using OWASP ZAP to detect potential vulnerabilities. The results showed that the system performed well with up to 100 concurrent users but experienced significant degradation at 500 users. Several high-risk vulnerabilities were also found, including SQL Injection and Path Traversal. This study concludes that while the system is stable under normal conditions, further improvements are needed in both performance and security aspects to ensure a more reliable and secure application.

Keywords: Software Testing, Performance Testing, Security Testing, OWASP, Stress Testing, Vulnerability Assessment.
