

**ANALISIS PERFORMA SISTEM ABSENSI MENGGUNAKAN
TEKNIK *LOAD TESTING* DENGAN JMeter DI SMK TARUNA
BAKTI KERTOSONO**

*(PERFORMANCE ANALYSIS OF AN ATTENDANCE SYSTEM USING LOAD
TESTING TECHNIQUES WITH JMeter AT SMK TARUNA BAKTI
KERTOSONO)*

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ABSTRACT

This study aims to analyze the performance of the web-based and mobile attendance system at SMK Taruna Bakti Kertosono using the load testing technique with Apache JMeter. The background of this study is the increasing use of a digital attendance system based on face recognition and QR Code, which is accessed simultaneously by students, teachers, and administrators. This condition has the potential to affect the system's stability and response time, particularly during peak hours. Therefore, performance testing is required to ensure that the system can handle multiple concurrent users before being fully implemented. The research method employed load testing using Apache JMeter as the performance testing tool. Load testing was conducted by gradually increasing the number of virtual users, while gorilla testing was performed using repeated execution (looping) on the same test scenarios to evaluate the system's robustness under continuous operations. The testing focused on the QR Code scanning and leave request management features in the mobile application, as well as the attendance report feature on the website. The results indicate that the student mobile application demonstrated good performance in terms of Load Time, Latency, Throughput, and Error Rate. However, the Response Time in most test scenarios remained above the optimal response time of 0.1 seconds. The website and teacher mobile application showed several features with an Error Rate exceeding 5% due to testing environment limitations. Meanwhile, the gorilla testing results showed that most features maintained stable performance during repeated execution. These findings provide an evaluation that can be used as a basis for further improvement and development of the attendance system.

Keywords: *Attendance System, Load testing, Apache JMeter, Gorilla testing, System Performance.*