

ABSTRACT

The decline in sports participation in Indonesia year after year highlights the need to improve the accessibility and quality of sports facilities. This study aims to develop a back-end information system for Batununggal Indah Club in Bandung, focusing on the operational module. The issues addressed include designing a scalable system, implementing suitable features, and conducting testing steps to ensure optimal functionality. The Iterative Incremental method was used in development, allowing step-by-step completion that can be tested repeatedly. In this process, the system was designed to support various operational functions, such as venue booking, facility management, and member management. Each development iteration involved thorough testing to ensure the developed features worked properly before moving on to the next stage. The results showed that the system could handle 121,158 requests in 10 minutes with an average response time of 374 ms and a 0% error rate. Testing each API design showed positive responses and met expectations across all developed features. This indicates that the system can operate effectively and efficiently in real-world environments, with the ability to handle high workloads without failure. The benefits of this research include increased booking process efficiency, reduced human error, and streamlined management tasks. With this system, users can book sports facilities online more easily and quickly, while managers can handle facilities and members more efficiently. The results of this research are expected to enhance the efficiency and effectiveness of sports facility management, provide a better user experience, and contribute to digital transformation in the sports industry.

Keywords: Back-End, Batununggal Indah Club, Iterative Incremental, Operational Module.