

ABSTRACT

The advancements of information and communication technology have had a significant impact on various aspects of life, including governance. Governments are required to be more responsive, efficient, and transparent in delivering services to the public. However, the booking service for the National Hall and Guesthouse in Padangsidempuan City is still operated manually. This has led to issues such as slow processes and limited availability of information. The National Hall and Guesthouse Information System (SIGEMES) was developed to address these problems. The system is designed for two platforms, namely mobile and web. This research focuses on the back-end development, which plays a crucial role in integrating information between both platforms. The back-end development applies the systematic and straightforward Waterfall methodology, combined with the Clean Architecture approach to ensure the system remains independent from external services. The main features of the system include booking and management of hall and guesthouse data. The system has been evaluated using black-box testing and performance testing. Based on the evaluation, the black-box testing successfully passed all 102 test cases. Furthermore, the performance testing met the expected performance requirements, processing 100 requests per second with an average response time ranging from 0.03083 second to 0.51179 second without any failed requests.

Keywords: back-end, waterfall model, clean architecture, black-box testing, performance testing.