

ABSTRACT

Housing management is an essential activity that includes resident administration, environmental maintenance, and the effective delivery of information to residents. However, many housing areas have yet to optimally implement technology in their administrative and communication processes, including Cherry Field Housing.

This study aims to develop a web-based housing management application using the Rapid Application Development (RAD) method, which enables iterative development by involving users in every stage. The application is built using Next.js for the frontend, Express.js for the backend, and PostgreSQL as the database. The main features of the application include resident data management, complaint submission, permission letter requests, invoice notifications, and a centralized announcement system.

The developed application includes features such as online complaint forms, payment notifications, digital permission letters, broadcast announcements, and a monitoring dashboard. The system was evaluated using Blackbox Testing to verify functionality and the System Usability Scale (SUS) to assess user satisfaction. The testing results show that all features function properly and the average SUS score falls into the "excellent" category, indicating that the application is feasible to use and does not require further refinement.

In conclusion, the application successfully addresses the main problems faced by the residents and management of Cherry Field Housing, and contributes to the creation of a more efficient, transparent, and sustainable residential environment in line with Sustainable Development Goals (SDGs) number 11.

Keywords—web application, housing management, Rapid Application Development, System Usability Scale, usability testing