

ABSTRACT

Manual booking systems for sports facilities often lead to various problems, such as scheduling conflicts, uncertainty of availability information, and inefficient administrative processes for venue owners. This research aims to address these issues by developing a mobile cross-platform booking information system named Lokaraga. The system is designed to provide centralized, real-time information on schedules, prices, and venue availability, as well as to integrate the entire booking flow from search and schedule selection to payment into a single, unified platform. The system was developed using the Waterfall methodology, with a focus on designing the mobile application's user interface (frontend) using the Flutter framework. The application connects to a backend service via an API, ensuring that data remains accurate and synchronized. The primary functionalities developed include booking features for renters, venue and membership management for owners, and supervisory features for administrators. The result of this research is a functional mobile application that has undergone a series of black box tests. Testing revealed that all functional flows from user authentication, search, and booking to data management perform according to the design and successfully overcome the inefficiencies found in the manual system. Thus, the application successfully simplifies the booking process and provides an efficient digital solution for both renters and owners of sports facilities.

Keywords: information system, booking, cross-platform, mobile, sports facilities, Flutter.