

ABSTRAK

Proses reservasi lapangan di Kawali Sport Center selama ini dilakukan secara manual melalui kunjungan langsung atau komunikasi pesan singkat kepada pengelola. Cara ini menimbulkan berbagai kendala seperti keterlambatan pemesanan, bentroknnya jadwal, dan verifikasi pembayaran yang lambat. Selain itu, pengguna tidak dapat mengecek ketersediaan lapangan secara real-time, sehingga menurunkan efisiensi dan kepuasan layanan. Berdasarkan permasalahan tersebut, diperlukan sistem berbasis *web* yang dapat mempermudah proses reservasi dan pembayaran secara terintegrasi.

Tujuan penelitian ini adalah merancang dan membangun sistem reservasi lapangan berbasis *web* dengan metode *Rapid Application Development (RAD)*. Tahapan penelitian meliputi *requirement planning* untuk mengidentifikasi kebutuhan pengguna, *user design* dalam pembuatan rancangan antarmuka dan prototipe menggunakan Figma dan UML, *construction* untuk proses pengembangan sistem menggunakan PHP dan MySQL, serta *cutover* untuk implementasi dan pengujian menggunakan metode *Black Box Testing*. Sistem dilengkapi dengan fitur pengecekan ketersediaan lapangan secara *real-time*, pemesanan *online*, serta integrasi pembayaran melalui *Payment Gateway* Midtrans.

Hasil penelitian menunjukkan bahwa sistem yang dibangun dapat mempercepat proses pemesanan, mengurangi potensi bentrok jadwal, dan mempermudah verifikasi pembayaran. Penggunaan metode RAD membuat proses pengembangan menjadi lebih cepat, fleksibel, dan responsif terhadap perubahan kebutuhan pengguna. Sistem ini diharapkan mampu meningkatkan kualitas layanan reservasi di Kawali Sport Center serta menjadi referensi untuk pengembangan sistem serupa di bidang pengelolaan fasilitas olahraga.

Kata Kunci: Sistem Reservasi, *Web*, RAD, Lapangan Olahraga, Midtrans.

ABSTRACT

The reservation process at Kawali Sport Center has been carried out manually through direct visits or short message communication with the management. This approach has caused several issues such as booking delays, schedule conflicts, and slow payment verification. Furthermore, users cannot check field availability in real-time, which reduces service efficiency and user satisfaction. Based on these problems, a web-based system is needed to facilitate an integrated reservation and payment process.

The purpose of this study is to design and develop a web-based sports field reservation system using the Rapid Application Development (RAD) method. The research stages include requirement planning to identify user needs, user design for creating interface designs and prototypes using Figma and UML, construction for system development using PHP and MySQL, and cutover for implementation and testing with the Black Box Testing method. The system is equipped with real-time field availability checking, online booking, and payment integration through the Midtrans Payment Gateway.

The results show that the developed system can speed up the booking process, reduce schedule conflicts, and simplify payment verification. The use of RAD methodology allows faster, more flexible development and responsiveness to user requirements changes. This system is expected to improve the reservation service quality at Kawali Sport Center and serve as a reference for the development of similar systems in sports facility management.

Keywords: *Reservation System, Web , RAD, Sports Field, Midtrans.*