

ROUF VEBY UTOMO, 21.240.0049

SISTEM PERPUSTAKAAN ONLINE BERBASIS MOBILE DI SMK PGRI 2 TAMAN, di bawah bimbingan Ibu Devi Sugianti, M.Kom. dan Bapak Anas Syaifudin, M.Kom.

169 + xiii halaman / 91 gambar / 20 tabel / 21 pustaka (2014 – 2025)

ABSTRAK

Pengelolaan perpustakaan di SMK PGRI 2 Taman masih dilakukan secara manual menggunakan pencatatan fisik dalam buku besar, yang menyebabkan berbagai kendala seperti lambatnya pencarian data transaksi peminjaman dan pengembalian, ketidakpastian ketersediaan buku, serta kesulitan dalam penyusunan laporan dan pengingat keterlambatan pengembalian. Untuk mengatasi permasalahan tersebut, dikembangkan sistem perpustakaan online berbasis mobile yang bertujuan untuk mendukung proses digitalisasi pengelolaan perpustakaan. Pengembangan sistem dilakukan dengan metode Waterfall, yang meliputi tahapan analisis kebutuhan melalui observasi dan wawancara, perancangan sistem menggunakan diagram UML, serta implementasi aplikasi menggunakan framework Laravel untuk backend dan Flutter untuk frontend mobile. Sistem ini diuji menggunakan tiga metode pengujian, yaitu White Box Testing untuk menguji alur logika program, Black Box Testing untuk menguji fungsionalitas sistem, dan User Acceptance Test (UAT) untuk mengukur tingkat kepuasan pengguna. Hasil pengujian menunjukkan bahwa sistem berjalan sesuai rancangan, fitur berfungsi secara valid, dan diterima dengan baik oleh pengguna. Sistem ini diharapkan mampu meningkatkan kelancaran operasional, keakuratan data, dan kualitas layanan perpustakaan sekolah secara keseluruhan.

Kata Kunci: Sistem Informasi, Perpustakaan Online, Flutter, Laravel, Waterfall

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MOBILE-BASED ONLINE LIBRARY SYSTEM AT SMK PGRI 2 TAMAN,

under the supervision of Devi Sugianti, M.Kom. and Anas Syaifudin, M.Kom.

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ABSTRACT

The library management at SMK PGRI 2 Taman is still carried out manually using physical record books, which leads to various obstacles such as slow retrieval of borrowing and return transaction data, uncertainty of book availability, and difficulties in compiling reports and providing overdue return reminders. Administrative processes that rely on conventional documentation are also vulnerable to data loss and recording errors. To address these issues, a mobile-based online library system was developed to support the digitalization of library management. The system development followed the Waterfall methodology, comprising requirement analysis through observation and interviews, system design using UML diagrams, and implementation using the Laravel framework for the backend and Flutter for the mobile frontend. The system was tested using three methods: White Box Testing to evaluate program logic, Black Box Testing to validate system functionality, and User Acceptance Testing (UAT) to assess user satisfaction levels. The test results indicate that the system operates according to design, the features function correctly, and it was well received by users. This system is expected to enhance operational smoothness, data accuracy, and the overall quality of school library services.

Keywords: *Information System, Online Library, Flutter, Laravel, Waterfall*