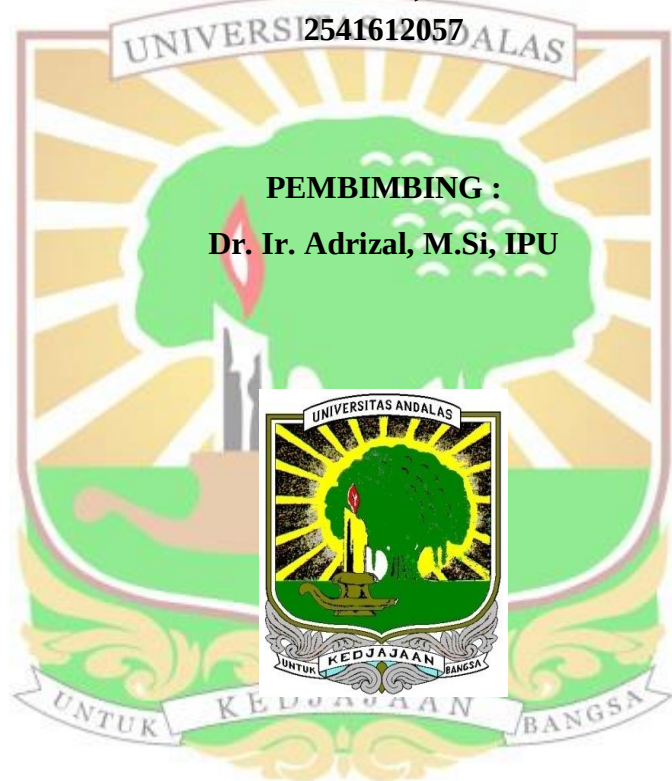


**REKAYASA SISTEM PEMBAYARAN AIR BERBASIS WEB DAN
PROGRESSIVE WEB APPLICATION UNTUK KELOMPOK
PENGELOLA SARANA PRASARANA AIR MINUM FAJAR INDAH II**

LAPORAN PENELITIAN

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INTISARI

Penelitian ini bertujuan mengembangkan Sistem Pembayaran Air Berbasis Web dan Progressive Web Application (PWA) bagi KPSPAM Fajar Indah II untuk menggantikan proses manual yang sering menimbulkan keterlambatan, kesalahan pencatatan, dan kurangnya transparansi. Sistem menyediakan pengelolaan data pelanggan, pencatatan tagihan otomatis, laporan real-time, fitur pengaduan, histori pembayaran, serta grafik penggunaan air. Pengembangan menggunakan pendekatan R&D dengan model ADDIE, meliputi: Analyze (identifikasi kebutuhan), Design (perancangan sistem), Develop (pengembangan aplikasi), Implement (penerapan dan uji coba), serta Evaluate (evaluasi efektivitas sistem). Hasil implementasi menunjukkan peningkatan efisiensi, pengurangan kesalahan data, dan kemudahan akses bagi pelanggan melalui perangkat seluler, sehingga mendukung akurasi dan transparansi pengelolaan air berbasis komunitas

Kata Kunci: Sistem Informasi, Pembayaran Air, KPSPAM, Web, PWA, ADDIE.



ABSTRACT

This study aims to develop a Web-based and Progressive Web Application (PWA) Water Billing System for KPSPAM Fajar Indah II to replace manual processes that often lead to reporting delays, recording errors, and low financial transparency. The system supports customer data management, automated billing and payment recording, real-time financial reporting, customer complaints, payment history tracking, and graphical visualization of water usage. The development applies an R&D approach integrated with the ADDIE model: Analyze (needs identification), Design (system architecture and interface design), Develop (application development), Implement (deployment and user testing), and Evaluate (system effectiveness assessment). The results demonstrate improved efficiency, reduced data errors, and easier access for users via mobile devices, contributing to better accuracy and transparency in community-based water management.

Keywords: Information System, Water Billing, KPSPAM, Web, PWA, ADDIE.

