

PENGEMBANGAN SISTEM AUTOMASI PEMBAYARAN LANGGANAN LAYANAN INTERNET PADA WAHYU NET MENGUNAKAN METODE RAD

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ABSTRAK

Penyedia layanan internet skala kecil sering menghadapi kendala dalam proses pengelolaan tagihan secara manual, seperti verifikasi bukti transfer dan keterlambatan aktivasi layanan. Penelitian ini bertujuan mengembangkan sistem automasi pembayaran langganan internet pada Wahyu Net yang mengintegrasikan payment gateway Midtrans, WhatsApp API (Fonnte), dan RouterOS MikroTik untuk manajemen pelanggan. Metode pengembangan yang digunakan adalah Rapid Application Development (RAD) yang meliputi tahap perencanaan kebutuhan, desain, pengembangan, dan implementasi. Pengujian sistem dilakukan melalui Black Box dan White Box testing, User Acceptance Testing (UAT) berdasarkan standar ISO 9126 terhadap tiga pengelola, serta System Usability Scale (SUS) terhadap 10 pelanggan. Hasil pengujian menunjukkan bahwa 100% skenario fungsional pada Black Box dan White Box berjalan sesuai rancangan. Evaluasi UAT memperoleh skor keseluruhan 92,67% (kategori Sangat Baik), dengan aspek usability 100% dan efficiency 91,11%. Pengujian SUS menghasilkan skor rata-rata 76,25 (kategori Good, Grade B). Sistem yang dibangun mampu mengotomatisasi verifikasi pembayaran real-time, manajemen sesi PPPoE, serta pengiriman notifikasi, sehingga mengubah proses administrasi manual menjadi terprogram.

Kata Kunci: Sistem Automasi Pembayaran, RT/RW Net, Midtrans, MikroTik, RAD, Wahyu Net

**DEVELOPMENT OF AN AUTOMATED PAYMENT SYSTEM FOR
INTERNET SERVICE SUBSCRIPTIONS AT WAHYU NET USING THE
RAD METHOD**

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ABSTRACT

Small-scale internet service providers often encounter challenges in manual billing management, such as transfer receipt verification and delayed service activation. This study aims to develop an automated subscription payment system for Wahyu Net by integrating the Midtrans payment gateway, WhatsApp API (Fonnte), and MikroTik RouterOS for customer management. The system was developed using the Rapid Application Development (RAD) method, consisting of requirements planning, user design, development, and implementation phases. System evaluation was conducted through Black Box and White Box testing, User Acceptance Testing (UAT) based on ISO 9126 standards with three administrators, and the System Usability Scale (SUS) involving 10 customers. The test results demonstrate that 100% of the functional scenarios in Black Box and White Box testing executed as designed. UAT evaluation achieved an overall score of 92.67% (Very Good category), with usability and efficiency aspects reaching 100% and 91.11%, respectively. The SUS evaluation yielded an average score of 76.25 (Good category, Grade B). The developed system is capable of automating real-time payment verification, PPPoE session management, and notification delivery, effectively transitioning manual administrative tasks into a programmed workflow.

Keywords: Payment Automation System, RT/RW Net, Midtrans, MikroTik, RAD, Wahyu Net