

ABSTRAK

Bintang Rehandika. 2026. Rancang Bangun Sistem Informasi *Rent Car* Berbasis *Website* Pada Bintang Travel Kabupaten Ponorogo. Skripsi. Program Studi Teknik Informatika, Fakultas Teknik, Universitas PGRI Madiun. Pembimbing (I) Sekreningsih Nita, S.Kom., M.T. (II) Slamet Riyanto, S.T., M.M.

Penelitian ini bertujuan untuk merancang dan membangun Sistem Informasi *Rent Car* berbasis *website* pada Bintang Travel Kabupaten Ponorogo guna mengatasi permasalahan operasional yang selama ini masih dilakukan secara manual, seperti tumpang tindih jadwal pemesanan, ketiadaan pemantauan perawatan armada secara digital, dan lambatnya rekapitulasi laporan keuangan. Metode pengembangan yang digunakan adalah model *Waterfall* yang mencakup tahapan analisis kebutuhan, desain sistem, implementasi, pengujian, dan pemeliharaan. Sistem dibangun menggunakan arsitektur *decoupled* dengan pustaka React pada sisi antarmuka (*frontend*), *framework* Laravel pada sisi logika peladen (*backend*), serta PostgreSQL sebagai sistem manajemen basis data relasional. Hasil penelitian menunjukkan bahwa sistem berhasil dibangun dengan fitur-fitur utama meliputi katalog armada secara *real-time*, manajemen reservasi terpusat, verifikasi pembayaran manual melalui unggahan bukti transfer, pencatatan riwayat perawatan kendaraan, notifikasi pengingat jadwal servis otomatis melalui Telegram, serta dasbor laporan keuangan bulanan yang interaktif. Pengujian fungsionalitas menggunakan metode *Black-Box Testing* menunjukkan hasil pengujian yang sesuai, sehingga sistem dinilai layak, sehingga sistem dinilai layak diimplementasikan untuk mendukung digitalisasi operasional bisnis Bintang Travel Kabupaten Ponorogo.

Kata Kunci: Sistem Informasi, *Rent Car*, *Website*, *Waterfall*, *Black-Box Testing*.

ABSTRACT

Bintang Rehandika. 2026. *Design and Development of a Web-Based Rent Car Information System at Bintang Travel, Ponorogo Regency. Undergraduate Thesis. Informatics Study Program, Faculty of Engineering, Universitas PGRI Madiun. Advisor (I): Sekreningsih Nita, S.Kom., M.T. Advisor (II): Slamet Riyanto, S.T., M.M.*

This study aims to design and develop a web-based Rent Car Information System for Bintang Travel, Ponorogo Regency, to address operational issues that have previously been managed manually, including overlapping booking schedules, the absence of a digital vehicle maintenance monitoring system, and the inefficient preparation of financial reports. The system was developed using the Waterfall software development model, which consists of the requirements analysis, system design, implementation, testing, and maintenance phases. The application adopts a decoupled architecture by utilizing React for the frontend, the Laravel framework for the backend, and PostgreSQL as the relational database management system. The research results indicate that the system was successfully developed with key features including a real-time vehicle catalog, centralized reservation management, manual payment verification through proof-of-transfer uploads, vehicle maintenance history management, automatic service reminder notifications via Telegram, and an interactive monthly financial reporting dashboard. Functional testing using the Black-Box Testing method showed that all features functioned in accordance with the expected requirements, indicating that the developed system is suitable for implementation to support the digital transformation of Bintang Travel's business operations in Ponorogo Regency.

Keywords: Information System, Rent Car, Website, Waterfall, Black-Box Testing.