

RANCANG BANGUN SISTEM *POINT OF SALE* (POS) BERBASIS WEB DENGAN FITUR ANALITIK BISNIS PADA UMKM RUMAH BU'E

ABSTRAK

UMKM Rumah Bu'E merupakan usaha di bidang *food and beverage* yang dalam operasionalnya masih mengandalkan pencatatan transaksi dan pengelolaan stok secara manual menggunakan buku catatan harian. Kondisi tersebut menimbulkan berbagai permasalahan, seperti transaksi yang kerap terlewat pada saat ramai pembeli, ketidaksesuaian data stok, serta proses rekap penjualan harian yang membutuhkan waktu dan rentan terhadap kesalahan pencatatan. Selain itu, pemilik tidak dapat memantau penjualan secara jarak jauh karena tidak tersedia sistem yang mendukung akses informasi secara fleksibel. Penelitian ini bertujuan untuk merancang dan membangun sistem *Point of Sale* (POS) berbasis web dengan fitur analitik bisnis guna mendukung pengelolaan transaksi, stok produk, pelaporan penjualan, serta pengambilan keputusan operasional berbasis data bagi pemilik UMKM Rumah Bu'E. Metode pengembangan sistem yang digunakan adalah metode *Waterfall* yang mencakup tahap analisis kebutuhan, perancangan, implementasi, pengujian, serta operasional dan pemeliharaan. Sistem dibangun menggunakan *framework* Laravel, Bootstrap, dan MySQL. Hasil penelitian menunjukkan bahwa sistem *Point of Sale* berbasis web yang dikembangkan telah berhasil dibangun dan terbukti lebih efektif dan efisien dibandingkan sistem pencatatan manual yang sebelumnya digunakan. Sistem ini menyediakan fitur pencatatan transaksi otomatis, manajemen stok produk, sesi kas harian, laporan penjualan, serta *dashboard* analitik bisnis yang menyajikan visualisasi tren penjualan, distribusi metode pembayaran, analisis penjualan produk, analisis jam sibuk (*peak hour*), dan rekomendasi restock otomatis berbasis proyeksi ketahanan stok, sebagai pendukung pengambilan keputusan operasional bagi pemilik usaha.

Kata Kunci : *Point of Sale* (POS), Analitik Bisnis, Sistem Informasi, UMKM, *Waterfall*

DESIGN AND BUILD A WEB-BASED POINT OF SALE (POS) SYSTEM WITH BUSINESS ANALYTICS FEATURES FOR RUMAH BU'E MSMEs

ABSTRACT

Rumah Bu'E MSMEs are businesses in the food and beverage sector which in their operations still rely on recording transactions and managing stock manually using a diary. This condition poses various problems, such as transactions that are often missed when there are many buyers, stock data mismatches, and daily sales recap processes that take time and are prone to recording errors. In addition, the owner cannot monitor sales remotely because there is no system that supports flexible access to information. This research aims to design and build a web-based Point of Sale (POS) system with business analytics features to support transaction management, product stock, sales reporting, and data-driven operational decision-making for Rumah Bu'E MSME owners. The system development method used is the Waterfall method which includes the stages of needs analysis, design, implementation, testing, as well as operations and maintenance. The system is built using the Laravel, Bootstrap, and MySQL frameworks. The results of the study show that the developed web-based Point of Sale system has been successfully built and proven to be more effective and efficient than the manual recording system previously used. This system provides automatic transaction recording features, product stock management, daily cash sessions, sales reports, and business analytics dashboards that provide visualization of sales trends, distribution of payment methods, analysis of best-selling products, analysis of peak hours, and automatic restock recommendations based on projected stock resilience, as a support for operational decision-making for business owners.

Keywords: *Point of Sale* (POS), Business Analytics, Information Systems, MSMEs, *Waterfall*