

ABSTRAK

Di era digital, efisiensi operasional sangat krusial bagi UMKM. Café Nokira saat ini masih mengandalkan proses pencatatan penjualan dan pengelolaan stok secara manual. Hal ini rentan memicu antrean panjang, kesalahan perhitungan transaksi, ketidakakuratan data stok barang, serta keterlambatan dalam penyusunan laporan keuangan. Penelitian ini bertujuan untuk merancang dan membangun sebuah sistem informasi penjualan berbasis aplikasi *mobile* (Android) guna mengatasi permasalahan tersebut. Pengembangan sistem menggunakan metode *Waterfall*, yang dilakukan secara sistematis melalui lima tahapan: analisis kebutuhan, perancangan sistem, implementasi, pengujian, dan pemeliharaan. Aplikasi kasir yang dikembangkan memiliki empat menu utama, yaitu Manajemen (barang, kategori, stok, dan pelanggan), Transaksi Penjualan, Laporan (ringkasan, transaksi, laba rugi), serta Pengaturan. Kualitas sistem dievaluasi menggunakan dua metode pengujian, yaitu *Black Box Testing* dan *Performance Testing*. Hasil pengujian fungsional dengan *Black Box* menunjukkan bahwa seluruh fitur aplikasi beroperasi dengan semestinya, berstatus valid, dan memenuhi kebutuhan fungsional pengguna. Selanjutnya, hasil *Performance Testing* membuktikan tingkat efisiensi sistem yang sangat baik, di mana rata-rata penggunaan CPU hanya sebesar 12%-24% (dengan lonjakan puncak 35%), serta konsumsi memori (RAM) yang tergolong ringan, yakni rata-rata 124 MB pada beban puncak. Kesimpulannya, sistem ini berhasil mengotomatisasi operasional transaksi secara akurat dan sangat layak diimplementasikan tanpa membebani perangkat keras.

Kata Kunci : Sistem Informasi Penjualan, Android, *Cafe* Nokira, Metode *Waterfall*, Aplikasi Kasir.

ABSTRACT

In the digital era, operational efficiency is crucial for MSMEs. Café Nokira currently still relies on manual sales recording and stock management processes. This is prone to causing long queues, transaction calculation errors, inaccurate item stock data, and delays in preparing financial reports. This research aims to design and build an Android-based mobile sales information system to overcome these problems. System development uses the Waterfall method, which is carried out systematically through five stages: requirements analysis, system design, implementation, testing, and maintenance. The developed cashier application has four main menus, namely Management (items, categories, stock, and customers), Sales Transactions, Reports (summary, transactions, profit/loss), and Settings. System quality was evaluated using two testing methods, namely Black Box Testing and Performance Testing. Functional testing results using Black Box show that all application features operate properly, are valid, and meet user functional needs. Furthermore, Performance Testing results prove an excellent level of system efficiency, where average CPU usage is only 12%-24% (with a peak of 35%), and memory (RAM) consumption is classified as lightweight, averaging 124 MB at peak loads. In conclusion, this system successfully automates transaction operations accurately and is highly feasible to implement without overburdening hardware.

Keywords: Sales Information System, Android, Cafe Nokira, Waterfall Method, Cashier Application.