

ABSTRAK

Pengelolaan bahan baku makanan dalam menjaga kualitas makanan menjadi aspek paling krusial industri makanan. PT. EKY Semesta Raya yang merupakan badan usaha yang bergerak dalam penjualan bahan baku makanan masih memiliki permasalahan dalam penghitungan stok. Penelitian ini bertujuan merancang dan membangun Sistem Informasi Manajemen Persediaan berbasis web dengan menerapkan metode First Expired First Out (FEFO) untuk membantu pengelolaan persediaan, menyajikan informasi stok secara terintegrasi, serta mendukung proses monitoring dan pengambilan keputusan. Hasil penelitian menunjukkan bahwa sistem mampu mengelola data persediaan, barang masuk, barang keluar, transaksi, serta batch kedaluwarsa secara terintegrasi. Selain itu, sistem menyajikan dashboard informasi persediaan, menerapkan mekanisme FEFO dalam proses pengeluaran barang, serta pembagian hak akses berbasis Role Based Access Control (RBAC) sesuai peran pengguna. Berdasarkan hasil User Acceptance Testing (UAT) yang melibatkan Owner, Manajer Operasional, Admin, dan Staff Gudang dengan total 40 skenario pengujian, seluruh skenario memperoleh hasil valid sehingga sistem dinyatakan memenuhi kebutuhan pengguna dalam mendukung pengelolaan dan monitoring persediaan bahan baku di PT. EKY Semesta Raya.

Kata Kunci : Sistem Informasi, Stok, Kedaluwarsa, First Expired First Out

ABSTRACT

Raw material management in maintaining food quality is a crucial aspect of the food industry. PT EKY Semesta Raya, an enterprise engaged in the sales of food raw materials, still faces challenges in stock calculation. This study aims to design and develop a web-based Inventory Management Information System by applying the First Expired First Out (FEFO) method to assist in inventory management, present integrated stock information, and support monitoring as well as decision-making processes. The results show that the system is capable of managing inventory data, incoming goods, outgoing goods, transactions, and expiration batches in an integrated manner. Furthermore, the system provides an inventory information dashboard, implements the FEFO mechanism in the goods issuance process, and enforces access control based on Role-Based Access Control (RBAC) according to user roles. Based on the User Acceptance Testing (UAT) results—which involved the Owner, Operational Manager, Admin, and Warehouse Staff across a total of 40 test scenarios—all scenarios achieved valid results, confirming that the system meets user requirements in supporting raw material inventory management and monitoring at PT EKY Semesta Raya.

Keywords: Information System, Stock, Expired, First Expired First Out