

Abstrak

Sistem informasi memiliki peran penting dalam mengoptimalkan efisiensi dan akurasi pengelolaan produk terutama dalam industri retail seperti Indomaret. Penelitian ini bertujuan untuk merancang dan mengimplementasikan sistem informasi pengelolaan barang kedaluwarsa dengan menerapkan metode *First Expired First Out* (FEFO) di Indomaret Cirewed, Cikupa. Metode FEFO diterapkan untuk memprioritaskan produk dengan tanggal kedaluwarsa terdekat agar terjual terlebih dahulu sehingga meminimalkan risiko produk kedaluwarsa tetap berada di rak. Metode penelitian yang digunakan meliputi observasi, wawancara, dan studi pustaka, untuk analisis kebutuhan sistem dilakukan dengan metode analisis *User Requirement Specification* (URS), proses pengembangan sistem dilakukan dengan metode *Rapid Application Development* (RAD), yang mencakup tahap perancangan, pengembangan, dan pengujian sistem. Sistem ini dirancang untuk mendukung pengecekan produk secara otomatis, menghasilkan laporan barang kedaluwarsa secara *real-time*, serta meningkatkan akurasi dan efisiensi pengelolaan data. Hasil penelitian menunjukkan bahwa sistem informasi yang dikembangkan berhasil mengatasi kelemahan proses manual, seperti rendahnya efisiensi dan tingginya risiko kesalahan manusia, penerapan metode FEFO dalam sistem memastikan pengelolaan barang kedaluwarsa menjadi lebih terstruktur dan akurat. Dengan implementasi sistem ini Indomaret Cirewed mampu meningkatkan kualitas layanan pelanggan dan mengurangi jumlah produk kedaluwarsa yang tidak terjual.

Kata Kunci : Sistem Informasi, Barang Kedaluwarsa, Metode *First Expired First Out* (FEFO), Retail, Indomaret

Abstract

Information systems play a crucial role in optimizing the efficiency and accuracy of product management, especially in retail industries like Indomaret. This study aims to design and implement an information system for managing expired goods by applying the First Expired First Out (FEFO) method at Indomaret Cirewed, Cikupa. The FEFO method is applied to prioritize products with the nearest expiration dates to be sold first, minimizing the risk of expired products remaining on the shelves. The research methods include observation, interviews, and literature reviews. The system requirements analysis is conducted using the User Requirement Specification (URS) method, analyze system requirements. The system development process adopts the Rapid Application Development (RAD) method, covering the stages of system design, development, and testing. The system is designed to support automated product checks, generate real-time expired goods reports, and improve data management accuracy and efficiency. The research results indicate that the developed information system successfully addresses the weaknesses of manual processes, such as low efficiency and high risk of human error. The application of the FEFO method in the system ensures more structured and accurate management of expired goods. With the implementation of this system, Indomaret Cirewed has improved customer service quality and reduced the number of unsold expired products.

Keywords: *Information System, Expired Goods, First Expired First Out (FEFO) Method, Retail, Indomaret*