

ABSTRACT

DESIGN AND DEVELOPMENT OF A WEB-BASED SPAREPARTS INVENTORY MANAGEMENT APPLICATION AT PT OPQ USING THE WATERFALL METHOD.

Enriqo Harpa Armadani. ¹⁾, Augury El Rayeb, S.Kom., MMSI. ²⁾

¹⁾ Student of Information System Department, Universitas Pembangunan Jaya

²⁾ Lecturer of Information System Department, Universitas Pembangunan Jaya.

Optimal spare parts inventory management is highly needed by PT OPQ to maintain smooth company operations. Currently, the stock management process is still carried out manually, which potentially causes recording errors, complicates stock availability monitoring, and slows down the reporting process. To overcome these problems, this research aims to develop a web-based spare parts inventory application using the Waterfall software development method. This application is designed to automate inventory management processes, from recording incoming and outgoing goods, monitoring stock, to generating real-time reports.

The selection of the Waterfall method is based on its structured approach and clear stages, including requirements analysis, system design, implementation, testing, and maintenance. The application is built using modern web technologies to ensure easy access and usability. The implementation of this application at PT OPQ has a positive impact in terms of improving stock management efficiency, reducing recording errors, and accelerating decision-making related to spare parts needs. Overall, this application is expected to improve the productivity and operational effectiveness of the company.

Keywords: Spare Parts Inventory, Web-Based Application, Waterfall, Stock Management, Automation.