

ABSTRACT

Design and Development of a Web-Based LPG Cylinder Inventory Application at PT ABC Using the RAD Method

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Assets are a crucial element in supporting company operations, especially for distribution companies such as PT ABC, which operates in the energy distribution sector. One of the key assets that must be properly managed is the Liquefied Petroleum Gas (LPG) cylinder, which is stored in warehouses as well as loaned to customers. PT ABC currently faces issues with inventory and asset movement records, which are still maintained manually using Microsoft Excel without standardization. This leads to difficulties in monitoring, delays in data processing, stock shortages, and potential asset loss. To address these issues, this study aims to design and develop a web-based LPG cylinder inventory application. The study adopts the Rapid Application Development (RAD) method, which is considered effective for accelerating the development process within a limited timeframe through iterative and collaborative approaches. Data collection was conducted through observation, semi-structured interviews, and literature review. The outcome of this study is a web application that facilitates real-time recording of cylinder loan and return transactions, monitoring of cylinder stock in both warehouses and customer sites, and structured asset movement reports. The system is expected to help reduce the risk of asset loss, improve operational efficiency, and support PT ABC's digital transformation efforts.

Keywords: LPG Cylinder Inventory, Information System, RAD, Web Application.

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