

DESIGN AND DEVELOPMENT OF A SUBSIDIZED LPG GAS DISTRIBUTION MONITORING SYSTEM USING THE PROTOTYPING METHOD

Student Name : M. Rizki Hidayat
Student ID : 6304211328
Supervisor : Eva Yumami, S.Kom., M.T
Co-Supervisor : Muhammad Ridho Nosa, S.T, M.Kom

ABSTRACT

The LPG distribution system plays an important role in ensuring energy availability for the community, yet the manual processes still commonly used often lead to issues such as delayed stock information, recording errors, and a lack of transparency between agents, distribution points, and supervisory authorities. This study aims to design and develop an LPG distribution application using Flutter and the Prototyping method, which allows developers and users to interact directly during development so that system requirements can be quickly adjusted based on user feedback. The application consists of several main modules: the Agent module for sending and managing LPG stock, the Distribution Point module for confirming stock reception and recording sales to customers, and the Disperindag module for monitoring sales reports and distribution activities. The backend is developed using PHP and MySQL to support fast and real-time data communication. The results of this study indicate that the Prototyping approach accelerates the development process and improves the alignment of system features with user needs. With this application, the LPG distribution process becomes more efficient, transparent, and easier for relevant stakeholders to monitor.

Keywords: *Application, LPG Gas, Prototyping*