DESIGNING A LOADING AND UNLOADING LABOR INFORMATION SYSTEM APPLICATION USING EXTREME PROGRAMMING METHODS

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ABSTRACT

This research aims to design and build a stevedoring workforce information system (TKBM) application using the Extreme Programming method. Currently, the process of recording attendance, scheduling, and assigning tasks is still done manually, which often results in errors and administrative delays. The application was developed using the Flutter framework using the Dart language and a MySQL database, to replace conventional paper-based and spreadsheet-based methods that are inefficient. This system makes it easier for officers to record attendance, manage payslips, and convey information about ships that will dock. Using the Extreme Programming approach, development was carried out iteratively and responsive to user needs. Test results show that the application improves work efficiency, reduces recording errors, and speeds up the TKBM administrative process. It is expected that this system can improve port operations more organized and encourage a significant increase in workforce productivity.

Keywords: *Information Systems, Loading and Unloading Workers (TKBM), Extreme Programming, Mobile Applications*