

***Design and Development of a Mobile Application for Mahesa Digital printing
Ordering System in Kediri Regency Using Flutter***

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ABSTRACT

This study aims to design and build a mobile-based digital printing service ordering application using the Flutter framework at Mahesa Digital printing in Kediri Regency. Thus far, printing operations such as customer service and recording order specifications are still conducted manually, which often takes an average of 10 to 15 minutes per customer. Furthermore, this conventional method is susceptible to human error in the recapitulation of order data, which frequently occurs around 3 to 5 times a week due to negligence or miscommunication. This mobile application system is developed using the Flutter framework, Dart programming language, and MySQL database, applying the Waterfall method for its software development life cycle. To simplify operational layouts, the system structurally separates functional access rights for two main roles, namely Customers and Administrators. Based on the functional testing results using Black Box Testing with the Equivalence Partitioning method, the system demonstrated a 100% success rate and was capable of rejecting invalid data, including on the registration page testing which requires the correct input format for Full Name, phone number, and username. The mobile interface feasibility testing using the System Usability Scale (SUS) method achieved an average score of 83.75, proving that the application falls into the highly acceptable (Excellent) category and is easy for users to understand. This system is expected to automate the business processes at Mahesa Digital printing to increase the efficiency of the service process and significantly minimize errors in order recapitulation recording.

Keywords: *Digital printing, Flutter Framework, Mobile Application, Waterfall Method, System Usability Scale.*