

DESIGN AND DEVELOPMENT OF A&R CAR WASH INFORMATION SYSTEM (SIPAR) USING THE WATERFALL METHOD

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ABSTRACT

A&R Car Wash is one of the car wash businesses located in Sangatta Utara. This car wash has many loyal customers and several employees. However, the management of data such as customer data recap, employee data, and transaction data is still done manually. This method is considered ineffective and inefficient for data processing. While using a manual system in the form of books, several issues frequently occur, including data loss, data manipulation by employees, and discrepancies between transaction data received and the data written in the books. To address these problems, an information system for A&R Car Wash is needed to facilitate the business owner in managing their business data. The design and development of the A&R Car Wash Information System is carried out using the Waterfall method with a web-based approach through the CodeIgniter framework. During the development process, several documents will be produced, including the software requirements specification document, software design description document, and software testing document. In the requirement analysis stage, 13 system functional requirements were identified, and three types of users were determined: admin, customer, and employee. In the system design stage, 13 use case diagrams were modeled based on the identified functional requirements. The process continued to the implementation stage, where the system coding was carried out using the CodeIgniter framework. Next is the testing stage, which involves functional testing of the system using the black box testing method. The testing was successfully completed. After testing, the process proceeded to the deployment stage, where the SIPAR website will be hosted and made ready for use.

Kata kunci: UMKM, A&R Car Wash, Information System, *Waterfall*