

ABSTRACT

The population data management in Ampel District, Boyolali Regency, is still conducted manually, relying on physical documents and Microsoft Excel. This method is prone to data entry errors, duplication, and delays in verification and validation processes, which hinder administrative efficiency and data-driven decision-making. To address these issues, a web-based Population Information System was developed to improve data recording accuracy and facilitate easier access and management of population records. The system was developed using the ICONIX Process methodology, which includes requirement analysis, Domain Model creation, Use Case Diagram, Robustness Diagram, and Sequence Diagram to ensure a structured and user-centered system design. The system was tested using the black box testing method, with test scenarios covering user authentication, population data management, family card processing, housing data management, data validation by validators, report generation, and barcode scanning features. The test results showed a 100% success rate, indicating that all tested features performed as expected. With the implementation of this system, population data management becomes more organized, transparent, and efficient. The system effectively reduces data entry errors, speeds up data validation processes, and enhances the accuracy and accessibility of information for authorities. Furthermore, automatic notifications and an interactive dashboard enable real-time data monitoring, supporting more accurate and data-driven administrative decision-making.

Keywords: *Population Information System, ICONIX Process, Black Box Testing, Population Administration*