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Driving Digital Business Innovation Through Uml-Based Web Inventory System Design

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Abstract
The research is based on the development of a digital inventory and borrowing management system prototype through prototyping methodology. The system was designed to solve the inefficiencies often encountered during manual borrowing by integrating ordered features such as a login and registration page, a real-time monitoring dashboard, a borrowing request form, an admin validation page, and reporting and tracking borrowing history modules. These features are particularly designed to facilitate safe user authentication, unambiguous request submission, efficient validation, and brief reporting. The prototype is highly promising in terms of enhancing user experience, streamlining administrative work, and validating proper inventory management. It is clear from the findings that the system can enhance accountability, minimize errors, and provide informative information in the form of readily available digital reports. For full-scale development, additional usability testing and integration into organizational workflows on a larger scale are recommended.

Keywords: Prototyping, Inventory Management, Borrowing System, Dashboard, Reporting