

ABSTRACT

Design and Development of a Web-Based School Transportation Booking Application for Operations and Academics in XYZ School.

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School transportation management is important for academic and operational activities, but it is still done manually. This leads to scheduling conflicts and data inaccuracies. This research aims to design and build a web-based application to automate the transportation booking process at XYZ School. The objective is to create a system that centralizes vehicle scheduling, booking management, and reporting. The Waterfall model was used as the system development methodology. The development process includes several stages: requirements analysis, system design using Unified Modeling Language (UML), implementation using JavaScript and MySQL, and Black-Box testing. The result of this research is a web-based school transportation booking application. This system features data management for vehicles and users, a booking calendar, an automated approval workflow, and email notifications for booking confirmations and changes. Additionally, the system includes a reporting module that allows for data filtering and exporting to Excel. This system successfully provides a centralized and automated solution for managing school transportation, improving data accuracy, and simplifying coordination.

Keywords: Transportation Booking Application, Web-Based Application, School Operational, Waterfall.