

ABSTRACT

IMPLEMENTATION OF A WEB-BASED EMPLOYEE ATTENDANCE SYSTEM USING THE MODEL-VIEW-CONTROLLER (MVC) ALGORITHM AT THE TANJUNG RATU ILIR VILLAGE OFFICE

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Advancements in information technology have prompted institutions, including village offices, to switch from manual processes to digital systems. The Tanjung Ratu Ilir Village Office still uses a manual attendance method. Staff manually signed in daily logbooks. This causes queues, delays in recapping attendance, risks of data manipulation, and problems with long-term data storage. This study developed and described a web-based attendance system that uses the Model-View-Controller (MVC) architecture to meet the village office's operational needs. This research used a descriptive qualitative approach. The waterfall development method was applied during requirements analysis and system design. Data were collected through observation and interviews with employees and administrative staff at the village office. The findings demonstrated that the web-based attendance system effectively overcomes the limitations of manual processes by enabling real-time attendance recording, automated recaps, successful attendance notifications, and improved employee data management. The MVC architecture facilitates development, maintenance, and separation of application logic, resulting in a stable and scalable system. Black-box testing confirmed that all core functions, including login, check-in/check-out, employee data management, and report generation, operate in accordance with user requirements. Employee feedback was predominantly positive, though some users required time to adapt to the digital system. This study concludes that the web-based attendance system using the MVC architecture is suitable for implementation in rural settings, as it enhances efficiency, accuracy, and transparency in attendance recording. The system also has the potential for further development through the integration of additional security features and cloud-based servers, which can improve accessibility.

Keywords: Employee Attendance, Web, Model-View-Controller (MVC), Waterfall, Village Office Digitalization

