

ABSTRAK

Abdul Hafizh : Pengembangan Aplikasi Absensi Siswa Berbasis *Website* Menggunakan PHP *Framework* Laravel 12 dengan Integrasi Teknologi RFID di MAN 1 Langkat. Fakultas Teknik, Universitas Negeri Medan, 2026

Penelitian ini dilatarbelakangi oleh pencatatan kehadiran siswa di MAN 1 Langkat yang masih manual berbasis kertas sehingga memakan waktu lama, rentan human eror, serta tidak transparan bagi orang tua. Penelitian ini bertujuan untuk merancang, membangun, dan menguji kelayakan aplikasi absensi siswa berbasis *website* menggunakan *Framework* Laravel 12 yang terintegrasi dengan teknologi *Radio Frequency Identification* (RFID) dan WhatsApp API. Metode penelitian yang digunakan adalah *Research and Development* (R&D) dengan model pengembangan *Waterfall*. Pengumpulan data dilakukan melalui observasi, wawancara, dan kuesioner, di mana pengujian validitas menggunakan formula Aiken's V dan uji akseptabilitas menggunakan pendekatan *Technology Acceptance Model* (TAM).

Hasil penelitian menunjukkan aplikasi absensi dengan arsitektur *Model-View-Controller* (MVC) berhasil dibangun dan berfungsi dengan baik. Hasil uji validitas dari ahli sistem informasi dan praktisi melampaui standar minimal koefisien Aiken's V sebesar 0,677, sehingga sistem dinyatakan valid dan layak diterapkan. Sementara itu, uji akseptabilitas TAM kepada guru (22 responden) dan orang tua (36 responden) menunjukkan hasil kategori "Sangat Baik" pada seluruh aspek (PU, PEOU, ATU, BIU, AU) dengan persentase berkisar antara 98% hingga 100%. Kesimpulannya, aplikasi ini efektif mempercepat pencatatan kehadiran, mengotomatisasi rekapitulasi laporan, serta mengoptimalkan pengawasan kedisiplinan siswa secara *real-time*.

Kata Kunci: Aplikasi Absensi, *Website*, Laravel 12, RFID, WhatsApp API, TAM.



ABSTRACT

Abdul Hafizh : Development of Web-Based Student Attendance Application Using PHP Framework Laravel 12 Integrated with RFID Technology at MAN 1 Langkat. Faculty of Engineering, Universitas Negeri Medan, 2026.

This research is initiated by the manual paper-based attendance tracking system at MAN 1 Langkat, which is time-consuming, prone to human error, and lacks real-time transparency for parents. This study aims to design, develop, and evaluate the feasibility of a web-based student attendance application using the Laravel 12 framework integrated with RFID technology and the WhatsApp API. The Research and Development (R&D) method with the Waterfall development model was employed. Data collection involved observations, interviews, and questionnaires, with validation analyzed using Aiken's V formula and user acceptability measured through the Technology Acceptance Model (TAM).

The findings demonstrate that the attendance application based on the Model-View-Controller (MVC) architecture was successfully developed and functions properly. The validation results from information systems experts and practitioners exceeded the minimum Aiken's V coefficient standard of 0.677, declaring the system valid and highly feasible. Concurrently, the TAM acceptability test involving teachers (22 respondents) and parents (36 respondents) achieved an "Excellent" rating across all aspects (PU, PEOU, ATU, BIU, AU) with scores ranging from 98% to 100%. In conclusion, this application is highly effective in accelerating attendance logging, automating report summaries, and optimizing student discipline monitoring in real-time.

Keywords: Attendance Application, Website, Laravel 12, RFID, WhatsApp API, TAM.

