

SISTEM ABSENSI SISWA SMK NEGERI 2 RUPAT *BERBASIS WEBSITE*

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ABSTRAK

Perkembangan teknologi informasi mendorong digitalisasi Administrasi sekolah, termasuk absensi siswa. Namun, proses absensi di SMK Negeri 2 Rupert masih dilakukan secara manual dengan memanggil nama siswa dan mencatatnya pada buku absensi, sedangkan *rekapitulasi* data menggunakan *Microsoft Excel* sehingga prosesnya menjadi lambat. Selain itu, orang tua belum dapat memantau kehadiran anak secara langsung. Penelitian ini bertujuan merancang sistem absensi siswa berbasis website untuk membantu guru melakukan absensi dan rekapitulasi data secara otomatis. Sistem ini memungkinkan wali kelas memvalidasi keterangan absensi dan memantau kehadiran siswa berdasarkan mata pelajaran, guru BK merekap data sakit, izin, dan alfa, kepala sekolah memantau laporan kehadiran, serta orang tua memantau kehadiran anak dan mengirim surat sakit atau izin. Penelitian ini menggunakan Metode *Waterfall*. Sistem dikembangkan menggunakan *framework Laravel* 13 dan database *MySQL*, dengan fitur pengelolaan jadwal pelajaran, absensi, *rekapitulasi* data dalam format *PDF* dan *Excel*, serta pemantauan dan pengiriman surat sakit atau izin. Pengujian dilakukan menggunakan *Black Box Testing* terhadap enam peran pengguna, yaitu *Admin*, guru mata pelajaran, wali kelas, guru BK, kepala sekolah, dan orang tua, serta pengujian *kompatibilitas* perangkat dan *browser*. Hasil pengujian menunjukkan seluruh fungsi berjalan sesuai skenario dan sistem dapat digunakan dengan baik pada laptop, *smartphone*, serta berbagai *browser* yang diuji. Dengan demikian, sistem dapat digunakan di SMK Negeri 2 Rupert.

Kata Kunci : Sistem Absensi, *Website*, *Waterfall*, *Monitoring*, *Black Box Testing*, *framework Laravel*.

WEB-BASED STUDENT ATTENDANCE SYSTEM AT

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ABSTRACT

The development of information technology has encouraged the digitalization of school administrative processes, including student attendance management. However, the attendance process at SMK Negeri 2 Rupert is still conducted manually by calling students' names and recording their attendance in an attendance book, while attendance data is recapitulated using Microsoft Excel, making the process time-consuming. In addition, parents are unable to monitor their children's attendance directly. This study aims to design and develop a web-based student attendance system to assist teachers in recording attendance and automatically generating attendance recapitulation reports. The system enables homeroom teachers to validate attendance records and monitor student attendance by subject, guidance and counseling teachers to recapitulate records of sick, permitted, and absent students, school principals to monitor attendance reports, and parents to monitor their children's attendance and submit sick leave or permission letters. This study adopted the Waterfall method. The system was developed using the Laravel 13 framework and MySQL database, featuring class schedule management, attendance recording, attendance report generation in PDF and Excel formats, as well as attendance monitoring and submission of sick leave or permission letters. System testing was conducted using Black Box Testing involving six user roles, namely administrators, subject teachers, homeroom teachers, guidance and counseling teachers, school principals, and parents, along with device and browser compatibility testing. The testing results indicate that all system functions operated according to the expected scenarios, and the system performed well on laptops, smartphones, and various web browsers. Therefore, the system is suitable for implementation at SMK Negeri 2 Rupert.

Keywords: *Attendance System, Website, Waterfall, Monitoring, Black Box Testing, framework Laravel.*