

## ABSTRACT

### ***Design and Development of an Employee Attendance Application Using the Web Engineering Method (Case Study at Makhtab.Id Store)***

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Manual attendance recording often presents challenges in terms of accuracy, delayed reporting, and difficulties in monitoring attendance data in real time. Therefore, this study aims to design and develop a web-based employee attendance application for Toko Makhtab.id using the Web Engineering approach. Web Engineering is a software engineering model designed for developing web-based applications, encompassing processes to create high-quality websites, and integrates principles of software engineering with other aspects such as design, information organization, and programming. The development process in Web Engineering consists of several key stages: 1) Communication, 2) Planning, 3) Modeling, 4) Construction, and 5) Deployment. The Laravel framework was used as the main backend technology due to its flexibility and efficiency. The application was tested using the Black Box Testing method to ensure that all developed features function as intended. The application includes several main features, such as QR Code-based attendance, face recognition, webcam selfies, shift management, digital leave requests, and attendance reporting in PDF and Excel formats. The development results indicate that the Web Engineering approach plays a significant role in facilitating a structured and need-oriented system development process. Although the application has not yet reached the implementation stage in the actual work environment, the results show that the system is ready for use and has the potential to be implemented as a digital solution for attendance management in the future.

**Keywords:** Attendance Application, Web Engineering, Laravel, Employee Management, Black Box Testing.

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