

ABSTRACT

DESIGNING AN ANDROID-BASED TEACHER ATTENDANCE SYSTEM APPLICATION USING AGILE SCRUM METHOD

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SMP Negeri Satu ATAP 1 Bantarsari still employs a manual attendance system using paper as the primary tool for recording attendance. This method is prone to potential issues such as data manipulation, loss of attendance records, inaccurate attendance recap processes that take up to 2 hours, and teachers having to queue to record their attendance. This research aims to design and develop an Android-based teacher attendance system using the Agile Scrum methodology to address the existing problems in the attendance system at SMP Negeri Satu Atap 1 Bantarsari. The Agile Scrum method was chosen due to its ability to support flexible and structured software development. The research stages include needs analysis, system design using Unified Modeling Language (UML), application implementation, and testing using Black Box Testing. The results indicate that the developed application successfully replaces the ineffective manual attendance system, improving process efficiency from 42.1% to 78.9%. The application provides multi-user login features, attendance recording, attendance data recapitulation, and teacher data management by the admin. The system is also designed to ensure data security through integration with Firebase. With these outcomes, the application is expected to serve as a significant solution in enhancing teacher productivity and work discipline, as well as becoming a model for implementing modern technology in educational institutions.

Keywords: *Agile Scrum, Android, Attendance System*