



ATTENDANCE SYSTEM FOR TEACHERS USING WEB BASED AND MOBILE
APP IN TPQ AL IKHLAS

UNDERGRADUATE THESIS
Submitted as one of the requirements to obtain
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ABSTRACT

The teacher attendance process at TPQ Al Ikhlas is still done manually, resulting in inaccurate data and difficulties in monitoring attendance. This research aims to address these issues by developing a mobile-based attendance application that integrates GPS technology to verify a teacher's location during attendance. This allows attendance to only be recorded if the teacher is within a certain radius of the TPQ Al Ikhlas location.

The system development method used is the waterfall approach. The Java programming language is used for the application logic and XML for the display, which was developed on the Android platform using Android Studio. The Google Maps API is used for the location verification feature, and a MySQL database is used for data storage.

Black box testing was conducted to ensure all features function properly. The test results showed that teacher location verification functions properly and only allows attendance if the GPS coordinates match the predetermined TPQ Al Ikhlas area. The application provides real-time feedback to users and administrators, facilitating attendance monitoring.

This study concludes that a GPS-based mobile attendance system can improve the accuracy and accountability of teacher attendance at TPQ Al Ikhlas, making it more efficient, transparent, and fast, while minimizing data errors.

Keywords: Mobile Attendance, GPS Verification, Android Application, TPQ Al Ikhlas, Teacher Attendance

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