SISTEM PRESENSI PEGAWAI SEKOLAH DASAR MENGGUNAKAN LOCATION BASED SERVICE BERBASIS ANDROID DENGAN MENERAPKAN ANTI FAKE GPS

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ABSTRAK

Sistem presensi pegawai di SD Negeri 1 Bantan masih menggunakan metode manual, seperti tanda tangan pada lembar kehadiran, yang memiliki kelemahan seperti potensi kecurangan, keterlambatan pencatatan, dan kesulitan dalam monitoring kehadiran pegawai. Untuk mengatasi masalah tersebut, penelitian ini mengembangkan sistem presensi berbasis Android dengan teknologi Location-Based Service (LBS) dan fitur Anti Fake GPS. Sistem ini memastikan pegawai hanya dapat melakukan presensi di lokasi sekolah yang telah ditentukan, sehingga mengurangi kemungkinan manipulasi lokasi menggunakan aplikasi Fake GPS. Sistem ini juga menyediakan laporan kehadiran real-time, yang memudahkan admin sekolah dalam memantau dan merekapitulasi data kehadiran pegawai dengan lebih cepat. Teknologi Anti Fake GPS diterapkan untuk mendeteksi dan mencegah manipulasi lokasi, sehingga keakuratan presensi lebih terjamin. Pengembangan sistem menggunakan metode Extreme Programming (XP), yang memungkinkan pengembangan perangkat lunak lebih mudah disesuaikan terhadap kebutuhan pengguna. Hasil pengujian kuisioner terhadap 22 pegawai menunjukkan bahwa 77,3% responden menilai sistem mudah digunakan, 81,8% menyatakan respons cepat, dan 86,4% menilai fitur Anti Fake GPS efektif. Secara keseluruhan, responden menyatakan bahwa sistem ini berjalan dengan baik, lebih efisien dibandingkan metode manual, serta meningkatkan ketelitian pencatatan kehadiran. Dengan metode Extreme Programming (XP), sistem ini terbukti lebih akurat dan membantu sekolah dalam mengurangi kecurangan serta mempercepat proses monitoring pegawai.

Kata kunci: sistem presensi, Location-Based Service, Android, Anti Fake GPS, Extreme Programming.

PRIMARY SCHOOL EMPLOYEE PRESENCE SYSTEM USING ANDROID BASED LOCATION SERVICE BY APPLYING ANTI FAKE GPS

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ABSTRACT

The employee attendance system at SD Negeri 1 Bantan still uses manual methods, such as signatures on attendance sheets, which have weaknesses such as the potential for fraud, delays in recording, and difficulties in monitoring employee attendance. To overcome this problem, this research developed an Android-based presence system with Location-Based Service (LBS) technology and Anti-Fake GPS features. This system ensures that employees can only attend predetermined school locations, thereby reducing the possibility of location manipulation using the Fake GPS application. This system also provides real-time attendance reports, which makes it easier for school admins to monitor and recapitulate employee attendance data more quickly. Anti Fake GPS technology is applied to detect and prevent location manipulation, so that presence accuracy is guaranteed. System development uses the Extreme Programming (XP) method, which allows software development to be more easily adapted to user needs. The results of questionnaire testing on 22 employees showed that 77.3% of respondents thought the system was easy to use, 81.8% said the response was fast, and 86.4% thought the Anti-Fake GPS feature was effective. Overall, respondents stated that this system works well, is more efficient than manual methods, and increases the accuracy of recording attendance. With the Extreme Programming (XP) method, this system has proven to be more accurate and helps schools reduce fraud and speed up the employee monitoring process.

Keywords*: employee attendance, Location-Based Service, Android, Anti Fake GPS, Extreme Programming.*