

Mobile Attendance using near Field Communication & One-Time Password

Abstract:

This paper introduces a Near Field Communication (NFC) supported Company M-Attendance system for Company Employees. Near Field Communication (NFC) is one of the latest technologies in radio communications and being a subset of RFID technology, it is growing at an enormous pace. NFC technology provides the fastest way to communicate between two devices and it happens within a fraction of a second. It has several applications in Mobile Communications and transactions. An NFC-supported Company M-Attendance system for company employees is discussed as one potential use of this technology. The proposed framework replaces manual roll calls and hence, making it resilient to forgery. It gives Company and Manager Information and employs attendance details. The marking of attendance is quick, unsupervised, and makes use of a One Time Password (OTP) to enhance the security of the system and takes away the possibility of proxy attendance. This paper discusses NFC as a technology that is more secure and convenient than the prevalent technology of Bluetooth, and also elaborates on the proposed framework of the M-Attendance system that makes use of this advantage that NFC has over other technologies.

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Introduction:

This project we proposes a Near Field Communication (NFC) and One-Time Password (OTP) supported M-Attendance framework for Small Scale Company. Traditionally, Employers has to maintain the registration records for attendance. This routine requires time and effort, compromising on the working time. In addition to this, some employees take advantage of the low-security attendance system and mark the attendance of the employee, who isn't present in the office, i.e., proxy cases. The proposed m-attendance supervision system has been designed to simplify and optimize attendance monitoring. It replaces the traditional attendance-marking system and makes it faster, more secure and completely digital.

NFC (Near Field Communication)

It provides us with the framework of implementing an Android application using NFC. NFC is a short-range and high frequency wireless communication technology that enables the exchange of data between devices within a range of 10 cm from each other. It is an upgrade of the existing proximity card standard (RFID) that combines the interface of a smartcard and a reader into a single device. It allows users to seamlessly share content between digital devices. Shorter set-up time is a big advantage that NFC has on its side. Instead of performing manual configurations to identify devices, the connection between two NFC devices is established at once (under 111 0 a second). Due to this short range, NFC provides a higher degree of security than Bluetooth and makes NFC suitable for crowded areas where correlating

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a signal with its transmitting physical device might otherwise prove impossible. NFC can also work when one of the devices is not powered by a battery (e.g. on a phone that may be turned off, a contactless smart credit card, etc.). A one-time password (OTP) is a password that is valid for only one login session or transaction, on any digital device. OTPs avoid a number of shortcomings that are associated with the traditional password based authentication

Systems.

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