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SMART ATTENDANCE SYSTEM USING RFID

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SMART ATTENDANCE SYSTEM USING RFID

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Abstract: This paper presents an inventive prototype design of attendance system which purposely used for lecturers in the class. This project is designed to develop a smart attendance system by using Radio-frequency identification (RFID). Nowadays, most of students tend to come to the class late. Besides, they also usually like to cheat to their lecturer by signing the attendance on behalf of their friends. The student who come late evenly have the same benefits as others because there will be no different for those who always came early to the class. The conventional attendance system has poor system which might be taking for granted by students. In order to resolve this problems, the design of smart attendance system will help to reduce all the problems occurred by conventional attendance system. This system would help the students and also lecturer to take attendance easily by improving the function of the student card. The students will scan their Radio-frequency identification Card (RFID) on the MIFARE RC522 RFID Kit which will be the reader for the card. The data will be kept in the data base in the Arduino (Uno) which is a micro-controller board based on the ATmega328. The system will set the critical time for the student who attends the class late that will be displayed on the LCD display. After the scan completed, the output will be either two. There will be taken the record with good attendances or otherwise the record will list in red colour which means that the students come late more than fifteen minutes. Thus, it will reduce the problems occurred from conventional attendance system.

Keywords: RFID Card, Mifare RC522 RFID, LCD (2x16), Arduino (UNO).

INTRODUCTION

Nowadays, there are many ways of attendance system including fingerprint attendance system, scan QR codes with the mobile app, card swiping with phone, signature attendance system and RFID based attendance system.

For the fingerprint attendance system, biometric authentication is considered the automatic identification, or identity verification, of an individual using either a biological feature they possess physiological characteristic. In practice, the process of identification and authentication is the ability to verify and confirm an identity.

An alternative use of QR code could be for logging students in and out of class, whether it is outside of the class students or in class students. All you would need to do is create a "Check-In" QR code and a separate "Check-Out" QR code using the desired process, and have your students scan one entering class and the other one when finishing class. Attendance Tracking data type QR codes do exactly that by allowing you to link your QR code to a Google spreadsheet that records the name of the person scanning the QR code and the date and time of the scan.

For our project, smart attendance system using RFID, the first objective to be achieved is to improve the function of the students' card. Secondly it could save the time of the students and lecturers and it can be guaranteed to make the process of taking the attendance of the student in more efficient way.

The problem is that lecturers forgot to bring the attendance sheet to class. For the student, they are often coming to the classes at late time which we called critical time to class. The students can also cheat to the lecture by signing the attendance sheet for his friends. By all this problems, we could