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ATTENDANCE MONITORING SYSTEM USING RFID TECHNOLOGY

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ABSTRACT

Our main objective of this paper is to enhance and promote the attendance monitoring system all over the nation. The proposed system consist of two chips RFID tag and reader. The installation of RFID reader scan be do neat various locations in campus as well as in class rooms. When student arrives in the surrounding area of reader then it tracks the location & send sit to the server. This server checks the time table of that particular student whether he/she is attending lectures or not according to desired timetable, then an alert message is delivered to the parent. The system also generates detention list of the students and ensures that attendance and exam records of the students can be tracked properly & efficiently. Though it is a small scale application but is completely automated, easy to control, time saving and very much reliable, trust us!. The advantages and disadvantages will be presented in this paper of the proposed RFID technology.

Keywords: Load Forecasting, Artificial Neural Network (ANN), Regression Analysis, Back Propagation Method, MAPE

I. INTRODUCTION

As our generation is moving towards digital world there is vast development in technologies, all the information we need can be found on internet, in fact now a days everything is easily available on internet isn't it!. Because this digitalization students are reattracted towards various things, most important they ignore studies & waste much more valuable time in other activities. It is often observed that students going to schools/colleges always tempt to bunk the lectures. They completely have different mindset these days as compared to earlier days. It mean this digitalization is having huge impact on students some "boon and banes", never the less we are surely going to see a solution to this in near future for sure, count on that! On the other side parents are fully assure that the irspawn is attending lectures. But this is not exactly what happen sinreality. So to evade such happenings RFID technology can be implemented. It is a system that tracks students in the campus and also manages attendance of each of them. Consider a particular student who bunks the lecture plus has the attendance below 75% then in such a case as a result, an alert message is delivered to that parent.

System has a 128 bit unique random number which is associated with the RFID card what is also called as universal identifier (UID) and can be read by any RFID reader without knowing any of the secure keys used to protect rest of the card. It uses radio frequency identification (RFID) technology to wirelessly communicate with a card reader. It consist of aluminum or copper antenna. It is a850-960MHz ultrahigh frequency card having capacity of 3328 bytes for data storage. It is used extensively for location and attendance tracking applications.RFIDusesRFenergytopowerthechipandsendandreceivedata. RFID technology has increased dramatically in the last few years due to the speed and convenience of these cards in various fields. RFID tech is owned by Philips electronics.

The paper is organized in sections as follows:

- Section i is all about introduction to RFID tech
- Section ii holds the architecture ,implementation details and equipment in RFID tech along with block diagram of proposed system
- Section iii extra info
- Section iv consists of result & discussion
- Section v is summarized by conclusion of the paper

II. RELATED WORK

An automated attendance management system was implemented in computer platform using stationary matrix AR400RFID. An automatic attendance system by the use of finger print verification technique has been proposed. It was achieved using extraction of abnormal point on the ridge of finger's finger print or minutiae technique.

The verification confirms an authenticity of an authorized user by performing one to one comparison of a captured finger print templates against the stored templates in the database. We can see its application in passport verification offices.

Our proposal highlights a simple and cost effective, reliable model for classrooms' attendance management that uses existing student id card chip as the passive tag with additional short message service stop a rents as weekly summary

III. SYSTEM ARCHITECTURE

This system is developed to reduce the manual work. It is difficult to generate the report of student details using manual attendance. It is difficult task for admin staff to maintain the attendance for long time in attendance registers. This system basically consist of RFID reader and RFID tag.

The information is comprehended with the help of an RFID card reader. An antenna present on the reader is used in the transmission as well as the reception of signals. RFID tags are microchips that store all the necessary information in them. Database module is has authority for creating any new entry of faculty and student details. User has authority of making daily attendance. Attendance report can be generated by system. The system is designed in such a way that only authorized persons should be allowed to access some particular modules. The records should be updated by only administrators and no one else. The user must be present in the range of reader. The users have to be consistent so that the user can control the application easily.

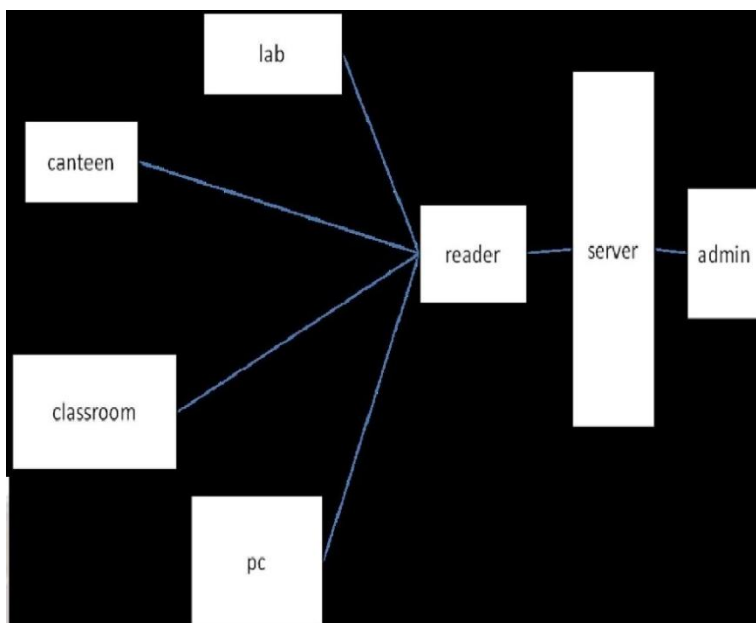


Fig:Block diagram of system Architecture

System architecture consists of readers at various locations such as classrooms, canteens, libraries and parking area. All RFID readers are connected to server. Reader is used to scan id of student in college campus and send updates to the server. Server checks the timetable of student. If student doesn't attend lecture according to timetable then alert messages are sent to the parents so this application is useful for intruder tracking and management of

student's attendance. Also by using this application pc can be on/off according to id of student. For on/off purpose system uses the relay. By using RFID technology student tracking and student attendance becomes more easy and convenient than any other technology.

IV. CONCLUSION

So from above paper we have come up with the system which can mark the attendance of students. As class attendance being important part of institutions/organizations. Recording and maintaining the attendance is an area of administration that requires momentous amount of time and work in schools/college environment. So this RFID system benefits as it is automated to monitor and maintain the records of student. It can be a powerful device in helping to maintain the attendance. RFID is a technology that allows for a tag allocated on identity card to communicate wirelessly with a reader, in order to identify the student. It also automatically creates the detention list as it sends the alert message to the respective parent. The purpose of promoting this technology is to enhance the attendance monitoring in organizations. It is easy to implement and time saving.

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