ANJUMAN COLLEGE OF ENGINEERING AND

TECHNOLOGY NAGPUR

"RFID BASED ATTENDANCE SYSTEM"

DIVYA SAWARKAR

8TH SEM EXTC,SEC:B

KHUSHBOO KHADIWALA

8TH SEM EXTC,SEC:A

ABSTRACT:

Student's attendance records of classes are primary and required data to manage a course and to take care of students, but a recording task causes extra burden and loss of lecturing time. An attendance management system using student identification card with IC chip has been proposed and implemented in several universities. even those to system work well, there are obstacles to install them to other institutes such as an initial cost of system and the modification cost for pre-installed system such as an e-learning system. This paper describes a new attendance management system on model using RFID type student identification card.

INTRODUCTION:

The method of taking attendance by calling name is very time consuming for offices, by taking attendance by signing on paper is insecure hence inefficient . This paper described the utilization of Radio Frequency Identification (RFID) and Arduino technology. This implementation consists of hardware and software system. This RFID based attendance system has a storage system that store the unique identification number of the student/employee and also the attendance system is very user friendly for commercial purpose. In this project, we designed a system to record the attendance using RFID technology which will be time efficient.

The main objective is to make a system that will take the attendance of authorized individuals, record the data along with time and date and store in server, and finally send the data to Thing speak channel (an API application) at the end of the day using Wi-Fi connection. We worked with both hardware and software parts in order to serve our objective. Each user will be given an individual RFID tags and its record will be maintained.

THEORY:

The main goal of the system is to detect the presence or absence of any person in an educational institute/organization. RFID technology works by mainly with the RFID Reader, and RFID cards. The RFID cards have a unique identification number and that is one of the main benefits of the system as this makes the system very reliable. The card saves the personal details of the user across its identification number. Since the card saves all the personal details of the user, there has to be very high security system to secure the information. This privacy issue resulted in standard specifications development that addresses privacy and security issues.

PRINCIPLE OF OPERATION:

The system initially starts when the user RFID card is brought near the RFID reader. From the RFID reader, it receives the unique ID of the user and starts to search this Unique ID in the system database. Here IR sensor will sense after the Unique ID is found RF reader, then within few second students have to enter. If after receiving unique ID student fails to enter in the class within few second then process will unsuccessful his attendance won't count. If the process is successful then user's attendance is updated and displayed on the LCD display. However, if the Unique ID does not match then display error is shown. Finally the whole data is saved in an SD card. Later on Thingspeak is activated by login to a Thingspeak account. Here all the entries are automatically updated in the field graph from where we can retrieve data anywhere in the world.
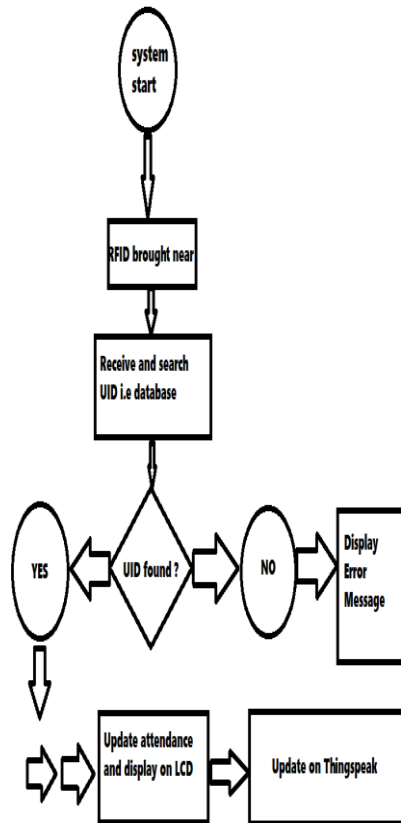
Fig1:- Flow chart of the system

RESULT FROM THINK SPEAK:

In this section, we discuss the outputs of the system. We can retrieve the entries from Thingspeak webpage where there is a part from where we can export data.
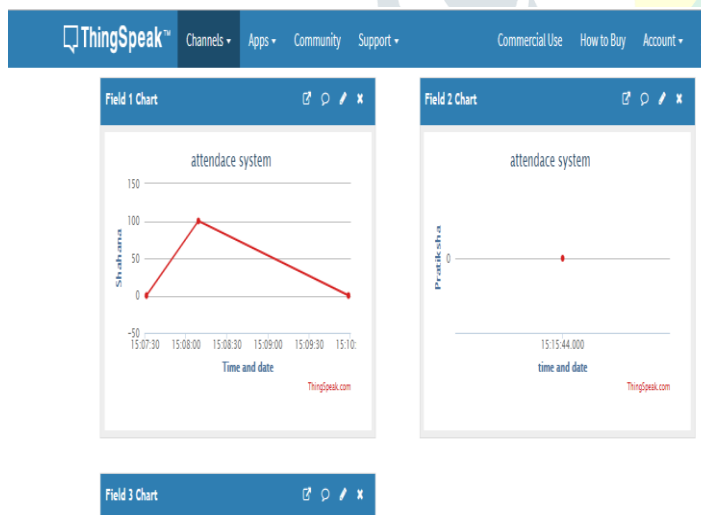

Fig 2:- View from ThingSpeak Channel

Above figure shows graphical representation of attendance on ThingSpeak. This output is on the scale of 0 to 100 where 0 indicates the absnce of student similarly 100 indicates presence of student.

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BENEFITS OF RFID:

It serves mainly two purposes. Firstly, to record attendance along with time of entry and time of leave and secondly its work is for authentication and authorization purpose. At present, this system is taking over schools, hospitals, industries etc. The RFID card is actually a transponder which transmits information through radio frequency. In the card, necessary information of the user is stored.

CONCLUSION:

This paper has presented the successful design and implementation of an automated attendance recording system utilizing the advantages of the RFID technology. This system has the potential of saving a lot of time and manpower in running any institution. It is a very efficient system at a very affordable price. Along with its advantages of
reduced cost and simplicity.

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7. *"SMART ATTENDANCE SYSTEM BY USING RFID

M. K. Yeop Sabri, M. Z. A. Abdul Aziz, M. S. R. Mohd Shah, M. F. Abd Kadir Fakulti Kejuruteraan Elektronik dan Kejuruteraan Komputer
Universiti Teknikal Malaysia Melaka
Karung Berkunci 1200, Hang Tuah Jaya, Ayer Keroh, 75450, Melaka, Malaysia