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# RFID Based Lecture Wise Attendance System for Teachers

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***Abstract*— Nowadays in colleges or schools only daily attendance system is available for teacher. There is no any provision for the lecture wise attendance system which hammers the growth of student as well as organization. If any lecturer wants to go outside the campus during working hours he has to put a movement in the register. This system is manual and time consuming. And due to such system some lecturers are not punctual about the lecture timing and also higher authority do not get update about the lectures .To overcome this problem we propose this system. The sole of our project is RFID technology. It has much more advantages like safe, easy and cost effective which is used for identification of physical objects using radio frequency. This system provides all information about presence of teachers during lecture to the authority and also this information collected in Database. Our proposed system helps to enrich the graph of organization.**

***Keywords:*--RFID reader, Tag, Microcontroller 89C52, ZigBee.**

## I. INTRODUCTION

To maintain the reputation of any collage or institute it is important to give the best results, so completion of syllabus is must. For this it is necessary to conduct all the lectures and practicals on time. And authorized person should know whether all lectures or practicals are going on time or not. If teachers are not punctual about time it affects the discipline of students and indirectly the growth of institute.

The proposed system provides the admirable remedy which assists the authorized person to monitor and manage the daily schedule of the institute. Whenever the lecturer shows the RFID tag in front of RFID reader then it will directly inform the starting timing of session to the authorized person.This system also keeps the record of attendance.

***Block diagram:-***

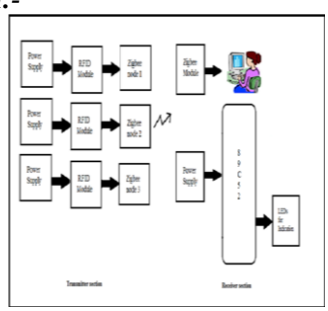

***Fig.1:Block diagram.***

## II. PROPOSED SYSTEM:-

***2.1 Objectives:-***

- To provide the lecture wise attendance of the teachers.
- To assist the authority to enrich the academic graph and to upgrade the reputation of the organization.

In the proposed system, RFID tags are attached with the ID of the teacher[1].Each teacher has its own unique ID number. Whenever the teacher shows the ID in front of reader then reader reads that particular number and transmits it through ZigBee module which will be sent to receiver which is mounted in the cabin of authorized person. This received number is send to server through USB connection which is already saved in Database.[2].Now, the work of server is it will match the RFID code to other already stored codes and as per these stored codes faculty is recognized and it's starting time of the session, classroom, day and date.

This all information is stored in Database which helps to keep the record. At the same time it is also send to the microcontroller and depending on the code microcontroller drives the LED. We are going to connect one board in the cabin of authorized person which has one LED per class. Normally those LEDs are OFF. Whenever microcontroller receives ID number it will glows the LED for particular class and authorized person come to know that whether the lecturer in the class or not.

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## III. HARDWARE SPECIFICATIONS:-

### *3.1 AT89C52:*

The AT89C52 is a low-power, high-performance CMOS 8-bit microcomputer. It has 8K bytes of Flash programmable and erasable read only memory. The AT89C52 provides the standard features like 16 bit timer/counters, six-vector two-level interrupt architecture, a full-duplex serial port, on-chip oscillator, and clock circuitry.

### *3.2 RFID tag:*

RFID Tag stores the information related to object. It has 12 digit unique ID number. It consist of mainly three parts i.e. antenna, semiconductor chip and encapsulation. The tag antenna captures the energy from reader and transfer the tag's ID. The chip co-ordinate this process and encapsulation protects the antenna and chip from environmental conditions.

### *3.3RFID reader EM18:*

This is a low frequency (125 KHz) RFID reader with serial output with at range of 8-12cm. It is a compact unit with inbuilt antenna and can be directly connected to the PC using RS232 protocol. The power generation by the EM18 in the form of electromagnetic wave this is captured by tag.

### *3.4 ZigBee:*

ZigBee is a low-cost, low power, wireless mesh network standard targeted at the wide development of long battery life devices in wireless control and monitoring applications. ZigBee devices have low latency, which further reduces average current. ZigBee chips are typically integrated with radios and with microcontrollers that have between 60-256 KB of flash memory.

## IV. COMPARATIVE STUDY OF EXISTING AND PROPOSED SYSTEM.

| Sr. No | Existing model | Proposed model |
|---|---|---|
| 1 | The attendance on the server is not maintained. | The attendance on the server is maintained. |
| 2 | Authorized person do not get update of sessions. | Authorized person automatically get update of sessions. |
| 3 | Time consuming | Time saving |
| 4 | Manual interference is present | Manual interference is avoided |

***Table.1: comparative study of existing and proposed system.***

## V. RESULT:

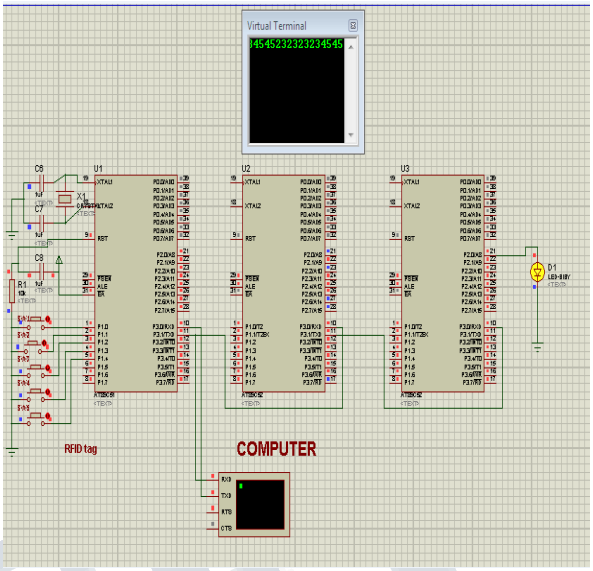


***Fig.2:Result.***

## VI. CONCLUSION:

The main aim of our proposed system is to provide lecture wise attendance for teachers which is successfully achieved .This system helps the authority to upgrade the reputation of the institute. The main advantages of this system are that the records are maintained in the Database.

### *Future scope:*

As we look towards the future we can make one addition in our proposed system is that we can make provision of automatically sending memo to the particular teacher whose attendance is poor or irregular.

## REFERENCES

1. IEEE paper-: RFID Technology Based Attendance Management System (2010)

2. Springer: Design and Implementation of a Scalable RFID Based Attendance System with an Intelligent Scheduling Technique (2012).