SMART GFM Module Database Attendance System on IoT using Raspberry PI

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Abstract — Attendance recording in educational institutions is an effective task. In most of the educational institute provide database administration but still the system is based on manual data handling procedures. In this paper, we forth put a system that takes the attendance in the classroom when lecture is going on. Our system automatically recognizes the attendance. Attendance is for keeping records of number of students present in colleges. Database attendance system is an application developed for daily student’s attendance in colleges. This project attempts to record attendance through SMS.

Keywords — Data acquisition, Attendance management system, Raspberry pi web server.

I. INTRODUCTION

Every professional organization has to maintain a proper attendance record of the organization. In our project keyboard based attendance system is proposed but, with a twist, Instead of using ID, ZIGBEE, RFID we are making this setup IOT based to overcome the consequences of the above. This would improve the accuracy of the records, approve proper present days and absent days of the student and this shall all be monitored.

When there is any student is absent then the message instantly convey to regarding members (like parent's, GFM, CC ).In our project is going to solve this problem by using RASPBERRY PI technology. If Object has existence then our system identifies it and gets the student data of student and searches same in our register database system. If Id found then get the record of student and mark the attendance as present with present date and time. Our system is fast and easy to maintenance. RASPBERRY PI technology provides the means of students identification and forms the basis of :

- Students attendance record
- Provide regarding students database
- Authentication of attendance and sending SMS.

II. PROPOSED SYSTEM

There are so many drawbacks in the existing system we go for a mobile based android application. In the proposed system, a smart phone based android application using android can be used to make the process more easier, secure and less error prone. Thus reduction of manual and more efficient information system will be achieved through this proposed system. The main advantage of proposed system is that it provides portability and also provides access from anywhere and at any time. In their mobile phone where student is given the authority only to view their record whereas the faculty has the authority to modify and make changes in the record.
The proposed system is a fully automated one using wireless android. The proposed android application introduces portability as it is used on a mobile device and can be carried anywhere.

III. BLOCK DIAGRAM

Attendance is defined as the action or state of going regularly to or being present at a place or event. Attendance of every student is being maintained by colleges. The manual attendance record system is inefficient and more time is required to record as well as calculate the attendance of each student. Hence a system is needed which will solve the issue of manual attendance because this system take a lots of time. While the move towards the digital era is being accelerated every hour.

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In our project we are taking attendance with the help of SMART Android Mobile with a special application Telegram. In case any staff teacher is unable to bring their own smart mobile then,they can use the external data through keyboard.

The students database stores the data like students roll no.,contact number, parents contact number etc.with the help of this Telegram application. And we give aspecific format to the telegram application to enter the absent number ( <CLASS NAME> , <practical /Lecture> , <SUBJECT NAME> , ( <SLOT NUMBER > etc).
IV. RESULT ON EXCEL SHEET

Figure 3. A) Result declaration on Excel sheet
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IV. CONCLUSION

Mainly, this project aimed to develop an automated system to reduce the time and manual work done for recording attendance. This is one of the precise systems that can be used as proper fully automated attendance system in educational institutes. Based on the automated attendance system, this serves as a whole system for managing attendance systems in college. The system reduces manual work for teachers as it also generates reports for the attendance. In future, we can also have two-way security by sending OTP for the attendance monitoring.

V. REFERENCES

