

IOT based student attendance system

#1Sumit Pande , #2Aishwarya Bhosale, #3 Akshata Shirke, #4Jagruti Pawar
#5Prof. S.G.Shinde



¹sumitpande1995@gmail.com

²aishubhosale77@gmail.com

³akshatashirke53@gmail.com

⁴jagu1696@gmail.com

^{#1234}Student, Department of Electronics and Telecommunication,

^{#5}Prof. Department of Electronics and Telecommunication

Savitribai Phule Pune University,

JSPM, NTC, Narhe, Pune.

ABSTRACT

Educational institution has to maintain a proper record of attendance of students for effective functioning of organization. This system would improve accuracy of attendance records because it will remove all the problems of roll calling and will save valuable time of student as well as teachers. This application is based on IOT. The student attendance monitoring as develop in this paper which is capable of eliminating time wastage during manual or documental collection of attendance and an opportunity for the educational administrators to compile the attendance effectively.

Keywords: Esp8266, ATmega328, fingerprint module R-305

ARTICLE INFO

Article History

Received: 26th May 2018

Received in revised form :

26th May 2018

Accepted: 29th May 2018

Published online :

30th May 2018

I. INTRODUCTION

IOT based attendance system is to create and data base about to presenty or attendance into institute or industries.Through this application the attendance of all student is taken.In this system to concept of IOT is applied.A portable module is designed which has capability of recognizing the student via their fingerprint and then sending the ID of student to server whose fingerprint is recognized first of all the system requires connectivity to internet ,which can be achived through wi-fi module so a system is required to connect ESP8266 which is act as wifi module.It first scans the wi-fi networks and any networks can be connected by entering password then it scan fingerprint via fingerprint module R-305 and recognize the student.And the server is basically a pc which maintains all the records of attendance and calculates the attendance in percentage. As this system uses fingerprint recognition to identity to student, proxy attendance can't be marked.And attendance is sent to server in real time all to calculation are done by to server and students can check their attendance in real time. II. LITERATURE SURVEY [1] K. Akhila proposed an android-based mobile application for student attendance tracking system. It offers reliability, time saving, and it is easy to control and to take the attendance using android mobile phones. It can reduce the efforts of the staff members towards attendance maintenance. It is an efficient and user friendly android mobile application for attendance monitoring [2]. Rakhi Joshi developed an android-based

attendance management with smart learning system. The web-based mobile application is developed with a SQL server. This system is used to mark attendance through smart phone and gives a prior intimation to student as soon as their attendance goes below the specified level through SMS. [3]. Amita Dhale presented a survey on "smart connect", android and web based application for college management system. It is developed using SQL server. It is mainly used to store the details required for the institutions. The mobile operating system (MOS) place a key role in the development of mobile application since the application for one MOS is not compatible with other MOS. Therefore, before developing the mobile application for a particular application the MOS must be considered and the application must be developed for the same. Thus, the student attendance management and monitoring systems are developed for the Android MOS

The IOT based attendance system is to create and data base about to presenty or attendance into institute or industries. Through this application the attendance of all student is taken. In this system to concept of IOT is applied. A portable module is designed which has capability of recognizing the student via their fingerprint and then sending the ID of student to server whose fingerprint is recognized first of all the system requires connectivity to internet ,which can be achived through wi-fi module so a system is required to connect ESP8266 which is act as wifi

module. It first scans the wi-fi networks and any networks can be connected by entering password then it scan fingerprint via fingerprint module R-305 and recognize the student. And the server is basically a pc which maintains all the records of attendance and calculates the attendance in percentage.

As this system uses fingerprint recognition to identify to student, proxy attendance can't be marked. And attendance is sent to server in real time all to calculation are done by to server and students can check their attendance in real time.

II. LITERATURE SURVEY

[1] K. Akhila proposed an android-based mobile application for student attendance tracking system. It offers reliability, time saving, and it is easy to control and to take the attendance using android mobile phones. It can reduce the efforts of the staff members towards attendance maintenance. It is an efficient and user friendly android mobile application for attendance monitoring

[2]. Rakhi Joshi developed an android-based attendance management with smart learning system. The web-based mobile application is developed with a SQL server. This system is used to mark attendance through smart phone and gives a prior intimation to student as soon as their attendance goes below the specified level through SMS.

[3]. Amita Dhale presented a survey on "smart connect", android and web based application for college management system. It is developed using SQL server. It is mainly used to store the details required for the institutions. The mobile operating system (MOS) place a key role in the development of mobile application since the application for one MOS is not compatible with other MOS. Therefore, before developing the mobile application for a particular application the MOS must be considered and the application must be developed for the same. Thus, the student attendance management and monitoring systems are developed for the Android MOS.

III. TECHNOLOGIES TO BE USED

Language:

1. Java J2SE and JDK: J2SE (Java 2 Standard Edition) Java would be the required as language for development of the project. JDK is the development kit used to compile java programs.

2. Embedded c

Database/Data Library: Serialized Objects/Serialization - Database in Java In case the project needs database this is how it is handled in java.

IV. PRODUCT FUNCTION

Register user –student have to register first. As well as the all required data of student will be saved database

Admin and Student Login – admin login have to create for teachers and student login for checking information about attendance

Data base- all information is saved in database

A. REQUIREMENT SPECIFICATION

SOFTWARE REQUIREMENTS

- Operating system: Windows VERSION: 7
- Languages: Java, embedded c
- Jdk 1.7
- MySQL 6.0
- Neatbeans, Android sdk, Android Studio

HARDWARE REQUIREMENTS

- ESP8266 wifi module,
- R-305 finger print module
- ATmega 328
- LCD display

B. USER CHARACTERISTICS

- Registration form for attendance by college
- Login form for attendance
- Fingerprint by student everyday

V. SYSTEM ANALYSIS

We have created IOT based application. Data is stored in mysql database. And also web application that communicates with local server and wifi module. We have uploaded the all attendance details of student in database. We have evaluated overall weekly attendance and then if the attendance is less than 75% then messege will be send to the students parent.

VI. CONCLUSION

Thus we propose a wireless network which connects the HOD and Classroom which will use the advance technique IOT for student attendance which will reduce the cost of project than other technologies. And this is more efficient way and send this attendance to the parents.

VII. ACKNOWLEDGEMENT

I wish to express my profound thanks to all who helped us directly or indirectly in making this paper. Finally I wish to thank to all our friends and well-wishers who supported us in completing this paper successfully I am especially grateful to our guide for time to time, very much needed, valuable guidance. Without the full support and cheerful encouragement of my guide, the paper would not have been completed on time.

REFERENCES

[1] A. Shahab, F. Shafait, and A. Dengel, "ICDAR 2011 robust reading competition: ICDAR Robust Reading Competition Challenge 2: Reading text in scene images," in

Proc. Int. Conf. Document Anal. Recognition, 2011, pp. 1491–1496.

[2] C. Yi and Y. Tian, “Assistive text reading from complex background for blind persons,” in Proc. Int.

[3] <https://en.wikipedia.org>.

[4] Advance Data Reports from the National Health Interview Survey (2008). [Online]. Available: http://www.cdc.gov/nchs/nhis/nhis_ad.htm