



# INTERNATIONAL JOURNAL OF ADVANCE RESEARCH, IDEAS AND INNOVATIONS IN TECHNOLOGY

ISSN: 2454-132X

Impact factor: 4.295

(Volume3, Issue2)

Available online at [www.ijariit.com](http://www.ijariit.com)

## Android Based Digital Attendance Recording System

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**Abstract—** Attendance recording in educational institutions is an important task. But now a day's manual data entry procedures are used to take the attendance. Traditional ways of recording attendance involve manual entering of individual attendance on a sheet of paper. Later, these are fed into staff diary or computer database. It is still possible to access the data by unauthorized person after entering it into computer data base.

In this paper we are focusing on developing this project, which will help the lecturers to take attendance easily, securely and will have less error. For this we are implementing android based software for digital attendance recording system at teacher's Android mobile phone and student's Android mobile phone. This system will helps lecturers to take attendance of the students using android mobile phone, by using Bluetooth device with fingerprint authentication of mobile phone, those who are present in the class, whose attendance will be marked. After that captured data will be sent to server database from where attendance list will be updated automatically on the server's data base, lectures will able to edit the attendance and easily get requested information.

Thus, the project will reduce the workload of lecturer by providing them the android technology based platform where they will be able to take, manage, update and see the attendance of students with efficiency.

**Keywords—** Attendance Recording, Bluetooth and Fingerprint Authentication, Android Technology, Mobile Phone, PHP, MySQL, Web Server.

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### I. INTRODUCTION

Our project aims in implementing software that will help lecturers to take the attendance of students using android based mobile phone. After taking the attendance in the mobile phone, lecturer will update attendance of students in the web server. Keeping in view the importance of attendance recording, our proposed system provides fast solution for any organization especially academic institutions.

II. EXISTING SYSTEM

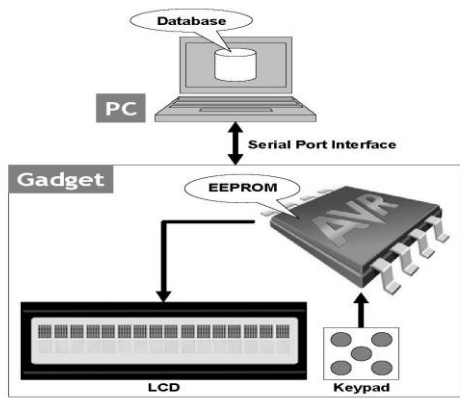


FIG. A) KEYPAD BASED [1]

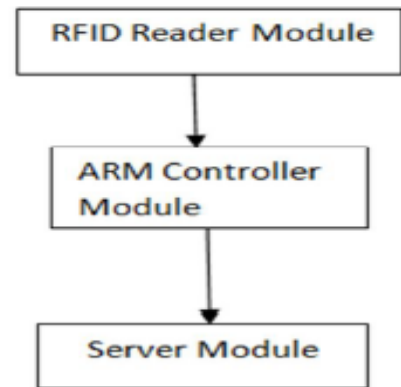


FIG. B) RFID BASED [2]

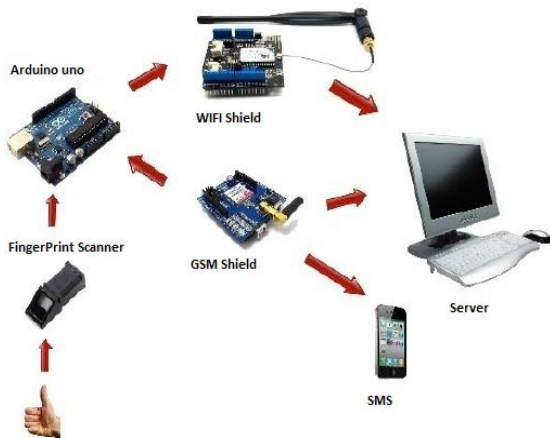


FIG. C) BIOMETRIC BASED [3]

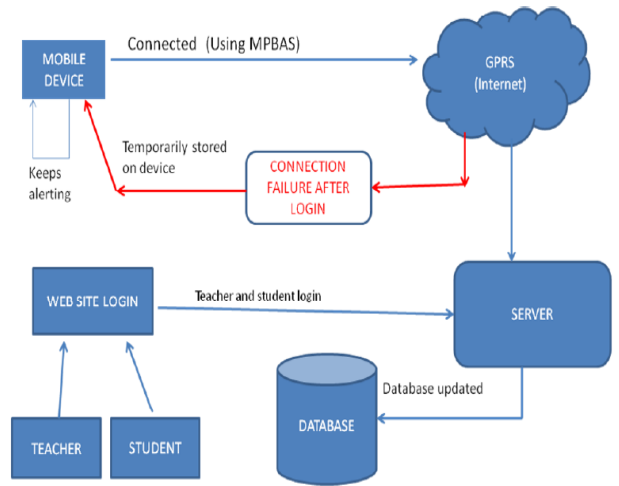


FIG. D) MOBILE PHONE BASED [4]

The system refer to Fig a) comprises of handheld gadget and application software residing on computer. Teacher takes attendance of students on the gadget instead of paper. The gadget retains this information infinitely in its Memory. The application software then communicates with the gadget and transfers this stored information from memory to computer through data acquisition interface. This software interprets the received data, stores them in a database and generates different types of reports from them. The system refer to Fig b) which shows that student attendance using RFID system is automatic record of student attendance developed especially for academic institution. The system refers to Fig c) which is fingerprint sensors with attendance management system and it sends messages automatically. The system refer to Fig d) which is aims in implementing software that will help lecturers to take the attendance of students using mobile/Smartphone. Lecturers will login to the phone application and get connected to the server. After login, they will take attendance using mobile phone. After taking the attendance in the mobile, lecturer will send it over to the server using GPRS. Lecturer will be able to edit attendance by login to the website and students will check their attendance using a website.

### III. PROPOSED SYSTEM

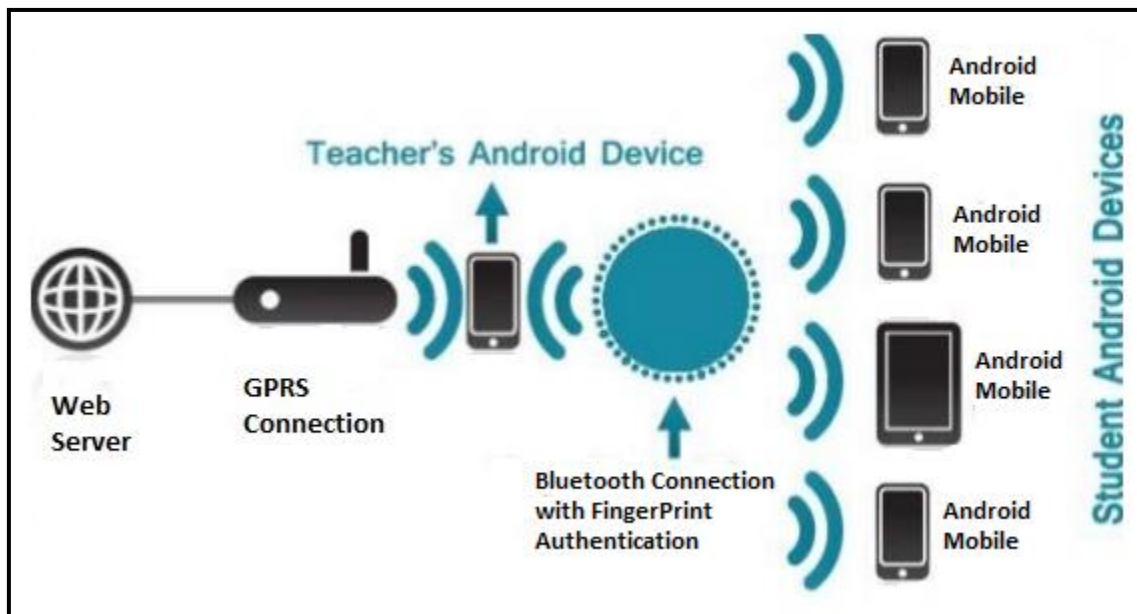


FIG. E) ANDROID BASED DIGITAL ATTENDANCE RECORDING SYSTEM

Regarding the above literature research and taking into consideration its drawbacks and limitations, we proposed the Android Based Attendance Recording System. In this proposed system we are going to develop an android application which will eliminate all the drawbacks of existing system, which consists of the following dynamic features:

- Time saving as attendance can be taken just by counting total number of students.
- No needs to maintain several separate records and manual calculations.
- More secured than traditional attendance system.

#### 1. Modules

##### 1.1 User Module

The main purpose of the user module is to provide security. This module is specially designed for staffs, which use mobile phone to take attendance. Each staff enter username and password before enter into application and also able to access/retrieve attendance of student.

##### 1.2 Bluetooth Module

The main purpose of this module is to capture the list/data of present students in class using mobile phone of each student.

##### 1.3 Finger Print Authentication Module

The main purpose of this module is to match/authenticate the finger print of student on their mobile phone and allow them to marked their attendance only after fingerprint authentication on their android mobile phone which fingerprint enabled mobile phone and stored in the data base of android mobile phone of teacher, and then it will be sent to server database.

##### 1.4 Database Module

The first function of this module is to update the attendance list from the cell phone. When the attendance list from cell phone receives, server automatically updates its database and students or parent can view attendance through web server.

#### 2. Application

It can be used wherever the attendance is necessity such as schools, colleges and institutes and almost everywhere.

#### 3. Future Scope

- Periodically, Camera will automatically capture image in the class and update the attendance of students in the database of computer.
- SMS module can be implemented which will inform students about low attendance and various events.

### **CONCLUSION**

This project will help the lectures to reduce their workload by reducing the time and calculations required to update the attendance manually.

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### **WEBSITES**

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- [6] <http://www.bluetooth.com/Pages/FAQ.aspx>