Smart Attendance Application

Dr. Bhuvaneshwari C. Melinamath*, Nagama B. Jamadar, Nandan B. Patil, Omkar S. Killedar

Computer Science and Engineering, Sanjay Ghodawat Institute, Kolhapur, Maharashtra, India

ABSTRACT

Previously it was very hectic job to enter & maintain attendance of student manually. Existing attendance records are maintained on papers, which are kept in files and folders. This process is time consuming. After the entry of application software it somewhat became efficient to manage attendance on computer system. This application contains every student details, daily attendance, monthly report of attendance of each students etc. For maintaining all students' record, we can use this application. We developed this application in android as well as in php, so it is useful for everyone who has Smartphone and Computer. Our aim is to optimize the work of faculty member through our application. Therefore, we are developing online attendance management application. This is installed on android mobile phone, we provide user id, and password for the security purpose. Smart attendance management app provides many benefits to colleges and organizations.

Keywords : Android Studio, Smart Phones, Fingerprint Scanner (Digital Persona)

I.   INTRODUCTION

In the 21st century, we are living in the computerized world and our lives are becomes faster even than the airflows. Everyone is rushing within bit of minutes of time, in each routine activity. **"Time is precious to save",** and keeping this in mind, almost all the manually working systems are computerized.

Existing manual system is very time consuming, tedious and not so efficient. System exerts more tensions and pressure on the user related to the clerical depts. In maintenance of the registers, Some mistakes due to human bias may occurred and to make corrections we have to go to previous registers , its pages and particular records which is very tedious work. To keep track of all related records is complicated which may lead to number of errors. For speedy data retrieval, fast access there is need of   computerization   of existing manual system.

"Smart Attendance System" is developed for each day student attendance in schools, colleges and institutes for maintaining the attendance of the student. If facilitates to access the attendance information of a particular student in a particular class.

Here the staffs will be responsible to mark the attendance of the students with help of fingerprint device. Only Faculty has to maintain proper record for the attendance. Each staff will be given with a separate username and password. An accurate report based on the student attendance is generated. All data is stored securely on SQL servers managed by the college Administrator. The manual attendance record system is not efficient and requires more time to arrange record and to calculate the average out attendance of each student. Hence there is a requirement of a system that will solve the problem of student record arrangement and student average attendance calculation.

The proposed application should store the absent and present student's attendance details in electronic format with help of Fingerprint scanner so that management of attendance becomes easy.

II. LITERATURE REVIEW

In [1] Bluetooth smart is a wireless technology aimed at innovative applications in the healthcare, fitness, beacons, security, and home entertainment industries. The technology makes use of electronic tags to facilitate automatic wireless identification, with a Bluetooth Smart enabled device.

In [2] GPS aided autonomous monitoring and attendance system is an idea to monitor the people proposed using GPS and GPRS integrated using ARM microcontroller. GPS position data sent from identity card, continuously to server.

In [3] radio Frequency Identification (RFID) technique facilitates use automatic wireless identification through electronic passive and active tags with suitable readers. Proposed system not only eliminates the time consumed in manual attendance but also maintains the record of entries which can be used for statistical purposes like allocation of appropriate attendance score and further administrative tasks.

In [4] the purpose of developing attendance management system is to computerized the tradition way of taking attendance. Another purpose for developing this software is to generate the report automatically at the end of the session or in the between of the session.

In [5] the design and implementation of the system is to provide service in institutes and colleges. The system is to provide comprehensive student information system and user interface is to replace the current paper records. College Staff uploads attendance, results and college notifications through a secure, online interface using android devices. All data is thoroughly reviewed and validated on the server before actual record alteration occurs. The system plans for student user interface, allowing students to access tips and tricks as provided by their seniors. All data is stored securely on SQL servers managed by the college administrator.

In [6] this mobile application will require connecting to the internet through Wi-Fi(Wireless Fidelity) technology or through GPRS (General Packet Radio Service).Lecturers will first have to sign up for this and then they can take attendance any time they wish by first logging in with the help of a smartphone to the server. After attendance has been taken lecturer will send it over to sever via GPRS. The lecturers can also enroll new students, delete information about a particular student, modify some information etc.

III. MODULE DETAILS

1) Registration:
We are providing registration for both teacher and student. Both can register only once.

2) Login:
The student can login into the account for giving attendance.

3) Reports:
Students and teacher can access reports of monthly attendance for report card generation.

4) Attendance Module:
The purpose of Attendance Entry Module is to enter the attendance using android cell phone. In this module Lecturer takes the attendance using fingerprint scanner and android cell phone.. After this session he enters in to attendance page. Lecturers are only allowed to take attendance during their lecture time.
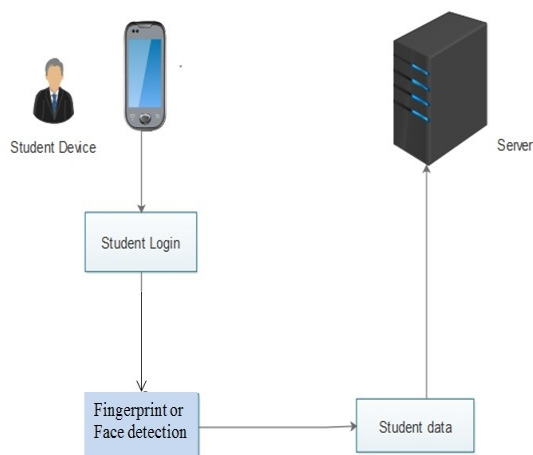
Figure 1. Architecture of Smart attendance system

IV. CHARACTERISTIC

• **User Friendly-** The online attendance application is user friendly because the retrieval and storing of data is fast and data is maintained efficiently. Moreover the graphical user interface is provided in the proposed application, which provides user to deal with the system very easily.

• **Reports are easily generated-** Reports can be easily generated in the proposed application so user can generate the report as per the requirement (monthly) as well as in the middle of the session. User can give the notice to the students so he/she become regular.

• **Reduce paper work-** All the data is fetch into the computer immediately and reports can be generated through computers. Moreover work becomes very easy because there is no need to keep data on papers.

Application
✓ It used in schools and colleges
✓ It used in organizations.

Advantages
✓ It is relatively fast approach to enter attendance.
✓ It is highly reliable.
✓ It has appropriate result.
✓ Best user Interface can be experienced.

V. CONCLUSION

The "Smart Attendance Management App" gives reduced paper work and saves time to generate accurate results from student's attendance .It provide security by using individual login id and password. This application is very useful for schools and colleges.

VI. REFERENCES

[1]. RiyaLodhaa, SuruchiGuptaa, HarshilJaina, Harish Narulaa, "Bluetooth Smart based Attendance Management System", International Conference on Advanced Computing Technologies and Applications (ICACTA-2015)

[2]. Sudheer Kumar Nagothu, Om Prakash, "GPS Aided Autonomous Monitoring and Attendance System",4thInternational Conference on Recent trends in Computer Science & Engineering.

[3]. SarmadHameeda, Syed Muhammad TahaSaquibb, MoezulHassana,FarazJunejoa,"Radio Frequency Identification (RFID) Based Attendance &Assessment System with Wireless Database Records", World Conference on Technology, Innovation and Entrepreneurship.

[4]. Rakhi Joshi1, V. V. Shete, S. B. Somani, "Android based smart learning and attendance management system", International Journal of Advanced Research in Computer and Communication Engineering Vol. 4, Issue 6, June 2015.

[5]. Vishwakarma R Ganesh,"Android College Management System", International Journal of Advanced Research In Computer Engineering & Technology (IJARCET) Volume 5, Issue 4, April 2016.

[6]. Freya. J. Vora, Pooja. L. Yadav, Rhea. P. Rai, Nikita. M. Yadav, "Android Based Mobile Attendance System",International Journal of Advanced Research inComputerScience and Software EngineeringVolume 6, Issue 2, February 2016.