A Review on: Academic Monitoring System Using Android

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Abstract— In today's world scenario, android plays an important role, which is an open source mobile operating system based on Linux with Java support. As per report, 85% of all smart phone market is occupied by android based smart phones. The attendance software consist of many features like taking attendance of student, inserting their marks, syllabus coverage system adding new student, adding their information, teacher can edit attendance, sending and retrieving important documents, sending an Notification to parent whether the ward is present or absent in the college, the blog facility for student as well as teacher to post any information etc. In many colleges attendance is taken manually, to overcome from this problem we can use this android application to reduce the work of teacher and to add the mobility to our existing attendance system. This android application will really helpful for the teacher.

Keywords-Academic Monitoring System (AMS); android platform; database

I. INTRODUCTION

The maintenance and management of student information is almost a tiring process in the educational institution nowadays. Therefore an effective system for the management of student academic information such as their Attendance, Curriculum performance is required [1]. Moreover the students also need to be updated of their performance periodically for their improvement in the Academic. The workload of the lecturers is huge when handling subjects for more than one class. In the traditional way, first the attendance of all the students is recorded manually in a log book and then entered again in a desktop application. The same procedure is followed for recording the marks for each internal exam. Generation of reports on the information using such system is a tedious process which may often result in errors. A smart phone based application using Android can be used to make this process more easier, secure and less error prone. Reduction of manual work and more efficient information management will be achieved through this system. Android is an open source Linux based system developed by Google, and primarily aimed at mobile handsets and other portable devices. The ability to deploy applications written in other languages remains uncertain, as the suitability of Android devices that are larger than a PDA. Java 2

'Micro Edition'(J2ME) is a Java-based application platform for mobile devices developed by Sun Microsystems.

II. LITERATURE REVIEW

Author: Ms.Shweta A.Shaha, Ms. Madhuri V.Gorade, Ms.Nutan T.Shitole, Ms.Swati B.Gawade.
Paper Name: "Smart Attendance Management System", In International Journal Of Advance Research In Technology(IJSART),Vol.1,Issue3, March 2015.

In this paper an author proposed a system consist of many features like taking attendance of student, inserting their marks, adding new student, adding their information, teacher can edit attendance, view students bunk, send and retrieve important documents, sending and important message to parents whether the ward is present or absent in the college. In many colleges attendance is taken manually, to overcome this problem we can use this android application. Unfortunately there are several drawbacks in this paper.

Author: Brian James Mendonca, Gavin D'mello, Rachel D' souza.
Paper Name: "Automated Attendance using Android Device", In International Journal of

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Applied Information Systems(IJAIS), Volume 8-No.6, April 2015.

The author proposed in this paper a new, quick and easy way of registering attendance. It tries to reduce the traditional or manual process of marking attendance in which the teacher has to call out the roll number of every student in the class and mark his/her attendance after he/she has responded on it. An online system has been developed which aims to reduce the duration of the entire attendance taking process and reduce proxies entirely. It also include an offline feature which is kept as an contingency palm if the online feature cannot function normally due to some technical difficulty. Teacher will no longer have to carry attendance sheet or register to mark student's attendance. The android application takes in mind all these parameters and tries to ease the activity for the teachers.

Author: P.Jessenth Ebenezer, M.R.Mralidharan, S.Srianth, E.Ramesh, Mr.S.Prabhu.
Paper Name: "Android Application for Student Activity Register",In International Journal of Research Engineering and Advanced Technology(IJREAT),Volume2,Issue 2,May2014.

To reduce the fake attendance the author proposed in this paper integrates the RFID technology which consist of the RFID reader and the RFID tags. RFID reader read the signals from the tags and calculate the total number of counts in class. This count is cross checked with the attendance taen by the lecturers in the application. Mark entry system helps to maintain and update the marks taken by the students. Auto calculation system will help to calculate the cumulative attendance, individual performance, class performance. Website login is provided for the lecturers, HODs and principal to generate reports.

Author: Ankit Bansal, Ajit Rana, Akhil Bansod, Prafulla Baviskar.
Paper Name: "Mobile Based Campus Information Retrieval Android Application", In International Journal of Computer Science and Mobile Computing, Vol.4, Issue.3, March 2015.

This paper enhance the excellence of information in campus environment. It is related to issues in academic with the source of information in colleges. It depict a network for distributing campus information among lecturers and students. The idea of developing campus information via HTTP Internet Technology resulted campus information can be accessed inside as well as outside the campus and even all around the world through internet connected devices. This is an Android platform based mobile application is used to create an efficient environment and make sure that students and teachers can view information at anytime.

Author: Aniket Shah, Amruta Tuptewar, Pradnya Yeole, Prof.L.J.Sankpal.
Paper Name: "Automated Attendance Monitoring and Personal Intelligent System", In International Journal of Advanced Research in Computer and Communication Engineering, Volume3, Issue 11, November 2014.

The author in this paper proposed a approach for making attendance, where the student sign on the attendance sheets. This data is then manually entered in the system. Managing the attendance of the students during lectures is a difficult task and it becomes more difficult durng the report generation phase and maual computation produces errors and also waste a lot of tme. For this reason, the development of automated attendance monitoring system using android platform is proposed. Additionally, implementation of an intelligent system which will interact with user and

provide environment where chatbot will interact to provide dedicated chat.

Author: Mohommad Salah Uddin, S.M.Allayear, N.C.Das, F.A.Talukder.
Paper Name: "A Location Based Time and Attendance System", In International Journal of Computer Theory and Engineering, Volume 6, No.1, February 2014.

The paper enhances the time and attendance system that provides many benefits to organizations. It enables an employer to have full control of all employees working hours. Every organization has a specific location, which is determine by the GPS. The location of an employee can be determined by GPS device. If the location of an employee and the location of organization is same, then it should be said that , the employee is in the office. This paper use location as a proof of attendance and proposed a new time and attendance system based on location. Automated time and attendance system can use electronic tags, bar-code badges, magnetic strip cards, biometric and touch screens in place of paper cards which employee touch or swipe to identify themselves.

Author: Sanjay.T
Paper Name: "Attendance Management System", In International Journal of Emerging Technology and Advanced Engineering, Vol 4, Issue 7, July 2014.

The author in this paper created an application for android OS which is user friendly. This allows faster access of data and also less memory storage capacity. It calculates the attendance percentage of the students in faster time to check and uncheck the attendance of all the students. It is an efficient method to store the attendance in the smart phone rather than wasting the paper. It also updates the students report directly on the server reducing the faculty's time on logging from the computer.

III. EXISTING SYSTEM

3.1RFID:

Radio Frequency Identification system have been applied to different areas such as health-care, agriculture, and hospitality industry to name a few. The application of RFID to student attendance monitoring is capable of eliminating time wasted during manual collection of attendance and an opportunity for the educational administrators to capture face-to-face classroom statistics for allocation of appropriate attendance scores and for further managerial decisions.

3.2 DESKTOP BASED SYSTEM:

Attendance Management System s software developed for daily student attendance in school, colleges and institutes. The information is sorted by the operators, which will be provided by the teacher for a particular class. This system will also help in evaluating attendance eligibility criteria of a student. The scope of the project is the system on which the software is installed, i.e the project is developed as a desktop application, and it will work for a particular institute. But later on the project can be modified to operate it online.

3.3 BLUETOOTH SYSTEM:

The system is the closest representation to the proposed system. This system has high usability and proxy removal techniques can be included to make the system perfect. However the system is not scalable and requires more than eight connections active at a time. This redundancy makes it viable resource for a limited population.

IV.   PROPOSED SYSTEM

4.1 Modules

Proposed system will contain following module:

1] Admin:

The role of admin module is to register student, teacher. To keep security so that no one can use another user name and password. The admin can also post the blog.

2] Teacher:

The role of teacher is to take attendance, insert marks, sending important notice to student on blog, teacher can download or upload the document.

3] Student:

The student can view marks, check his/her performance, status of attendance, student can download the document. He/she cannot have the permission to change any data. If required the access will provide by the admin.

4] Attendance:

It allows the lecturer to enter attendance of the students into the database. After login, the lecturer will select the year and section of the class. The list of students with their roll no. is displayed.

5] Syllabus Coverage:

The syllabus covered by the lecturer is stored in the database by this   module. The student will login select the type of subject in the application which display the syllabus coverage list.

6] Marks Entry :

The marks scored by the students in any exams are stored in the database through this module. The lecturer will login and select the type of exam and marks of each student is entered and submitted and store in the database.

7] Report generation:

This module allows the lecturer to generate various information about the students attendance and marks data. To generate reports user must login through the web portal and select the report type. The reports are displayed.

8] Notification:

This module allows the lecturer to post all the notification on blog.

4.2 Proposed System Design

The lecturer can login and take the attendance through click on the checkbox appear on the device. The lecturer can insert the marks that are internal marks, class test, etc .They can also insert syllabus coverage information, generate report, and send important notice to students on blog. They can download and upload the documents. The information is stored in the database as shown in the figure.
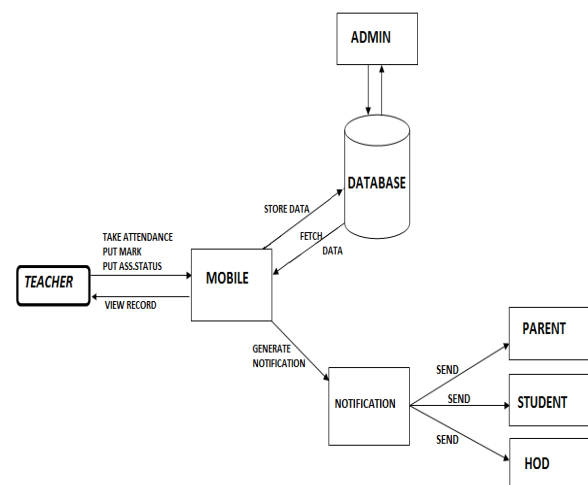

Fig 4.2.1: Overall architecture of system
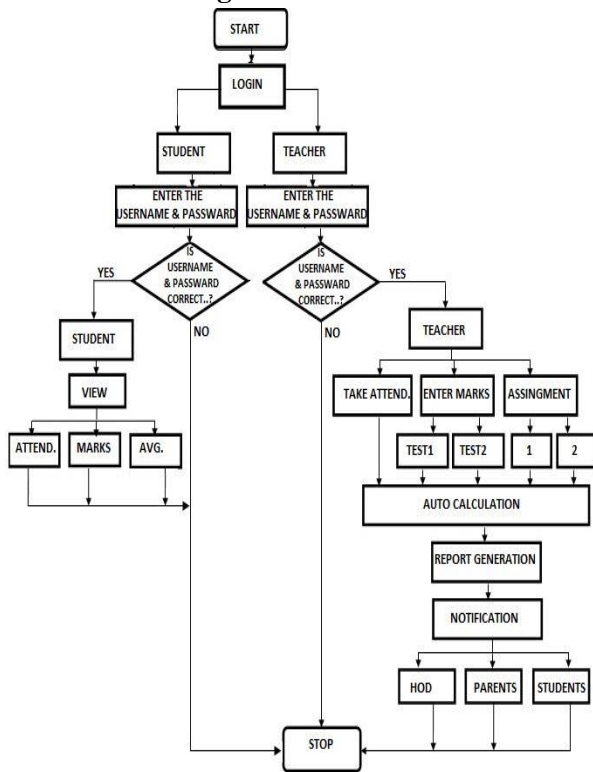
4.3 Data Flow Diagram:

Fig 3.3.1: Data flow diagram

4.4 Admin Login:

The role of admin is to register student, teacher, subject registration, branch registration. To provide password to students and teachers. To keep security so that no one can use another user name and password. The admin can also post the blog and send the notification. Admin have full right to add the new faculty, students and can altered the data if required.
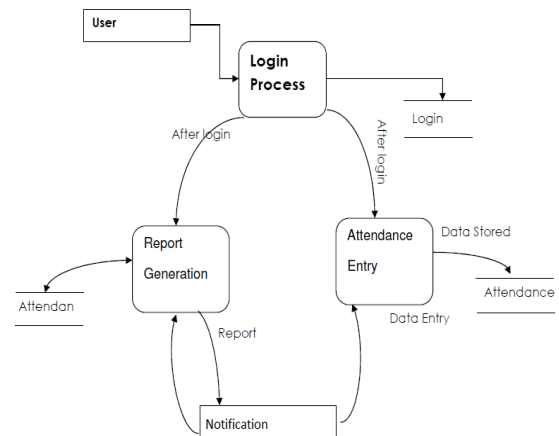

Fig: 3.4.1: Admin login

V.   ADVANTAGES

- Calculating the attendance will take less time and reduce the work of staff.
- The accuracy will increase.
- The paper work will be reduced.
- The attendance is stored in database.

VI.   CONCLUSION

The designed system fulfils all the necessary requirements of the lecturers in maintaining the student related records. The system is portable and can be easily installed and used on any mobile phone running android OS. By using this application proxies are completely avoided. This application helps to reduce time, effort and resources, also it will eliminate the tedious work of teachers. The accuracy will be maintained and faster result will generate. Parents are also updated about their wards performance.

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