Andro Attendance – Marking Attendance with Android Application

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Abstract: Andro Attendance is the android application developed to manage daily student attendance in colleges. The Mobile Phone Based Attendance System will help the lecturers to take attendance easily, securely and without errors. This system will be used to reduce the fake attendance and also reduce the waste of the time. Lecturer will be able to view the attendance by this App. After taking the attendance in the Android mobile, attendance will be send to the server.

Keywords: Android, Application, Attendance Management System, Smart Phone, Android Phone, Smart Attendance.

I.   INTRODUCTION

Usually attendance system calculated manually using computer but, this project using tablets. Education system in developing countries has been changing widely in last 10 years due to the development of the technology. Smart class, E-learning, Video conferencing are some of them. The core idea of this project is to implement some of the emerging Technologies like mobile computing and near field communications and advances in behavioral science studies to make a better educational system.

II.   EXISTING SYSTEM

There are different methods used by various some colleges to record the presence of their students. Such systems may be manual. In the present system all work is done on paper. The whole session Attendance is stored in register and at the end of the session the reports are generated. I am not interested in generating report by manual method because, it takes more time in calculation. If it is automated system, then it may be a Biometric-based system, card-based systems and etc. In some of the college, they are using software on PC for marking attendance to students by Teachers.

III.   DISADVANTAGES OF EXISTING SYSTEM

1) Lack of Graphical User Interface Environment.
2) Difficulties in report generation.
3) Manual control.
4) Lot of paperwork.
5) Consumes more time.
6) Sometimes it leads to error on conversion.

IV.   PROPOSED SYSTEM

In this project "Andro Attendance", an attempt has been made to record attendance through mobile devices. Andro Attendance is the android application developed for attendance system that can be used by all teachers for managing attendance of their respective classes. The aim of this "Andro Attendance" project is to add mobility in the existing attendance process. This Application will help the teaching staffs to take attendance easily, securely and without errors. This system will also reduce the fake attendance and also reduce the waste of the time.

This android application will provide different roles for different peoples like Administrator, Teaching Staff, Head of the Department and Student. Both Staffs and Students can View and Edit their Profile. They can also reset their passwords too. Staffs,

Administrator, Teaching Staff and Head of the department can view the Alumni Profile and Staff Profile. Administrator and Head of the department can search about a Teaching Staffs. Administrators, Teaching Staffs and Head of the department can view attendance. Head of the department and Teaching Staff can mark, view and edit the attendance of the Students. Administrator can also edit the Profile of Student and Staff. Administrator can create a new Staff and Student Profile. They can also reset the password of the Staff and Student Profile. They can also promote Students from one year to another year. They can edit the alumni profiles too.

V. SOFTWARE REQUIREMENTS

a. *The For Developing PC*
  1) Java Development Kit (jdk1.6 or above).
  2) Java Runtime Environment (jre1.6 or above).
  3) Eclipse IDE (Integrated Development Environment) with SDK (Software Development Kit).
  4) WAMP Server.
b. *For Mobile*
  1) Operating System: Android 3.2 (Honeycomb) or above.
  2) Apps Required: Browser, PDF Reader.

VI. ARCHITECTURE DIAGRAM

This App will run only on the Particular Network through Wi-Fi connection. After Completion of each process on the android device, the data will be sent to the PHP file on the web server through the network and data will be stored on the MySql Database. Flow of the application is as shown in Fig. 1.
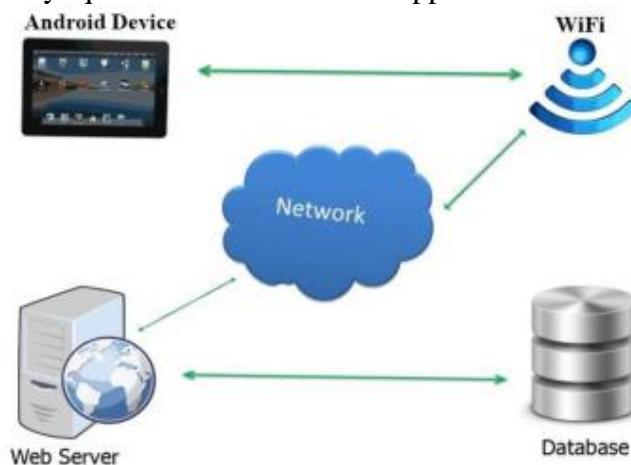

Fig.1. Architecture Diagram of the Project

VII. MODULES

There are four modules in this Project. There are

  1) Module 1: Authentication.

  2) Module 2: View and Edit Profile.

  3) Module 3: Reset Password.

  4) Module 4: Mark, Edit and View Attendance.

a. Module 1: Authentication

Administrator, Teaching Staff, Student should Login to this Application first. Login will provide rights after the successful completion of verification of username and password with the database on the web server. Screenshot of the Login Screen is as shown in Fig. 2. Forget password option is also provided to change the new password by entering the Username, Name, Date of Birth, Phone No and E-Mail ID correctly.

b. Module 2: View and Edit Profile

Administrator, Teaching Staff, Student can view their profile and edit their profile. Administrator can have additional rights to view and edit the Profile of Student, Staff and alumni. Administrator can also have rights to promote students. Head of the Department can have rights to Promote Students from one year to another year or semester, He can also change the Designation of the Staff and Change the allotted class for them too. Head of the Department, Administrator, Staff can have rights to view the class students, alumni student batch, profile of alumni student and student. Administrator can also create a new staff profile and student profile. Screenshots for the Module 2 are shown in Fig.3, Fig.4, Fig.5, Fig.6 and Fig.7.

c. Module 3: Reset Password

Administrator, Teaching Staff, Student can change their Password for their Profile. They have to log out after the password is reset. Administrator can have additional rights to reset the password of student or staff. First login after reset of password by administrator, they have to give the new password. It is compulsory process. Screenshots of Reset Password are shown in Fig.8.

d. Module 4: Mark, Edit and View Attendance

Students can view their Attendance based on the date and period they chosen with the Subject Name, Attendance and Marked By. Administrator and Staffs can view the attendance of a class and a particular student on the particular period of the specified date. Staffs can mark and edit the attendance of the classes they are handling. The attendance marked by one staff is not allowed to edit by another staff. After the completion of Marking or Editing Attendance, the head counts will be displayed for the verification. Then, Attendance will be stored, It can also be saved as PDF on the Device Memory of the Staff's Android device. Screenshots for the Module 4 are shown in Fig.9, Fig.10, Fig.11, Fig.12, Fig.13, Fig.14 and Fig.15.
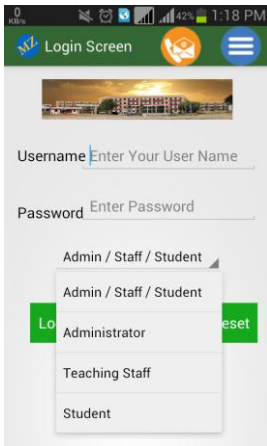
Fig. 2. Login Screen
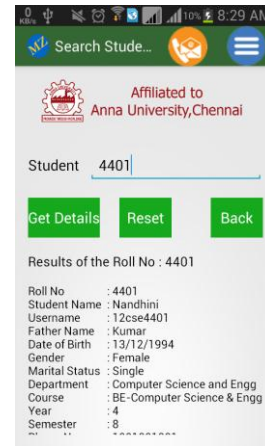
Fig. 3. Search Staff Profile
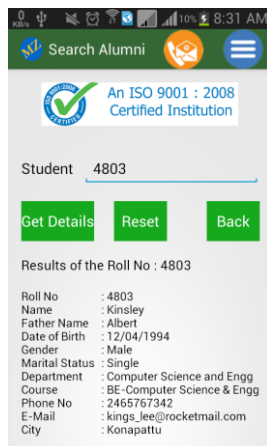
Fig. 4. Search Student Profile
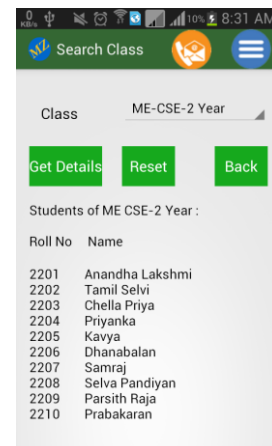
Fig. 5. Search Alumni Profile

Fig. 6. Search Class

Fig. 7. Search Alumni Batch
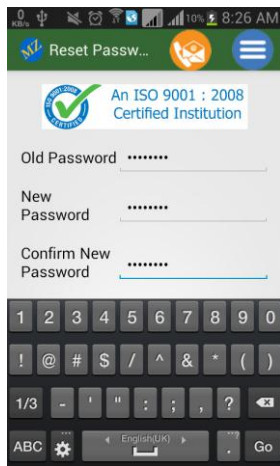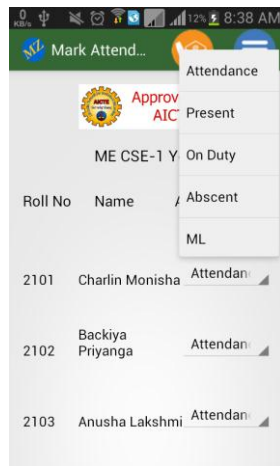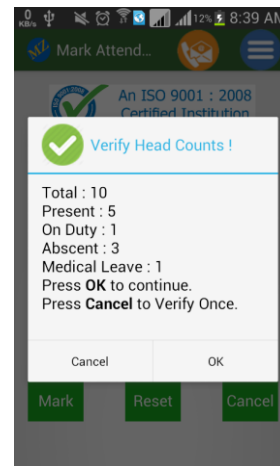
Fig. 8. Reset Password

Fig. 9. Marking Attendance
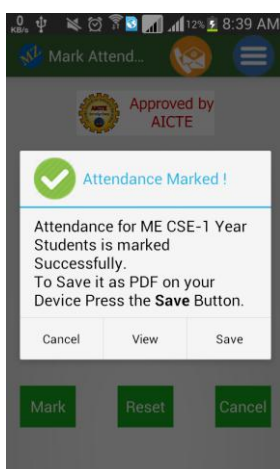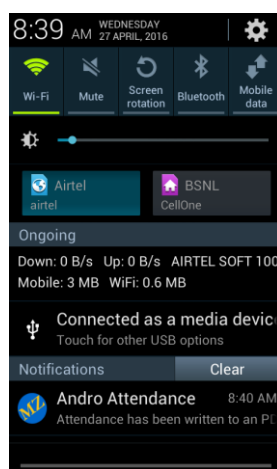
Fig. 10. Head Counts

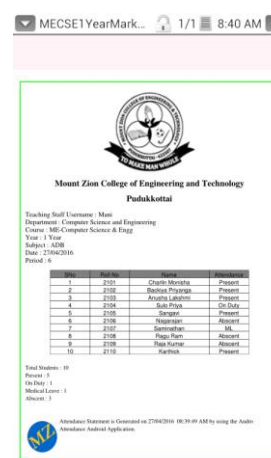Fig. 11. Attendance Marked

Fig. 12. Notification

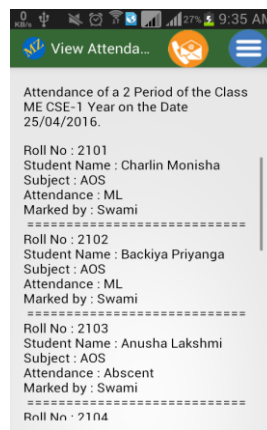Fig. 13. Generated Statement

Fig. 14. View Student Attendance

Fig. 15. View Class Attendance

CONCLUSION AND FUTURE WORK

The attendance management system will be used to lectures to take attendance easily, securely and is less error prone. Then this system is used to reduce the waste of the time for taking attendance to the students and we can save our manual calculations time. And then it will also reduce the fake attendance, then this system is user friendly .Because, we can put attendance to the students anywhere in the place. The paper work will be less to using this attendance management system.

I am planning to change this android application as an "E -Campus" for the College. I am planning to include profile picture for the Students, Teaching Staffs and Administrators. I am planning to include Declaration of Holiday on the Specified Date option for the Administrator and the Head of the Department. I am planning to change the Authentication with One Time Password, Face Recognition, Voice Recognition instead of Password to improve security of the Application. I am also planning to include login for Alumni to get the current news and events of the college and the current students of college can get the notes and ask Job

related queries to them. I am also planned to include the chatting option which enables Student to post a question and the staff or the alumni can answer for that question based on the department. I am planning to change this Project based on QR (Quick Response) Code.

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