

# Developing Smart Student Attendance System Using Smart Phone Application

Tghrid Almardi<sup>1</sup>, Himangi Pande<sup>2</sup>

<sup>1</sup>MIT Pune, ME IT

<sup>2</sup>Professor, MIT Pune, ME IT

**Abstract:** *An Education system in India has become so advanced in last decade due to the development of the technology. Smart class, video conferencing is some of the examples of modern trends in educational system. These applications help the institute to move forward quickly, fulfill their vision and accomplish their goals, E-way. The core idea of research project is to implement Android based application for attendance management system for advancement of institution and educational system. Proposed project application alerts, academic calendar and exam study materials online, online presence records, performance record and Android applications using parent's information system will be implemented as online reminders. Teacher attendance through smart phones and their progressive assessment for students to record the system helps. His presence as a SMS presence goes down, as this system allows a student to notice. Nowadays, mobile devices especially for students in higher education have become a way of life. Computers are now compact smart phone that can fit in a pocket and can be done anywhere are replaced by. The rapid progress in mobile technology, mobile learning, mobile learning, particularly attractive way knowledge distribution used in the teaching and learning process that e-learning is known as the next generation of a new zone is created. Students with the development of the Android application. Technology enabled educational tools as liked to use mobile devices. Smart phone like BlackBerry, I are based on the operating system OS and Android. Android OS entry rate is 70 percent, because the proposed project design, smart phone with Android operating system is selected.*

**Keywords:** Phone Application, Smart phone, Smart student attendance, mobile application

## 1. Introduction

In the past few decades, some technological changes have appeared gradually and their impact on higher education has been incremental. In other cases, relatively short period of time, but the introduction of technological changes, such as Web browsers have had a major, and some revolutionary effects on higher education as well as the wider society would say. Who will it be for mobile devices? Their effect gradually and will be incremental or sudden and revolutionary? Two points to see a case. Since individual's laptop and mobile phone devices like decades is used, one can say that the effect of the use of mobile devices on people's behavior in General and especially on higher education has been relatively slowly. On the other hand, compelling new features emerge and devices with wireless connectivity is available almost as mobile device impact on higher education and libraries may be on the verge of a radical step. This article examined events trends and mobile devices and what effect they might have on the academic library services will discuss the future. Mobile devices: laptops, net books, notebook computers, cell phones, MP3 players, cameras, and other items such as audio players are included. This article will focus on smart phones (and the iPod touch, which is one of the traditional telephone capabilities of smart phone features zero assumes) and e-book reader. Names used for the telephone of handheld devices can be misleading, such as cell phones, mobile phones, handheld devices, smartphones, etc. The term "Smartphone" using Internet and computers, are the same, although there are no industry-wide standard definition capabilities and smart phone uses well beyond the simple cell phone have gone 20 years ago of the functionalities that the device has become popular for identifying. When Americans first bought cell phones they used for on-the-go

communication and voice phone calls was through communication. European, Asian and African long used their mobile phone to send text messages, while many Americans through the phone device to move this different mode was very slow.

## 2. Literature Survey

**Classroom Attendance Application.** Attendance Management System is a software developed for daily student attendance in schools, colleges and institutes. It facilitates to access the attendance information of a particular student in a particular class. Using rad software development work and development plan to give more emphasis on approach to put less emphasis on. Red view knowledge as this project progresses achieved in response to the requirements emphasize need to adjust. This system of systems analysis and planning phases of systems development life cycle (SDLC) combines elements of. This program and application development focuses on the same SDLC work. Red, however, users can continue to participate and still have change or improvement suggestions in the form of actual screen or report are developed. Within the scope of the project to which the software is installed is an ANDROID application, system, and it will work for a particular institution is developed as IE project. School or College's vision with respect to the economic system is being developed. This means that the paper work is completely eliminated in cost effective. Android is a mobile operating system based on Linux kernel and is currently developed by Google system (OS).

**Attendance Check System and Implementation for Wi-Fi Networks Supporting Unlimited Number of Concurrent Connections.** Checking Students' Attendance in Schools,

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Universities kindergartens, and travel agencies is a time consuming process, because the instructor has to call each person by person when the number of students/users are big. So, instructors/ Leaders for students to investigate the presence and consume more time. Suggest that Wi-Fi signal using a smart phone-based attendance management system using Wi-Fi 802.11 x technology on smart mobile devices. In this research, users check the presence of AP mode Wi-Fi service managers initiate. A smart Manager to install applications Manager version, while only the add-on Manager smart device every time the student is connected to smart device functionality is required for users to use the user Optionally you can install smart client version application. Instructor mobile telephone software to install. This Bluetooth connection to query students enables mobile telephones and mobile telephone trainer student mobile phone to the media access control (MAC) addresses, through the transfer of student attendance can be confirmed with the proliferation of it technologies, we have a novel appearance 802.11 Wi-Fi smart method on mobile devices to take advantage of the convenient x technology and properly checked Offer. This research examines the presence of users in AP mode Wi-Fi service managers initiate.

**Android Based Smart Learning and Attendance Management System.** An Education system in India has become so advanced in last decade due to the development of the technology. Examples of modern trends smart class video conferencing are some of the educational system. These applications Institute quickly progressed, their dreams and meet their goals, to E-way. The core idea of the research project for the presence of Android-based applications to implement. Different tracking system block diagram with the proposed system relies on the presence of the survey. The presence of students as well as teachers can take and upload mobile Web server on server side records, percent attendance. automatically will become. SMS module to parents or students can also transmit for faculty to be student table or module is designed especially to be sent depends on the time. Staff attendance record can upload the database on the server. Attendance is calculated automatically and the message will be sent to parents. Need hardware processing engine and with less memory size personal desktops/notebooks Laptop Central Server 1 GB. Smart phones and more advanced software-application development – Android provides c # and .NET Web application development, database management-SQL Server 2012 Android application Development-Eclipse LUNA 4.4. Most of the educational systems this system can be applied to automate and be prepared for cross-platform.

**A Survey on “SMART CONNECT” an Android and Web Based Application of College Management System.**

The Android Technology with web services has brought many drastic changes in the mobile application development field. This application provides a generalized solution to monitor the various works that are carried out by a College for managing it. "Smart connect" student information provides a simple interface for maintenance. That improve the efficiency of managing college that College records and student and College should be a reduction in the space between the up to date information to the College website design purpose. Online interface to provide students, faculty. Increasing the efficiency of College records management. The time required for giving notice and access loss. To make the system more secure. Non-value added decrease in time spent on tasks. Depend on the various proposals. Schemes is an Android based mobile functions to monitor applications at remote sites. The application of various functions to monitor the presence of a generalized solution management system updating the Server result straight College and colleges students to calculate the presence of an Android application is provided to generate. Data will be stored in smart phones. Students using UR smart-phone. get helped take the presence of connected for lecturers. To the server. Presence in mobile using GPRS, lecturers take it to the server will send and attendance list will be automatically updated after lecturers' Web site login will be able to edit the appearance. And GPS location using the included.

### 3. Research Method

#### 3.1. Proposed Work

Following traditional systems are used to mark attendance in the teaching process. Manual attendance system calls it by name or by signing up on paper is the traditional method of taking attendance, but it is more likely that bad more paper work as well because it is disabled. Nowadays, mobile devices especially for students in college education have become a way of life. Computers are now compact smart phone that can fit in a pocket and can be done anywhere are replaced by. The rapid progress in the field of mobile technologies is a new territory, which is known as mobile learning is created. Mobile learning e-learning that fascinating way through the smart phone knowledge teacher presence and to assess their progressive students record keeping helps the system is the next generation of leads. This system student a notice his presence threshold the same as an SMS gives as.

#### Block Diagram of proposed System

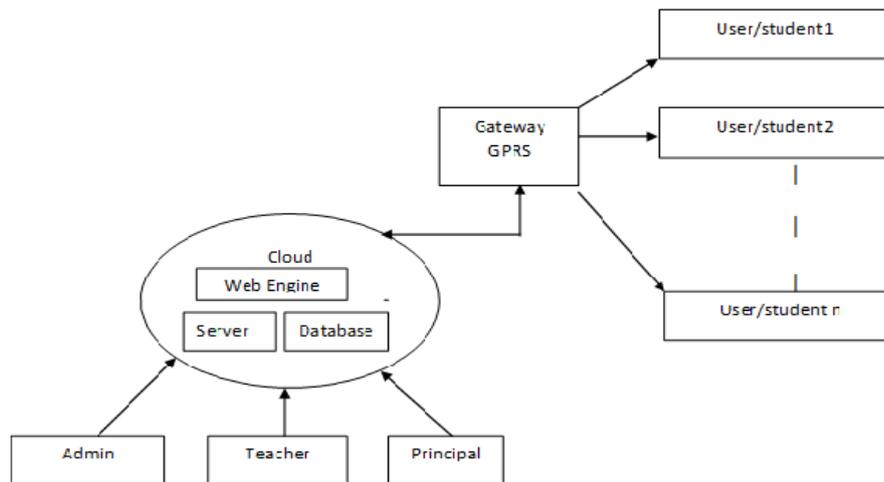


Figure 1: Block diagram

With the proposed system shown in Figure 1. Teacher can take attention of student as well as mobile and upload on the Web server can take the appearance of a record. On the server side will be automatically calculated percentage attendance and accordingly report will be generated. SMS notification module, SMS will be sent to parents or students. E-learning module notes, students can also broadcast schedule. Research through GPRS operator elaborations teacher or student's smart phones have been uploaded to the Web server with the data transmission can be uploaded.

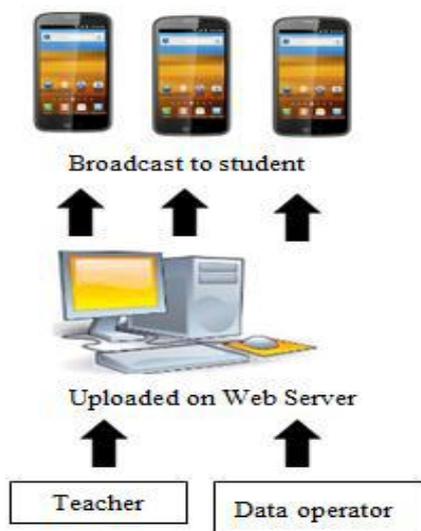


Figure 2: System Design and Development

**Authentication Module.** The purpose of Authentication module shown in Figure 3. Is to provide security. It is the entry module of application. Each user enters his/her username and password to enter into application. If username and password is matched, application gets started.

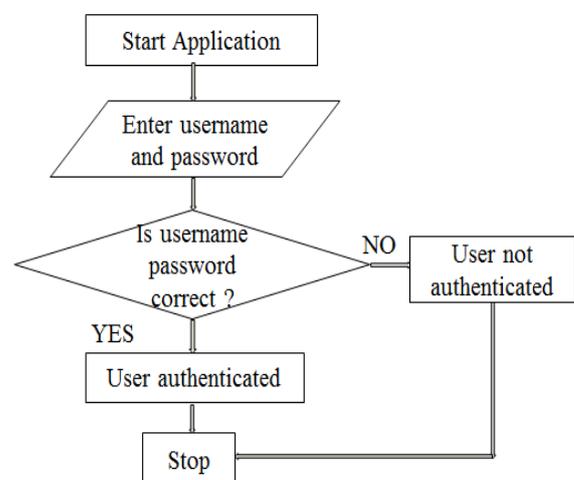


Figure 3: Flow diagram of Authentication Module

**Database module.** The learning material to be shared is stored on server. By means of internet it will be broadcasted to all the registered students. SMS notification module. SMS notification module SMS will be sent to parents or students. SMS parent notification option is selected, then will be sent to the mobile number entered. Student information will be sent bulk SMS option is selected the Group of students that comes under the special class. This module exam, with student progress, low attendance a reminder notice and any important information can be sent. Parents as well as students might be useful for this module

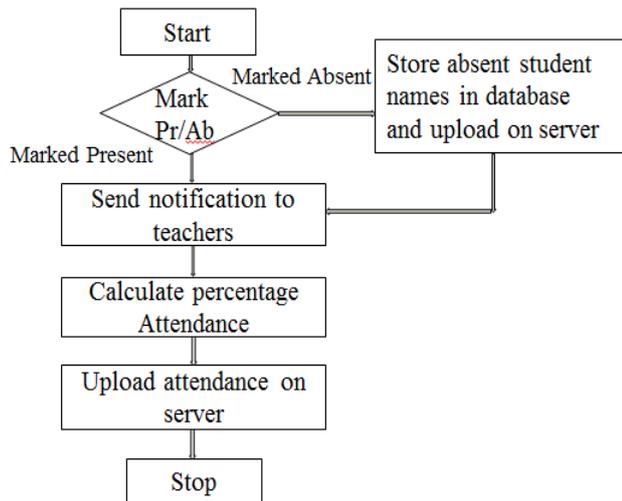


Figure 4: Flow diagram of Student attendance module

### 3.2. Scope

In this system can be implemented to automate most of the educational systems and it can be designed for cross platform. Setting up environment on own machine. This phase involves installation of Java JDK, JRE, Android SDK, and Eclipse. GUI/build Main forms/ Sub forms and create activities connected with each other. Error log module incorrectly enter network password; server up-downs such as non-authenticated transactions create which keeps track. Keeps a record of network connectivity. Keep the log module service call that time, log out to log all user activities in hit, kind of upload and download time, file size. Web APIs Smartphone and Android designed for communication between servers. Android App test run the Setup process. APK android smart phone on the file and test the application.

### 4. Results

This implementation is done on the server and Smart phone. Implementation on the server is done using .Net and visual studio, while the implementation of Smart phone is using Java script. The application is tested on Android smart phone version Lollipop 5.0.1.

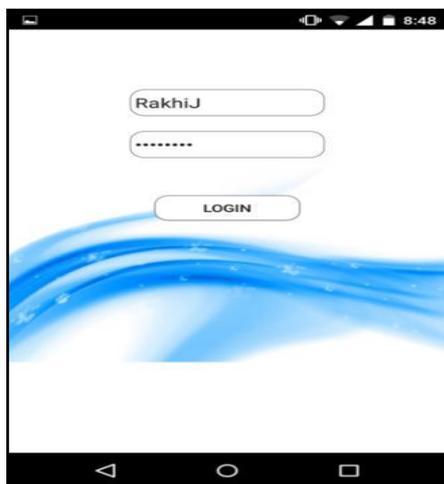


Figure 5: Authentication Screen

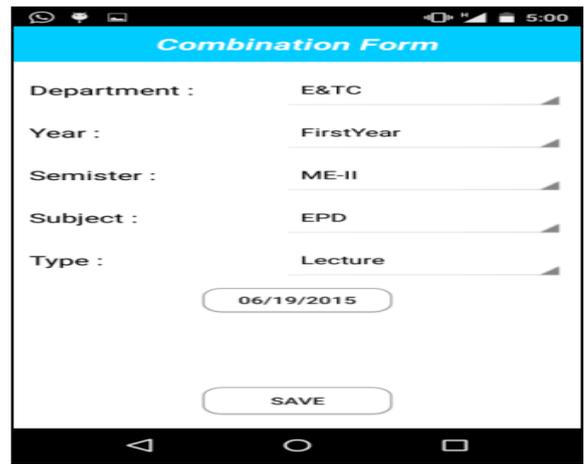


Figure 6: Department registration screen

Using department registration screen shown in Figure 6 user can select department, year semester and subject and enter into application option form.

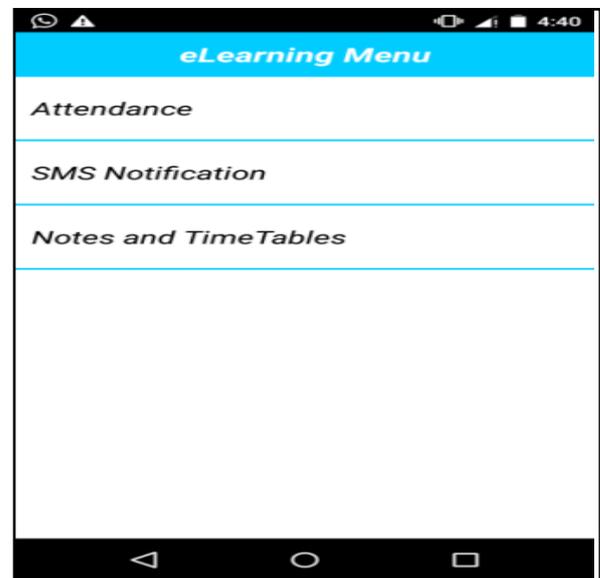


Figure 7: E-learning menus

ELearning Menu- User can select one option out of three as shown in Figure .7. As per selection, next screen will appear.

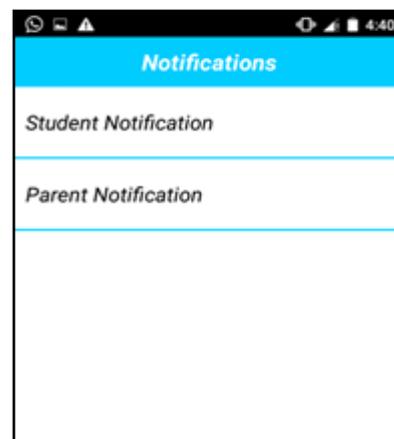


Figure 8: Notification screen

Using notification module, user can send notification to student or teacher. Shown in Figure .8.

## 5. System Interfaces

### 5.1. Hardware Requirements

A Processor having a clock speed of at least 1 GHz is essential for EAS to work.

A minimum of 256M RAM of primary memory is required for the EAS to work.

A secondary memory of a minimum of 100GB is required for the EAS system to work.

A GSM modem/server to send SMS alerts is required for EAS.

A mobile phone or a GSM modem is required to receive SMS alerts.

### 5.2. Software Requirements

Operating System: Windows XP

Languages: Java, JSP, Java script, HTML

Compilers: Java c compiler, J2EE

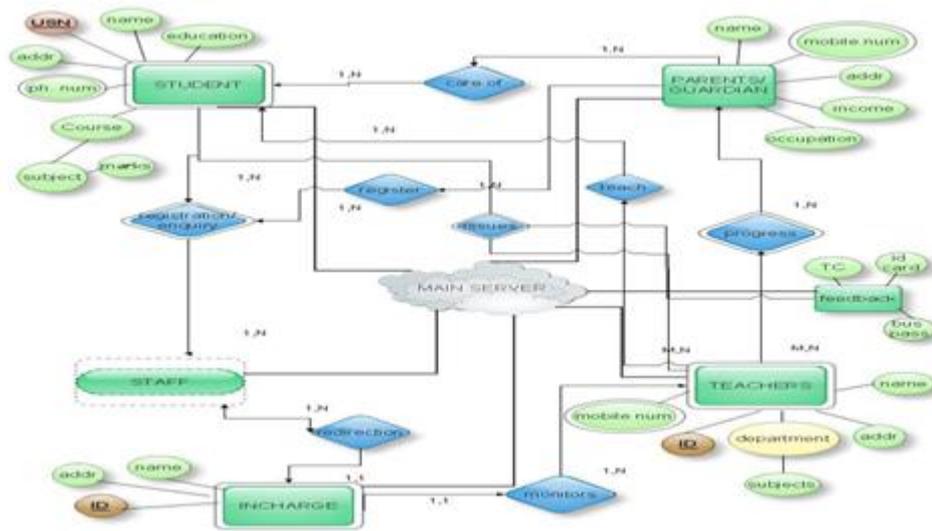
Software: CSS

Database: Oracle

### 5.3. Functional Requirements

The user must enter a valid log in ID, i.e. USN if the user is a student and/or student' sparest guardian and teacher's

employee no if user is a teacher. After this the user must enter a valid password. If the user has entered a wrong ID/password prompt him/her to enter the correct id/password up to three times, after which start a password recovery procedure. If the user has entered the correct ID password combinations, open and to provide different browsing related user IE options page student/ Teacher performance graph, addresses, etc. If then statement to retrieve from the database and display the results the user chooses to view your educational details. The user TC/ ID card application/ Nearby, just a feedback form in user input and which will be later in College, wants to store the database used by the College Administration. After the user logs off the necessary details her out the window are received after the changes are saved, and the user page exited students/Admin Teachers regularly updated details of and related to free any subject the student has failed, then every month, then sends it this an SMS alert for parents concerned, intimating.



**Figure 9: Logical Database Requirements**

## 6. Conclusion

Nowadays, mobile devices especially for students in college education have become a way of life. Computers are now compact smart phone that can fit in a pocket and can be done anywhere are replaced by. The rapid progress in the field of mobile technologies is a new territory, which is known as mobile learning is created. Mobile learning e-learning that fascinating way through the smart phone knowledge teacher presence and to assess their progressive students record keeping helps the system is the next generation of leads. This system student a notice his presence threshold the same as an SMS gives as. In this system can be implemented to automate most of the educational systems and it can be

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## References

- [1] Nurul Farhana Jumaata, Zaidatun Tasir, "Integrating Project Based Learning Environment into the Design and Development of Mobile Apps for Learning 2D-

- Animation”1877-0428 2013Social and Behavioral Sciences 103(2013) 526-533.
- [2] MHsuan Che Yang, Wen-Yongguang. Facilitating Academic Service-Learning with Android-based Applications and Ubiquitous Computing Environment”978-0-7695-4493-9/11 26.00 2011IEEE-DOI10.1109 U-MEDIA.2011.29.
- [3] K.w.T.G.T. Priyankara, D.c. Mahawaththa,D.P.Nawinna, J.M.A. Jayasundara, K.D.N. Tharuka, S. K.Rajapaksha “Android Based e-Learning Solution for Early Childhood Education in Sri Lanka”,International Conference on Computer Science and Education Colombo, SriLanka (ICCSE) April 978-1-4673-44632013.
- [4] M. Man, L.Y. Kyng 2007 “Utilizing MYKAD Touch N Go features for Student Attendance System (TITO)”. Proceeding of 1st International Malaysian Educational Technology Convention 2007, Johor Bahru, Malaysia, pp.114-120.
- [5] Sidi, Jonathan, N Syahrul, Junaini, and Lau, S. Ling. 2007 ISAMS: Tracking Student Attendance using Interactive Student Attendance management System. Third Malaysian Software Engineering Conference (MySEC’07), Selangor, Malaysia, pp. 1-5.
- [6] Z. Yongqiang, L. Ji 2006 “The Design of Wireless Fingerprint Attendance System” International Conference on Communication Technology, ICCT '06, Handan, Hebei, China, 27-30 November 2006, pp. 1-4.