



# **Mobile App for Attendance Management System**

A Report for Project 2

*Submitted by*

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*in partial fulfillment for the award of the degree of*

Bachelor of Technology

**IN**

**Computer Science and Engineering**

**SCHOOL OF COMPUTING SCIENCE AND ENGINEERING**

**Under the Supervision of**

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**MAY/JUNE- 2020**



**SCHOOL OF COMPUTING AND SCIENCE AND ENGINEERING**

**BONAFIDE CERTIFICATE**

Certified that this project report “Mobile App for Attendance Management System” is the bonafide work of “**Vikas Narayan Yadav**” who carried out the project work under my supervision.

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## **1. ABSTRACT**

We have seen over the years that the process of manual attendance has been carried out across almost all educational institutions. The process is not only time consuming but also sometimes inefficient resulting in the false marking of attendance. Today, we need not maintain pen and paper based attendance registers. Following this thought, we have proposed an attendance marking and calculation system which is implemented on Android mobile application integrating biometric scanner that communicates with the database and verification can be achieved. This Android application will give the students information on attendance and change in timetable if any whereas the biometric scanner is used for verification, authentication and to avoid proxy.

Keywords: Android, Attendance System, Application, Authentication, Biometrics, Bluetooth, HTTP, JSON, Mobile Application, Mobile computing, Operating System, Near Field Communication, Open source, PHP MySQL, WAMP, Web services, .

## **INTRODUCTION**

Student attendance system is the system of tracking the attendance of the student on basis of presence in class. Successful industries, schools, universities begin by engaging students and making sure that they will come regularly so the attendance rate become very important.

The attendance is important because students are more likely to succeed in academics when they attend class consistently. It's difficult for the lecturer to build students' skills and progress if a large number of students are frequently absent.

Because of the advancement of technology today has immersed itself towards education. The presence of technology has reached its maximum of providing sustainable technology towards quality education through delivery and effective learning and smart devices have become a way of life especially in higher education academic fields be able to develop their system into smart attendance

### **Android Operating System**

Android is a software platform and operating system for mobile devices, based on the Linux kernel, and developed by Google and later the Open Handset Alliance. It allows developers to write managed code in the Java language, controlling the device via Google-developed Java libraries. There are over 300 million Androids in use and over 850,000 devices activated every day. Android is the one of the most used mobile operating system with a market share of 48% and Over 400,000 applications available in Google play store.

### **Android Features**

- *User Interaction:* Android Provides beautiful, attractive and comfortable user interaction.
- *Connectivity:* Android supports different connectivity technologies like Bluetooth, Wi-Fi, and WiMAX.
- *Messaging:* SMS, MMS and android cloud to device messaging framework is available

in android operating system.

- *Web browser*: Browser present in android operating system depends on web kit in mix with Chrome's V8 JavaScript engine supporting.
- *Java support*: Most of the android applications are written in java language but there is an absence of java virtual machine in the platform of that DVM is presented. DVM is specially designed for android and battery powered mobiles.
- *Multitasking*: Android supports multi-tasking, which provides flexibility of running from one application to another or running different applications simultaneously.

*Hardware Support*: Android supports video or still cameras, touchscreens, GPS, accelerometers, gyroscopes, magnetometers, proximity and pressure sensors, thermometers

## **4. Existing System**

As already mentioned, there are several types of attendance management systems, and they are classified into following categories and their combination: • student identification card and card reader system, • near field communication (NFC) based system, • barcode and similar coding based system, • biometrics system, and • one time password system. The case example in the category of the identification card and its reader system is a typical case, as shown in the section one. There are not only research examples, but also many products are delivered in the market. Regarding these system, there are two major problems; one is a queue problem and another is a cost problem. At the beginning or at the end of the lecture, you can see that the students, who want to record their attendances, make a long queue in front of the card reader, if the number of attendees are too much. That is the queue problem. In addition, we have to pay much expense for replacing the whole of all identification cards if the cards do not have any function of keeping information.

## 5. Proposed system

### System Tools:

Android Studio has been used as a development environment. Java, and xml have been used as programming and scripting languages. While, MySQL lite has been used as a Database management system.

### System Database

Database of the proposed system consists of five tables: users, students, courses, departments and attendance logs. Figure (1) shows the schema of these relational database.

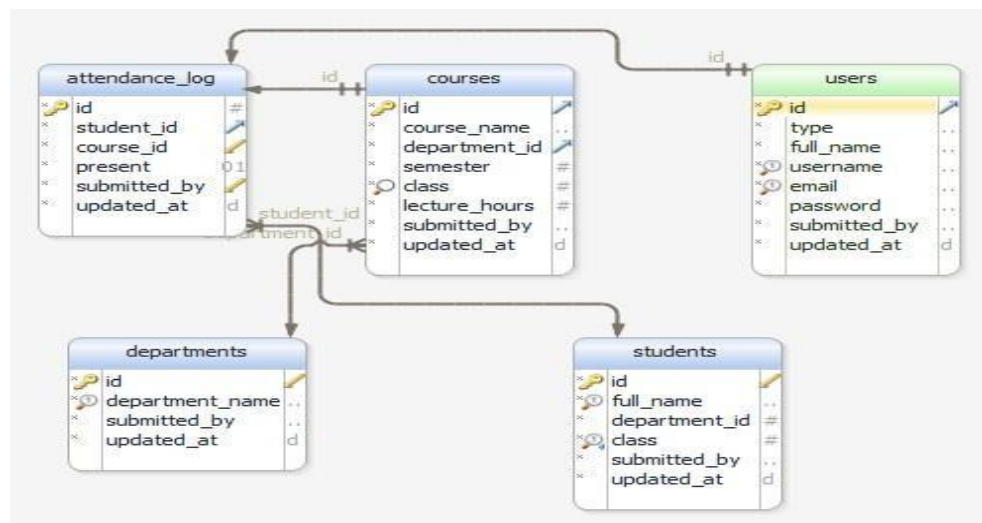


Fig -1: Database Schema

### System Users:

There are three types of system users: Administrator, Teacher and Student . Any user who wants to use the attendance system must get user name and password which admin grants it.

Attendance system consist from three parts, first part is admin session, who can login to system and edit on all database tables. The second part is teacher session, who login to system for marking attendance and third part is student session, that also login to system to show attendance and report all these tasks.

The homepage of the system is the login page. When user open the system login page will



prompt, as shown in Figure (2), It involves three input types: Text fields, button and labels.

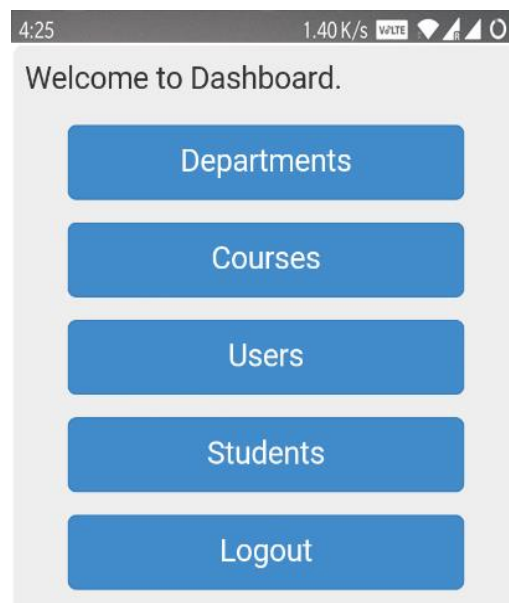
Two text fields for username and password



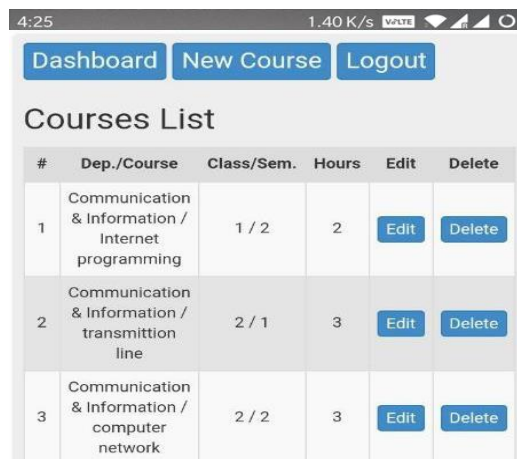
Fig -2: Login Page

## Administrator Session

After entering the user name and password, the system will redirect the admin into the "Dashboard" page. It contains buttons for Department, Courses, Users, students and logout as shown in figure (3). These buttons are used for adding, deleting and editing; department, course, student and user respectively. The proposed system suppose that current academic system consists of four classes, and two semesters. Figures (4), (5) ,(6) and figure (7) shows managing these sections.



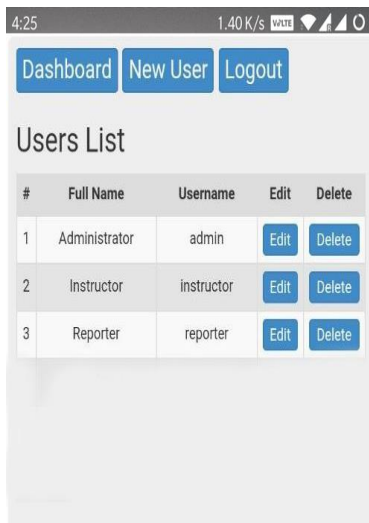
**Fig -3:** Admin Dashboard



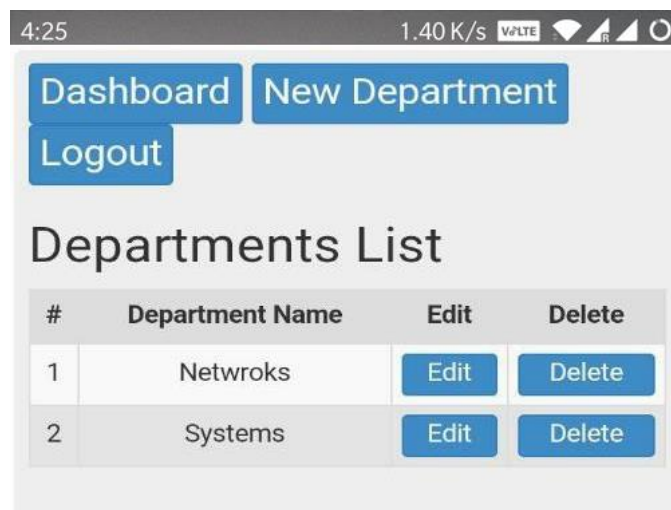
The screenshot shows a mobile application interface for course management. At the top, there is a status bar with the time 4:25, signal strength, Wi-Fi, and battery icons. Below the status bar, there are three navigation buttons: "Dashboard", "New Course", and "Logout". The main content area is titled "Courses List" and contains a table with the following data:

#	Dep./Course	Class/Sem.	Hours	Edit	Delete
1	Communication & Information / Internet programming	1 / 2	2	Edit	Delete
2	Communication & Information / transmission line	2 / 1	3	Edit	Delete
3	Communication & Information / computer network	2 / 2	3	Edit	Delete

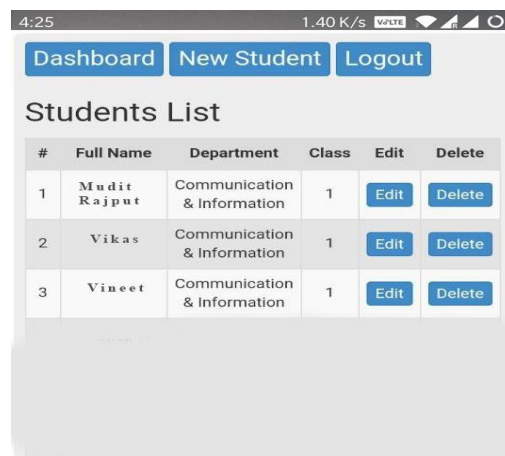
**Fig -4:** Course Management Page



**Fig -5: User Management Page**



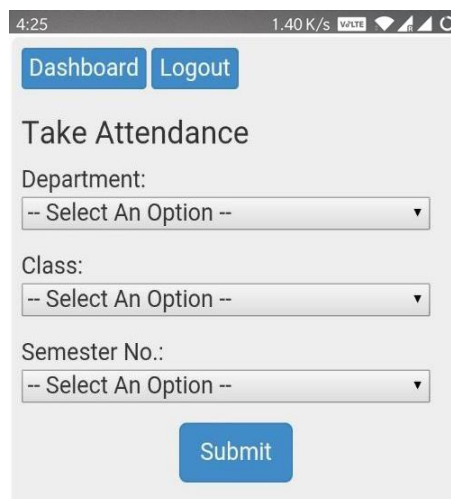
**Fig -6: Departments Management Page**



**Fig -7: Students Management Page**

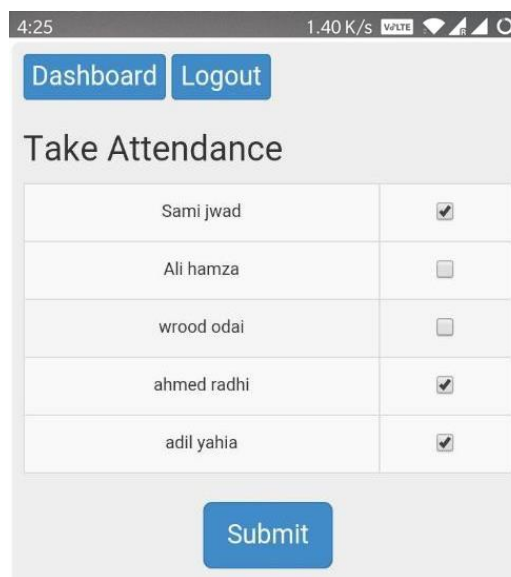
## Teacher Session

For taking the students attendance for particular department and class, instructor must be log in the system. After submitting the username and password of the instructor, the system will redirect that instructor to "take attendance" page as shown in figure (8). After selecting a department, class, semester, and the current course, all names of students at that class will appear in students list as shown in figure (9).



The screenshot shows a mobile application interface for taking attendance. At the top, there are two buttons: "Dashboard" and "Logout". Below them is the title "Take Attendance". There are three dropdown menus: "Department:" with "-- Select An Option --", "Class:" with "-- Select An Option --", and "Semester No.:" with "-- Select An Option --". At the bottom, there is a blue "Submit" button.

**Fig -8:** Take Attendance Page

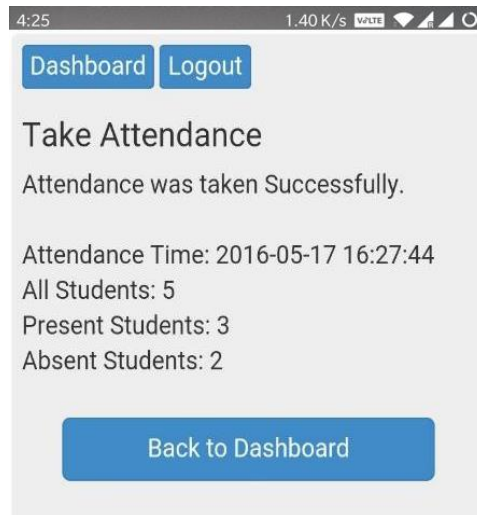


The screenshot shows the "Students List Page" in the same application. It features the same "Dashboard" and "Logout" buttons at the top. Below the "Take Attendance" title is a table with student names and checkboxes for attendance. The table has two columns: the first column contains student names, and the second column contains checkboxes. At the bottom, there is a blue "Submit" button.

Sami jwad	<input checked="" type="checkbox"/>
Ali hamza	<input type="checkbox"/>
wrood odai	<input type="checkbox"/>
ahmed radhi	<input checked="" type="checkbox"/>
adil yahia	<input checked="" type="checkbox"/>

**Fig -9:** Students List Page

After taking an attendance, a statistics page will be shown to acknowledge an instructor about both present and absent students, as shown in Figure (10).



**Fig -10:** Attendance Statistics Page

## **Student session**

The third user of the system is the Reporter. This user responsible for extract a report of attendance, for a particular course, as shown in figure (11), or student in specific course, as shown in figure (12).

4:25 1.40 K/s VLTE

Listing Attendance for Selected Criteria:

Name	Attendance	Time
adil yahia	Present	2016-05-17
ahmed radhi	Present	2016-05-17
wrood odai	Absent	2016-05-17
Ali hamza	Absent	2016-05-17
Sami jwad	Present	2016-05-17
adil yahia	Present	2016-05-17
ahmed radhi	Present	2016-05-17
wrood odai	Absent	2016-05-17
Ali hamza	Absent	2016-05-17
Sami jwad	Present	2016-05-17

Back to Dashboard

**Fig -11: Student attendance State**

4:25 1.40 K/s VLTE

Course Attendance Report

Select Course:  
transmission line

Select Student:  
Sami jwad

Get Attendance

Total Given Lectures Hours: 6  
Present Hours: 6  
Absent Hours: 0

Listing Attendance for Selected Criteria:

Attendance	Lecture Hours	Time
Present	3	2016-05-17
Present	3	2016-05-17

**Fig -12: Student attendance Report**

## **Conclusion and Future Work**

Attendance monitoring mobile application can considerably improve the traditional way of attendance marking in most of the surrounding universities. Attendance monitoring mobile application is of automatic calculation by the system, that results in a lot of precise information entry. This keep student attending information area unit framed and investigate surely without losing of data, compared to a conventional monitoring technique. Course handling faculty will simply take the student's attendance which can be stored and retrieved easily as a result of the less time needed to gather and method information. By implementing this application in surrounding universities makes easier to spot attending, automatic calculation, etc. A text message sent by the system automatically to remind parents so that they would be intimated regarding their kid's performance and progress within the organization.

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