

PROJECT REPORT  
ON  
**ANDROID BASED ATTENDANCE  
MANAGEMENT APPLICATION**



REPORT SUBMITTED  
TO  
**VISHWAKARMA INSTITUTE OF INFORMATION TECHNOLOGY, PUNE**  
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## **ABSTRACT**

Marking attendance in the class meeting session and recording the marks of the students are the prime tasks of the subject handlers, since marking the attendance can regulate the students to attend the classes. Moreover, it verifies the number of students present in the conducted classes. The purpose of recording the marks is to analyse the performance of the students in terms of curricular activities. It becomes a key concern because the university authority maintains a rule that one student can only attend in the exam if his/her attendance is higher or equal to several percentages (60%,70% or 80%, etc.) otherwise not.

The traditional attendance system needs students to physically sign the attendance sheet each time for the attendance of each class. This is unnecessarily time-consuming to notice and mark the student's name on the attendance sheet. This also happens that some students may accidentally or willingly mark the student's name as a proxy. The hard copy of the attendance sheet may get lost. Using smartphones like Android Technology the course teacher will be able to take attendance easily by our designed mobile application and save the attendance in the phone as well as in the server and can check percentage and can print as hard copy. Using the stored information, this system can mark attendance, attendance percentage calculations, generate attendance summary, etc. The designed system has online access from any place and any moment which may extraordinarily assist the course teacher with keeping track of their student's attendance.

# INTRODUCTION

Student attendance administration is a critical content of the administration of school/college/university students. The traditional scenario of tracking student attendance in the classroom is done by obligating the students to physically mark the attendance sheet that goes around the classroom while a course teacher is delivering the speech. For example, a course teacher with an extensive class may notice the bother of having the attendance sheet being passed around the class and the physical marking of attendance by students is oppressive and no doubt occupies them from instructing and getting complete consideration from the students. Later, this task is carried out by desktop applications. The desktop application is a standalone application installed in a particular desktop or laptop and the tasks can be performed only with that particular desktop system.

The main drawback of this system is that the computer systems are not portable hence it cannot be kept anywhere to perform the task such as mark and attendance entry. The entered marks can be viewed only on the particular system if the desktop is not connected with the network. Another method for mark and attendance entry is a web-based application. In this method, the attendance and the marks details are uploaded in a server through the internet and the users such as students, parents, and teachers can view the marks and attendance through browsers with the internet using any one of the devices such as desktop, laptop, and handheld mobile devices. This system is active only when the internet is on since the data are not been updated with the local database.

These limitations of the traditional systems are overcome by mobile applications. The mobile application allows users to install this application on their mobile devices. The user can update the student attendance and mark details in the local mobile database by connecting their mobile devices with the server which keeps the attendance and mark details through the internet. Hence, the updated marks and attendance details can be viewed anywhere anytime even offline.

# PROJECT DESCRIPTION

The project's intention is to make an android application that can mark attendance of students in lectures to replace former pen and paper system.

## **Process to mark attendance:**

- Both teachers and students should login to the app.
- Teachers will initiate attendance for the lecture and students will have to submit their attendance until the link closes.

The attendance data of every student is stored on online cloud platform (here we have used 000webhost.com), this enables data to be accessed anytime and anywhere to the appropriate person.

## **Functionalities for students:**

- Unique account
- Home page displaying attendance for each enrolled subject.
- Allows student to view date-wise attendance for each subject.
- Allows student to mark attendance for the subject whose link is initialised by the teacher.

## **Functionalities for teachers:**

- Unique account
- Home page displaying 4 options namely to Start attendance, Update Attendance, Check records, Account
- Allows teacher to select class/batch, subject, start time and end time of lecture whose attendance needs to be taken.
- Allows teacher to update the attendance in future if required.
- Allows teacher to download copy of attendance for particular batch as PDF.

# TECHNOLOGY STACK

Attendance App is built with quite new and popular technologies. In this project, we wanted to learn and try, how to use all these technologies and how they interact with each other. Further, we would like to list all technologies we have used and written a short description for each and why we have chosen it.

- **Android Studio:**

- Android Studio is the official Integrated Development Environment (IDE) for Android app development, based on IntelliJ IDEA. On top of IntelliJ's powerful code editor and developer tools, Android Studio offers even more features that enhance your productivity when building Android apps, such as:
  - A flexible Gradle-based build system
  - A fast and feature-rich emulator
  - A unified environment where you can develop for all Android devices

- **Java:**

- Java can be used to create complete applications that can run on a single computer or be distributed across servers and clients in a network. As a result, you can use it to easily build mobile applications or run on desktop applications that use different operating systems and servers, such as Linux or Windows.

- **MySQL:**

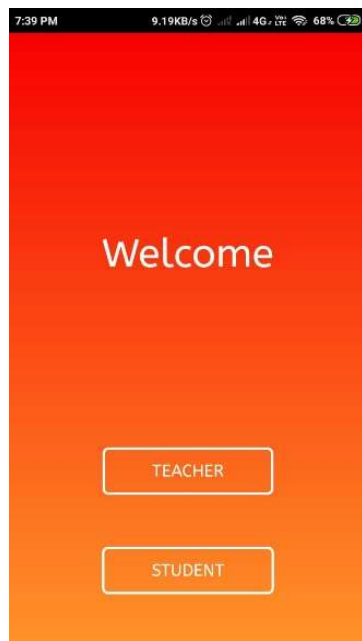
- Many of the world's largest and fastest-growing organizations including Facebook, Google, Adobe, Alcatel Lucent and Zappos rely on MySQL to save time and money powering their high-volume Web sites, business-critical systems and packaged software.

- **phpMyAdmin:**

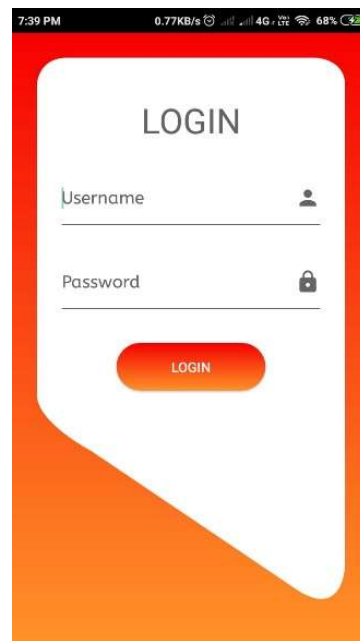
- phpMyAdmin is a popular and free open source tool used for administering MySQL with a web browser. Typical operations such as the management of databases, tables, indexes, permissions, and so on are executed with the user interface. Administrators can also use phpMyAdmin to directly execute any SQL statement.

## IMPLEMENTATION DETAILS

- **System User:** There are two types of system users: Teacher and Student. Any user who wants to use the attendance system must get the username and password which admin grants it. The first part is teacher session, who log in to the system for marking attendance and the second part is student session, that also login to the system to show attendance and report all these tasks

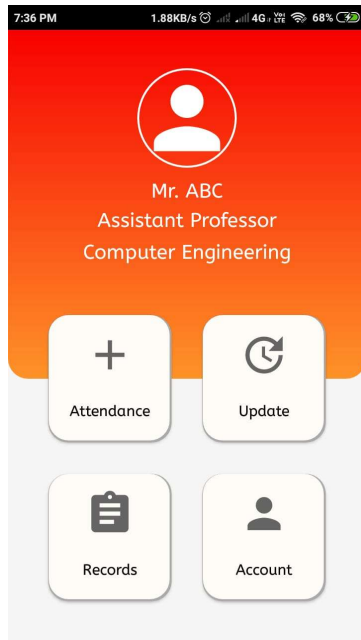


**Fig 1:** Home Page

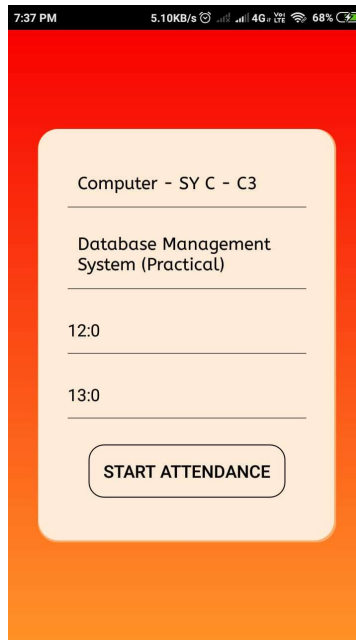


**Fig 2:** Login Page

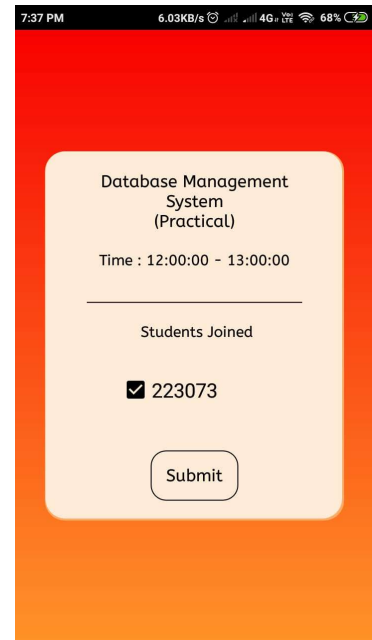
- **Teacher Session:** For taking the student's attendance for a particular department and class, the instructor must be log in the system. After submitting the username and password of the instructor, the system will redirect that instructor to the "Dashboard" page as shown in figure (3). A teacher can select different actions from the dashboard as per requirement like:
  - Start attendance
  - Update records
  - Download records
  - Sign out



**Fig 3: Teacher Dashboard**



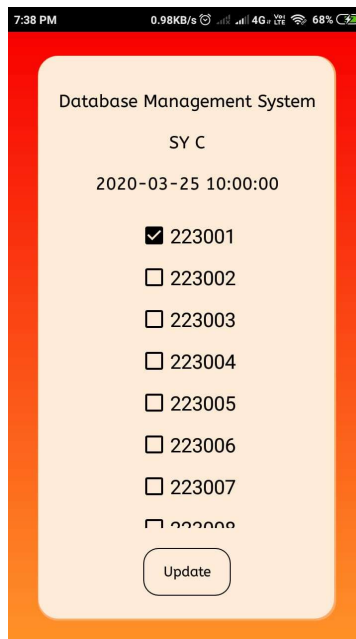
**Fig 4: Start Attendance**



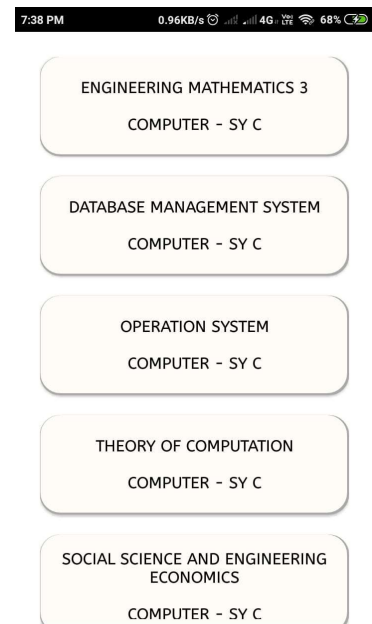
**Fig 5: Joined Students**



**Fig 6: Update Records**



**Fig 7: Change Records**



**Fig 8: All Records**



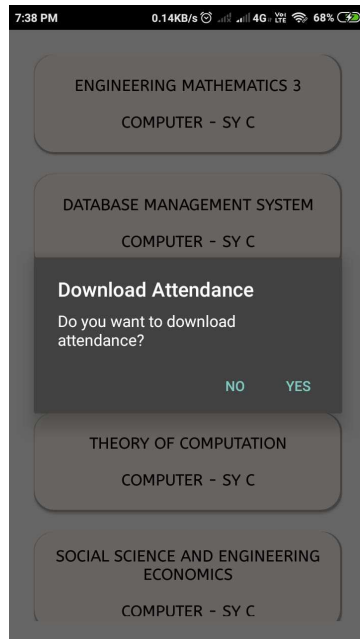


Fig 9: Download Records

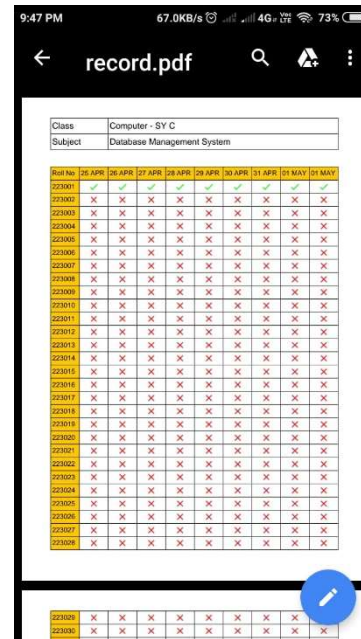


Fig 10: Downloaded Record

- **Student Session:** The second user of the system is the Student. A Student can:
  - Mark for attendance
  - See records of all subjects



Fig 11: Mark Attendance



Fig 12: Attendance Summary

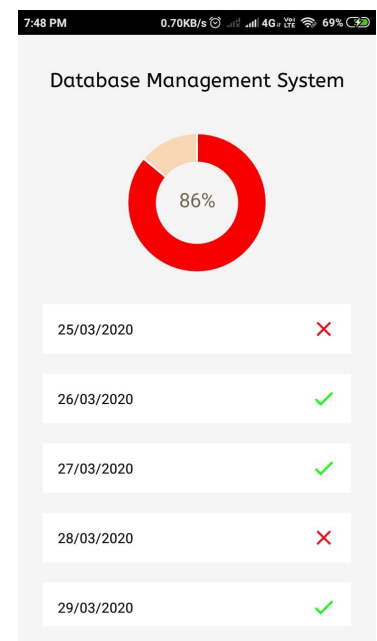


Fig 13: Detailed Record

## CONCLUSION

Smartphone-based Student Attendance System will significantly develop the conventional procedure of student attendance framework in a university/college/school surroundings. Smartphone-based Student Attendance System is a computerized information accumulation technology, which leads to more precise data entry. The stored student attendance data are framed and investigate inevitably without any loss of data, compared to a traditional recording method. A course teacher can easily monitor the attendance of students which may develop the excellence of instruction because of the less time required to collect and process data. Implementing the system in an educational environment helps the user to identify attendance, proxy attendance, calculate the percentage, etc.

# REFERENCES

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- The Busy Coder's Guide to Android Development

- **Websites:**

- <https://developer.android.com/guide>
- [https://www.tutorialspoint.com/android/android\\_php\\_mysql.htm](https://www.tutorialspoint.com/android/android_php_mysql.htm)
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