

ANDROID BASED STUDENT ATTENDANCE MANAGEMENT SYSTEM

Vedant S. Pachpute¹, Kiran T. Mahalange², Yogesh C. Mahajan³, Mr. P.S. Chopade⁴

^{1,2,3}Students in Department of Computer Science (Diploma), JSPM's RajashriShahu College of Engineering, Tathawade, Pune-411033.

⁴Lecturer in Department of Computer Science (Diploma), JSPM's RajashriShahu College of Engineering, Tathawade, Pune-411033.

Abstract -Over many decades the official work was in Manual format, this takes the employees much amount of time, irritation, and maintenance of papers/files. In the same manner college staff was suffering the same situation of handling the files, updating data, loss of data, lack of time, attendance and get frustrated.

In Manual Data Management it requires lots of Paper work which is difficult to manage and maintain. This work also indirectly affects our natural resources i.e. Non-renewable resources. We are in the age where we have to think about Sustainable Development by taking attendance and maintaining data on Android phones it will save our resources and help the Staff in various manners. So for decreasing their workload and saving their time we have designed a Android based application for Student Attendance Management. This android based application supports every Android Smart-Phone. In this application we use SQL language in Server side, SQLite in back-end design, and we use JavaScript for Android Studio in Front-end design.

Key Words:Data, SQLite, HOD/DAC, Staff, Android.

1. INTRODUCTION

In Today's world, management of student data is very difficult for every institute. Students' academic information consists of various sections such as Attendance, Marks, Assignments and many more. Maintaining such amount of data seems to be a workload on Faculty Members to update and handle periodically. The traditional way of maintaining attendance data is to store on a log book and then updating it onto a desktop application. But in this System most of the time the log book is lost, sheets are misplaced, data is incorrect and it is very time consuming. In order to achieve more efficiency and reduce manual work we have developed an Android based application for Student Attendance management which makes attendance process more easy and beneficial in every way. The proposed system will store, retrieve and sent the student attendance to

concerned person. With the help of this project the Faculty person can easily record and report student attendance. The student's data is sorted by the DAC or any other concerned person and provided to the teacher for particular class. Android based application i.e. Student Management System is developed using Android and Java technology. This software also helps in attendance evaluating of a student. Attendance is very important in every organization, institution or work place. Attendance is taken on daily basis every working day which is store in Manual format just for keeping record. Due to some small reasons lots of papers are wasted which indirectly affects our natural resources, due to this reason we have created this application which helps in many ways i.e. Safe, easy and environment friendly.

2. Literature Survey

Presently there is an urgent need of proper management in Organizational work. In many Colleges and School Attendance is stored in manual format i.e. Papers. The proper Entities of Student Attendance Management System are to take Attendance, Defaulter list are implemented in this System.^[1] Importing of Student data is also a key feature of this system which makes the attendance more Systematic and Sophisticated.^[2] Mobile is the very common Electronic device which can perform many task in very less time which makes it time Efficient and Multitasking i.e. makes Attendance process Easy.^[3,4] At last the main Feature is to Store Data in a Easy manner i.e. Retrieving Of Data. SQLite is an offline Database which stores the Data in internal Storage which makes Application Fast, Offline, Time-Efficient and User-friendly.^[5]

3. System Architecture

The diagram represents the System Architecture and working of our Application.

- Users make their login into application.
- The Login Page Module is connected to SQLite database for Authentication purpose.

- If the user is HOD/DAC it can access both HOD/DAC button as well as Staff button.
- If the user is Staff it can access only Staff button which can perform several actions like Attendance, Data Registration Defaulter list and Record Deletion.
- All the actions are saved in the application folder i.e. File Manager > Easy Attendance.
- The user can Retrieve the data from that folder and easily share or access it.

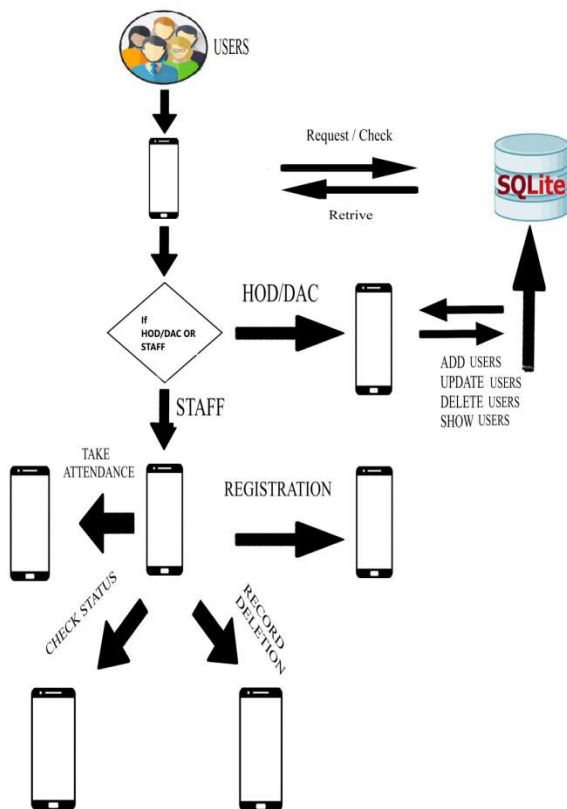


Fig. System Architecture

4. Result

The following figures shows the Output/ Screenshots of our Application at particular Phases:-

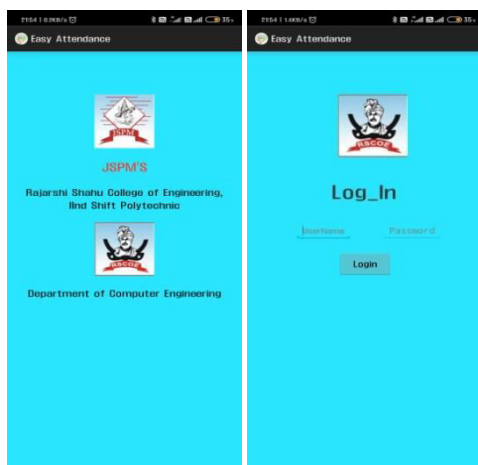


Fig A

Fig B

- Figure A represents the Information page of department which is the first view of application.
- Figure B represents the Login or authentication page of application, in which user have to enter username and password.

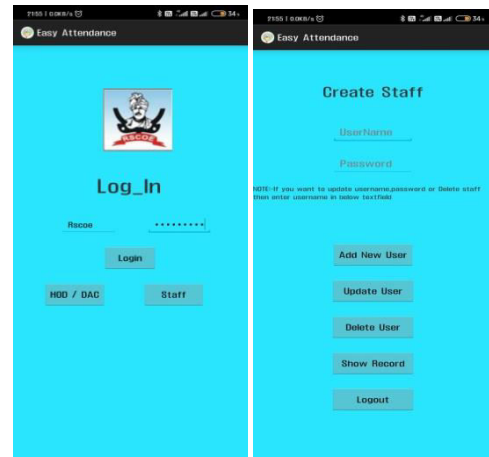


Fig C

Fig D

- Figure C shows the Login of HOD/DAC. If entered username and password is for HOD/DAC then it will show the next page as shown in Figure C.
- Figure D represents the Activities of HOD/DAC, in which HOD/DAC can create a entry for new staff, update their credentials, delete their account from database and also view the details of users.

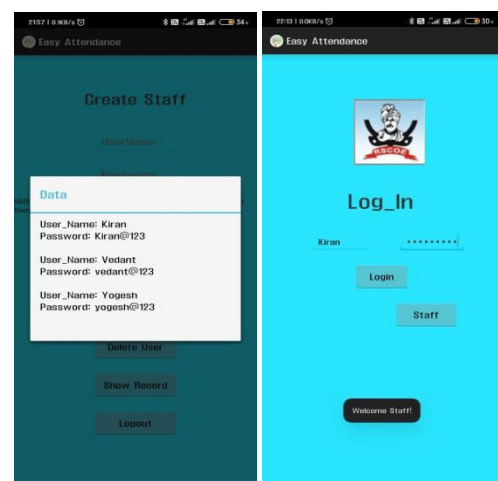


Fig E

Fig F

- Figure E represents the Data of Staff created by HOD/DAC.
- Figure F shows the Login of Staff. If the entered username and password for staff, then only staff button is visible.

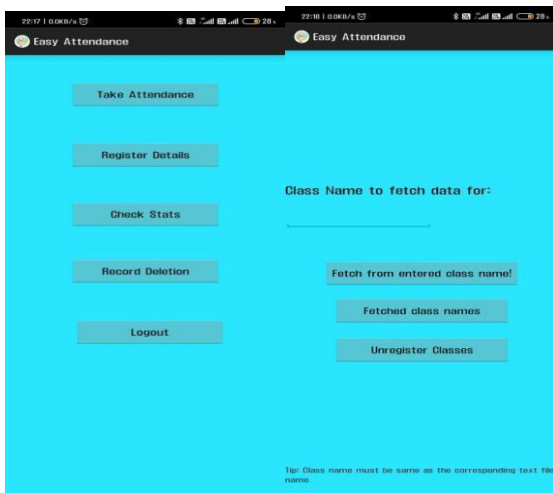


Fig G

Fig H

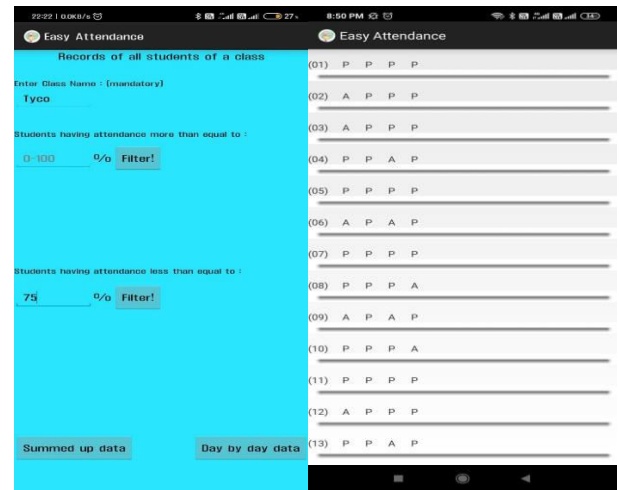


Fig K Fig L

- Figure G represents the activities of Staff, in which staff can take attendance, register student's details, check attendance status and also delete attendance record.
- Figure H is the actual Data registration of Student either Manual or File Entry. In this page staff can add student's details manually or by entering text file.

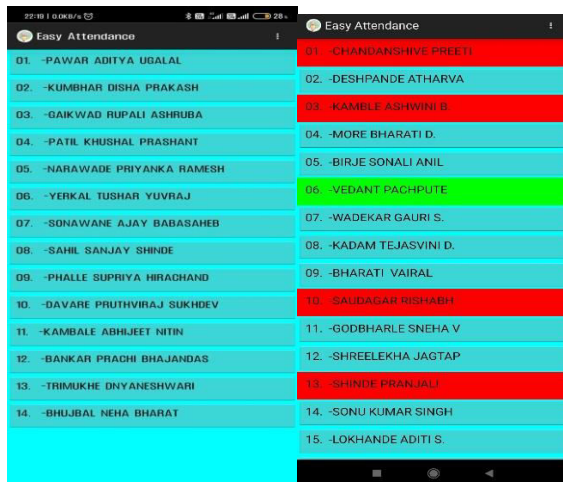


Fig I

Fig J

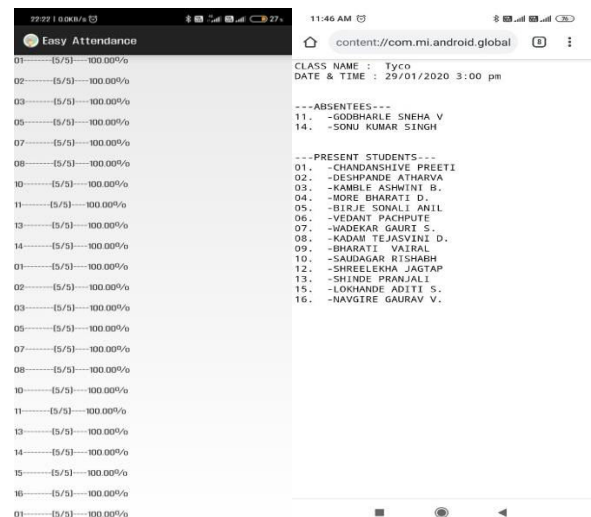


Fig M Fig N

- Figure I shows the Data of Students ready for Attendance.
- Figure J represents the Actual attendance taken by the Teacher. Red colour tabs represents the absent student and Green represents the mistaken absentee of student.
- Figure K represents the activity of staff which allows staff to Check Status of Student i.e. Defaulter List according to respective percentage criteria..
- Figure L represents the Day to Day attendance of Students in which actual attendance of students is represented.

5. Advantages

- Better performance
- Smart management of data.
- Time-Efficient.
- Monitor student performance.
- User-friendly.
- Eco-friendly because no paper work.
- Easy to find defaulter students according to percentage criteria.

6. Conclusion

We developed this project i.e. “ANDROID BASED STUDENT ATTENDANCE MANAGEMENT SYSTEM” to help faculty members for taking attendance easily and also for storing and retrieving student information. It also saves lots of Manual work. It is User friendly as well as Time Efficient that reduces work load of Faculty members.

7. References

1. Abdullah, Hamsa A., Israa A. Mohson, and Ether S. Mohamad Ali. "Student Attendance Management System." *i-Manager's Journal on Information Technology*4, no. 2 (2015): 7.
2. Shibata, H., "An attendance management system using mobile phones", *Communications, Computers and signal Processing*, 2005. PACRIM. 2005 IEEE Pacific Rim Conference on, vol., no., pp.590, 592, 24-26 Aug. 2005.
3. Mobile Phone Based Attendance System”, by Shraddha S.Chawhan¹, Mangesh P. Girhale², Gunjan Mankar³, *IOSR Journal of Computer Engineering (IOSRJCE)* e-ISSN:2278-0661, p-ISSN: 2278-8727 Volume 10, Issue 3 (Mar. -Apr. 2013), PP 48-50.
4. Joshi R, Shete VV, Somani SB. Android Based Smart Learning and Attendance Management System. *International Journal of Advanced Research in Computer and Communication Engineering*. 2015 Jun; 4(6):256–60.
5. Jay A. Kreibich, “Using SQLite: Small. Fast. Reliable. Choose Any Three.” O'Reilly Media, Inc.", 10-Aug-2010 - Computers.