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Guardian-Faculty Member Android Application (GFM)

Lecturer Salma Shaikh,Siddhi More,Poornima Edke,Shanti Gambhire
Dept. of Information Technology, Jayawantrao Sawant Polytechnic, Pune,India
salma9feb@gmail.com,siddhimore791@gmail.com,poornimaedke23@gmail.com,poornimaedke23@gmail.com

***Abstract*– This is aimed at developing an Android Application for parent-faculty interaction, which is very important in any educational institution. This system will be useful for both parents and faculty members for effective communication. Faculty members can upload information like maintaining records, attendance, daily activities. Earlier, managing details, a schedule was entirely based on manual effort and it is a time-consuming process. This application has been proposed to overcome such problems. This application has a record of daily activity planning that lists criteria for a piece of work. This application saves a considerable amount of time when instructors creates and manages activities. Overall, this application helps faculty in their work and improve their daily activity planning system.**

***Keywords*– GFM, Teacher, HOD, Student, Parent, Report, Information Services, Educational Institutes.**

I. INTRODUCTION

As colleges got expanded the number of students also gets increased and also the student related contents increase. Guardian-Faculty Member Android Application (GFM) is an application software which is deliberated to begin with exchange of information in a secure manner to affiliate with students, faculties, parents and the college/school administration. It contains data of student such as informing parents regarding student's progress through notification, and also modifying the student particulars through the application can be achieved successfully, student progress reports on this basis will be sent to respective parent. The student data contains the information (like roll no, mobile number, class, date-of-birth, gender, email-id, parent name, attendance etc.). These statistics will be stored in the database. This application provides information about ward to respective parents i.e. attendance, performance etc.This application can mainly be used in many educational institutions. In private and government educational institutions also, it can be implemented. This application is a web application that means it is easy to access and easy to control from anyplace and at any time. So GFM is uncomplicated application to the end user. Student information is stored in respective educational institutions with respective details. The responsibility of the faculty is to maintain the records. Maintenance of the attendance report by manually is not systematic, not secure and compared to this we have created app such that it will secure and have systematic report.

II. LITERATURE SURVEY

In First survey, information of the student such as informing parents regarding students' progress through mail system, and also modifying the student particulars through the application is achieved successfully. (Krithi, Dr M Ramakrishna May 2017) [1]

In Second survey, to overcome the problems of manual attendance, they have developed "web-based attendance Management System". The Attendance Management System is based on web application, which can be implemented on any computer.

(Sahar Hassan, December, 2015) [2] more time is needed to maintain the record and to determine the average attendance of individual student. The manual internal assessment record system is also not secure, more time is needed to organize it and getting an average is difficult. It is difficult to have a system which will overcome the downsides of traditional system like information arrangement of a student, average attendance estimation, to enter student internal marks to generate average and also to get report of student attendance as well as internal assessment progress.

Gathering of the details of student those who are absent and present attendance details as well as internal assessment marks in electronic format so that management of attendance and internal assessment becomes comfortable.

In Third survey, the motive of developing attendance management system is to computerize the traditional way of taking attendance. (Mrs. Dhanashree Amit Gupta, November 2011) [3]

In Fourth survey, the approach reflects on use of alternative tools to face to face academic tutoring, which promotes monitoring and contact with students. (David Perez-Jorge, Fernando Barragan- Madero, Josue Gutierrez-Barroso, Fatima Castro- Leon, April 2018) [4]

III.BASIC REQUIREMENTS

For implementing this project, we need to install the Android Studio, jdk in our systems which will help the code to execute successfully.

Hardware Requirements: -
Processor: - intel i3(3.4Ghz-4.2Ghz)
Ram: - 4GB
Hard Disk: - 500 GB
Android mobile

Software Requirements: -
Operating System: - Windows (10)
Android Studio 3.5
Java JDK 8 or 8+
MySQL 8.0.12
Php
Bootstrap
html

IV. IMPLEMENTATION OF GUARDIAN - FACULTY MEMBER

Figure below shows the structural design of the Guardian-Faculty Member. Users will login to the GFM application. If the logged in user is an admin, he will be able to register the students and faculties in the system, admin can only have the complete privileges on the system. He will be providing circular to the students as well as faculties regarding the upcoming events that will appear in the college. When faculty login to the system, his work is to manipulate the attendance and daily activities as well as he is going to send circular to his students regarding subject. Also, faculty will be able to generate the report of their students based on their progress in his class. When user will login into system he can visit only to his pages and he will be able to check his academic progress as well as attendance. All this information is stored in the database.

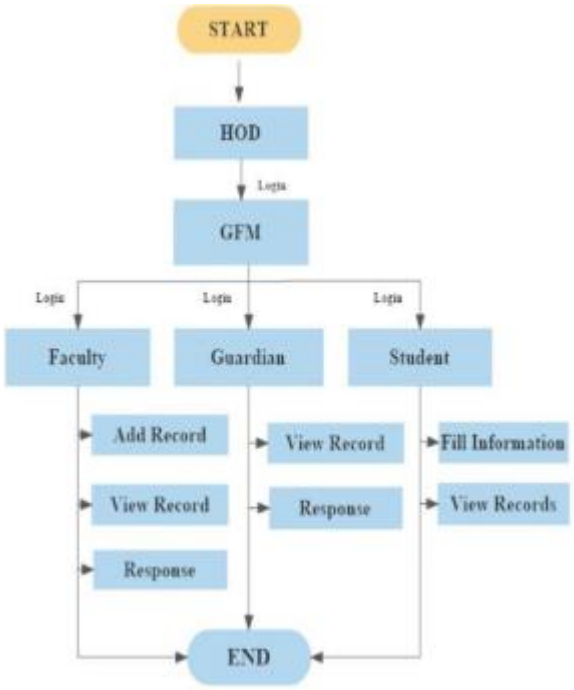


Fig.1.Structural design for Guardian- Faculty Member.

V. CURRENT SYSTEM

In This system, more time is consumed. While making your app work offline you will often need to store data directly on the device. It allows your application to work effectively even when there is no connection. There are several different methods of an offline data storage that make an app run offline. It can be different for different mobile platforms (iOS, Android, Windows phone and other). Large amount of manual work is needed to accomplish the task in the current system and more time is needed to perpetuate necessary record. This system requires lot of human efforts and interaction is needed to maintain the records. It is very difficult to get the information about the old or previous students who left the college more than ten years. Chances of data loss in case of any physical damage is encountered or in case of any natural disaster. It is decentralized and asymmetric way of storing the data.

VI. PROPOSED SYSTEM

Current system has encountered with many limitations. The system hits the restrictions found in the current system. There exists lot of advantages in a proposed system that is the system is complete package so there are no slipups concerning the statistics of student's attendance and records etc. Also, it eliminates redundancy.

Complete statistics of a student can be recovered to the mobile phone through one touch. Messages will be conveyed to the respective guardians through app when particular student not able to attend the class as per the university. Also, it allows admin to store student and faculty details also admin can track the faculty and student detail. This application allows lead about courses surrounded by a class domain. It has got profile based super vision like admin, faculty and student.

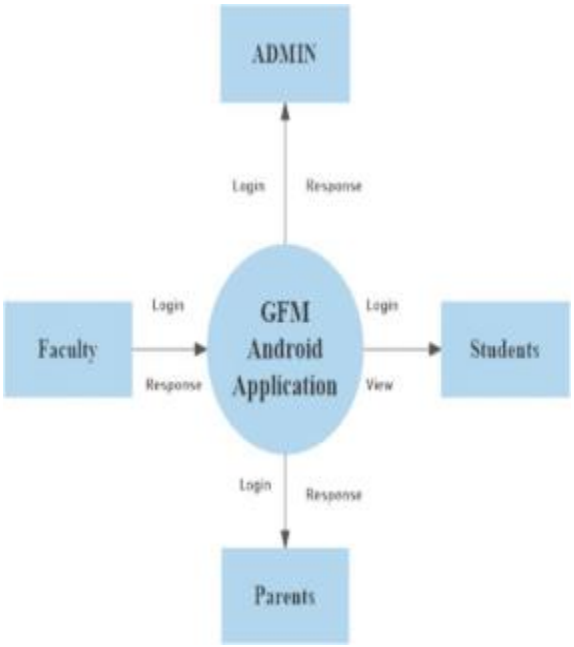
VII. MOTIVATION

This system will save a lot of paperwork and will give easy and quick access to all the students and faculty members, that would like to check their status – and save countless man hours.
With this electronic system, forms will not be "lost" And countless trees will be saved.

To provide better information management.
Doing this project was firstly an interest in undertaking a challenging project in an interesting area of research. The opportunity to learn about a new area of computing. Motivation has a strong influence on project results.
A project team that is highly motivated to accomplish the goals of the project is much more likely to reach those goals.

VIII. DATA FLOW DIAGRAM

1. DFD Level 0 diagram



2. DFD Level 1 diagram

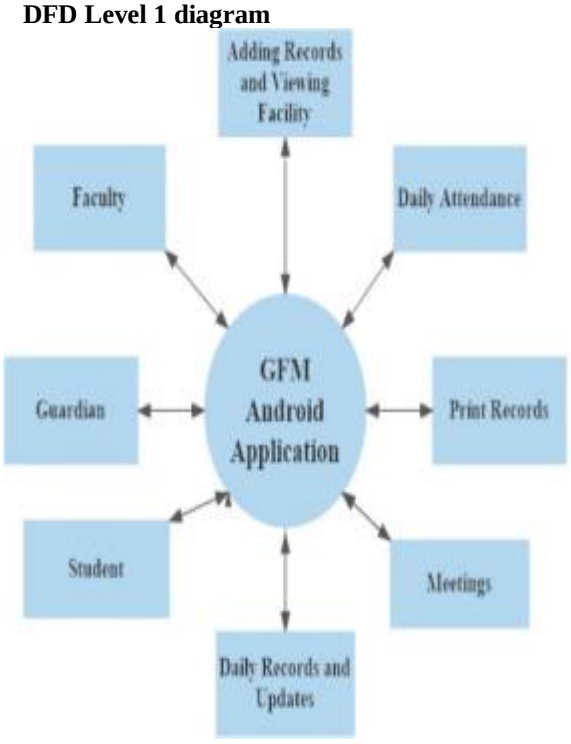


Figure a show the dataflow diagram for level 0. Figure b shows dataflow diagram for level 1. Based on end user necessary as well as the thorough investigation on current system we have suggested a system that satisfies user requirements.

IX. PROBLEM STATEMENT

This application is developed for the communication between faculty and guardian.
As the faculty and guardian do not have daily face to face communication for the respective student about the daily records this application is a solution on this problem as daily records will be immediately updated to the respective guardian.

X. RESULT & OUTPUT

This system is developed for the interaction between guardian-faculty, for this we have created an application known as GFM Android Application. In this, we have created modules of GFM, teacher, parent, student from which they will login into the app and perform their particular duties as seen in the following screenshots.

1. Login Details: -

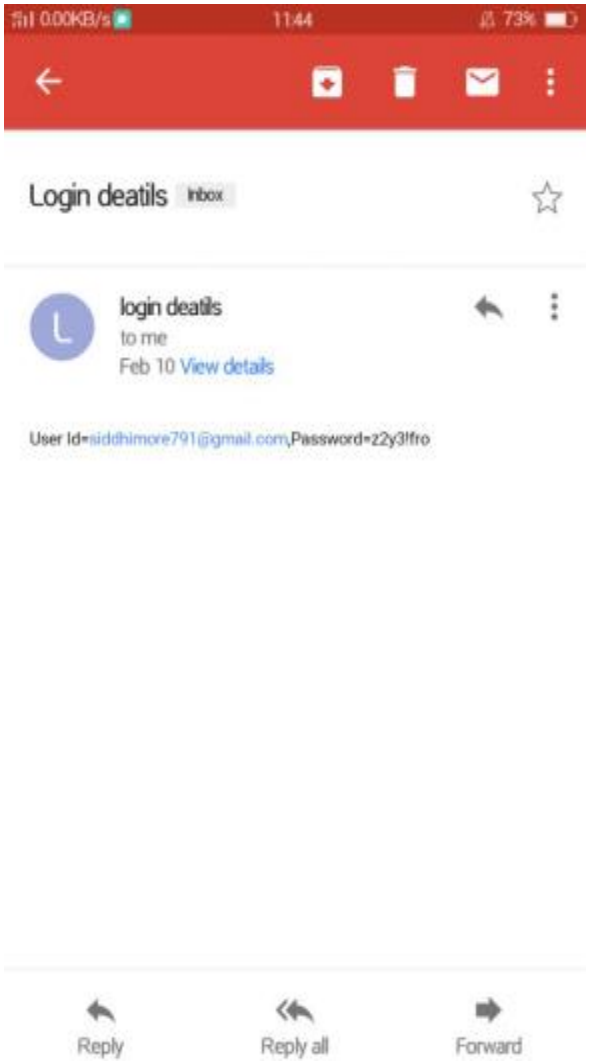


Fig.2. The login details will be notified through E- mail, in which the user will get user ID and password.

2. Login page: -

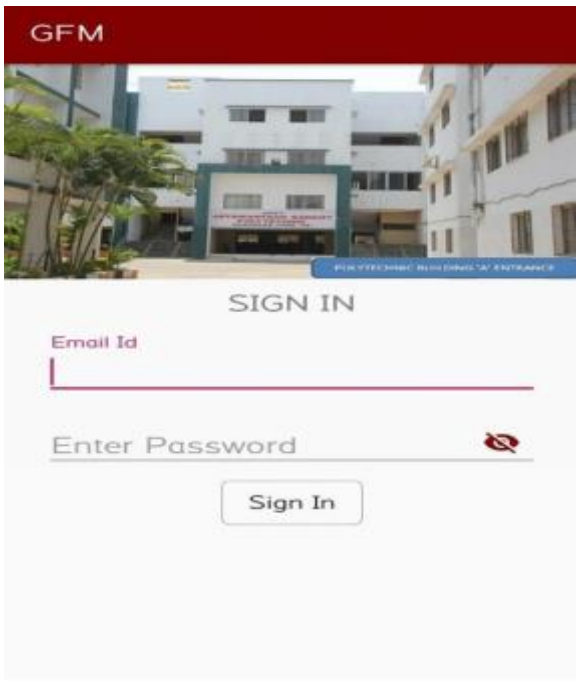
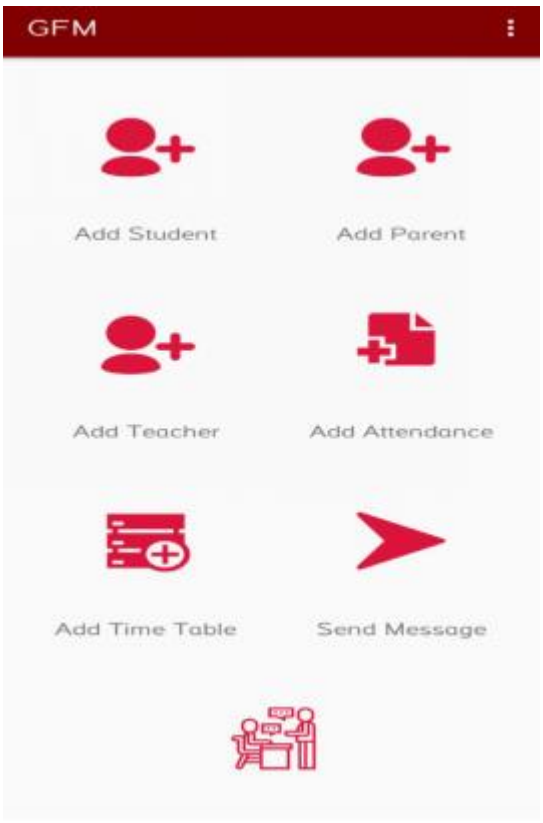


Fig.3.This is the Login page of GFM, Teachers, Students and Parents.

3. GFM Module: -

Fig 4: This is the GFM Module, in which GFM will perform their particular duties such as adding students, parents, teachers, attendance, timetable, sending message.



4. Teacher Module: -

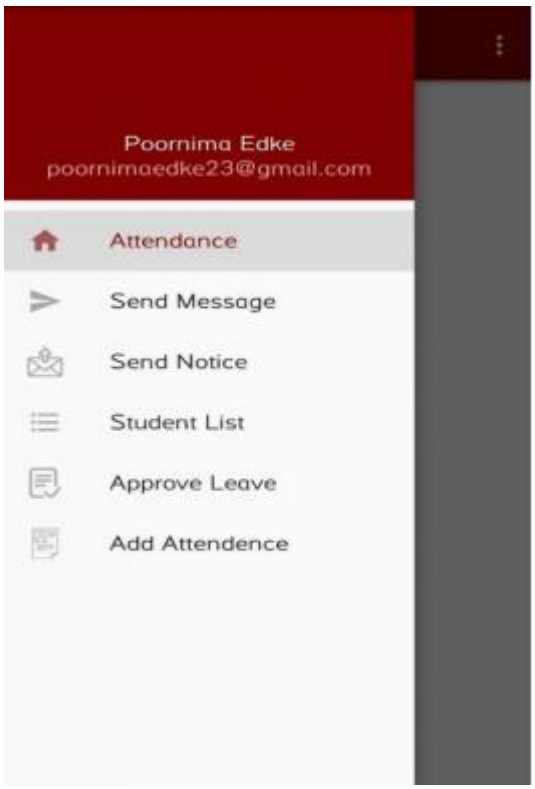


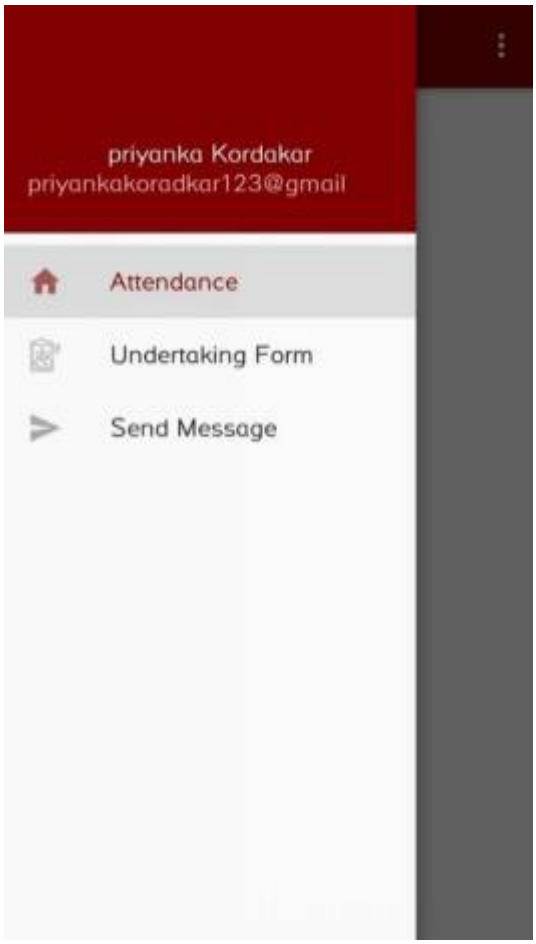
Fig.5. In this Module, Teacher will be able to add attendance, send message, send notice, view student list and can approve leave for student.

5. Student Module: -

Fig.6. In this Module, student can apply for leave, submit bio-data, can see his/her attendance, fill undertaking form, see notice and timetable.

6. Parent Module: -

Fig 7: In this Module, parent is able to see the attendance of their particular child, can fill undertaking form and send message.



XI. FUTURE SCOPE

In the future the students will be able to upload or download notes from the application.
Maintaining the information and updating it. Application can be modified or updated from time to time.
Limitations can be looked into enhancement.
Enable student to give online exam and get result on the spot.

XII. CONCLUSION

GFM system is very useful in an institution or in college or in universities. There is no paper work in this system. Observation can be done from anywhere by parents. This project especially minimizes human effort necessary. As it is a web-based application anyone can use the system anywhere at any time and it is very easy to get the necessary information without the latency.

It is very useful to the students to get their report on attendance and daily records. Since this application will be handled by the college whenever they need any changes in an application, they can make it without the upfront investment, and the system will become more secure when it is handled by the own college.
GFM system is very useful for college to maintain Daily records online.
This system is helpful to perform paperless work and manage all the data.
It provides easy, accurate, unambiguous and faster data access. This system has user friendly approach.

XIII. ACKNOWLEDGEMENT

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