

Android College Management System

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Abstract— Android College Management system is an android application which is helpful for students as well as the colleges. In the existing system all the activities are done manually. It is very costly and time consuming. In our proposed system, students can view results using Android phones. The data will be stored in the college server. The faculty can login into their college account through the app itself and update the academic result. In this system, students have easy access for viewing the marks, provided their authentications are correct and they are not permitted to change/update the marks. The proposed work has two modules: 1.Student 2.Admin. In the student's module, student need to register their roll no, college registration number, student name. Admin module maintains the student's marks of internal college exams. Other than this the advanced features are: In case of natural calamities such as floods, etc. notification to students will be sent from admin office through app directly. Any new notice for a particular semester will be uploaded by professor through application notifying to respective semester students. Application also includes logic to support above mentioned facilities to its students, however if the person downloading the application is not a student but an aspirant who has completed HSC and wants to know about the college then it only includes the advertisement of the college. Senior college toppers can also share their tips and tricks with other students via chat interface. Student's attendance is also monitored by the application.

KEYWORDS- Android, Results, Attendance, Notification.

I. INTRODUCTION

The design and implementation of the system is to provide service in institute and colleges. The system is to provide comprehensive student information system and user interface is to replace the current paper records. College Staff uploads attendance, results and college notifications through a secure, online interface using android devices. All data is thoroughly reviewed and validated on the server before actual record alteration occurs. The system plans for student user interface, allowing students to access tips and tricks as provided by their seniors. All data is stored securely on SQL servers managed by the college Administrator. The system decreases paperwork and time needed to access student records. Previously, college relied heavily on paper records for this initiative which had its own disadvantages. This system provides a simple interface for the maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. Achieving this objective is difficult using a manual system as the information are scattered, can be redundant and

collecting relevant information may be very time consuming. Our proposed system ensures to overcome these limitations. The paper focuses on presenting information in an easy and intelligible manner which provides facilities like online registration and profile creation of students, attendance monitoring, circular notifications, result viewing thus reducing paper work and automating the record generation process in an educational institution. There is an increasing trend for higher education institutions to be expected to monitor student records. This software generates reports on the results of research that considered the effect of attendance on student performance; surveyed planning students about attendance issues, shared the results with colleagues including agreement on a Departmental policy change, and assessed the approach academic staff should take towards poor attendance.

It is concluded that a graduated approach to result monitoring is the most effective in which sanction have a place, although only as a last resort. Online Attendance and Feedback System is software developed for daily student attendance in schools, colleges and institutes. It facilitates to access the information of a particular student in a particular class. It is concluded that a graduated approach to result monitoring is the most effective response, in which sanctions have a place, although only as a last resort. Online Attendance and Feedback System is software developed for daily student attendance in schools, colleges and institutes. It facilitates to access the information of a particular student in a particular class. There is another part which is feedback, the student can give the feedback at anytime from anywhere to faculty. This feedback can be reviewed by the admin or the management committee of the institute through which the confidentiality of the feedback of the faculty can be maintained. This application is developed for daily student attendance in colleges and institutes. It can also be useful in an organization or company at a certain limit not the whole application.

II. EXISTING SYSTEM

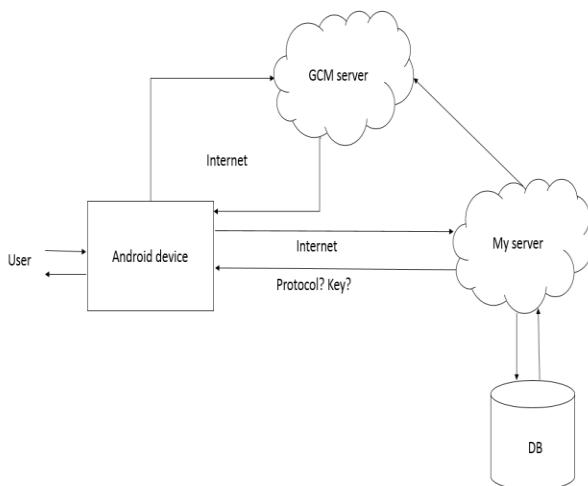
The system which is used nowadays has some drawbacks which need to be improved for better performance. The system through which the feedback is taken is not good enough. The views of each and every student are not expressed through these systems. As the technology is developed day by day we need to use this technology so we can get an efficient result in adequate time. For attendance management in the present system all work is done on paper. The whole session attendance is stored in register and at the end of the session the reports are generated. We are not interested in generating report in the middle of the session or as per the requirement because it takes more time in calculation. At the end of session the students who don't have

75% attendance get a notice. This is a very time consuming process. In the present system the result is viewed on the notice board. It requires lot of paperwork and is time consuming. Moreover, there is no system still present through which students can take advice from senior students. College cannot even provide urgent notifications to students in case of emergency.

III. DRAWBACKS OF EXISTING SYSTEM

1. The existing system is not user friendly because the retrieval of data is very slow and data is not maintained efficiently. The use of the some technology can be complicated and time consuming. These system need to handle by specialist for maintaining and update the system which can again be very costly.
2. It require more calculations to generate the report so it is generated at the end of the session. The existing system using the deprecated methods as new JSON and GCM is more flexible then previous algorithm. Hence requires more time to display the report.
3. All calculations to generate report is done manually so there is greater chance of errors. Here the faculty has to suffer a lot through the calculation and if there is a loss of some report then it may cause a lot of problem. This is time consuming also due to exaggerating calculation. Even after that there are some miscalculation which is very frustrating for the faculty. These calculations also effects the marks of the students which will finally led to their percentage.

IV. PROPOSED SYSTEM ARCHITECTURE



The system architecture has a smart phone with android OS, a web services, a database server and the user as its components. The android smart phone or tablet must use 3G or WiFi network for internet connectivity to ensure better performance however 2G should also satisfy user request with added disadvantage of time lag. The user will login to the application through an android smart phone. The user-type is verified with the database server and access is given to the appropriate user. The web application also can be used to login and perform certain operations such as

registration of users, generation of reports. The web application and the android application access data from a common Database server through the internet.

V. MODULES

1 User Module:

In this module we are authenticating the users by providing username and password. If username and password is valid then they will be taken to their screens. To identify user we are using unique IMEI number of android device with the number stored at server. When they get matched with each other system checks the status of that device and transfer the control to respective user-interface.

2 Database Module:

The proposed system used MySQL as its database because of their simplicity and flexibility. This module store every single information about students, faculty and model their data on specified operations. These operation can be storing student attendance, result data or can be authentication credentials.

3 Staff Module:

This module is designed for staff, which use mobile phone to take attendance, upload result and upload college notifications. The entered admin details are encrypted and sent to server for verification. Only after successful authentication the operations are performed. If username and password cannot match, he/she can enter in to attendance page.

4 Attendance Module:

The purpose of Attendance Entry Module is to enter the attendance using cell phone. In this module Lecturer takes the attendance using the cell phone. Lecturers select the branch, semester and year. After this session he enters in to attendance page. Here staff makes a mark on the absentees. Lecturer are only allowed to take attendance during their lecture time. In case of swapping of lecture or extra lecture, HOD can allow other faculty to take attendance of students by swapping the logic of time-table permanently or temporarily.

5 Marks Entry Module:

The marks scored by the students are stored in the database through this module. The exam cell will login, select the type of the exam e.g., unit test, model exam and then the year, section and subject in the application which displays the students list. Now, the marks for each student is entered and submitted to store in the database.

6 FEEDBACK Module:

This module performs automated calculation of student's feedback of their professors, and then this will be represent graphically. Student can see only fifteen questions and give feedback by select provided options. This module, stores student feedback into JSON object to provide faster transfer of feedback data to server or client-side. Next we extract string from the JSON to apply algorithm over and decide the result of feedback.

3.3.7 Result Generation Module:

This module allows the HOD and Lecturer to generate various reports on the student attendance and marks data. To generate reports, the user must login through app and

ensures that internet is on. In this module, application generates PDF file dynamically using java program.

8 Notification Module:

This module allows the department HOD to update students about any college related information through notifications. The students can view notifications provided by the interface provided by application. HOD can send message to only available options like all student, all faculty, specific faculty and to all.

VI. WORKFLOW

The detailed workflow of this application is as follows:

The application is divided into 3 sub-groups-

A] Admin/ HOD:

1. Admin Registration

The first step in this application is to get the HOD, staff members and teaching faculty to register. They need to first register their phone's IMEI number in the database. The respective person will then provide his or her phone's e-mail id and password for registration. An OTP would be then sent via e-mail address on the phone by the admin or faculty.

2. Admin Login

After registering the admin is allowed to log in. He or she can now view admin homepage where there are options to take attendance, upload results, send notifications to student. He can also view the attendance taken and uploaded results.

3. Take Attendance

Here, system will validate admin to check whether admin is applicable to take attendance for any subject which he/she selected from the application after validation is success. Next function of this module to check the time-table database to know when to allow admin to upload attendance. If admin is legitimate to take attendance and applying the operation at correct lecture time, now he can take attendance.

5. Upload Result

Admin can upload student's term-test marks through application. The same authentication will be performed by system as Take attendance module. This will not be complete without HOD's permission as HOD can only allow faculties to upload marks.

6. Upload Final attendance sheet

A report is generated which has the student's name, roll no., his or her attendance. This module categorised student according to their attendance.

7. Send notification to students/faculty

HOD can send notification to students or teaching faculty or some selected faculty or that faculty he wants to communicate his message to. Notifications related to college meeting, important information, training and placement related information.

B] Faculty/ Teaching Staff

1. Take Attendance

Teaching faculty can take attendance of students during the lecture i.e. within that time frame. If he or she takes attendance anytime else he is not allowed to do that. After taking attendance he can view it in the PDF file generated and keep it for future use.

2. Upload Result

Faculties can even upload results of the students. PDF is generated of the same and it can be viewed by the faculty in future.

3. View Uploaded Result

Result that is been uploaded can be viewed by the professor through the PDF file generated. This PDF file can be used in future.

4. Check notifications

Faculty can receive important announcements, information regarding meetings from the HOD or admin through these notifications.

C] Student

1. View Attendance

Students can view attendance uploaded by the faculty or HOD. They receive a PDF file and can view it anytime.

2. View Results

Students can even view results uploaded by the HOD. A PDF file is received and students have to first download it and then view it.

3. Give Feedback

Students have the facility to give feedback about the faculty or the teaching staff. This is an additional advantage provided to students by the college staff.

4. View notices sent by college

Notices are sent to the students by HOD or admin. Useful information, college notices, important announcements are received on students registered phone. They can view it anytime.

VII. REQUIREMENT ANALYSIS

A] Hardware Requirement

1. Intel Quadcore 1.7 GHZ Processor or above.
2. Minimum 100 GB HD.
3. Minimum 4 GB of RAM.
5. Standard Keyboard and Serial Mouse.

B] Software Requirement

1. Android Studio.
2. GCM Server
3. SQL Server (Either on localhost/domain)
4. XAMPP / PHPmyAdmin tool
5. Android SDK (Minimum API 15)

VIII. BENEFITS OF PROPOSED SYSTEM

1. The application will greatly simplify and speed up the result preparation and management process.
2. It includes advertisement of the college thus satisfying the marketing criteria to showcase its facilities to the HSC and diploma students.
3. It overcomes the limitations of the web based system as our proposed system is developed on Android OS.
4. As the current system is manual it does not require any sophisticated training for the User of the system.
5. This project will cater facilities to all the existing versions of android devices.
6. Students do not have to visit the college notice board every

time.

7. No chance of the mistake as calculations for attendance will be automated.

IX. CONCLUSION

An Android based mobile application for College Management System is presented. The application offers reliability, time savings and easy control. It can be used as a base for creating and enhancing applications for viewing results, tracking attendance for colleges or any workplace. Students and their parents will also view results, attendance and curriculum details using this application. Also students can view details, notifications anywhere and anytime. The application will greatly simplify and speed up the result preparation and management process. It includes advertisement of the college thus satisfying the marketing criteria to showcase its facilities to the HSC and diploma students. It provide high security and a system that reduces the work and resources required in traditional process. The proposed system provides the new way of computing and displaying an operations with responsive and attractive user-interface.

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BIOGRAPHY



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