

Smart Collage Management System

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Abstract - Smart College Management system is an android based application which is the new technical way to manage all department related jobs. Smart Collage management system 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. To store the data SQL server will be used. The Admin, Faculty or the student should be a register user. The faculty can login into their college account through the app itself and update the academic result like internal exam marks obtained by the students. In this system students have easy access for viewing the marks, The application will check user authentications. Students are not permitted to manipulate any data. The proposed work has two modules: A. Student B. Teacher C. Admin. In the student's module, students need to register their university registration number, 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. The students can download deferent subject notes according to their departments. 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, Notes, Feedback.

1. 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, share subject notes and college notifications through a secure, online interface using android devices. All data will be stored on the collage server 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. This system will decrease the 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. . 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. The teachers can send the attendance summary and feedback about the students to their parents. It can also be useful in an organization or company at a certain limit not the whole application.

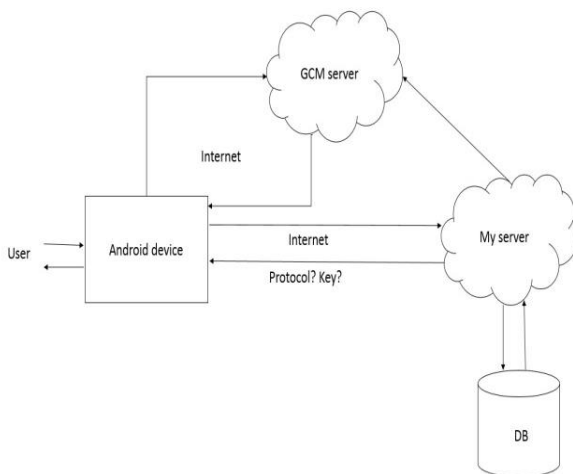
Existing System

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.

2. DRAWBACKS OF EXISTING SYSTEM

1. The existing system is not user friendly because the retrieval of data is very slow and data is stored manually. 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 like attendance calculation, percentage calculation etc. so it is generated at the end of the session. 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.
4. In this existing system the papers can miss placed and documents can be loss. This will cause extra work for the admin department stuffs.

PROPOSED SYSTEM STRUCTURE



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,4G or Wi-Fi network for internet connectivity to ensure better performance. 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 ensures that internet is on. In this module, application generates PDF file dynamically using java program.

Notification Module:

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

3. WORKFLOW

The detailed workflow of this application is as follows: The application is divided into 3 sub-groups-

[1] Admin

• 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.

• 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.

• 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.

• 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.

• Upload Final attendance sheet

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

• Send notification to students/faculty

Admin 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, seminar important information, training and placement related information.

[2] Faculty/ Teaching Staff

- 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. The attendance data will be stored in the collage database according to date and after every month the percentage will be generated. The generated data will be stored for future use.

- Upload Result

Faculties can even upload results of the students. The Students can directly check their marks through the application.

- View Uploaded Result

Result that is been uploaded can be viewed by the professor through the application. It will be stored in the collage database for future use.

- Check notifications

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

[3] Student

- View Attendance

Students can view attendance uploaded by the faculty or admin. They can check the attendance at any time but they cannot manipulate the data.

- View Results

Students can even view results uploaded by the HOD or faculty. They can check the marks at any time.

- 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.

4. REQUIREMENT ANALYSIS

A] Hardware Requirement

1. Intel Quad core 2.30 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 local host/domain)
4. WAMP / PHPmyAdmin tool
5. Android SDK (Minimum API 21)

BENEFITES OF PROPOSED SYSTEM

The application will be very simple and it will also simplify the and speed up the result preparation and management process.

2. An application will also do the promotion of the collage.
3. As the current system is manual it does not require any sophisticated training for the User of the system and now days android is the most used OS.
4. It overcomes the limitations of the web based system as our proposed system is developed on Android OS and it will be more handy for the user. It will take less time to perform all tasks.
5. Students do not need to check the notice board every day and every one will stay updated.
6. This project will cater facilities to all the existing versions of android devices. The mistake probability will be the lowest because of the automatic generation of the result by the application.

5. CONCLUSION

This android based project will do the task through the application. It will decries the paper work. The admin, faculty or the student will perform all the task very easily and more convenience way. The application offers reliability, security, time savings and easy control. . It can be used as a base for creating and enhancing

applications for viewing results, tracking attendance for colleges. 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. The proposed system will decrease the work time of the admin as well as the faculty. This will bring more perfection to the work.

6. REFERENCES

- [1] S.R.Bharamagoudar, Geeta R.B., S.G.Totad "Web Based Student Information Management System", International Journal of Advanced Research in Computer and Communication Engineering -June 2013, ISSN : 2319-5940.
- [2] Siddhant Gokule, Rohit Jadhav, Mruganayani Mane, Sanchita Chhajed "An Application to Enhance the Admission Process and Communication between Members of an Institute", International Journal on Recent and Innovation Trends in Computing and Communication- ISSN: 2321-8169.
- [3] CAI Chang-an, WANG Qi, "Design and implementation of student information management system based on B/S model", *COMPUTER ENGINEERING AND DESIGN*, Beijing, 2006, 27(14), pp. 2585-2587.
- [4] Zhi-gang YUE, You-wei JIN, "The development and design of the student management system based on the network environment", 2010 International Conference on Multimedia Communications, 978-0-7695-4136- 5/10 2010 IEEE.
- [5] Martin Hellebrandt and Rudolf Mathar "Location Tracking of Mobiles in Cellular Radio Networks", IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY, SEPTEMBER 1999.
- [6] Penghui Li1, Yan Chen, Taoying Li, Renyuan Wang, Junxiong Sun "Implementation of Cloud Messaging System Based on GCM Service", IEEE-2013.
- [7] Miss. Namrata N. Shahade, Miss. Priya A. Kawade, Mr. Satish L. Thombare "Student Attendance Tracker System in Android", INTERNATIONAL JOURNAL FOR ENGINEERING APPLICATIONS AND TECHNOLOGY- ISSN: 2321-8134.
- [8] Fei Shao, Zinan Chang, Yi Zhang, "AES Encryption Algorithm Based on the High Performance Computing of GPU", Second International Conference on Communication Software and Networks, IEEE -ICCSN.2010.124.
- [9] Suchita Tayde, Asst. Prof. Seema Siledar "File Encryption, Decryption Using AES Algorithm in Android Phone", International Journal of Advanced Research in Computer Science and Software Engineering, May-2015, ISSN:2277 128X.
- [10] Yang Shulin, Hu jipieng "Research and Implementation of Web Services in Android Network Communication Framework Volley" IEEE- ICCSN.2014.20.