

“Android Application for Student Information and Academic Institution Interaction”

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ABSTRACT:

Android Application for student Information and Academic Institution Interaction system which is very Important in Educational Academic Institution. The core Idea of this Project is to Implement Android Based Mobile Application for Advancement of Institution and Educational system. This system will be useful for Parents, Student, Management, and HOD as well as faculty members for effective communication. Today it is the Essence to not only use the Predictable forms of Statement, but also new forms such as cell Phone Technology, for faster and easier Communication among the Student. The main Objective of the work is to provide an Effective Interaction system Among Parents, Student, Academic Institutions and faculty members. Faculty members can Upload Information likes, Notes, Tutorials, Circular, Attendance for Student; Updated Notification Details through Student can Access & Improve their knowledge in Academic Institution Interaction.

This Android based system will help to eliminate the current Problems, Which also Promoting a Paperless Environment at the same time. Since this Application can Deployed on Lecturers own Existing Android Devices, No Additional Hardware Cost is Required.

Keywords: MobileApp, student information system, parent-academic institution interaction.

INTRODUCTION

Mobile applications provide substantial benefits for students and Department. These applications vastly improved communication, greater accountability, better student compliance, and greater objectivity in evaluation. With the development of android phones, the android applications suddenly became an important aspect for local and global communications. With the introduction of android phones, colleges started developing android applications through which student's information and activities in colleges can be viewed and accessible up-to-date 24/7. Mobile Application for Student Information and Academic Institution Interaction is one of the essential parts of colleges.

In most educational institutions, participation of students in learning process is regarded as a vital exercise for allowing knowledge transfer. This signifies the importance of having students to attend the scheduled lectures and classes. Conventional methods for recording student's attendance are still adopted by most colleges. One common method is by having students to manually sign the attendance sheet, which is typically passed around the classroom while a lecturer is giving the lecture. This approach could undoubtedly allow the students to cheat about their attendance, where a student may sign for an absent student.

II. LITEARATURE SURVEY

2.1 Mobile Application for Student Information System [Paper 1]

Authors : Dr.K.Sumathi¹, M.Umrani², Aninaya³

This paper focuses on a promising approach for objective of the design of this system is to computerize the procedure of managing and controlling the information about the student details and to reduce the overhead of managing paper documents for every announcement and notices being made.

2.2 Mobile Web Based Android Application for College Management System. [Paper 2]

Authors : A.J.Kadam¹, Arad Hana Singh², Komal Jagtap³, Srujana Tankala.

This paper discusses the method of the management information in higher education. On the basis of a comprehensive investigation and analysis on

student management in higher education, we establish the models of the college students' management information by adopting the advanced information technology, and construct the student management information and academic intraction platform.

2.3 Android – Based Attendance Management System. [Paper 3]

Authors : Siti Aisah Mohd Noor, Norliza Zaini, Mohd Fuad Abdul Latip, Nabilah Hamzah.

This paper introduces its objectives to develop a portable attendance system equipped with an online database, especially to prevent data loss as well as to promote paperless and a greener environment. Besides that, the application will help to reduce time being wasted, leading to a higher learning productivity in class.

III. TECHNOLOGIES USED

For user Interface, Android Studio Application 4.3.1 Development Software will be used. XML will be used for connecting various component of user interface to database system. Firebase is used as a database at the web server and java is used to fetch data from the databases. Application will be communicate with the java pages with necessary parameter and JAVA will contact FIREBASE databases and will fetch the result and return the application requesting it.

1. ANDROID STUDIO 3.3.1
2. JAVA (CORE)
3. WINDOWS OS
4. FIREBASE(Data Base).
5. ANDROID SMARTPHONE.

IV. PROPOSED SYSTEM

1. The proposed system keeps the information on a server and enables users to access information from their Smartphone, once the app is installed on the user's Smartphone.
2. The objective of the design of this system is to computerize the procedure of managing and controlling the information about the student details and to reduce the overhead of managing paper documents for every announcement and notices being made.

3. The main objective of this project is to add mobility and automation to the process of managing student information in an institute. In a real world scenario, such as college campus.
4. The information is in the form of notice, hand-written manual, verbal message, is being spread among the students.
5. The main objective of the system is to enhance the interaction among parents, faculty members and academic institution. This system displays appropriate information to users according to the selected module.

The proposed work is planned to be carried out In the following Manner.

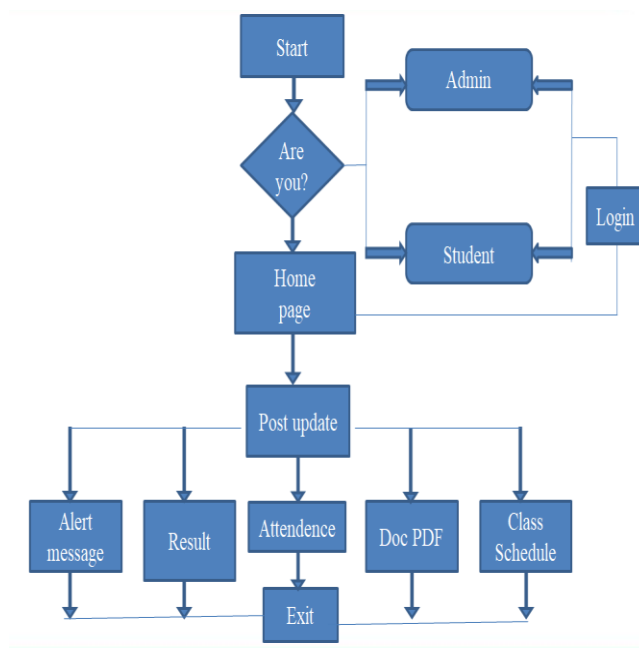


Fig.1: Basic system architecture

V. SYSTEM ARCHITECTURE

News and Event Service: The news service is for all students and staff. As soon as news about the university college is released on the university /college website, a notification is sent to all the student and staff.

Assignment and Notes Module: This service is for both the staff and students, however both have different usage of the feature. Students - will be able to view the following information which is critical about the Assignment and Notes; the number of assignments given, Upon the analysis using this data, the system will inform the students if they have got the new assignments and notes uploaded by the faculties.

Staff - will be able to upload the notes helpful for students and the new assignments using the mobile device.

Exam Remainder Module: This feature is available for the students. They can set remainders for their exams accordingly.

MODULE REPRESENTATION

MODULE – 1 : ADMIN.

1. Principal, HOD, Faculty, Management.
2. Login.
3. Student, Parents – Registration.
4. Data Submission

MODULE – 2 : Data Management.

MODULE – 3 : Attendance Sheet.

MODULE – 4 : Result /Exam Notification.

MODULE – 5 : Message Notification.

MODULE – 6 : log out / exit

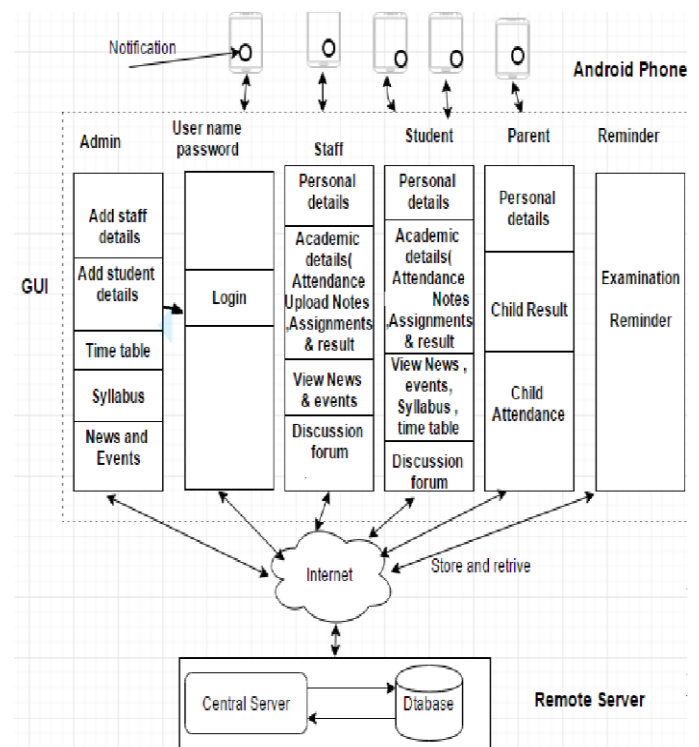


Fig.2. Process flow

VI. REQUIREMENTS SPECIFICATIO

A) Functional Requirements

1) Student /Parent/ Faculty Authentication:

The system can be accessed by only authenticated users. **Inputs:** Inputs include username and password submitted by the user.

Processing: Username and passwords are checked against the database to ensure valid user.

Output: Valid users are allowed to access the homepage.

2) Admin Authentication: Admin module can be accessed by only valid administrator. **Inputs:** Inputs include username and password submitted by the Administrator.

Processing: Username and passwords are checked against the database to ensure valid admin.

Output: Valid administrator only is allowed to access the admin page where he can create accounts for users.

B) Non - Functional Requirements

1) Performance of the system: Response time is very good for given piece of work. The system will support multi user environment.

2) Reliability of the system: The system will be highly reliable and it generates all the updates information in correct order. Data validation and verification is done at every stage of activity. System recovery will also be speed.

C) Behavioral Attributes

1) Security - The system is developed in java and extends security features of web browsers.

2) Availability - The system will be available 24X7.

3) Maintainability - The system will be able to meet new requirements (additions/ deletions).

4) Portability - This application will be portable on any system and can be opened in any browser.

Application :

1. Generates automated reports for attendance..
2. Notifications, events and events prove to be very successful.
3. Staff can arrange discussion forum which will help students.
4. The voids in education system can be found

VII. SYSTEM EVALUATION

VII.I Advantages:

1. Mobility and automation is added to the process of managing student information in an institute and management.
2. The application will greatly simplify and speed up the result preparation and management process.
3. Multiple algorithms working together to produce best results.
4. The system is easy to deploy, safe with convenient operations.
5. Access to authorized personnel only.

VII.II Disadvantages:

1. Designing the framework architecture for the system can be challenging part to make framework dynamic
2. The service servers can have their own technology to make it really secured.

Facilities required for proposed work:

i) Hardware :

- Android Mobile
- Client pc with dual core processor 2GB RAM
- I3,I5 processor 1GB HDD
- 4,8 GB RAM

ii) Software :

- Android studio 3.3.1
- Windows OS
- Firebase

VIII CONCLUSION

The main objective of the system is to enhance the interaction among parents, faculty members and academic institution. This system displays appropriate information to users according to the selected module. This system is very helpful for both parent and educational institution for effective communication.

Using this system student can gain technical knowledge and be aware of events organized in the educational institution. Deployment of this application will certainly help the educational institution to reduce unnecessary wastage of time in personally going to each department for gathering required information.

IX. REFERENCES

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