
Smart Communication for Academic System : Using Android

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Abstract—In this Smart era of technology, word Android has become buzzword everywhere. The Study is aimed at developing an android application for the smart communication between student and faculty in the educational institution. Application can play crucial role in managing the academic activities in the institution. It acts as knowledge management tool that helps the student and faculty of the institution; they can access it using the mobile phones anywhere and anytime. Each user of the application is provided with unique username and password to access. Three accesses are made from the admin side, student and faculty. Users can upload or download the information just in time. Application development is done by using integrated android and Web application. Proposed system in this study provides different functionalities such as attendance monitoring and report generation, delivery of course materials to the students timely, notifications, interface between student and faculty, timetable access etc., Thus, an application is the holistic and robust in developing a smart communication system.

Keywords-Android, Attendance, Faculty, Marks, Student.

I. INTRODUCTION

In this knowledge era, it is very important to reduce the communication gap. The major problem faced in academic system between the teacher and students is the communication gap. Along with change in technology, the academic system should also move with it by improving the traditional system of maintaining the records. Hence, there is need to switch the system to online based application for efficient acquire, process, store and retrieve of the data. Today we are living in the fast paced environment where the things done fast just by a click. As the technology is evolving alongside information revolution, power of computer is making easy to reduce the information gap. In this study, we have considered the android-based application as it is creeping in every aspect of our life today especially in students life. Android applications have become basic entities for local and global connectivity.

Towards the advancement of developing an android application for the college management, it helps in maintaining the efficient relationship between student and the faculty 24/7, which in turn reduce the communication gap. Android applications are next generation of e learning which leads the attractive information delivery between the students and faculty. By development of this android application, student and faculty can use it as the effective education tool. The android system is developed by considering the various limitations that are faced today in the academic system. With respect to students, course materials required for the them are not reaching them timely, not able to view their attendance report at end of

every session, examination marks report are not conveyed them immediately and any important notifications to be known can be delayed. To overcome this, android application provides the user-friendly platform for the download of course materials, viewing their attendance and examination results report timely, and notified about the notifications just in time. In the faculty perspective, they are finding difficult in delivering the course materials to the students in right time, taking the attendance manually is increasing the paper work and time consuming, and also notifying them about the results and important notifications can be delayed. Hence, keeping these some points as locus android application is developed.

II. RELATED WORK

In [1], Dr.Veena.K.N, Madhusudan.B proposed system of android application for sharing of study materials between student and faculty and live chat between them. In [2], the author proposed the android application for college management providing the utilities - student details maintenance, discussion forum, notice board, attendance and report generation and its main objective of that paper is to add mobility and automation to the process of college management. In [3], college communicator an android app is developed with main activities of feedback, notice and attendance. In [4], the proposed project will be implemented in applications such as online study material, notices, academic calendar and online reminders of examination, online attendance record, performance record, and parent intimation system using Android applications. In [5], android application is

proposed where it includes different modules such as, attendance, feedback, marks entry, etc.,

III. EXISTING SYSTEM

Today in the existing academic system, there is no end-to-end connectivity between the student and faculty. For the attendance management, in the existing system, there is lot of paper work, reports are generated at the end of session, and it requires manual calculation, which is time consuming.[6] For viewing their respective marks, students need to view notice board or approach the faculty which is again time consuming. College cannot provide the urgent notifications to the students in case of emergency, which is carried out by moving from class to class through paper circulars or notice boards. There is no automation and centralization of records. As it is a paper work, loss of records may occur and there is no provision of tracking or finding them back. In overall, existing system is time consuming, requires large space and timely maintenance is essential.

IV. PROPOSED SYSTEM

The proposed system is the android-based application for the student and faculty. Prime objective is to reduce the communication gap and develop a good relationship between them. It helps in delivery of the information timely. Android application is run on smartphone which every student and faculty has nowadays. This application is the easiest way to organise and maintain the functionalities of the college. It is the value- aided service that reduces the paperwork, time and will improve education.

Some of the important characteristics of the proposed work are:

- Widening Participation:** Any student of any department of college, any faculty of the college can access the application from anywhere. Each user is provided with unique login id and password.[6]

- User-friendly:** Retrieval of data is fast and GUI is provided which helps in to deal with the application easily.

- Easy-going learning:** Faculty can deliver the study materials in structural format easily and students can access them from anywhere timely.

- Reduces paper work:** As all the information is stored in the database, manual traditional system is replaced by an application that reduces the paper overhead.

- Report generation:** Reports are generated timely which reduces the time of calculating manually.

- Quality and Efficiency:** Improve the efficiency and effectiveness of the learning process and reduces communication gap.

V. SYSTEM DESIGN

The proposed application system is developed on the android platform. Android is an operating system based on Linux kernel and it is designed primarily for touch screen mobile devices such as smart phones and tablet computers. It is popular with technology and open nature has encouraged a large community of developers to work on it [7].

Nowadays mobile phones have become powerful and regular choice for the consumers. With the stylish and new features like accelerometer, GPS, touchscreen, it motivates the developers to create new innovative applications. Android helps in developing applications freely and helps to get explored easily [8].

The proposed system is divided into 3 different groups:

- Admin
- Faculty.
- Student.

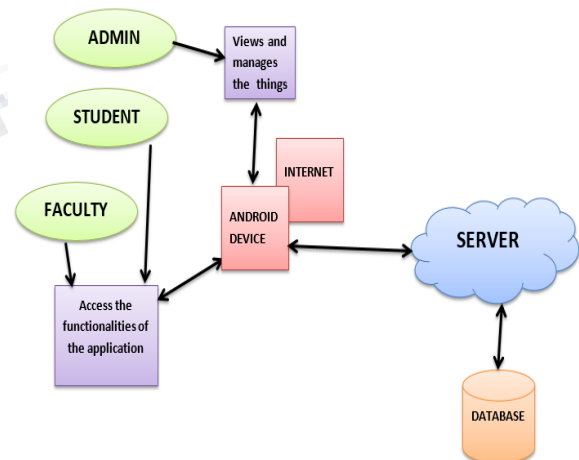


Fig 1. System Architecture

- Admin:** Admin is provided with the unique user name and password. Once both the user id and password is matched, he is allowed to login. Admin can view the homepage, functionalities, modify them. He can view the attendance taken and reports generated. Send notifications

to the students and faculty related to college meeting, events, training and placement etc.,

•**Faculty:** Faculty are provided with unique user name and password. He can view and modify some functionalities of the application. He can upload any content in the newsfeed. Upload the marks and course materials to the students. Monitor the attendance and generate reports. Interface system to communicate with students.

•**Student:** Students are provided with unique user name and password. Once the id and password is matched, students are allowed to access the functionalities of the application. They can view the various functionalities performed by admin and faculty. They can download the uploaded content of course materials. They can upload any content in the newsfeed. View their respective marks uploaded by the faculty. View the attendance report of the respective class timely. Interface system is used to communicate with faculty.

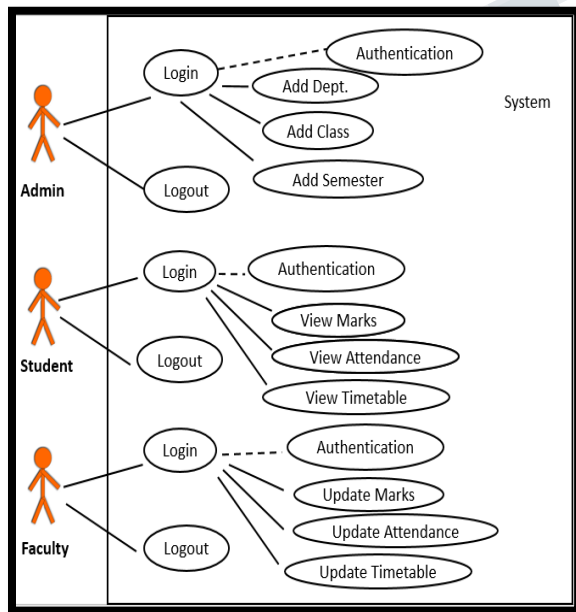


Fig 2. Use-case diagram of the system

A. Different Modules in the application:



Fig 3. Modules in the application

•**My Profile:** In this module, the user can able to view his personal details, he can modify his name, password and other details.

•**Newsfeed:** It consists an interesting news uploaded by both student and faculty and these files can be downloaded at any time offline. News updated contains the username, who updated it and format of the file. The format can be .txt, .pdf, .jpeg, .png etc.,

•**Gallery:** It is view only module consisting of images of college, departments and any images of events carried out in the college.

•**Department Details:** This module contains two functionalities, course materials and the marks. Faculty can upload the course materials for particular semester and section, student can download them easily. Faculty update the examination marks of particular student respectively, student can view only their respective marks timely.

•**Attendance:** Faculty can monitor the attendance department wise, semester wise, section wise and class wise. They can easily generate the report session wise and students can able to view their respective report timely.

•**Timetable:** In this module faculty, update the timetable of particular class for that academic year. Students can easily access it on their mobile in just in time.

•**Notifications:** Admin notifies any notifications such as events going on in college, exam notifications, library notifications, training and placement notifications and any meetings. Faculty and students can be notified timely.

•**Interface:** This module acts as interface between the students and faculty. It helps to directly communicate if there is any necessity.

•**About us:** It is the informative module consisting information about the college, departments along with their vision, mission, program outcomes, course outcomes.

B.Benefits of Proposed System.

- Helps students in coping up with the latest technology.
- Provides the portable environment for both students and faculty [6].
- Replace the traditional system of manual process which is time consuming.
- Reduces the communication gap between the students and faculty.

VI.CONCLUSION

The proposed android application helps the faculty and students to connect easily. System reduces the physical human efforts and provides the features that are not included in the existing system. Helps to maintain the records easily and work is done quickly and effectively compared to existing system. Management of the functionalities in the academic system becomes easy and helps in reducing malfunctioning. Thus, application offers reliability, time saving, easy access and control.

ACKNOWLEDGMENT

We are grateful to our institution Rao Bahadur Y Mahabaleswarappa Engineering College for providing us a congenial atmosphere to carry out the paper successfully. We would like to express our heartfelt gratitude to Dr Hiregoudar Yerranagouda., Principal, RYMEC, Ballari for extending his support. In addition, we would like to express our genuine thankfulness to Dr. T Hanumantha Reddy HOD, Department of Computer Science and Engineering whose guidance and support was truly valuable. We are very grateful to our guide, Mrs. Nagaveni Biradar, Associate. Prof, Department of Computer Science, for her able guidance and valuable advice at every stage, which helped us in the successful completion. Finally, we would also be indebted to our Staff members, Parents and Friends for their continued moral and material support Our thanks to all those who have contributed bits, bytes and words to accomplish this paper.

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