# An Android Application for Smart College

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**Abstract -** *Ideally, all the work related to college management is done manually. The work includes preparing results of students on papers/sheets, maintaining list of Defaulter students on papers, providing notes i.e the hardcopies to the students, providing results after each exam is finished and so on. Information is in the form of notice, hand-written manual, verbal message, is being spread among the students. So, the process of college management is tedious. This wastes the time of teachers as well as students in the process. Hence, in order to overcome this problem, a smart phone based application using Android can be used to make this process easier as well as less time consuming. All these tasks are integrated in a single application which is "Smart College". The main purpose of this project is to add mobility and automation to the process of managing student information in an institute. The application will be used by HOD, Faculties and Students. HOD will be the admin and the admin will add the faculty and faculty will add the students. The users of the application are given privileges accordingly. The faculty and admin will have the privilege of uploading and posting notices and notes to the application whereas the students will be having only privilege of viewing the notices, downloading the documents of the notes, view their attendance, view their results after each exam is finished,etc. Discussion forum is also provided in the application where students can interact with the faculty as well as admin. Thus, the application resolves the tedious process of college management process.*

*Key Words*: Android, Filtering, Interaction, Privilege, Dissemination.

## 1. INTRODUCTION

As we students face various problem related to study material, updates regarding notices, etc. Few years ago, manual systems were used, which made storing and retrieving academic related information difficult.

To overcome this tedious problem, websites like ERP were developed, which made uploading and downloading the academic related information easier to some extent but had some drawbacks like :

- Every time we had to login to the system to access the data

- Uploading student information individually which is very time consuming process.

- Information is not updated time to time.

With the help of advanced technology, manual systems of educational infrastructure like colleges and institutes are needed to function on mobile computing systems. And also computers and mobile devices are affecting our lives in more ways than we are aware of mobile computing system. If Students want necessary information he/she checks or searches the information about notices, notes, etc. It is difficult to prepare the manual work to store the information about all students, teachers etc.

In today's busy world, Smart college application provides a faster medium of communication by disseminating information in a short time span, thus enabling every student as well as faculty to access the information instantly. Smart college application support the android version higher than 4.0(Ice-Cream Sandwich). It allows students as well as faculty to access information anytime, anywhere.

It ensures each and every students are able to get notice by sending them an SMS on registered mobile number. Information is uploaded thus reducing work of manually displaying notices on notice board.

## 2. PURPOSE

The main purpose of this project is to add mobility and automation to the process of managing manual work being done in an institute so that the data which is passed to the students in the form of documents is faster disseminated through the application. It summarizes all the information related to academics. It simply disseminates the Notes, Notices, Timetable, Exam details, etc. It has a discussion Forum in which students can interact with HOD and subject teacher. So this improves the interaction between students and teachers.

## 3. EXISTING SYSTEMS

Currently Notices, results, Exam timetable or any other academic related information is either displayed on notice board or verbally delivered. Though this method is simple and convenient but has some drawbacks. This type of method doesn't ensure proper delivery of messages to students. Collecting Xerox copies of notes and Question Banks or any other related paper is time as well as money consuming; even managing those copies is sometimes tough. We can't even access to all the information anytime, anywhere as per desire.

Though ERP provides better way of accessing data than manual system, it has cons as mentioned above. Every time user need to remember the id and password to log in and access the data. Thus, existing systems has many drawbacks.

## 4. PROPOSED SYSTEM

In this project, we had developed an application which is fully reliable and convenient to use. Students particularly login with their particular IDs (Enrollment numbers) and passwords which are provided during admissions. Smart college application uses smart phones of android platform.The level of privilege given to the admin (HOD) is highest whereas privilege of students is Lowest. Thus, Delegation of Authority is implemented. The admin will add the faculties and the Faculties will add students. The admin and faculties can upload and edit the data and share to the students, but students can only access (read) the data.

Application has various modules such as:

1. Lectures Timetable
2. Examination
   2.1 Exam Timetable
   2.2 Result
3. Notes
4. Notices
5. Defaulter List
6. Reference Books
7. Forum

Faculty and admin can upload data in respective modules similarly Students can access the data in respective modules. Every user can view their ID number in navigation drawer. Students can clear their doubts by asking their queries in forum module and staff can answer to the questions particularly. Application uses cloud storage to store the data thus it can be accessed from anywhere and anytime.

**Table -1: Privilege of users**

| Privilege of users | | | |
|---|---|---|---|
| Users | Read | Write | Execute |
| Admin | YES | YES | YES |
| Faculty | YES | YES | YES |
| Students | YES | NO | NO |

## 5. SYSTEM ARCHITECTURE

The overall system design consists of following modules:

➢ Admin module: The admin (HOD) can login into the application with his particular ID and password and the application will authenticate the id and password. Admin has following features like adding faculties (new ID), he can issue the notes and

notices to the students or teachers, viewing the defaulter list. HOD can also discuss the answers with the students in discussion forum.

➢ Faculty module: Same as admin module, first faculty will login to the application and it will be authenticate the id and password. The module is designed for staff, which uses the application for uploading lectures timetable, uploading exams timetable and results and uploading notes and notices regarding anything. Also, the faculty will answer the student's questions in the discussion forum.

➢ Student module: The student will login o the application with his particular ID which is in the form of Enrollment number and password which is provided by the department. Here, students can access their regular timetables, access notes and can download it, access notices regarding anything like scholarships, holidays, activities, etc.

➢ Lectures Timetable module: Faculties will display or upload the timetable to the application and students can view their regular timetable which is uploaded by the faculty.

➢ Examination module: Under that there are two sub-modules which are:

Exam timetable - where the students can view their exam timetable

Result - where exam results can be accessed.

➢ Notes module: In this module, notes which are prepared by different staffs and uploaded by them, can be accessed and downloaded.

➢ Notices module: Different notices will be accessed by the students.

➢ Reference Books module: Here, different references books which are on different subjects are provided for the students only. This module is available only for students.

➢ Database module: All the data of android application are stored in the shared database. The database is stored on the cloud.

➢ Discussion Forum Module: The module is a feature where students and teachers can discuss the questions from the students. The students can put forth their queries here. This discussion improves the interaction between students and teachers. In this discussion forum, the respective subject teachers respond to student queries.
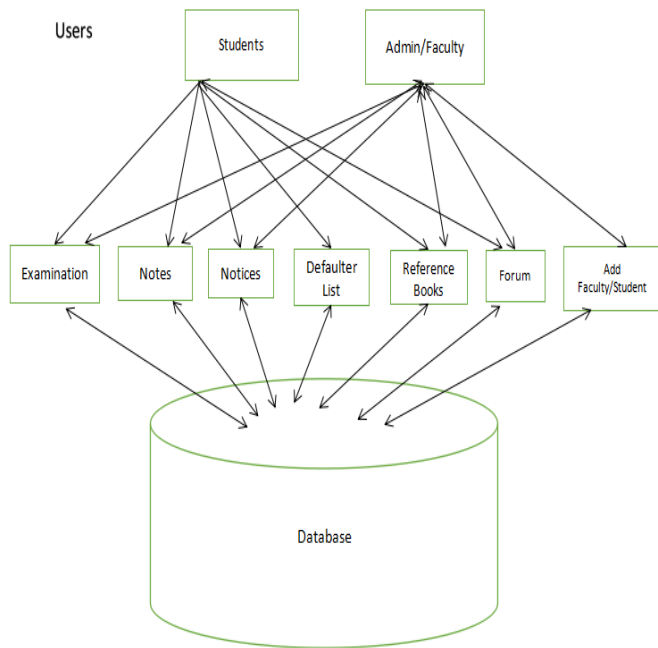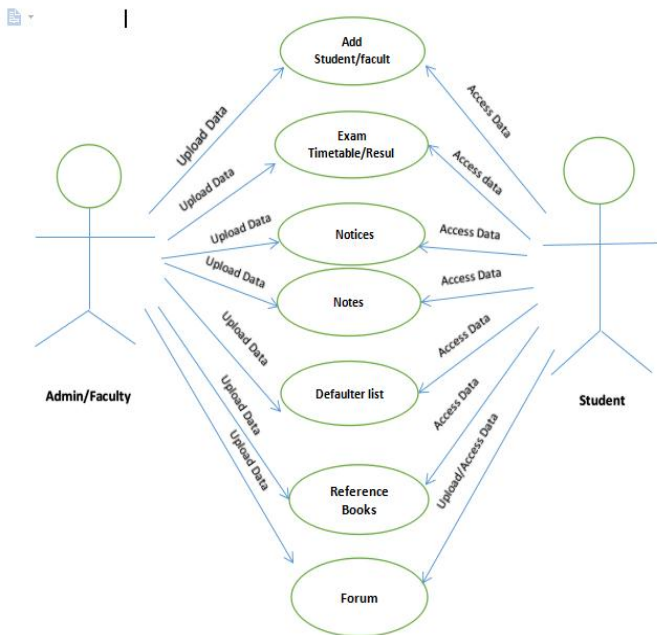
**Fig -1**: System Architecture



**Fig -2**: Use Case diagram

## 6. SCOPE

The application can be incorporated with more features like it can implemented to all the available departments in college. It can also be made to rum on IOS as well. It can be made to support the "Live" teaching facility, so absent students can continue their learning irrespective to the problems. "Online attendence" facility can be added which can reduce the paper work.

## 7. CONCLUSION

Smart College application offers reliability, saves time and is user friendly. 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. It provides 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 operation with responsive and attractive user-interface.

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