

## Android Based College Management System

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**Abstract**— In this paper focuses on a College Management system is an android application Based project. Which is helpful for students as well as the Faculties, Finance Department, Library and Admin (Record Manager). In the existing system all the activities are done manually. It is very costly and time consuming. In our proposed system, Student can view college related details like assignment, notes, notices, view available books details, give feedback or submit their issues etc. He/She view the detail of their Fee, etc. Librarian can record new book details also issue book and renew book, etc. Finance department can handle record like student fee details and salary of employee details, etc. Faculty can upload assignment, mark student attendance, etc. The proposed work has five modules: 1.Student 2.Faculty 3.Finance department 4.Librarian 5.Admin. In Student module student need to register after the registration He/She need to be verify their email. Only after verification of email He/She can login into system. In Librarian module, when Librarian add new book, that notification goes to all the subscriber of application access the system. In Admin module, admin can handle and view the all record which store in database. This college management system access anytime and anywhere, whenever user wants.

**Keywords**— College management system, Android Operating System, Firebase database, Java, XML.

### I. INTRODUCTION

The implementation of android based college management system and design of this system develop in android studio for the reducing the current paper work. College staff can be directly access the all record according to their roles as well as time. This system includes authentication, each entity in this system have a unique id using that they can access the system. By using email and password they get logged into the system and do other tasks like insert new data, update data, delete data etc. all data store on to the centralize server database securely. In our system we try to overcome the limitation of manual system. In this system we use a five modules and according to their work we design the User friendly GUI. So they access the system easily. We maintain the separation of each module. So they does not disturb other module. Student get access to system only if he/she verify his/her email after registration. Because of this feature fake user will not be created. Online test will arrange for students. Feedback facility is available where student can post their issues. The purpose of making this system is, Due to development of technology all are addicted to smart phones. The main objective of project is maintain the accountability of records. Due to this android system student also create their interest in academics and they easily manage their personal information.

### II. EXISTING SYSTEM

The existing system which is used in 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. Storing of record in big register, files and also generating of every record and its report is also difficult and time consuming process. 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. METHODOLOGY

#### A. System Analysis :

This application is developed using Android Studio. Android is an open source mobile operating system. Android studio includes SDK file. SDK file content many libraries. Android programs are written in java and xml and run through a JVM that is optimized for mobile devices. Here java is used for backend and xml for used in frontend.

Block diagram represents basic design of college management system

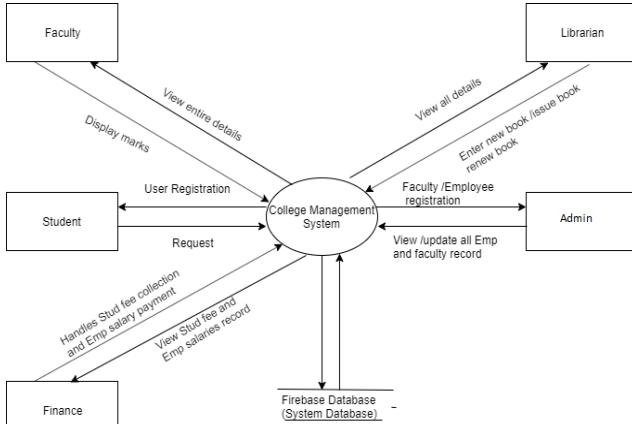


Figure 1: Block Diagram

#### B. Modules Description :

1. Admin/Record Manager: This module is designed for Admin, Which use this application for view, handle, delete, update details/data etc. Admin have a privilege to make registration of faculties, finance department handler and librarian. Admin has highest level of power in the College Management System.
2. Faculty Module : This module is designed for Faculties, which use mobile phone to take attendance, upload result and upload notices and upload documents like assignment list, experiment list, subject notes etc. Basic functionality like update password, update details. Faculty can arrange aptitude test for students.
3. Library Module: This module is designed for Librarian, which use this application for Add new books, issue book to students, renew book like that. When librarian add new book into in database that notification send to all the user/subscribers.
4. Finance Department: This module is designed for Finance department, which use this application for add the student fee related details, add employee salary related details etc.
5. Student Module: In this module, for accessing this application Student need to register first. After the registration student need to verify email. Without verifying the email student cannot be logged in into system. After login, student can view their details, fee detail, available books in library, notices etc. Also student can update password, update other details. Student can solve the aptitude test which is arrange subject wise. He/she submit their issues. Student can post their own feeds, He/She can view other student's feeds, and Also He/She can do likes and comments on their feed.

#### C. Database :

In any system storing of data is very important part. In this application for the storing data firebase database connectivity is provided. Firebase is an online platform to store data, documents like images,

video file, PDFs, Doc file, etc. Firebase provide all services like from authentication methods to messaging services. Firebase provide real time data storing facility which help to store all text data immediately on button click in system.

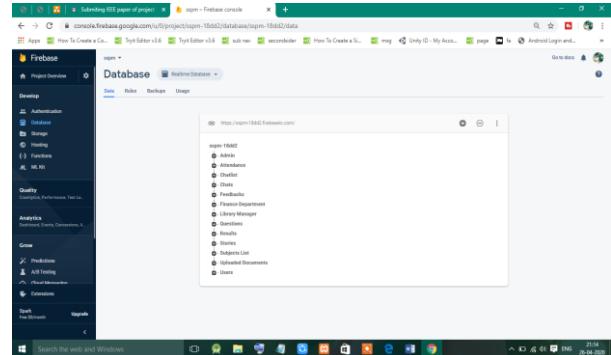


Figure 2: Firebase Database

## IV. IMPLEMENTATION

#### 1. Admin sitemap

Admin will enter login credentials which will redirect him/her to the Admin login page. After entering correct credentials user will be redirected to Admin dashboard page which show options as follows:

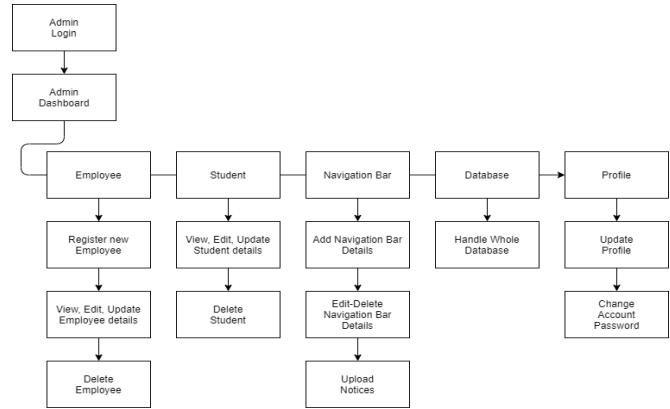


Figure 3: Admin Sitemap

- Employees - Display Employee details.
- Students - Display Student details.
- Navigation Bar - Display available Navigation Bar details, Notices and Other detail.
- Database - Display Whole Database.
- Profile - Display own Profile details.

#### 2. Faculty sitemap

Faculty will enter login credentials which will redirect him/her to the Admin login page. After entering correct credentials user will be redirected to Faculty dashboard page which show options as follows:

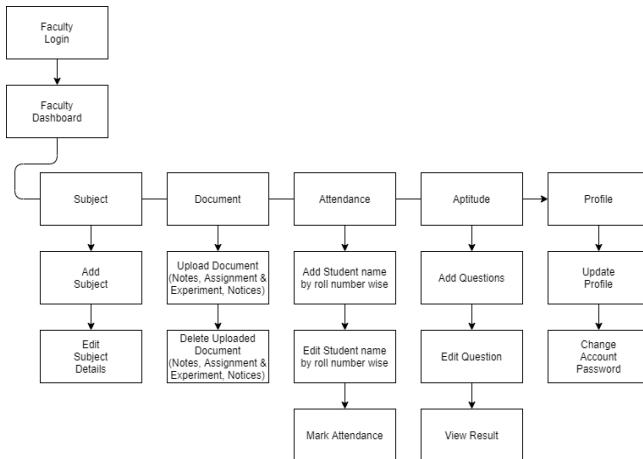


Figure 4: Faculty Sitemap

- Subject - Add subject.
- Document - Upload document.
- Attendance - Mark attendance.
- Aptitude - Set aptitude.
- Profile - Display own Profile details.

### 3. Librarian sitemap

Librarian will enter login credentials which will redirect him/her to the Admin login page. After entering correct credentials user will be redirected to Librarian dashboard page which show options as follows:

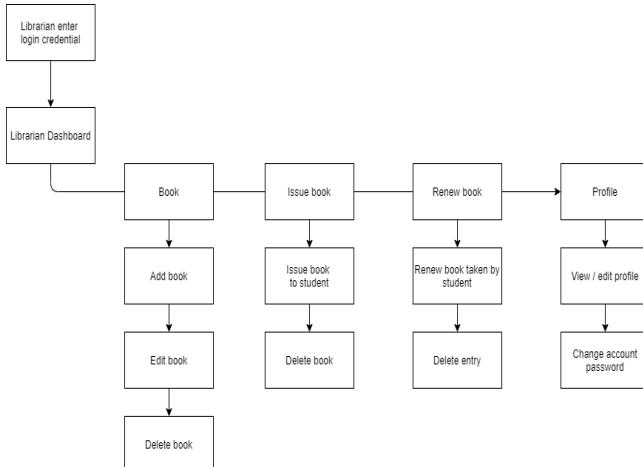


Figure 5: Librarian Sitemap

- Books - Add new books.
- Issue book - Display Book details and Issue book to student.
- Renew book - Display list of issued book taken by student and Renew date.
- Profile - Display own Profile details.

### 4. Finance Department sitemap

Finance Department will enter login credentials which will redirect him/her to the Admin login page. After entering correct credentials user will

be redirected to Finance Department dashboard page which show options as follows:

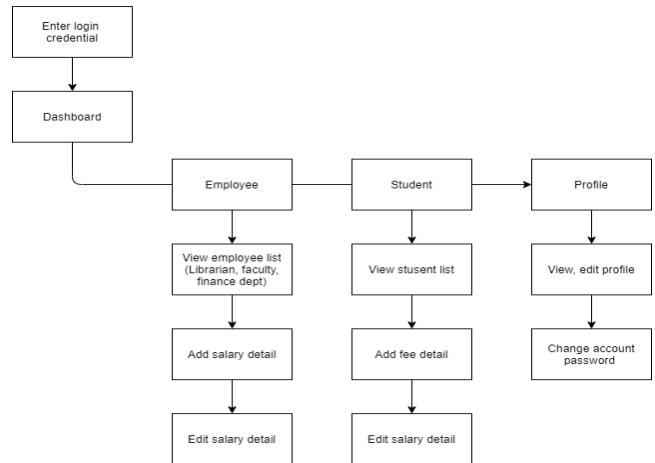


Figure 6: Finance Department Sitemap

- Employees - Display Employee details.
- Students - Display Student details.
- Profile - Display own Profile details.

### 5. Student sitemap

Student will enter login credentials which will redirect him/her to the Admin login page. After entering correct credentials user will be redirected to Student dashboard page which show options as follows:

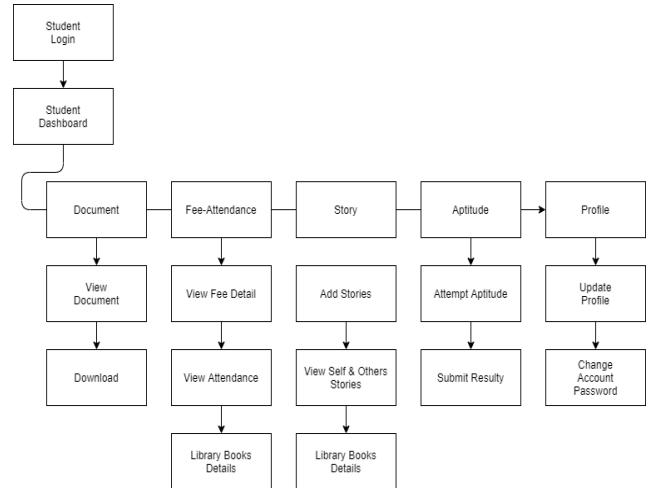


Figure 7: Student Sitemap

- Document - View Documents.
- Fee-Attendance - View fee-attendance details.
- Story - View and Add stories.
- Aptitude - Solve aptitude.
- Profile - Display own Profile details.

## V. RESULTS



Figure 8: Result

## VI. CONCLUSION

In this paper Android based application for College Management System is presented. The application offers reliability, time savings and easy control. This application used student, faculties, librarian, finance dept. as well as admin so it make easy to handle and manage record/data. The proposed system provides the new way of computing and displaying an operations with responsive and attractive user-interface.

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