

Objective

Build an android application for colleges

Structure

- 1) College Connect - Students : In this app, students can view their timetables, events, tests & assignment deadlines in real time. Moreover, they can contact teachers either via external apps like whatsapp, phone or can chat with them using a built-in chat system. Students can join rooms where they can see all the subject related items posted by the teacher. We will also be incorporating a common discussion forum in this app.
- 2) College Connect - Teachers : In this app, teachers can view their timetables for the day or edit them in real time. E.g. They can cancel the classes for the day if they are absent and it will be notified to students. Moreover, they can create rooms for a subject and can share all the materials related to it in that room. Teachers can contact students or other faculty members either using external apps or using our built-in chat system. Teachers can send documents and can create various deadlines or test schedules via this app. Atlast, but not least, teachers can order food from the canteen via this app and all the transactions / orders will be stored on the server which means the teacher can view how much balance is outstanding to the canteen along with tons of other features. In short, it is like a mini wallet.
- 3) College Connect - Canteen : In this app, canteen vendors can view / edit / change availability of various food items available in the canteen. We will implement an order management system in this app and canteen vendors can easily view and can edit orders. We will also develop a built-in chat system for canteen vendors and teachers.
- 4) College Connect - Admin : This is the backbone app of College Connect applications and all the users (Students, teachers, canteen vendors, other admin users) can be created / modified from this app. Admins can contact any person in College with our built in chat system and have no restrictions. They can add course structures, timetables and can create various events. They can send custom notifications and can send documents to various other users. We will also develop an admin dashboard using React and Django.

Timeline :

The time for implementing various features are given below:

S.No	Task name	Duration
1)	Authentication	2 days
2)	Chat Functionality	2 days
3)	Contact Feature	1 day
4)	Events	1 day
5)	Course Management	2 days
6)	Teachers Management	2 days
7)	Students Management	2 days
8)	Timetable Management	1 day
9)	Document Feature	2 days
10)	Notification Feature	2 days
11)	Room Feature	2 days
12)	Canteen Management	2 days

Phases :

- 1) Designing Layouts
- 2) Implementing the classes and functions
- 3) Hosting on Firebase and setting required methods
- 4) Integrating APIs

System Analysis :

- 1) Understanding application
- 2) Planning
- 3) Scheduling
- 4) Forming theory background
- 5) Developing the solution
- 6) Performing the test analysis
- 7) Recommending alternative solutions
- 8) Launching the proposed solution

Technical Requirements :

i) Hardware Requirements

- Minimum 35 MB Hard Disk space for installation of different apks.
- Android Minimum API - 25
- Recommended 2 GB RAM
- Network card

ii) Software Requirements

- Application system : Android Studio, Android SDK
- Operating System - Windows 10
- Development environment - Java, XML, Android SDK
- IDE - Android Studio 4.1.1
- Frameworks - Android framework , Firebase (Authentication Methods, Realtime Database, Cloud Storage, Cloud Functions, Cloud Messaging)