Ministry/state
Government of Chandigarh

Software

Student Mobile App

The problem statement

Student Mobile App

———

Mobile application app at Directorate of Higher Education level, which will not only provide information/data regarding the particular college in which admission is taken but also all the State/Centrally sponsored schemes and events. Problem statement: Create a mobile application that will server various needs as follows a. Track attendance (by students, teachers and parents) b. Provide important information and updates to students e.g. circulars, results, exam dates, timings etc c. Library book return reminder etc When a student takes admission into any college, he/she gets a roll number/ id number. When student download this app and adds his/her roll number, he/she should get all updates for his/her college as they are circulated. This application can become a one stop shop for all the information need. A parents version of this application can enable parents to track academic performance and attendance of their children.

It will also enable parents to discuss child's academic performance with his/her teachers through app. Colleges can even share the results, marksheets, necessary certificates such as domicile certificates etc through this app which currently takes lot of bandwidth from college administration to complete these tasks physically. Questions: 1. Is there any central database that can provide information about which student belongs to which college? Is Aadhaar ID mandatory now for college admission? Can it be used to link student records? Answer : Central data based information is available in the office of the Director, Higher Education, Chandigarh Administration, Chandigarh as admission in higher education institutions for the session 2017-18 were made on-line through central portal. Every student is asked to provide his/her Aadhaar number during the admission process. It can be used to link student's records. 2. Can we get a hierarchy of state -> university -> affiliated colleges -> Enrolled students Aademic performance attendance etc from somewhere? Or this needs to be created? Answer : As on date no such hierarchy is in place it has to be created.

What are our goals?

- Provide **information/data** regarding the **particular college**
- State/Centrally **sponsored schemes and events**.
- **Track attendance** (by students, teachers and parents).
- Provide important **information and updates** e.g. circulars, results, exam dates, timings, etc.
- Library **book return reminder**.
- Login with roll number/id number.
- Allow parents to **track their ward's attendance, performance** as well as location.
- **Share documents** like domicile and bonafide.
- Connected to Central Governmental database.
- **Connected with AADHAR** to enable verification of documents.
- **Get data of any student anywhere** like:
    State -> University -> College -> Student

Presenting

This is an all-in-one college management app.

Features

Features :

———

- Centralised dashboard

- Contact and Postal details

- Registered Courses

- Attendance

- Exam paper download

- Results

———

- Noticeboard for announcements

- Chat room for discussions

- Class schedule

- Order food from canteen

- Event organizer

- Library reminders

- Fees payments

- Course registration

- Easy entry of marks and attendance

- Web based interface

- Login from any device

- Themable

———

- College informations

- Government scheme information

- Easy applications for documents

- Central national database

- Easy verification of credentials

- Linked with AADHAR

Tech Specs

Platform specifications

———

Cross platform hybrid application

Based on web technologies

Nodejs based server

Native wrapper provided by Phonegap

Design framework provided by Materialize

Architecture

———

This would consist of three parts:

1. Mobile Application:
    a. This would be installed on the device itself.
    b. This will serve as front end of the system.
2. Server:
    a. This would be globally hosted and provide connectivity between different colleges.
3. Local server:
    a. This would be hosted in college itself and would allow internal data to be kept secure.

Module Details

Public Information Module

- This would provide information about all the colleges.
- This will provide details about state/central government schemes and benefits.

Academic Module

———

- This module would be used for core educational purposes.
- It will track attendance.
- It will manage marks.
- It will display results.
- It will display schedule.
- It will show college notifications.
  - Events, deadlines, announcements
- It will show availability of book in library.
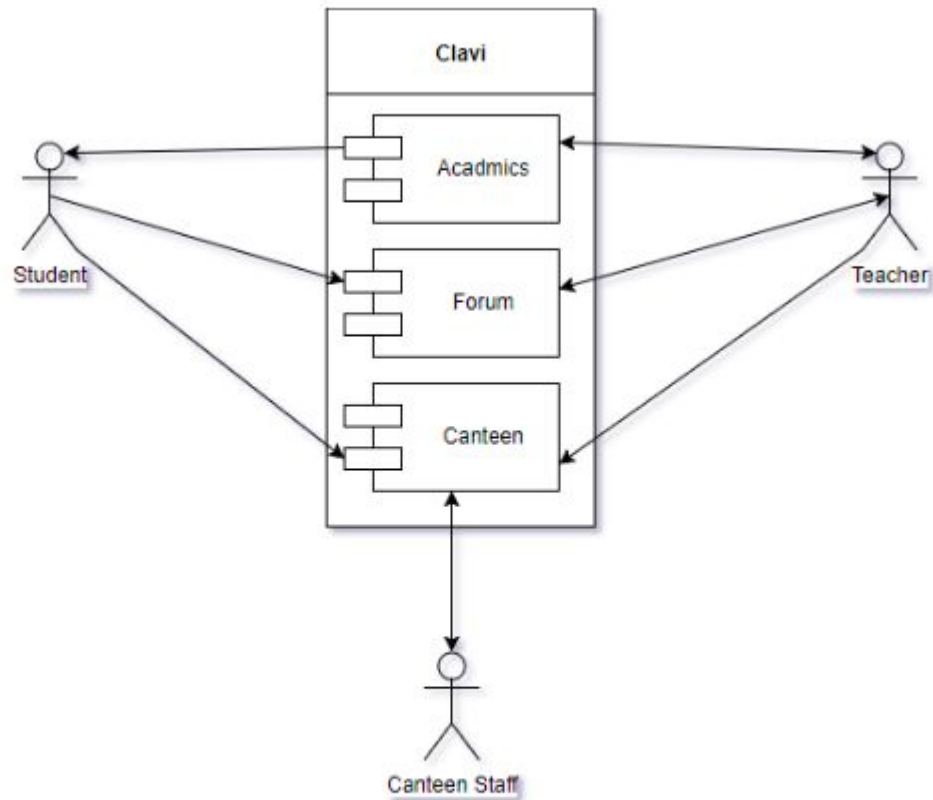- It will remind to return the book.

Forum Module

———

- This module will be used for managing conversations in the forum section of the app.

Canteen Module

- This module would serve data regarding availability of food items in canteen.
- This will users to place and track their orders
- On the canteen side, it will allow user to accept or cancel the order.

Use case diagram for Canteen, Academics and Forum module

Document request manager

———

- This would act as an engine to create requests to access documents of any person by someone else.
- It would enable the authorities and owners to respond to those requests.
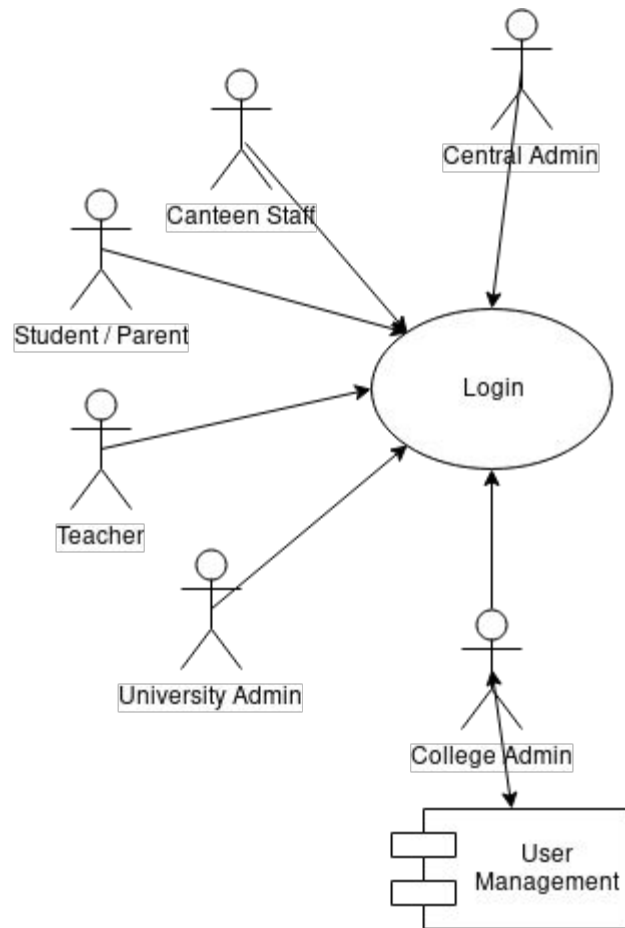
General File Server

- This would be a common gateway for public files of an institute.
- Files including, but not limited to previous exam question papers, solutions, canteen pictures would be served.
- This data would be from a less restricted, open channel.

User Management Engine

- This engine would be responsible for adding and removing user accounts for the application.
- It would be accessible only from secure server and would not be available on the mobile app platform.
- This, in association with the Authentication engine, enable efficient and effective permission management.
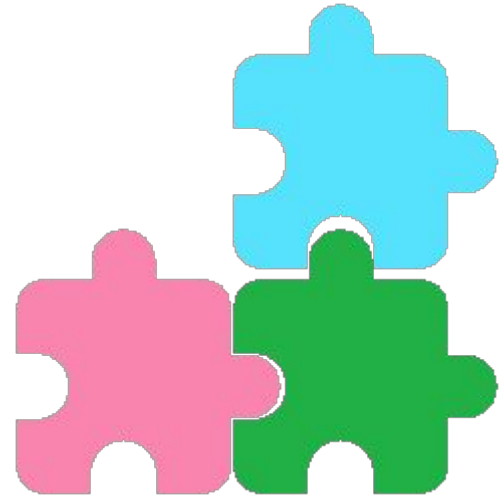
Authentication Engine

———

- This engine would be designed with the sole purpose of verifying and accepting authenticated requests such as login and payments.
- It will follow a specific hierarchical model to assign permissions to users based on their properties and allow administrators to control them.

Requirements

Devices

Central server

Institutional server

Mobile devices as clients

Desktop computers as clients

Desktop computers for special tasks like canteen

Server computer system requirements

———

Internet connection

Nodejs Runtime

Linux based operating system (Recommended)

SQL DB or MongoDB (MongoDB is preferred)

The Team

Team Name : CyberKnights
Team Leader : Savneet Chhatwal

Made with ❤️ by