Mini Project 2 Report

Veermata Jijabai Institute of Technology, MCA department .
Under the guidance of Prof. Kaustubh Kulkarni

Semester 2

Created by:

- **Akash Davada (202010061)**
- **Samprada Jawalkar(202011046)**

University Management System

1. Problem addressed and its importance:

Problem Statement :

Nowadays,visiting the university website to get details of subjects and lots of other such academic details has become a part of regular student/staff member routine . The websites are generally jam packed with a lot of information and tabs which makes the user interface less affective and the website more complicated.

Solution:
University Management System (UMS) deals with maintenance of the university,college,faculties and student's information with the university.
It is easy to use and simple because it deals with a single university and the colleges affiliated with only that university.
Plus it has an interface that is easy on the eyes and of the format which won't look boring.

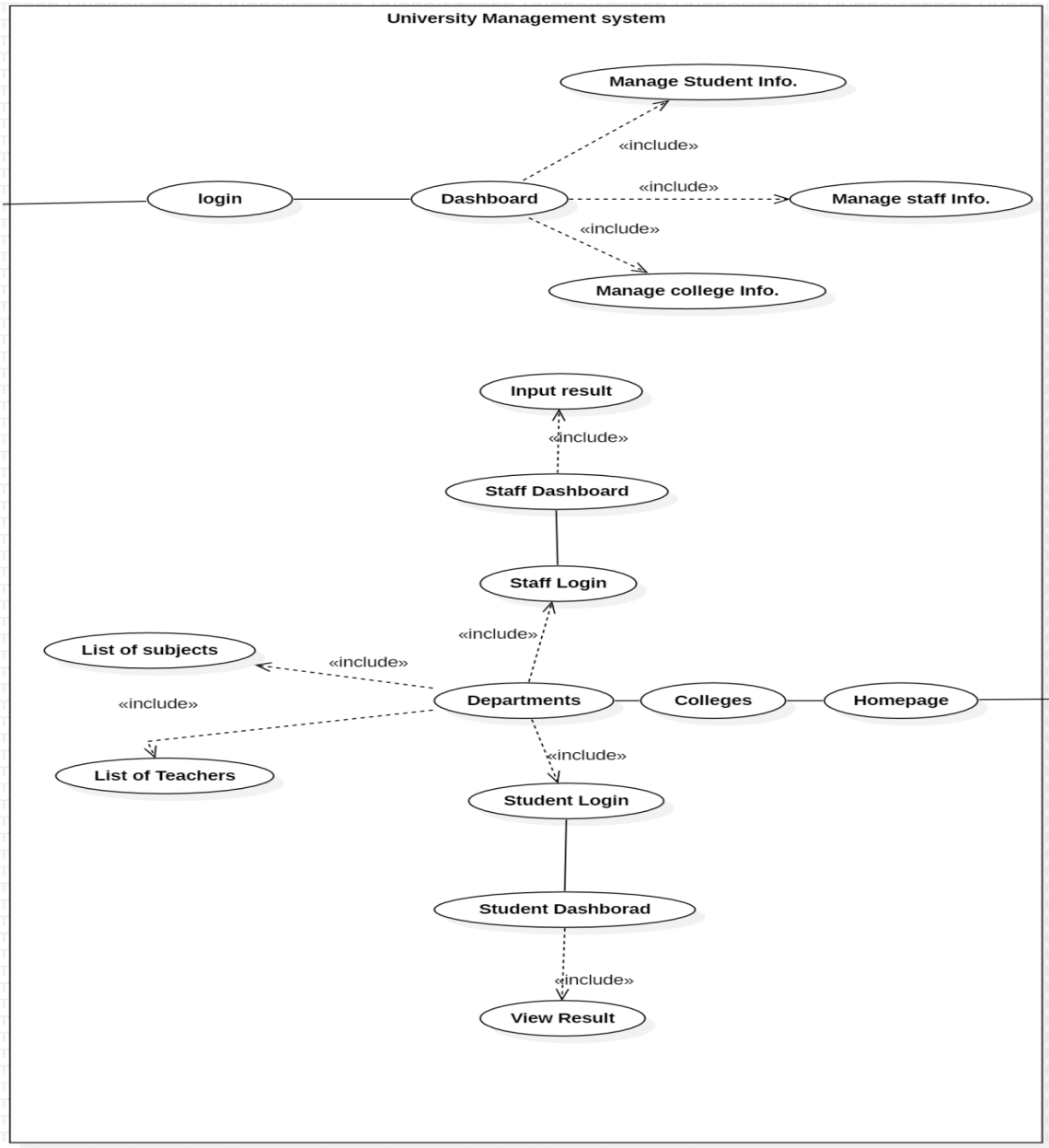
Scope of the Project: (why to use?)

University Management System (UMS) helps the management to get the most updated information of the faculties and students by avoiding manual processes. Along with that it can provide features like registration of new staff and students, allocation of subjects to the faculties etc. With an attractive interface .

2. Approach (What was done?):

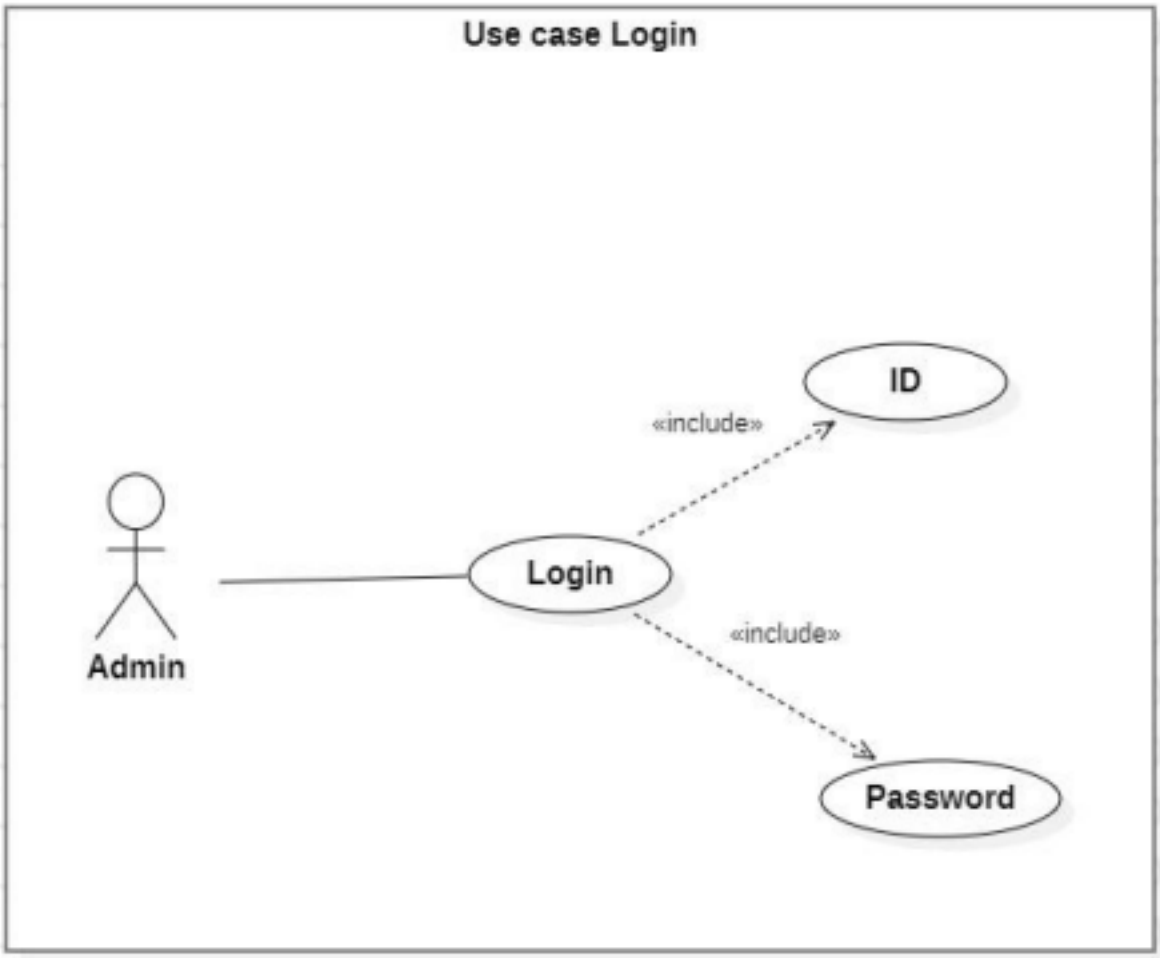
The most important thing to start implementing is making a blueprint of how things should proceed and everything should be well implemented. Following are the Designs Made by us before implementing the code.

1. Use case Diagram



UseCase diagram description:

Use-case:Login (Admin)



Brief description

This use case logs in to the admin's account after entering credentials i.e id and password. **Actors**

1) Admin

Precondition

1) Active internet connection on the system
2) A proper device connected to the internet

3) Admin must have credentials (id, password)

Flow of events

1) This use case begins when the admin enters the correct url.
2) After redirecting to the admin page, the system asks the admin for a valid id and password he has.
3) Admin inputs credentials and if they match to the one in the database then admin successfully redirected to the admin dashboard.

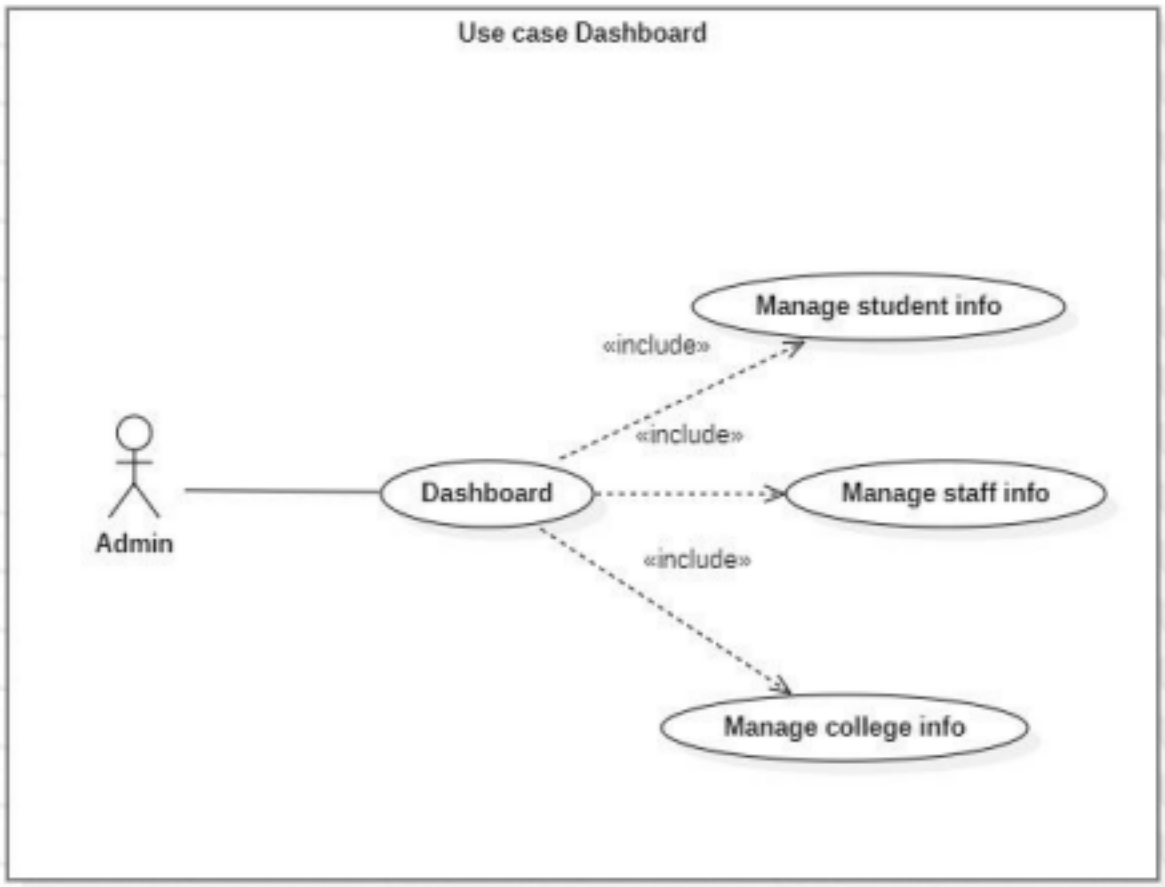
Alternative flows

1) Invalid Username: if the username entered by user does not meet the credentials in database, system displays a message “Please enter a valid Username”
2) Invalid Password: if the password entered by user does not meet the credentials in database, system displays a message “Please enter a valid Password”

Post-conditions

1) Successful completion- admin logs in into account successfully
2) Failure- couldn’t log in to account

Use-case : Dashboard (Admin):



Brief description

Once admin logs in, he can see,edit, add and delete all the details such as:

Managing the colleges

Managing the Students

Managing the Staff

Actors: Admin, Staff,Students.(Students and staff only

provide the information here) **Pre-conditions:**

1)The admin must have successfully logged in .

Flow of events:

This use case begins after the successful login of the admin.

After logging in, the admin is directed to the dashboard where he can :

Manage College: The admin collects proper information about the colleges.Admin can later add, update or delete college details using this option.

Manage Students:The admin takes proper information from the students Admin can later add, update or delete details of students previously added using this option. .

Manage Staff: The admin takes proper information from the staff Admin can later add, update or delete staff details which are added to the system using this option.

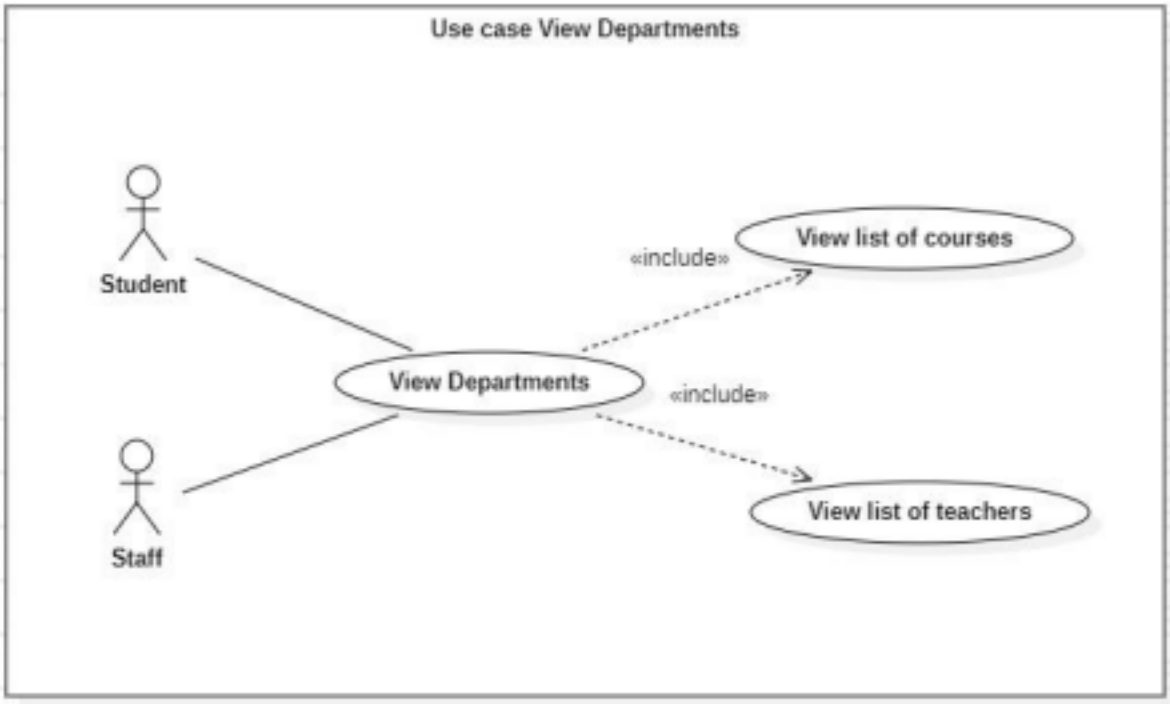
Alternative flows:

1) The admin fails to login and thus fails to get on the dashboard
2) The information gathered might not be complete which will lead to the system displaying message ”some fields are empty”

Post -conditions:

1) The admin will successfully carry out operations from the available options on the dashboard and add/update/delete data from the database.
2) The admin will fail to carry out operations from the available options on the dashboard and add/update/delete data from the database due to any of the reasons that are mentioned in the alternative flow

Use-case Departments:



Brief description:

This use case begins when the user i.e, student/staff member enters the appropriate url and visits the **HOMEPAGE** there he can

see various **COLLEGES** from which on selection of a particular college, the user is directed to **DEPARTMENTS** page where the user can view the subjects as well as the faculties.

Actors: Students/Staff.

Pre- conditions:

1) The user must enter a valid url.
2) The user must choose from the available list of colleges.
3) The user must choose from the available departments.

Flow of events:

1) The user inputs a valid url to get on the homepage of the website
2) The user can select from available list of colleges
3) After selecting the college, user will be directed to the department page where the user can view subjects and faculties .

Alternative flow:

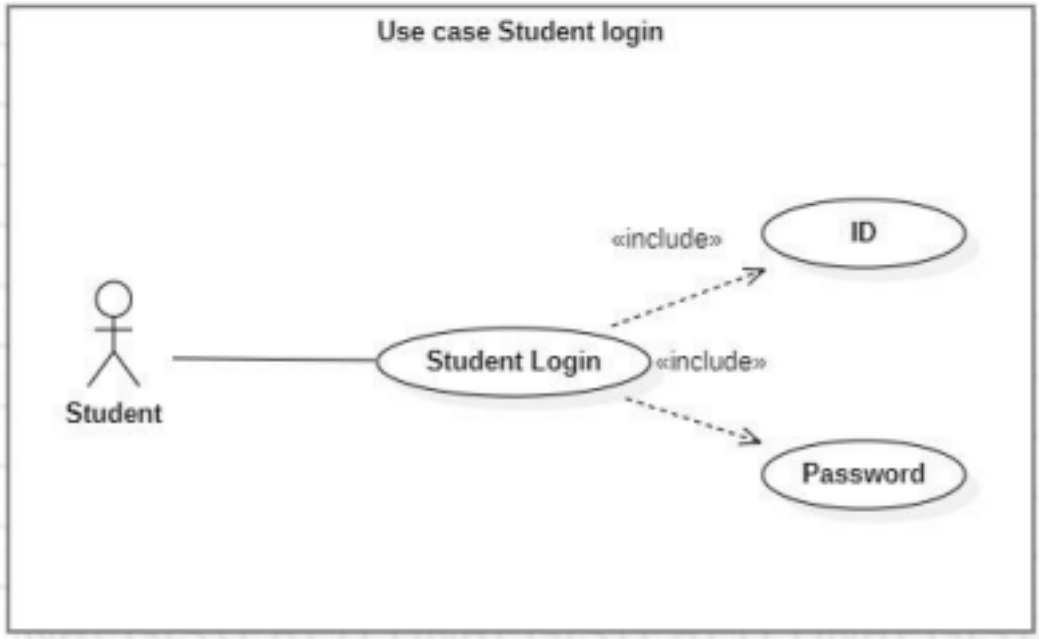
1) Entered url may not be a valid url leading to an error.

Post-conditions:

1) The user will be directed to a homepage after entering the appropriate url . 2) The user will be able to select from available colleges .
3) The user will be able to view and select departments .
4) The user will be able to view subjects.

5) The user will be able to view faculties.

Use-case: Student Login



Brief description

This use case helps student to login into his account

Actors

University Student

Precondition

User must be added into the database and must have account credentials i.e id, password.

Flow of events

1. This use case begins when a student comes to the home page.
2. After redirecting to the home page, there is a list of colleges

associated with the university as well as departments.

3. Also, there students can see lists of Subjects and Teachers related to each course. 4. After clicking on Login, the system asks the student for a valid username and password he has. 5. On providing valid credentials he is directed to the student dashboard .

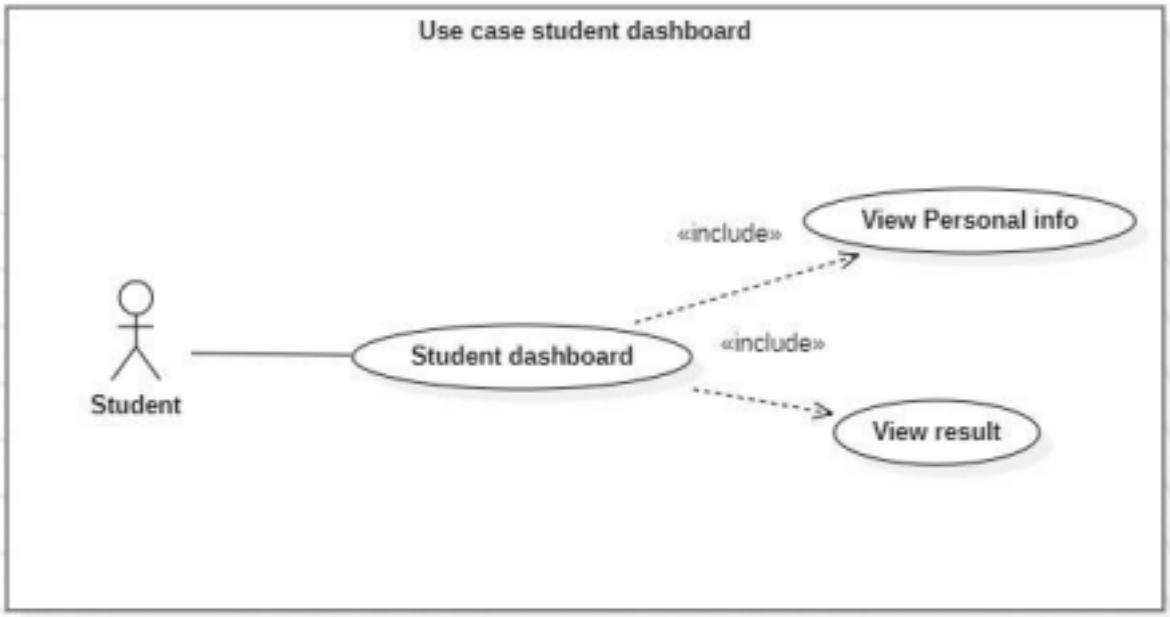
Alternative flows

1) Invalid user: if username and password is not valid, the use case ends with a failure condition

Post-conditions

1) Successful completion: student is successfully logged in
2) Failure condition: student does not exist.

Use-case: Students Dashboard:



Brief description:

This case begins after a successful login of the student, The student is directed to the student's dashboard where he can view the personal information that he/she provided during the time of admission and also view results

Pre-conditions:

1) The student must have successfully logged in using the valid credentials.

Flow of events:

1) The student enters valid credentials to login .

2) Once student logs in using given credentials, he is redirected to the student dashboard where he /she can see all the details such as:

Personal Details: All the details such as name, course

he enrolled,parents contact etc. Results: Marks of all the

subjects in the course he is enrolled in.

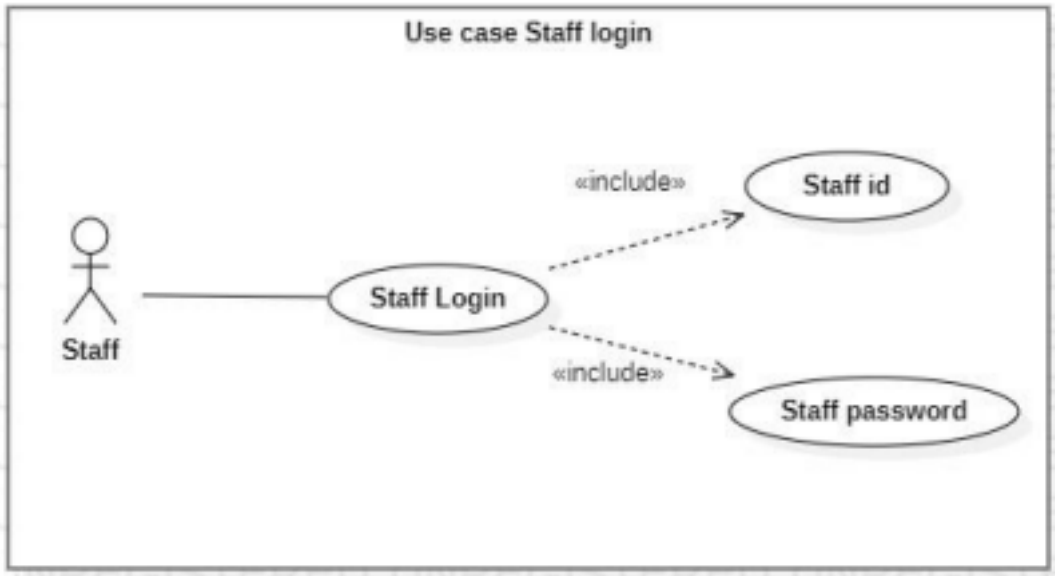
Alternative flow:

1) Student fails to visit the dashboard due to login failure.

Post -condition:

1) Student will view the personal information as well as the result.
2) Student will be redirected to the login page for logging in

using the appropriate id password. **Use-case: Staff Login**



1. Brief description

This use case helps staff members to login into their account .

2. Actors

University Staff

3. Preconditions

User must be added into the database and must have valid account credentials i.e id, password. **4. Flow of events**

1) This use case begins when a staff member comes to home page.

2) After redirecting to the home page, there is a list of colleges associated with the university as well as departments.

3) Also, there staff members can see lists of Subjects and Teachers related to each course. 4) After clicking on Log in, system asks the member for a valid username and password

he has.

5) On providing valid credentials and logging in, the staff member is redirected to the Staff dashboard.

5. Alternative flows

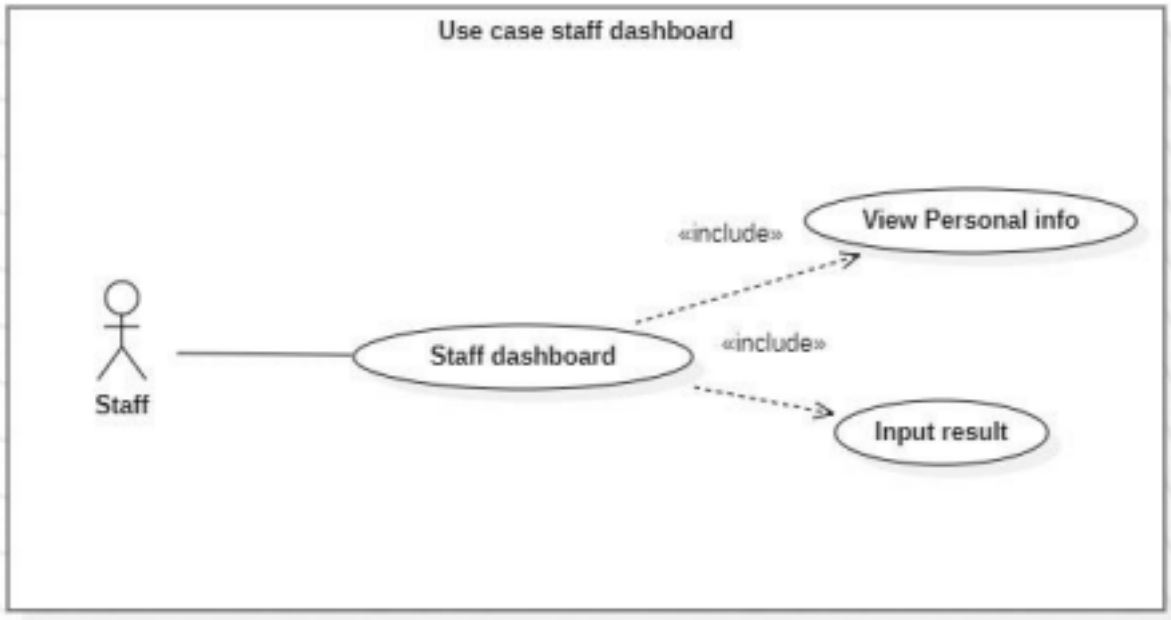
1) Invalid user: if username and password is not valid, the use case ends with a failure condition

6. Post-conditions –

1) Successful completion: staff member is successfully logged in

2) Failure condition: staff member does not exist.

Use-case: Staff Dashboard:



Brief description:

This case begins after a successful login of the staff member, The

staff member is directed to the staff dashboard where he can view the personal information that he/she provided and also input results.

Pre-conditions:

1) The staff member must have successfully logged in

using the valid credentials. **Flow of events:**

1) The staff member logs in using valid credentials.
2) Once the staff member logs in using given credentials, he is redirected to the staff dashboard where he can access all the details such as:

Personal Details: All the details such as name, course he

teaches, Contact details etc. Input Results: Marks of all the

subjects to be inserted in a student's enrolled course.

Alternative flow:

1) Staff member fails to visit the dashboard due to login failure.

Post-conditions:

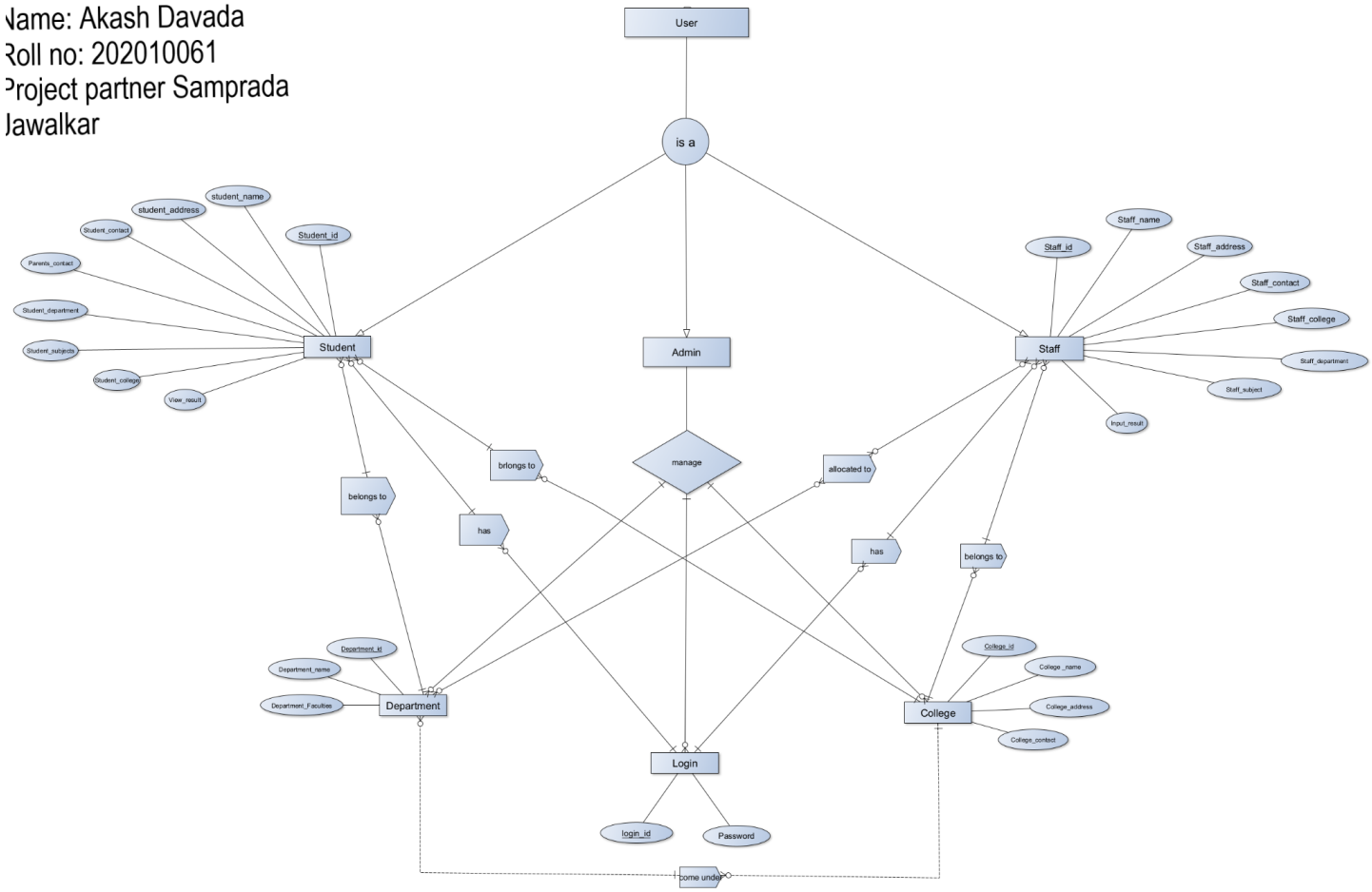
1)Staff Members will view the personal information as well as input the result.

2)Staff Members will be redirected to the login page for logging

in using the appropriate id password.

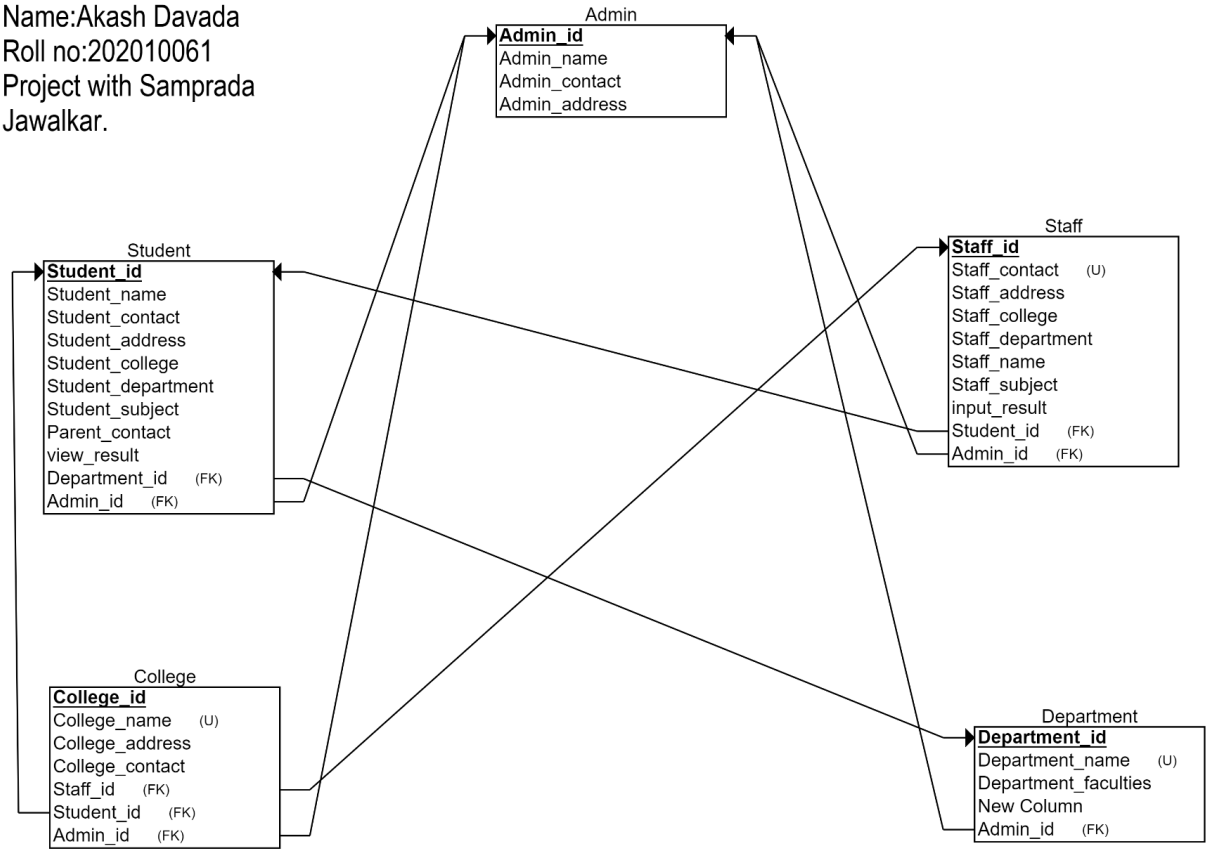
3. Extended Entity Relationship Diagram

Name: Akash Davada
Roll no: 202010061
Project partner Samprada Jawalkar



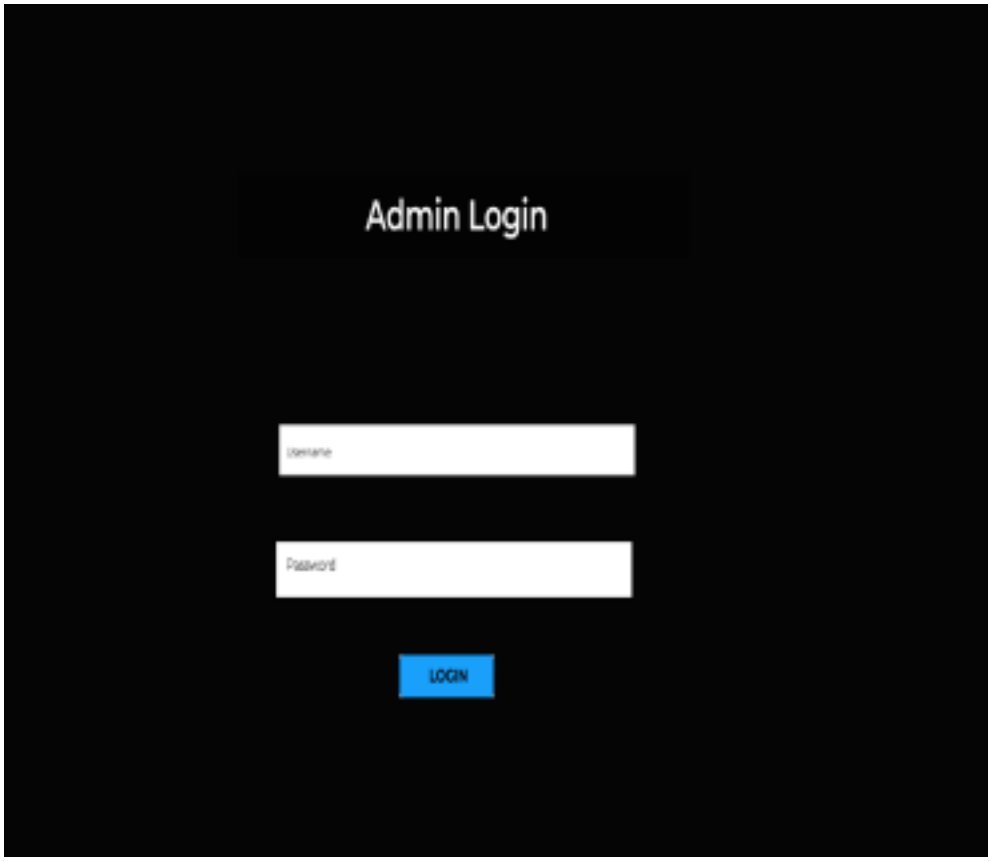
4. Relational Schema:

Name:Akash Davada
Roll no:202010061
Project with Samprada Jawalkar.

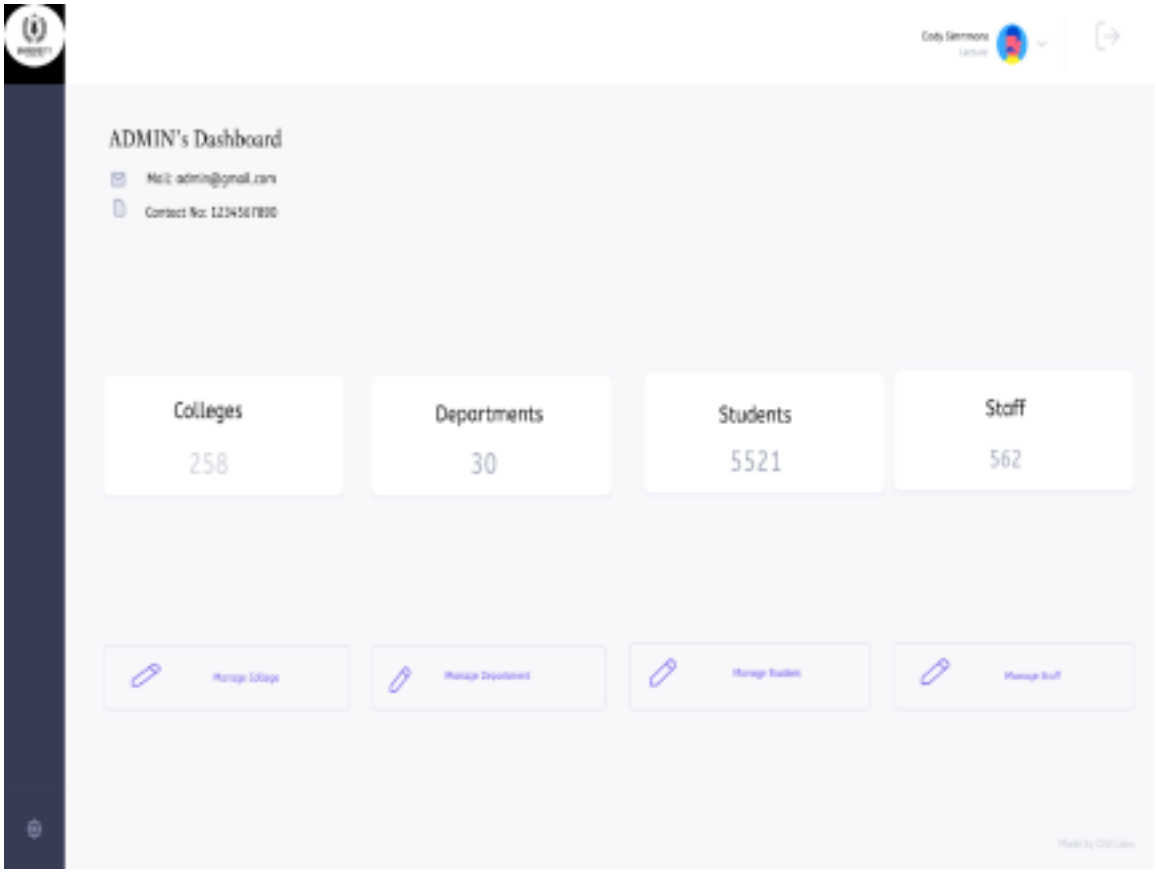


5. Wireframe Diagram:

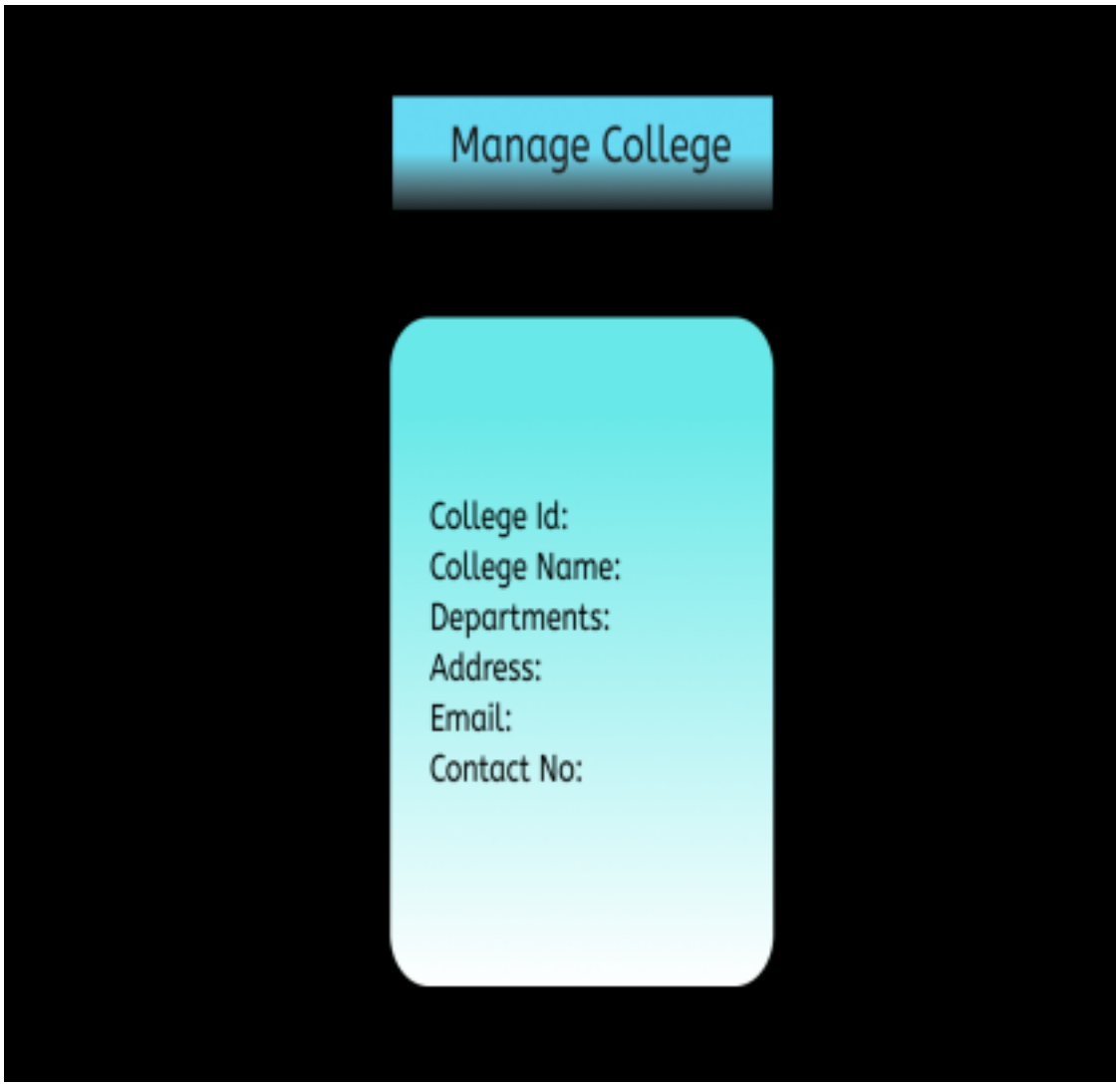
Admin login page:



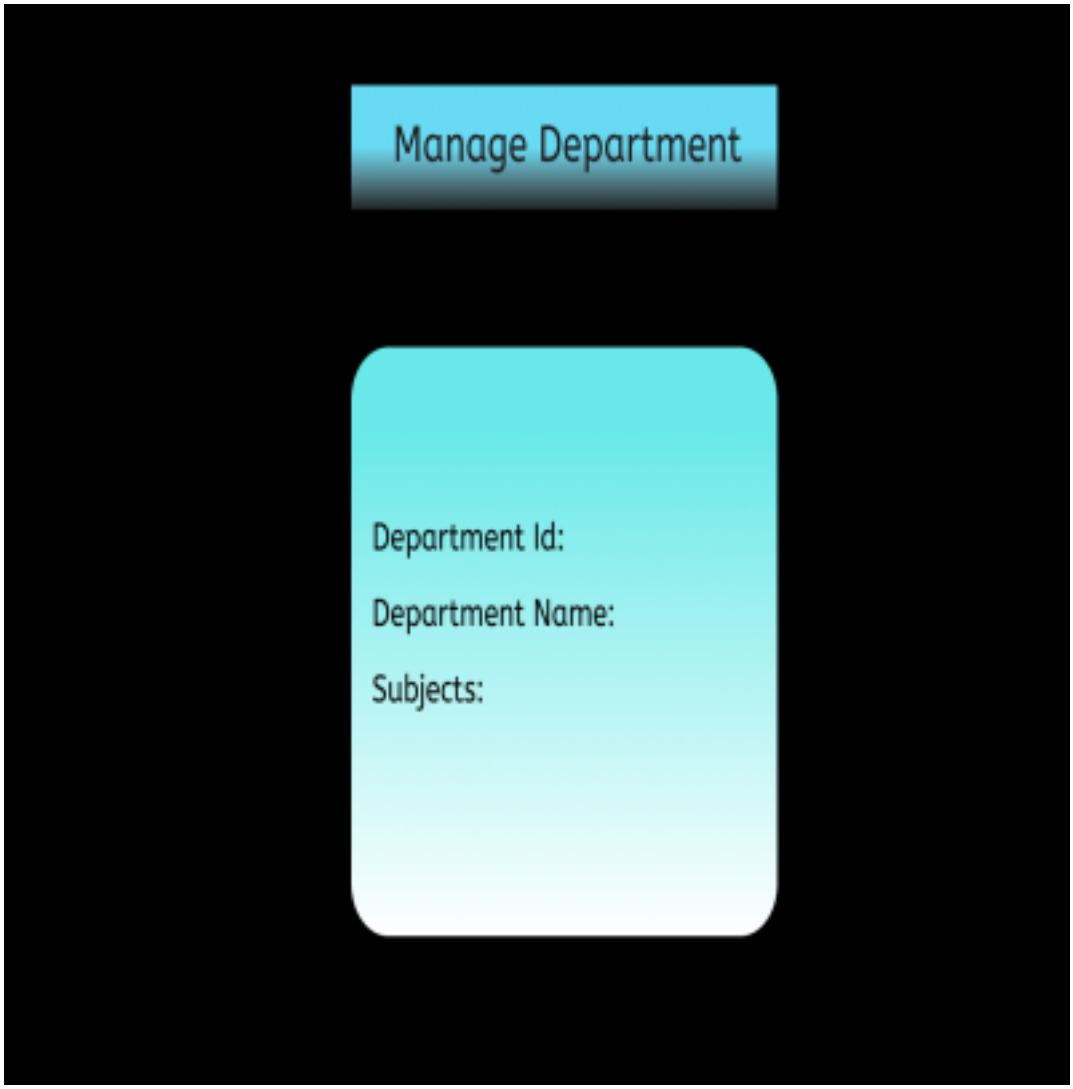
Admin Dashboard:



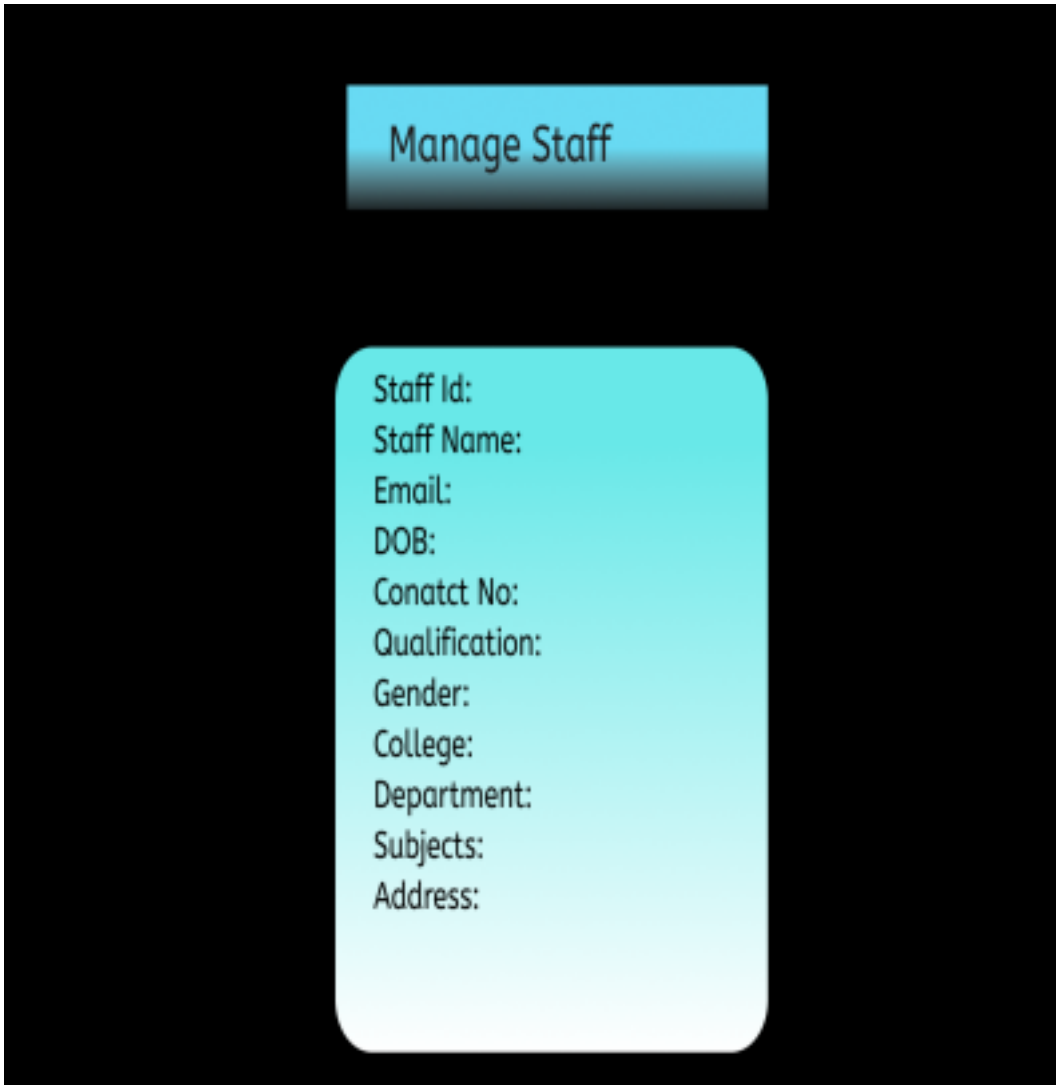
Manage Colleges:



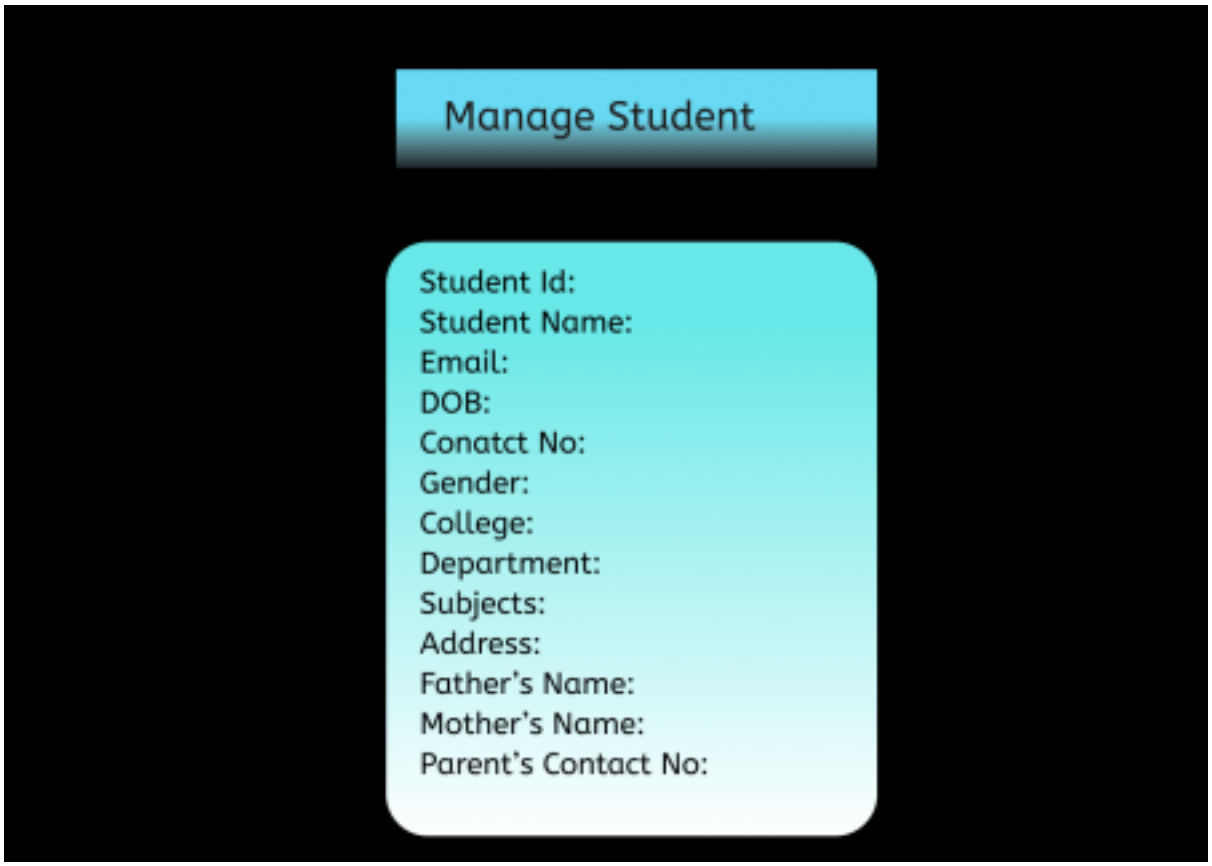
Manage Departments:


Manage Department
Department Id:
Department Name:
Subjects:

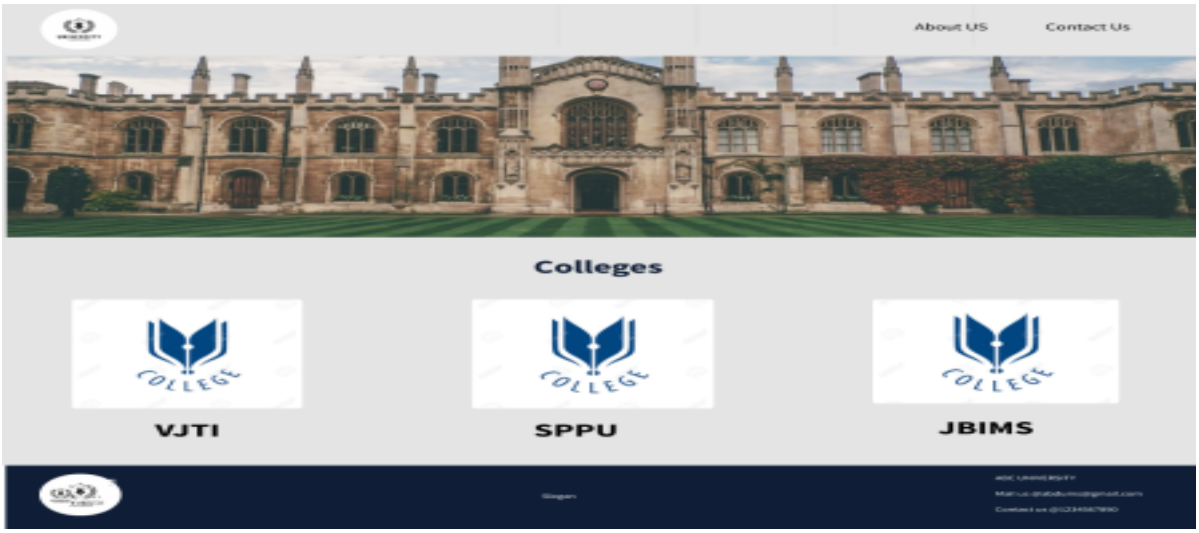
Manage Staff



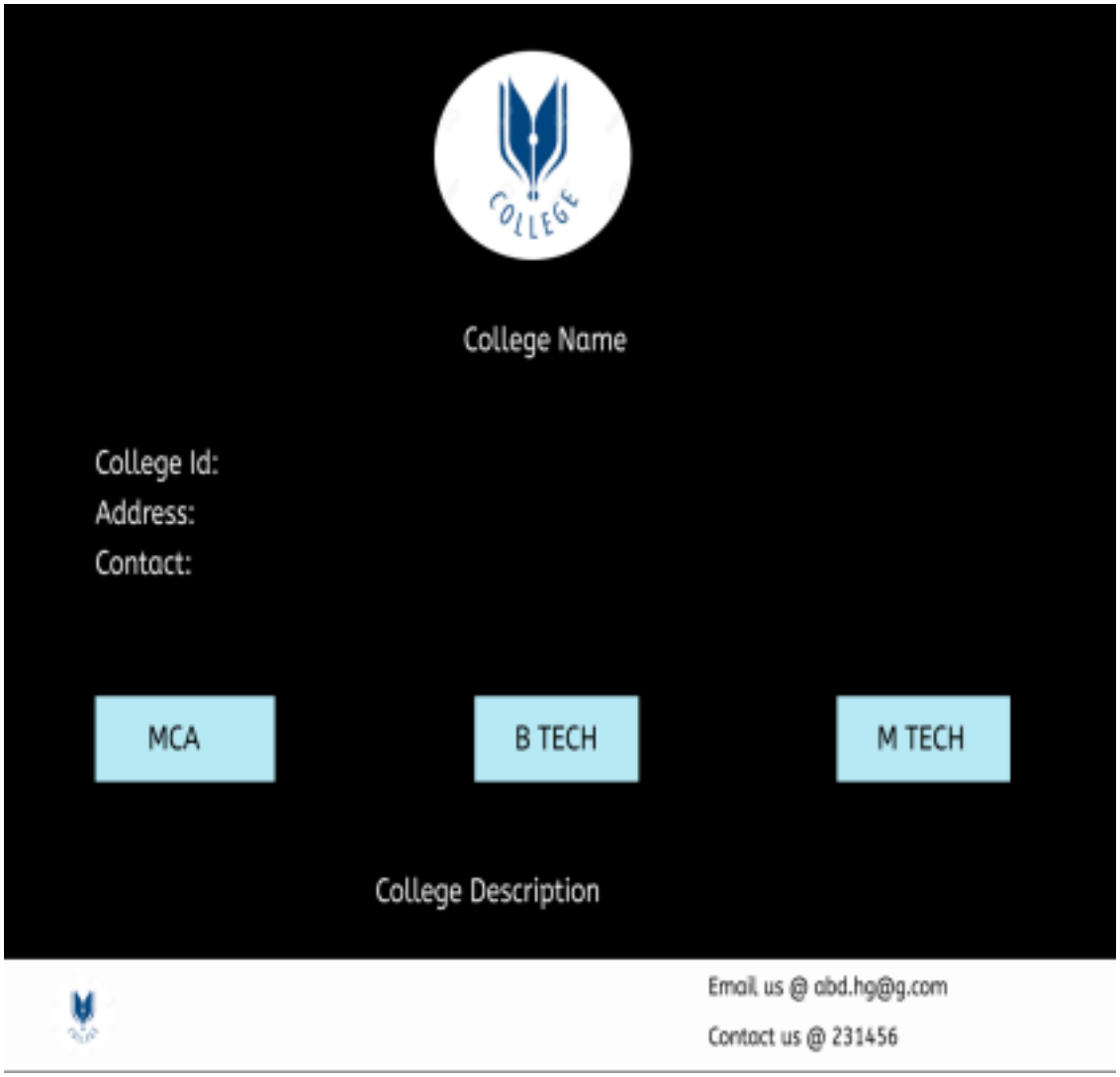
Manage Student



Home page:

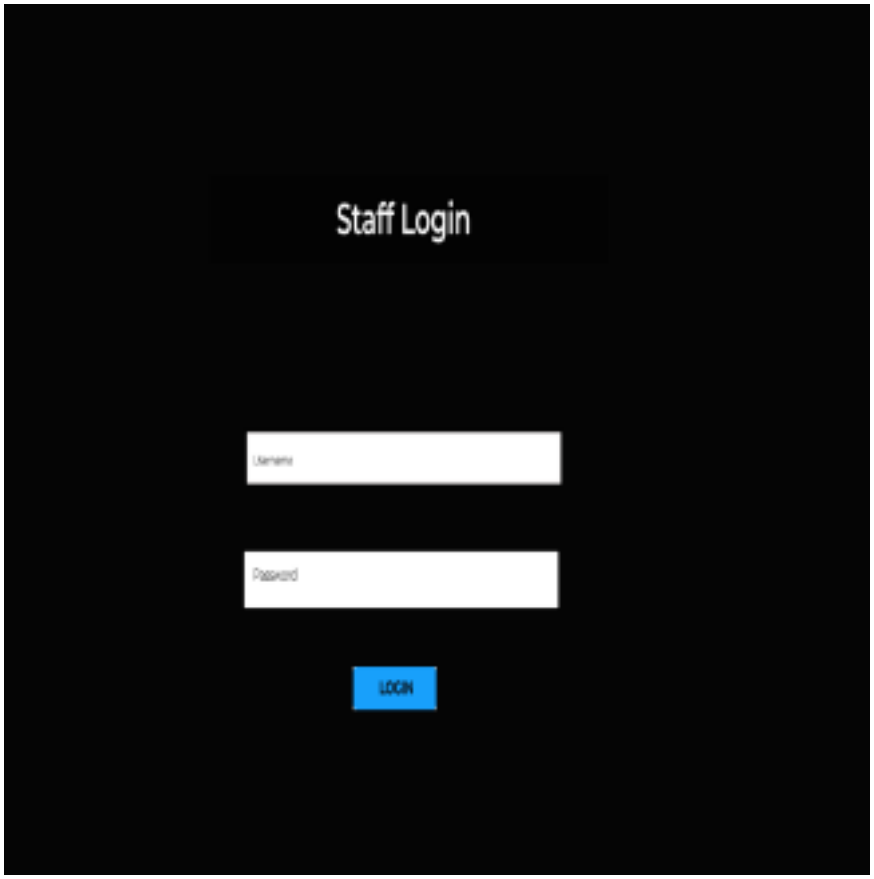


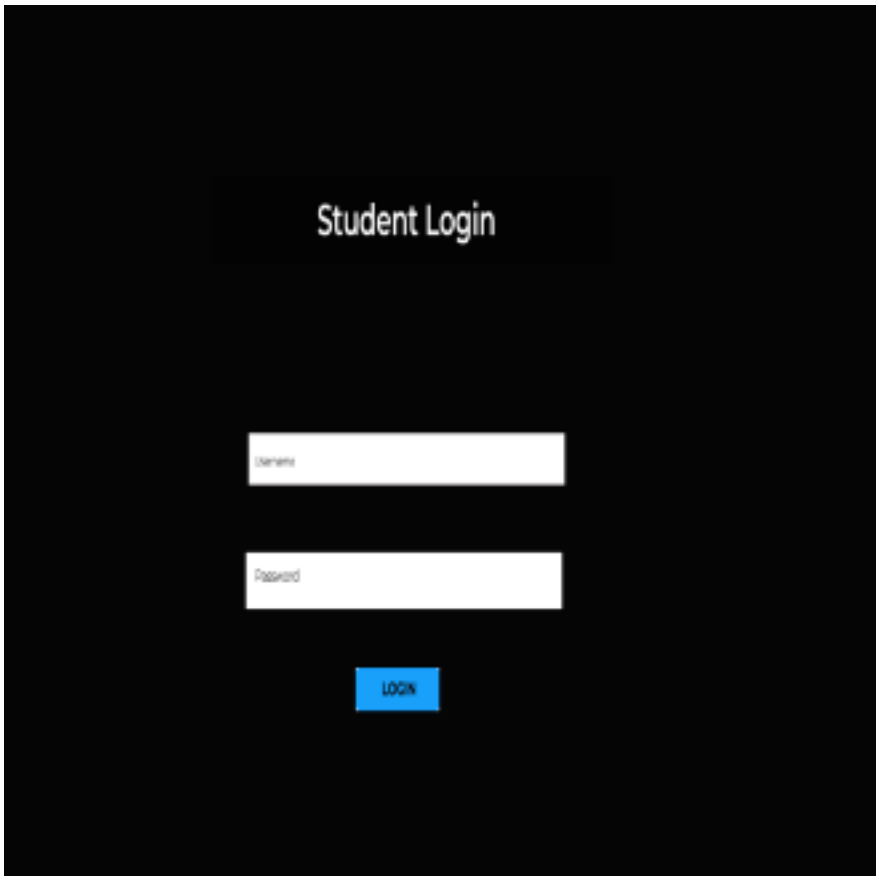
Selected College Page:



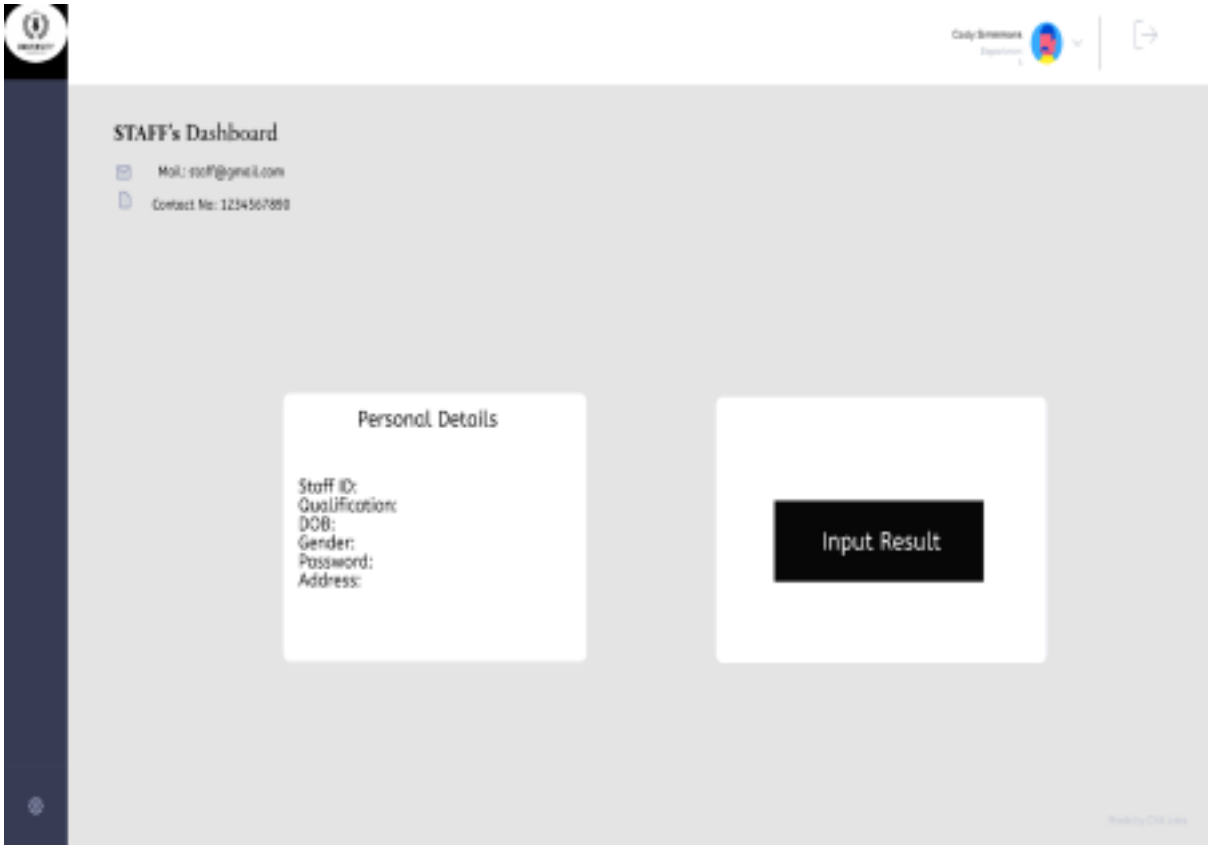
Selected Department Page:

Staff Login:

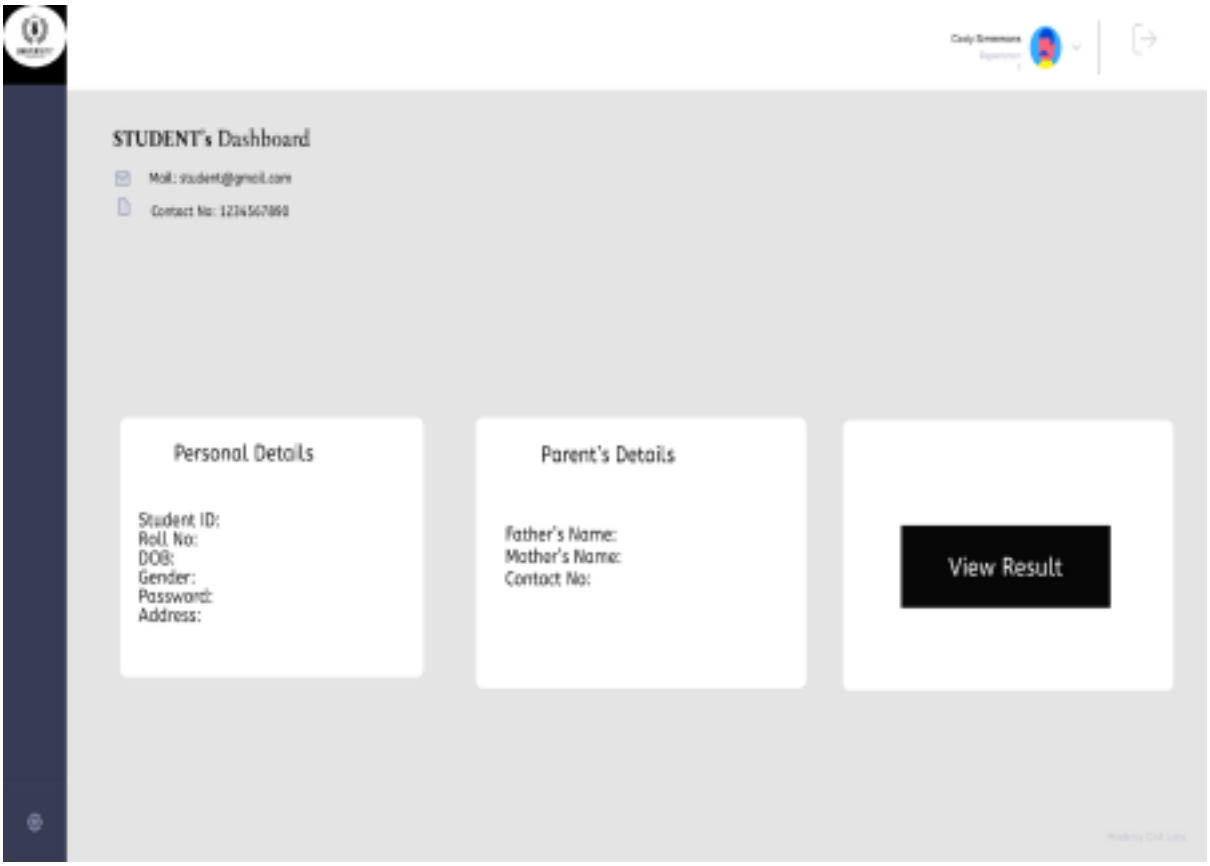



Student Login
Username
Password
LOGIN

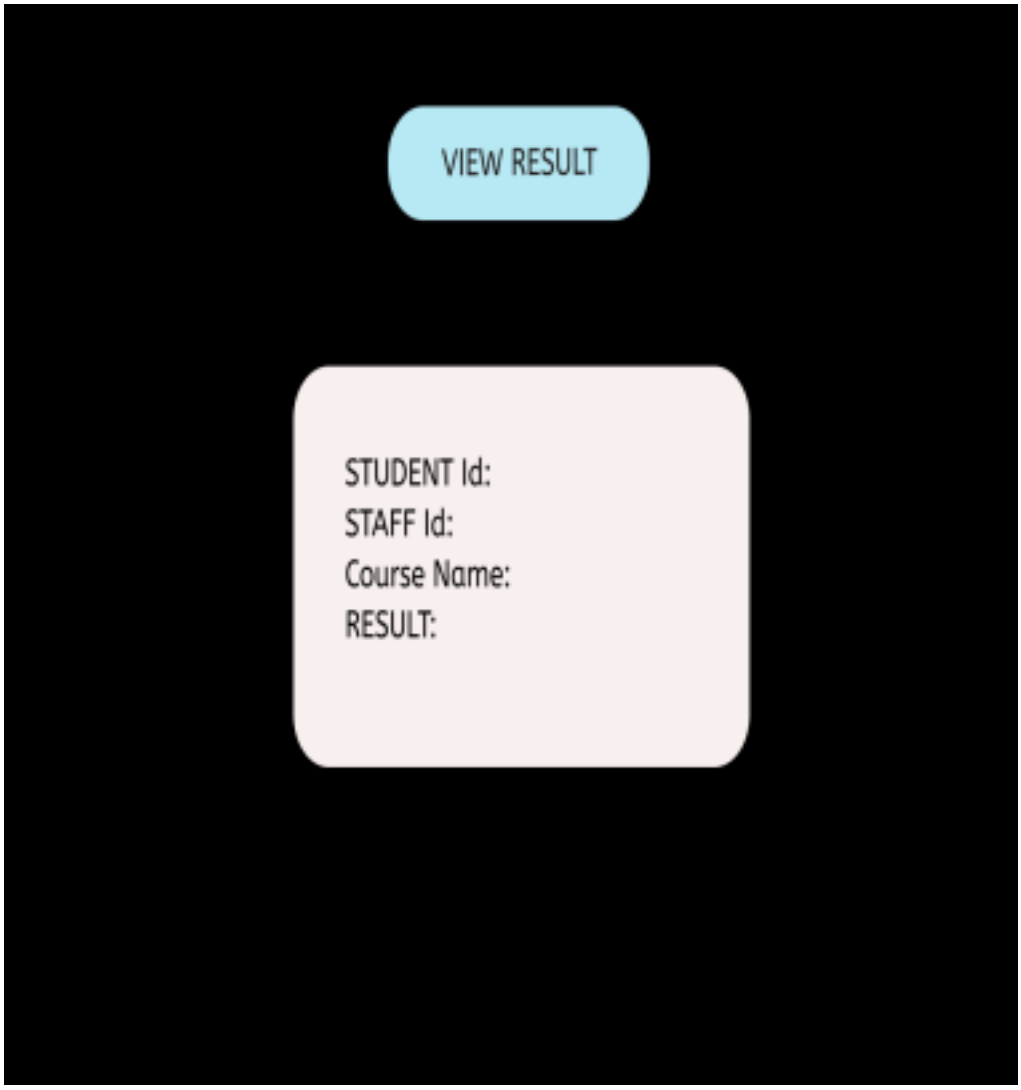
Staff Dashboard:



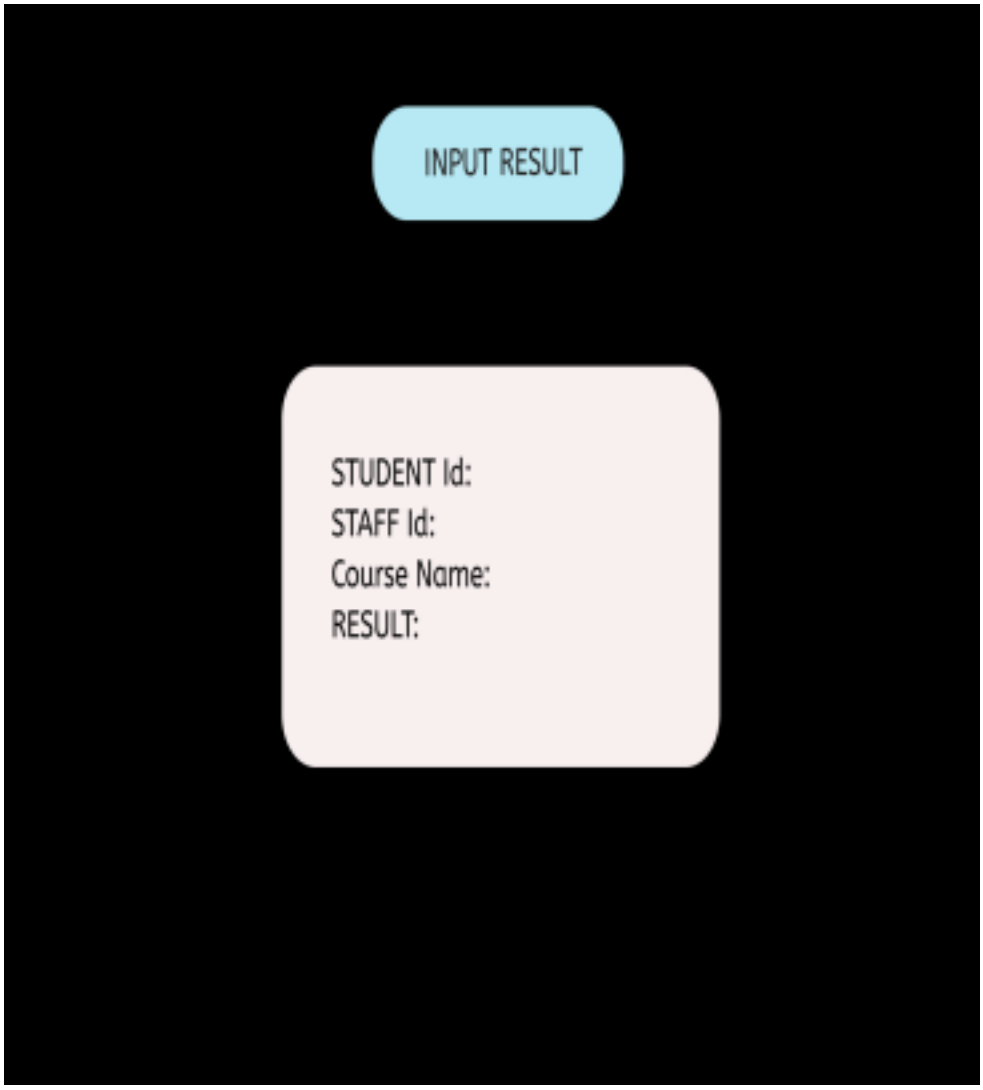
Students Dashboard:



View Result:



Input Result:



4. Discussion:

Steps to interact with the project :

When the user visits the website by entering the appropriate Url, he/she will visit the homepage where the details of the university and the list of colleges affiliated to the university will be

displayed .
Major components of the project are :

- Admin controls:
  Admin controls where the admin manages every aspect of the website by logging in through the credentials.
  Validation is necessary to get the access of managing the website this increases the security of the website handling.

- Home page:
  Home page consists of the details of students enrolled in the university , staff hired by the colleges within the university , number of colleges and departments within the university .

- College page:
  When the user selects a specific college,he gets directed to the college details page and there he can get the general information of the college and also the departments available in the college

- Department page:
  When the user selects any department, he / she can get the general details of the department and also dedicated login sections for students and staff .

- Staff/Student log in:
  When the user logs in with the credentials provided to him by the university ,at the time of admission , he/she is redirected to one of the dedicated ‘Staff / Student dashboard’ .

- Student Dashboard:
  Contains information of the student and an option to ‘view result’ of the course he has enrolled in .

- Staff Dashboard :
  Contains general information of the staff member along with an option to input result for the specific student

- View Result page:
  Contains result of the student

- Input Result page:
  Staff can input the results of dedicated students here.

Other details and functionalities might be visible in the project.

Future Enhancements:

More colleges can be added.
More departments can be added.
OTP authentication for validation of users can be added.
Individual subject codes and private comment sections can be added to comment on specific marks .
Assignments and other academic activities can be added .

References Section :

· Github
· W3schools
· Stack overflow
· Youtube
· Few pieces of code reused from previous projects

Deliverables:

1. Project Code
2. Project Report
3. Project Readme File
4. Database File