

# **COLLEGE MANAGEMENT SYSTEM (CMS)**

*A project report submitted in partial fulfillment of the requirement for degree of*

**BACHELOR OF TECHNOLOGY**

**In**

**COMPUTER SCIENCE & ENGINEERING**

**By**

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September2022-April2023

# RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES

(A.P.Government Act 18 of 2008)RGUKT-RKValley



Vempalli, Kadapa, Andhra pradesh-516330.

## CERTIFICATE OF EXAMINATION

This is to certify that we have examined the thesis entitled **College Management System(CMS)**, submitted by S.Surendra(R170931) and M.Bindu Manasa(R170496)and here by accord my approval of it as a study carried out and presented in a manner required for its acceptance in partial fulfilment for the award of Bachelor of Technology degree for which it has been submitted. This approval does not necessarily endorse or accept every statement made, opinion expressed or conclusions drawn, as recorded in this thesis. It only signifies the acceptance of this thesis for the purpose for which it has been submitted.

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**Vempalli, Kadapa, Andhrapradesh-516330.**

## **CERTIFICATE OF PROJECT COMPLETION**

This is to certify that we have examined the thesis entitled **College Management System(CMS)** submitted by S.Surendra(R170931) and M.Bindu Manasa(R170496) under our guidance and supervision for the partial fulfilment for the degree of Bachelor of Technology in Computer Science and Engineering during the academic session September 2022 –April 2023 at RGUKT-RKValley.

To the best of my knowledge, the results embodied in this dissertation work have not been submitted to any university or institute for the award of any degree or diploma.

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# **RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES**

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## **DECLARATION**

We, S.Surendra(R170931) and M.Bindu Manasa(R170496)here by declare that the project report entitled “College Management System(CMS)” done by is under guidance of Mr.B.Linga Murthy is submitted in partial fulfilment for the degree of Bachelor of Technology in Computer Science and Engineering during the academic session September 2022– February 2023 at RGUKT-RK-Valley.

We also declare that this project is a result of our own effort and has not been copied or imitated from any source. Citations from any websites are mentioned in the references.

To the best of my knowledge, the results embodied in this dissertation work have not been submitted to any university or institute for the award of any degree or diploma.

S.Surendra (R170931)

M.BinduManasa(R170496)

## **ACKNOWLEDGEMENT**

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## **Abstract**

Over the years the manual attendance management has been carried across most of educational institutions. To overcome the problems of manual attendance, we have developed “College Management System”. College Management System is based on web server, which can be implemented on any computer. In this application, PHP is server side language, MySQL and PHP is used as back-end design and HTML, CSS and Node JS are used as front-end tools. The system communicates with database residing on a remote server. It calculates automatically, the attendance percentage of students without any manual paper-based work. The system facilitates the end users with interactive design and automated processing of attendance management.

## **1. INTRODUCTION**

Education is an important and traditional part of the society. As time has progressed, education has also progressed into the modern times. So in accordance with the progress of education, changing the way of maintaining college information is required.

In most educational institutions the attendance is taken manually. It is not only time consuming, but it is also unsecure and unreliable and it can be lost. If all the work is included on an online system, then it can reduce time and work. The College Management System is an intranet based application that can be accessed throughout the institution or a specified college. The system is helpful for both students, lecturers. This System is fully responsive where a user can use in mobile, tablets and different computer systems. In this system records are kept safe and secure and the attendance information of particular or all students of particular class can be accessed easily and without time consuming, the report is generated automatically.

### **1.1 Purpose**

The main characteristics of this system is that it is web based , fully responsive and flexible .It can be accessed from any computer no matter where you are. Its purpose is to make a web based attendance software to register the student details, their subjects, teachers, and related field. The daily attendance of students are taken automatically by selecting student name. Here admin can login and assign faculty to the respective sections. Faculty give attendance to the students for respective subjects. Students are capable to login and check their attendance in semester wise in the portal.



## 1.2 Scope

- Eliminate duplicate data entry and errors in time and attendance entries.
- Eliminate paperwork and save time.
- Automatic calculation of attendance.
- To increase security.

## 2. Product Features and User Classifications

There are several types of end users for the CMS. They are broadly divided as Students, Staff and the Administrator. Each of these classes have their own set of features.

**1) ADMIN :** Who can view and edit the details of any students/staff. Can add/edit departments,courses, classes and time-tables.

**2) STAFF :** who can view students details, add/update assignments, marks and attendance of a particular student. They can see the time-table of a particular class also.

**3) STUDENT :** who can update profile/ add solution to assignments and see attendance.

- The features that are available to administrator are :
  - An admin can login into the system and perform any of the available operations :
  - Add a student
  - View the student details
  - Modify student data
  - Delete student record
  - Add staff
  - View staff details

- Modify staff data
- Delete staff record
- Modify department
- Add/modify courses
- Add/modify classes
- Can view the record of all the students and staff of a particular class/course/department.

- The features that are available to staffs are :

- A staff can login into the system and perform any of the available operations :
- View his/her personal details (name, dob, age, address, joining date)
- Edit his/her details
- View the department (s)he belongs to.
- The classes they teach.
- Generate class report
- Mark attendance of a particular student
- Update the attendance
- See the time-table of a class.

- The features that are available to students are :

- A student can login into the system and perform any of the following operations :
- View his/her personal details (name, dob, age, address, joining date)
- Edit his/her details
- View the department (s)he belongs to.
- The classes they belong
- View his/her attendance

## **2.1 Operating Environment**

The operating environment for CMS application are listed below :

- Operating System : Windows 10
- Database : MySQL
- Frontend : HTML/CSS/JS/Bootstrap
- Backend : Node.js

## **2.2 Constraints**

1. Users should be aware of the internet.
2. Users must have a valid id and password.
3. Only Admin, Staff and Students can access.
4. Every user must be comfortable using a computer.
5. All operations are in English so users must have basic knowledge of English.

## **3. SYSTEM DESIGN**

### **3.1 System Design of CMS**

Various Design concepts and processes were applied to this project on the basis of which a complete logical system is built which fulfils the given requirements. There were two steps while design analysis :

#### **1. Primary Design Phase :**

The system is designed at block level. We first decided the end users that will be using ourvapplication. On finalizing that and following the concepts like

separation of concerns, the software is divided into individual modules based upon the end users that are functionally independent and incorporates information hiding. There are 3 types of end users (modules) - students, staff and the administrator.

## **2. Secondary Design Phase :**

Each module/block was studied in detail during this phase.

### **3.2 Admin**

The administrator will have access to all the information in the different tables in the database. They will be able to add an entry in any table and also edit them. They will be responsible for maintaining the data. The main aim here is to provide a user friendly environment for the admin so that they can easily adapt themselves with the environment. They will be responsible for the creation/deletion of student / staff / department / course / class information. Only authorized users will be made admin and thus we have protected the routes. They will be provided with search and filter features so that they can access the data efficiently. Different Views of Admin are described below.

- **Profile**

Admin will be able to see it's own information. They will be able to see a complete overview of total students / staff in the college and various courses / departments.

- **Settings**

Admin will be able to change it's own information like name, email, password, add other informations such as address, contact etc.

- **Department**

The admin is responsible for creating new departments and updating the already existing ones. Here they will be provided with search and filter operations so that they can work efficiently. Necessary information will be needed while adding new departments.

- **Course**

The admin is responsible for creating new courses and updating the already existing ones. Here they will be provided with search and filter operations so that they can work efficiently. Necessary information will be needed while adding new courses.

- **Class**

The admin is responsible for creating new classes and updating the already existing ones. Here they will be provided with search and filter operations so that they can work efficiently. Necessary information will be needed while adding new classes.

- **Student Section**

The admin will be able to see the complete information of all the students. They are also responsible for adding new students and updating the already existing ones. They will be provided with a user friendly UI to list down all the necessary information of students and if they want they can see the complete details by clicking on the relevant student's name.

- **Staff Section**

The admin will be able to see the complete information of all the staff. They are also responsible for adding new students and updating the already existing ones. They will be provided with a user friendly UI to list down all the necessary information of staff and if they want they can see the complete details by clicking on the relevant staff's name.

- **Forget Password / Reset Password**

In case a staff forgets his password or wants to reset it, he can do so by clicking on a reset password button. A reset link will be sent in the mail which will be active for only 20 min.

### **3.4 Students**

Each student belongs to a class identified by semester and section. Each class belongs to a department and are assigned a set of courses. Therefore, these courses are common to all students of that class. The students are given a unique username and password to login. Each of them will have a different view. These views are described below.

- **Profile**

Each student will be able to see it's own information. They will be able to see the department they belong to, current semester registered courses, their personal information etc.

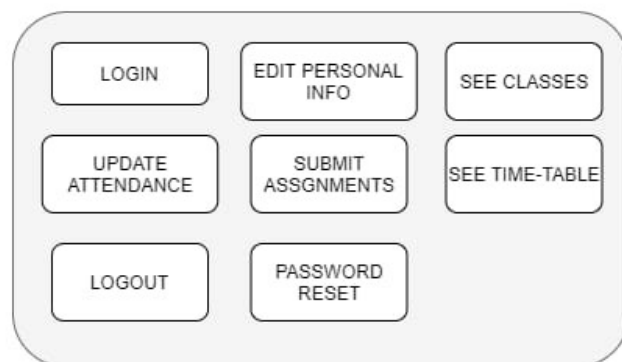
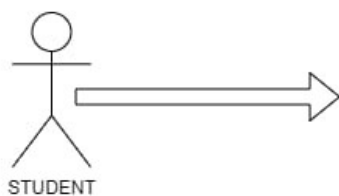
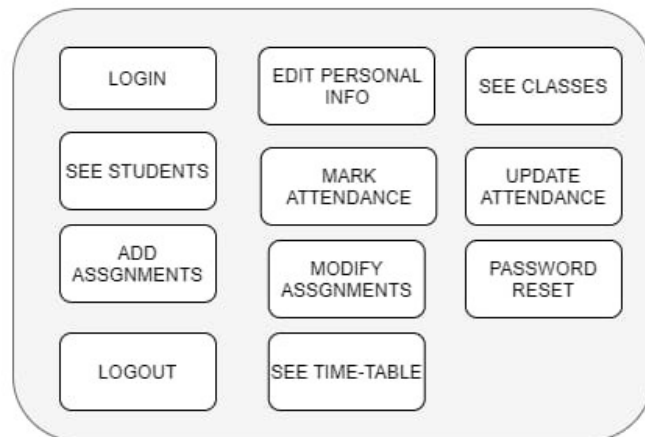
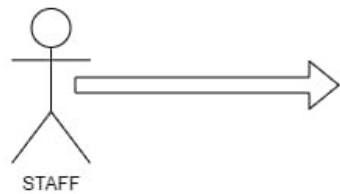
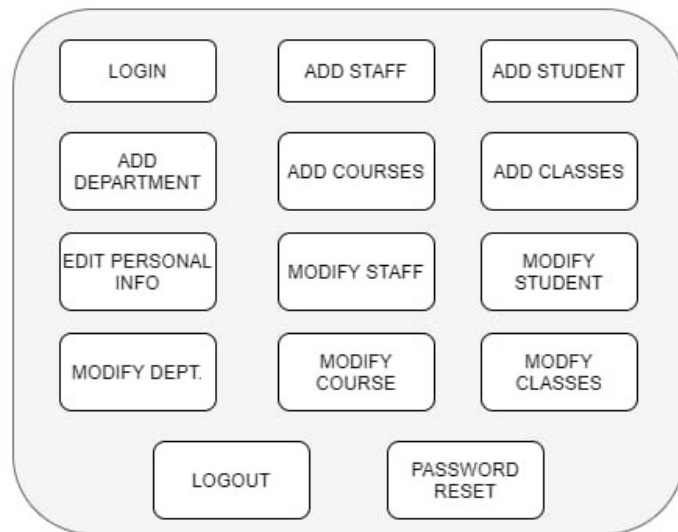
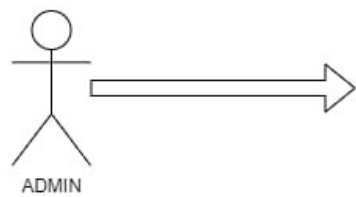
- **Attendance Information**

Attendance for each course will be displayed. This includes the number of attended classes and the attendance percentage. If the attendance percentage is below a specified threshold, say 75%, It will be marked in red otherwise it will be in green.

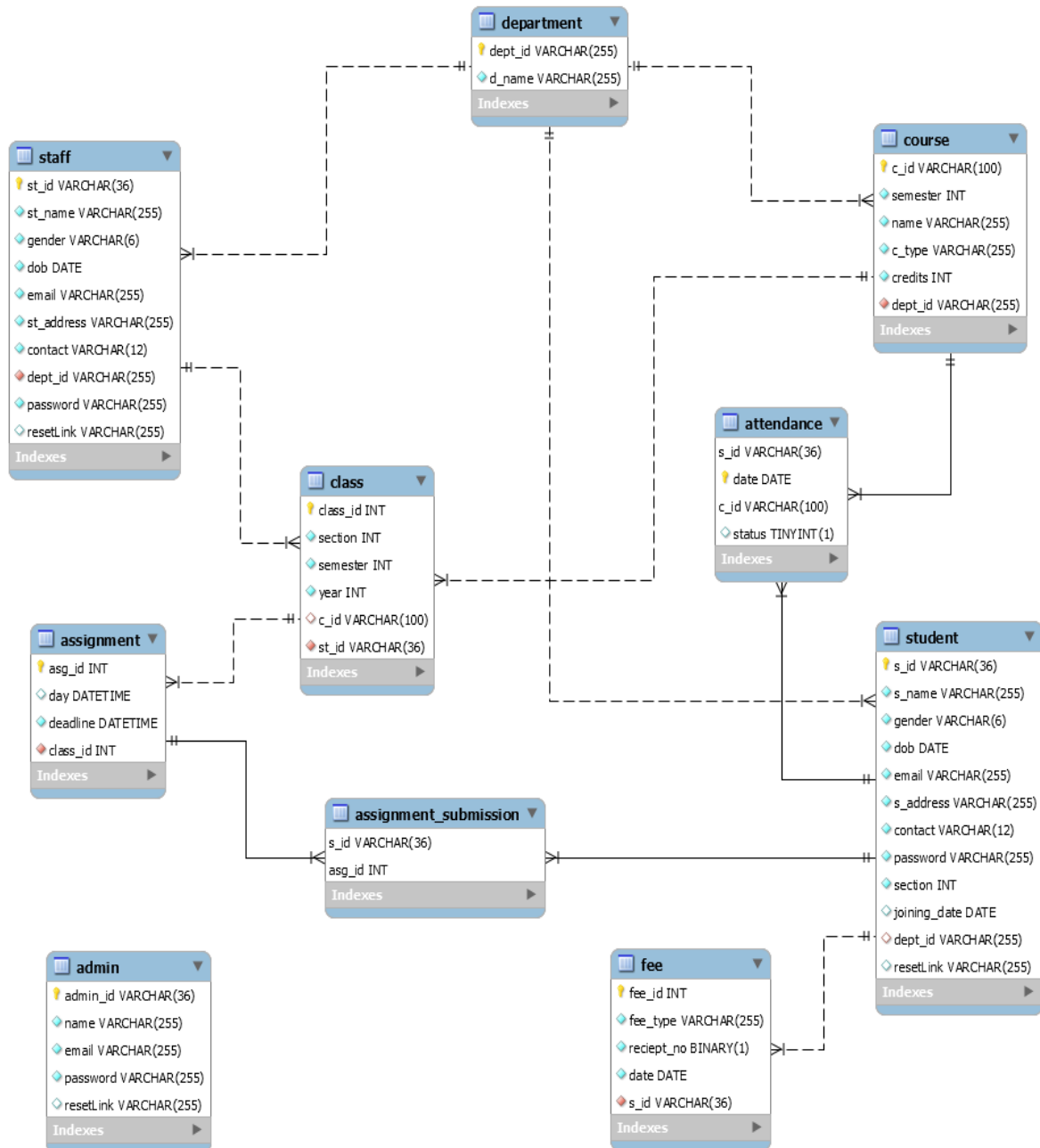
## **4. Diagrams:**

### **4.1 End User Features (Diagram)**

This is the use case diagram which depicts the user's interaction with the system. It also shows the relationship between the user and the different use cases in which the user is involved.

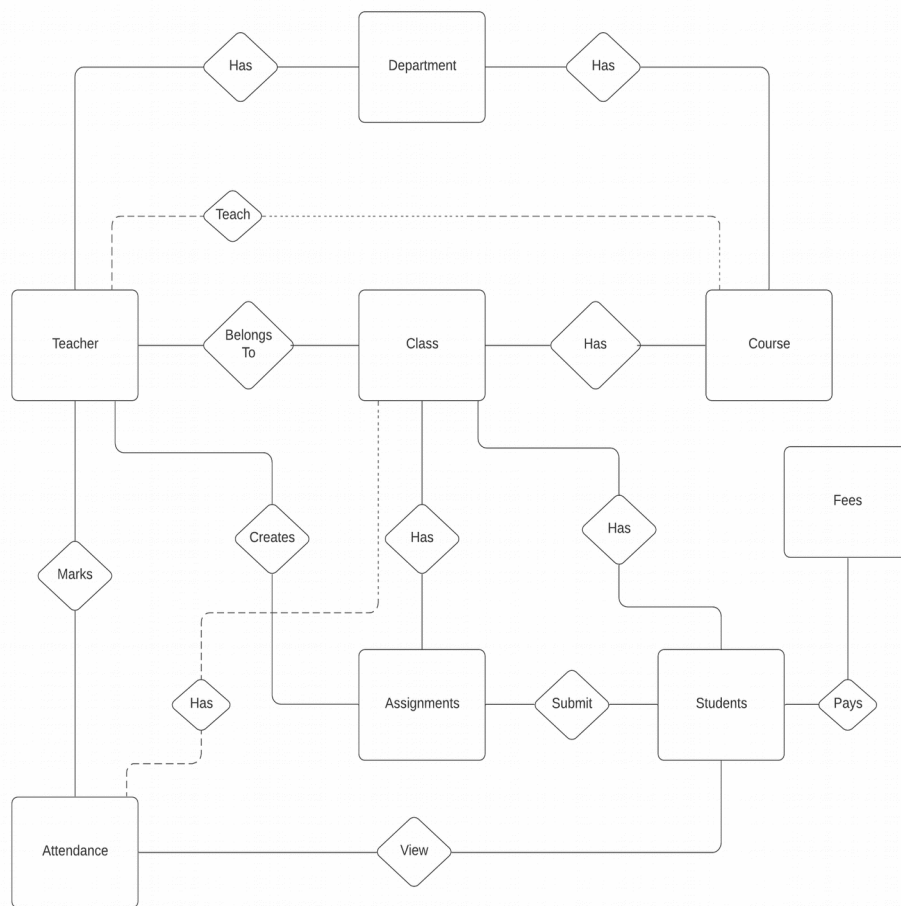


## 4.2 Class Diagram

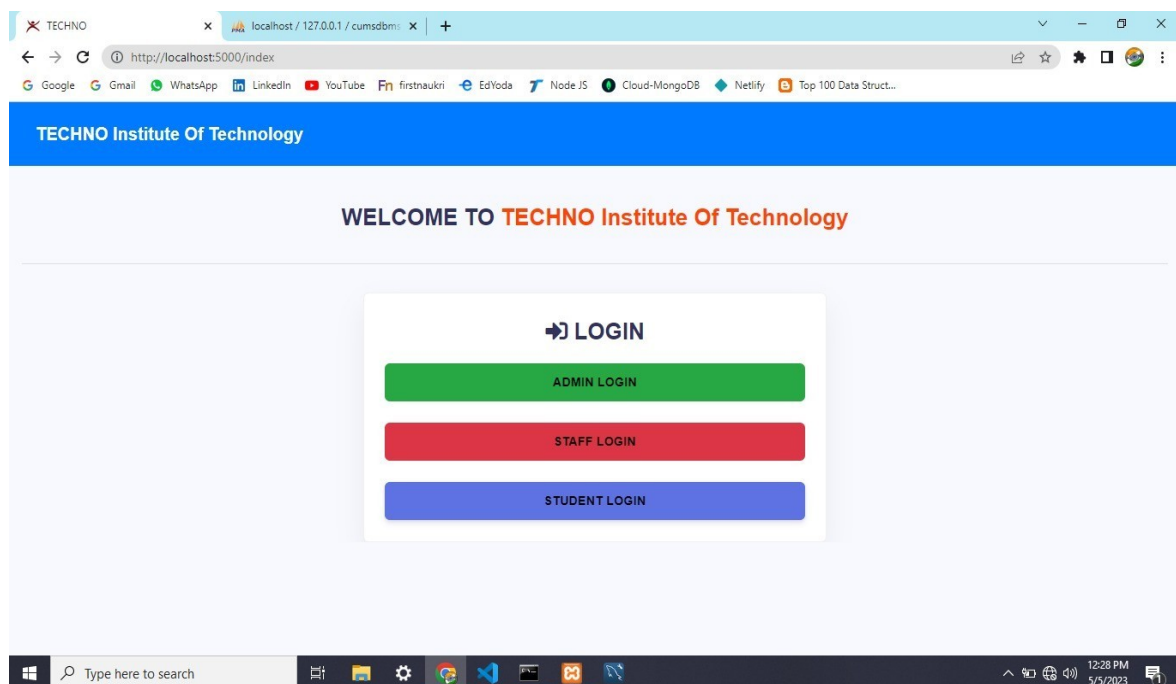
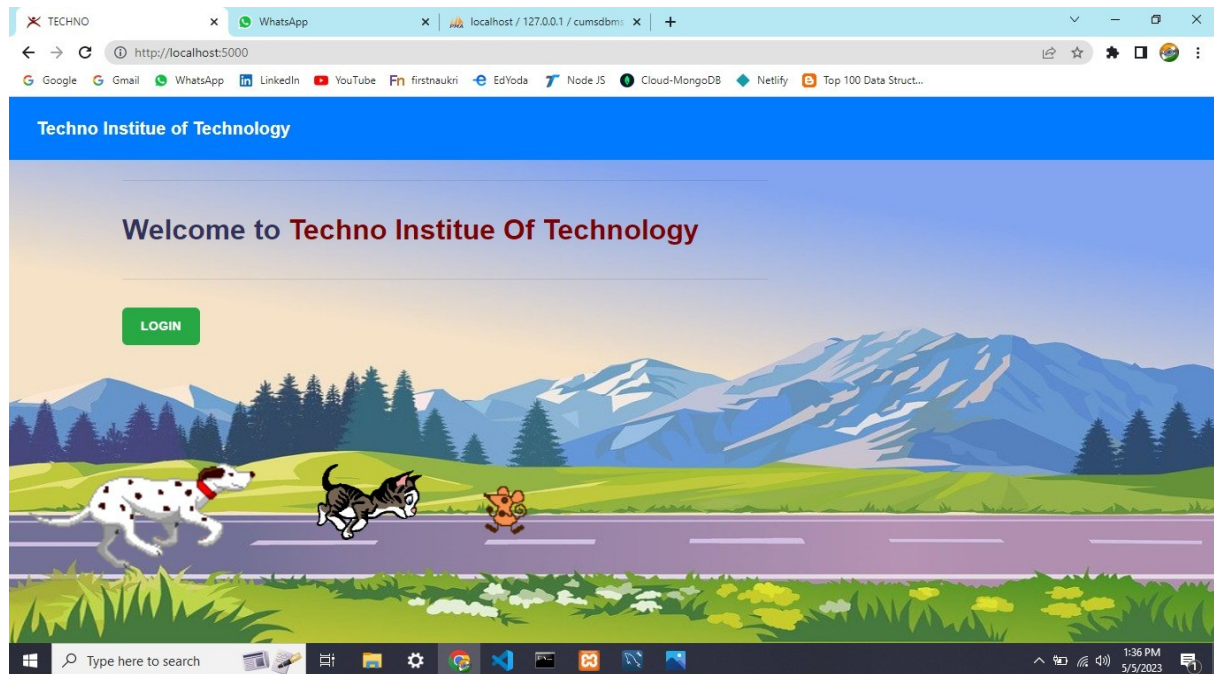


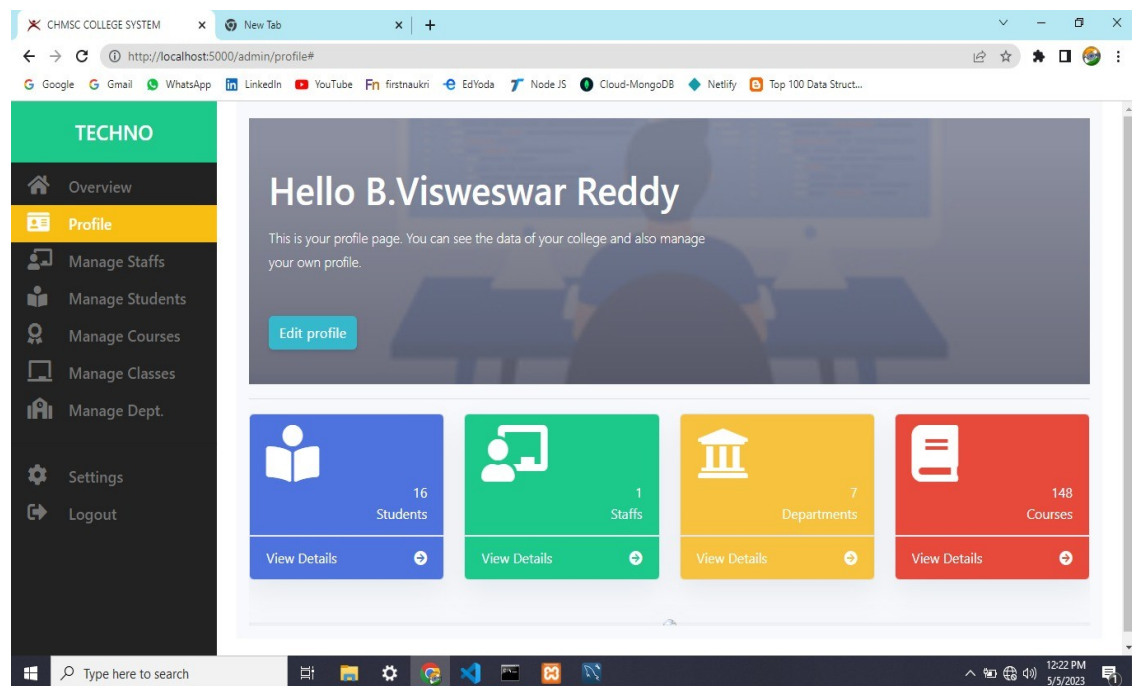
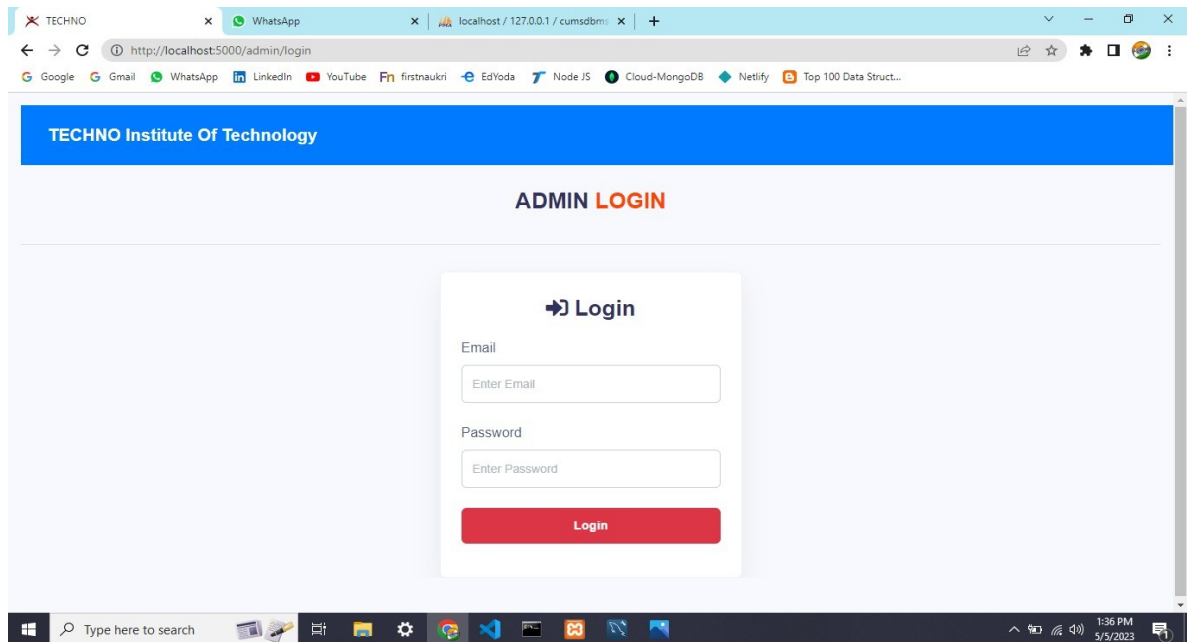


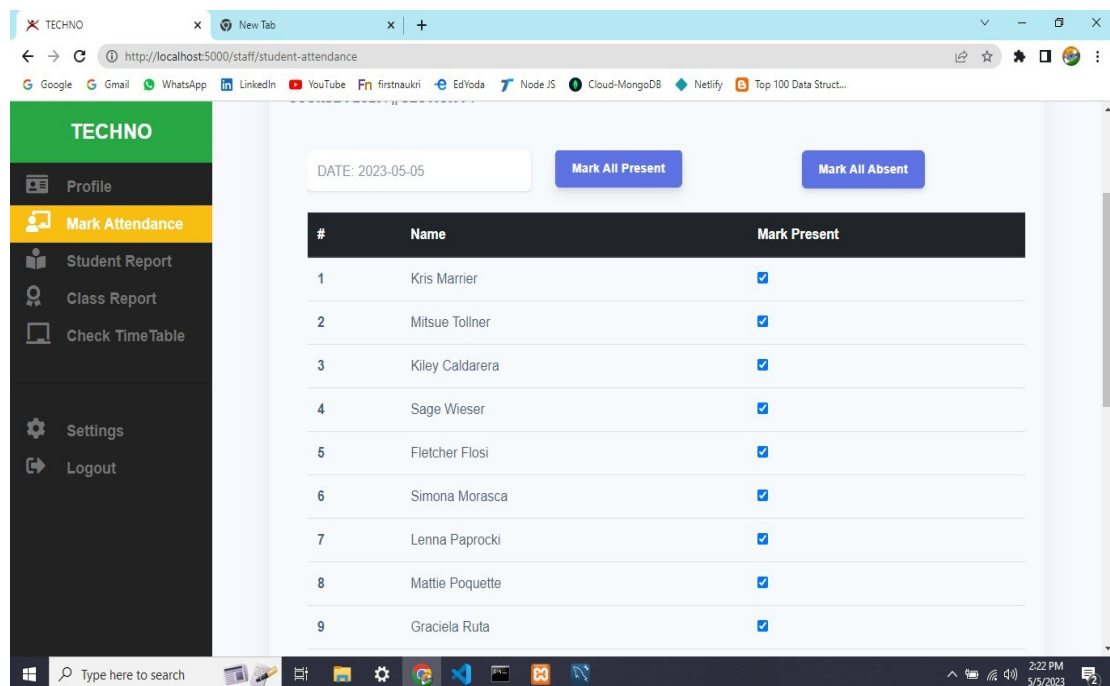
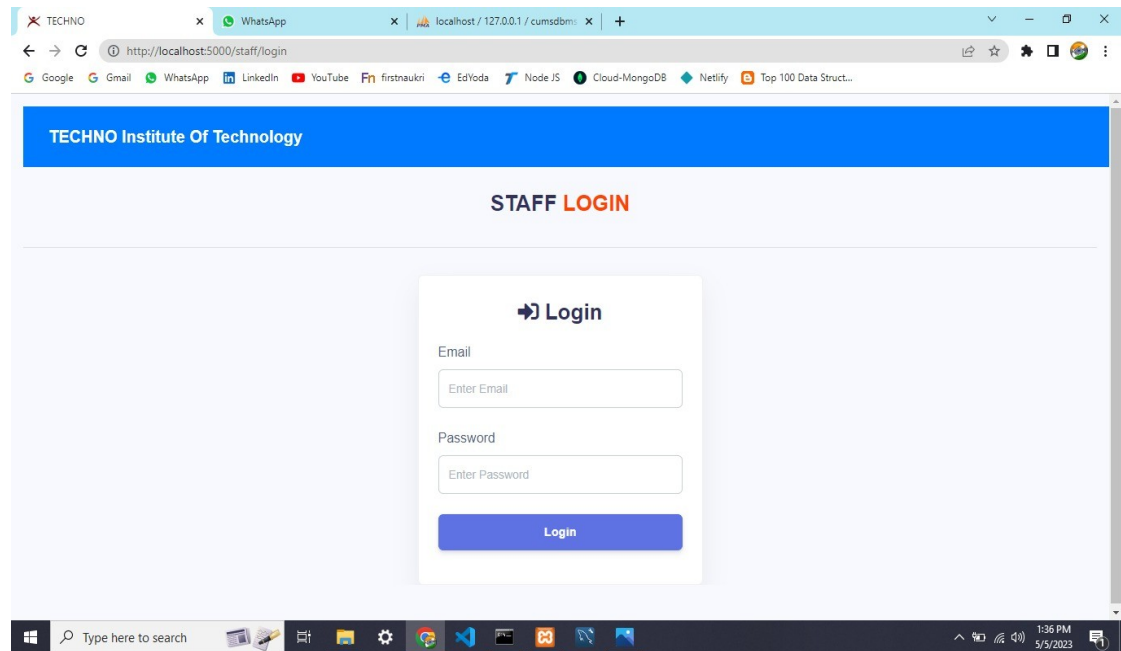
## 4.3 ER Diagram

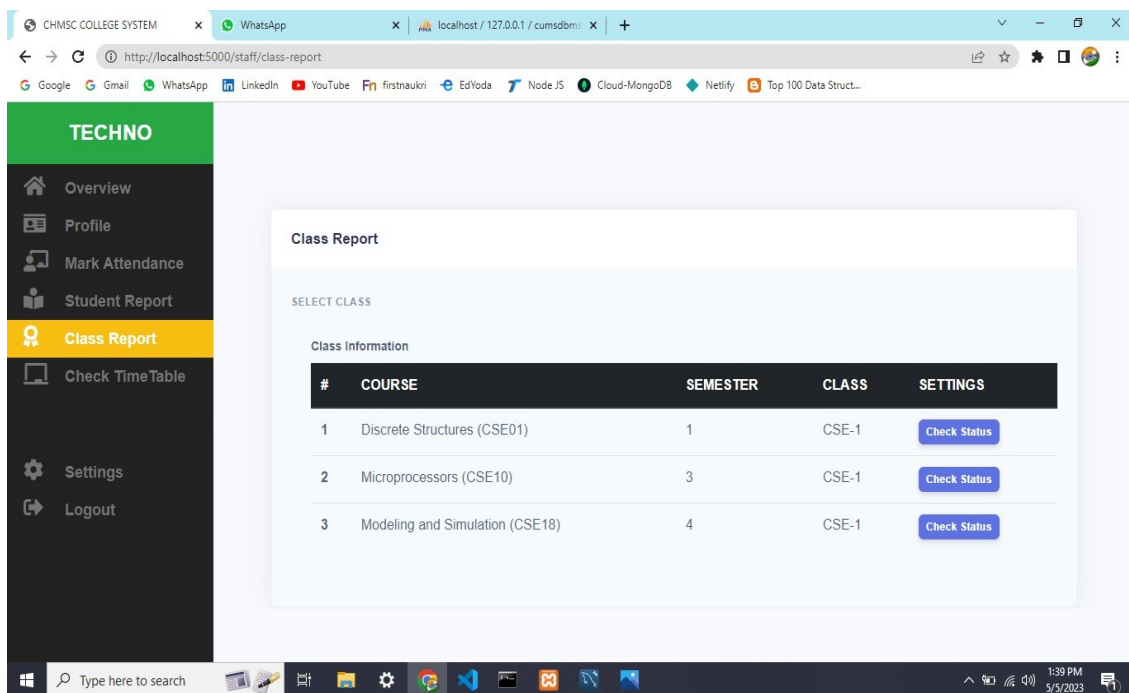
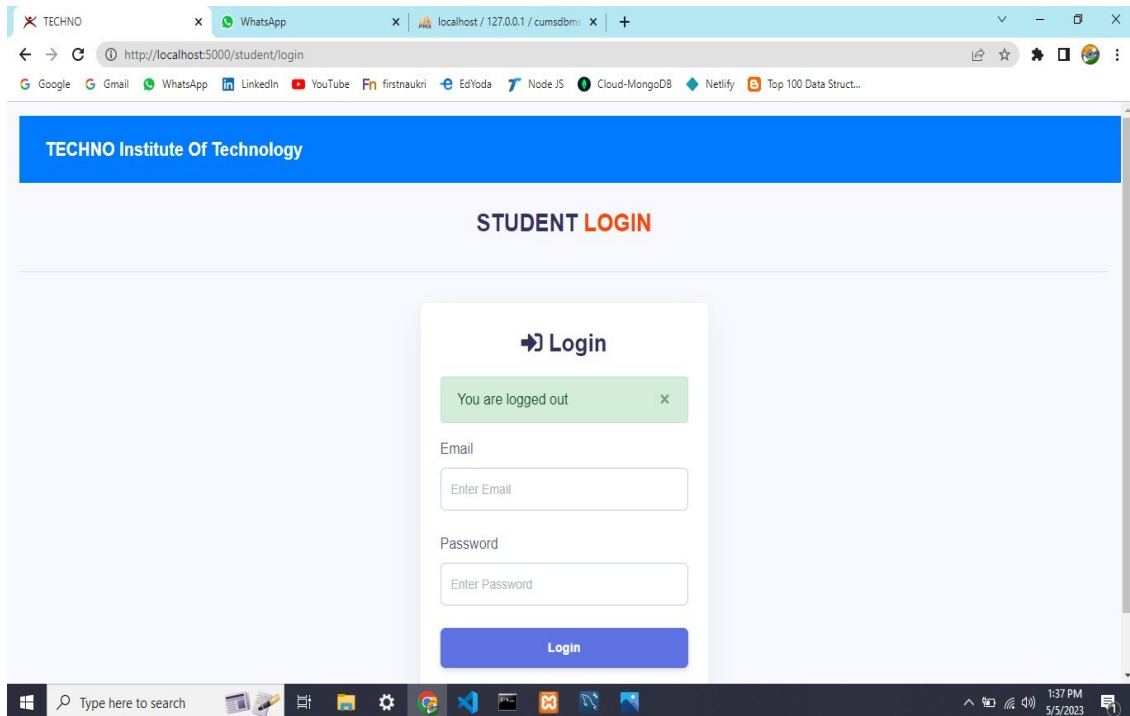


## 6. OUTPUT









CHMSC COLLEGE SYSTEM

WhatsApp

localhost / 127.0.0.1 / cumsdbm

http://localhost:5000/staff/timetable

Google Gmail WhatsApp LinkedIn YouTube firstnaukri EdYoda Node JS Cloud-MongoDB Netify Top 100 Data Struct...

**TECHNO**

Overview

Profile

Mark Attendance

Student Report

Class Report

**Check Time Table**

Settings

Logout

**Class Time Table**

NAME : || SEMESTER : 1

10:00 - 11:00	11:00 - 12:00	12:00 - 13:00	13:00 - 14:00
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

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