

HOSTEL MANAGEMENT SYSTEM

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Introduction

The online hostel management system is web based software to provide college students accommodation to the university hostel more efficiently. This project also keeps details of the hostellers and applied students. It is headed by Warden. She will be the administrator. For accommodate a large number of students into hostel. This document is intended to minimize human works and make hostel allocation is an easier job for students and hostel authorities by providing online registration for hostel, warden can check the attendance of students also she can check who came to visit students at which date.

Need of This System

- There is always a need of a system that will perform online booking of hostel rooms and management of student records.
- This system will reduce the manual operation required to maintain all the records and also generates the various report for analysis.

Objective

- This will reduce the manual work of the person in admin panel and the bundle of registers that were search when to find the information of previous student, because through this system you can store the data of those student even if they had left the hostel.
- Through the system you can check the personal profile of all current student within few minutes the database of the system will help you to check list of all students.
- This system will help you to keep the mess fees and hostel fees of every student.
- The students of the hostel will be recognized from the ID number allocated at the room rental time.
- There will be attendance and visitors list also that keeps the date and relation of visitors with students.

Languages

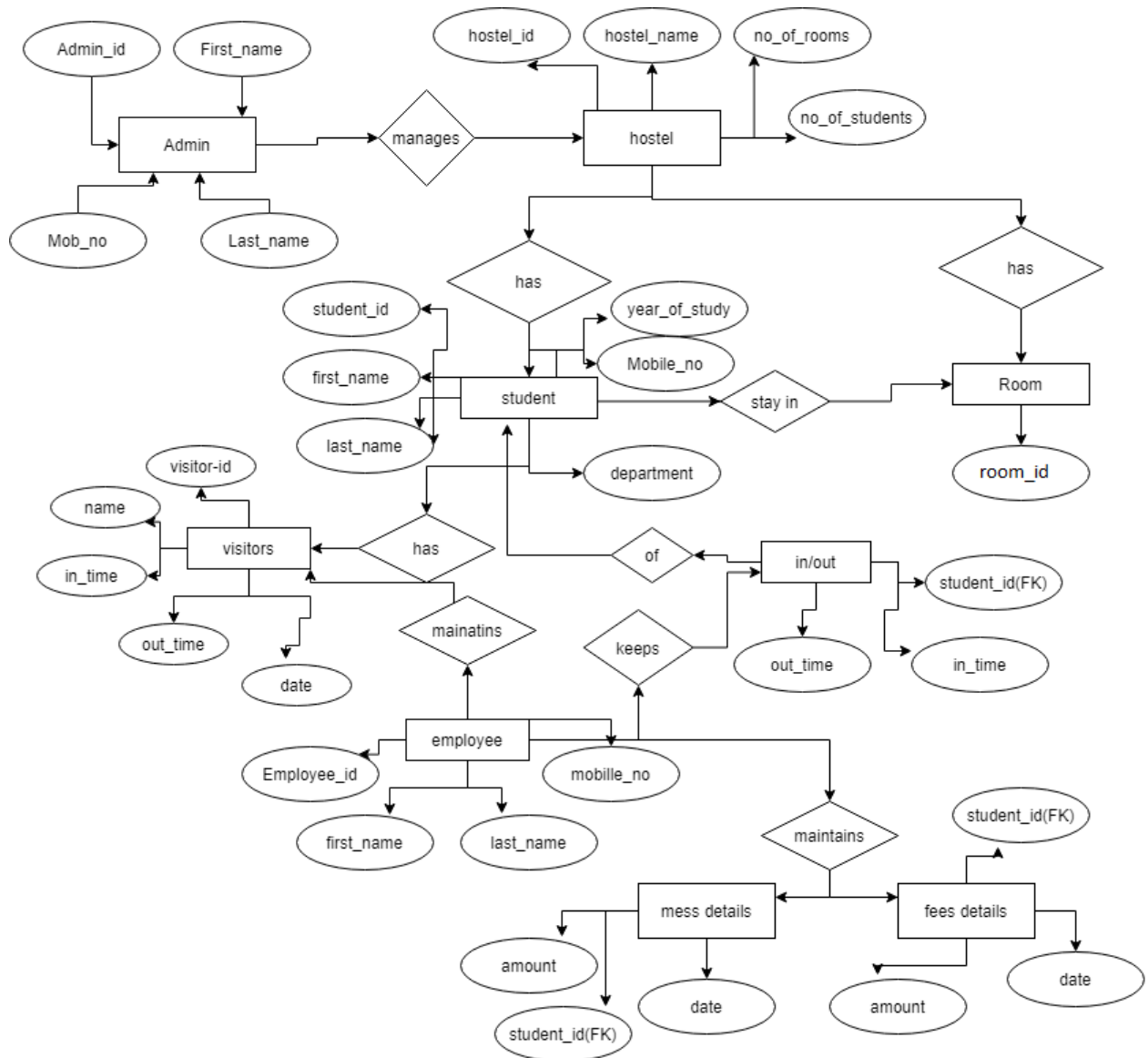
Front END Languages that will be used in this system:

- HTML
- CSS
- PHP

Back END Languages that will be used in this system:

- Oracle/phpmyadmin

ER diagram and Tables before Normalization



Before Normalization we had 9 tables:

- Admin
- Hostel
- Student
- Room
- Visitors
- Mess details
- Fees details
- In/out details
- Employee

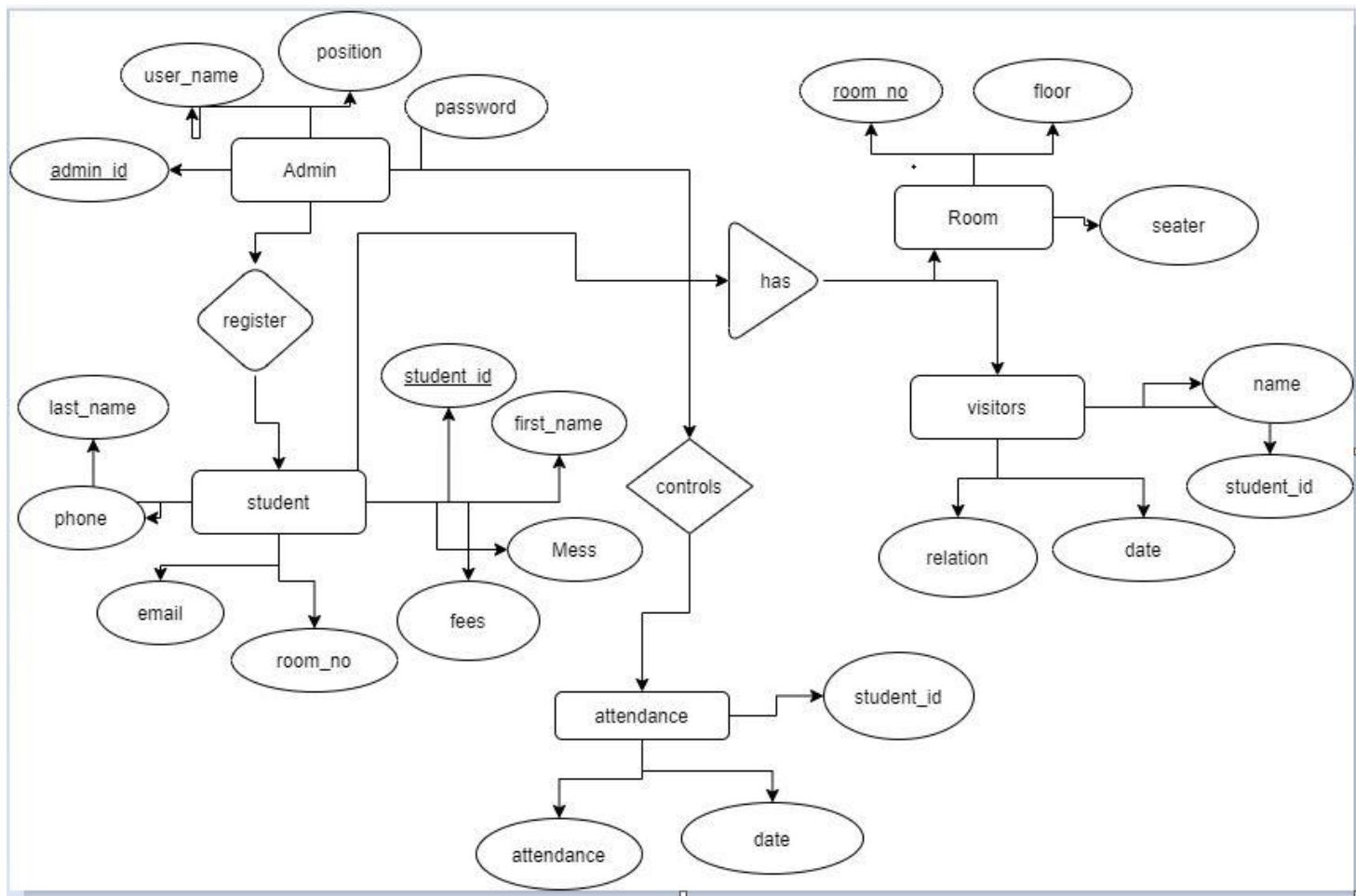
But after Normalization we see there is no need to Hostel table because we already have one hostel,

There is no need to employee table because just warden can administrate this system also for mess and fees we can keep both details in student table.

So after normalization we will have 5 table as following:

- Admin
- Student
- Room
- Attendance
- Visitors

Actual ER Diagram of Hostel Management System



Back End of System

Data dictionary of Tables,views and indexes of Hostel database

hostel

admin

Column	Type	Null	Default	Links to	Comments	Media (MIME) type
admin_id (<i>Primary</i>)	int(11)	No				
username (<i>Primary</i>)	varchar(30)	No				
password	varchar(8)	No				
position	varchar(20)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	admin_id	2	A	No	
				username	2	A	No	

attendance

Column	Type	Null	Default	Links to	Comments	Media (MIME) type
student_id	int(11)	No				
room_no	int(11)	No		room -> room_no		
date	date	No				
attendance	varchar(10)	No				

attendance_list

Table comments: *VIEW*

Column	Type	Null	Default	Links to	Comments	Media (MIME) type
first_name	varchar(20)	No				
room_no	int(11)	No				
date	date	No				
attendance	varchar(10)	No				

room

Column	Type	Null	Default	Links to	Comments	Media (MIME) type
room_no (<i>Primary</i>)	int(11)	No				
seater	int(11)	No				
floor	int(11)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	room_no	5	A	No	

student

Column	Type	Null	Default	Links to	Comments	Media (MIME) type
student_id (<i>Primary</i>)	int(11)	No				
first_name	varchar(20)	No				
last_name	varchar(20)	No				
phone	int(10)	No				
email	varchar(320)	No				
room_no	int(11)	No				
department	varchar(20)	No				
duration	varchar(15)	No				
status	varchar(10)	No				
mess	int(10)	No				
fees	int(10)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	student_id	5	A	No	

visitors

Column	Type	Null	Default	Links to	Comments	Media (MIME) type
name	varchar(30)	No				
student_id	int(11)	No		student -> student_id		
room_no	int(11)	No				
relation	varchar(20)	No				
date	date	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
std_id_fk	BTREE	No	No	student_id	6	A	No	

visitors_list

Table comments: *VIEW*

Column	Type	Null	Default	Links to	Comments	Media (MIME) type
name	varchar(30)	No				
date	date	No				
relation	varchar(20)	No				
first_name	varchar(20)	No				
last_name	varchar(20)	No				

Codes of Tables Creations in MySQL

```
1 CREATE TABLE `hostel5`.`visitors` (  
2   `name` VARCHAR(30) NOT NULL,  
3   `student_id` INT NULL,  
4   `room_no` INT NOT NULL,  
5   `relation` VARCHAR(20) NULL,  
6   `date` DATE NULL);  
7
```

```
1 CREATE TABLE `hostel5`.`attendance` (  
2   `student_id` INT NOT NULL,  
3   `room_no` INT NOT NULL,  
4   `date` DATE NULL,  
5   `attendance` VARCHAR(10) NOT NULL,  
6   INDEX `student_id_idx` (`student_id` ASC) VISIBLE,  
7   CONSTRAINT `FK_ID`  
8     FOREIGN KEY (`student_id`)  
9     REFERENCES `hostel5`.`student` (`student_id`)  
10    ON DELETE RESTRICT  
11    ON UPDATE CASCADE);  
12
```

```
1 CREATE TABLE `hostel5`.`student` (  
2   `student_id` INT NOT NULL,  
3   `first_name` VARCHAR(20) NOT NULL,  
4   `last_name` VARCHAR(20) NOT NULL,  
5   `phone` INT NULL,  
6   `email` NVARCHAR(320) NULL,  
7   `room_no` INT NOT NULL,  
8   `department` VARCHAR(20) NULL,  
9   `duration` VARCHAR(20) NULL,  
10  `status` VARCHAR(10) NULL,  
11  `Mess` INT NULL,  
12  `Fees` INT NOT NULL,  
13  PRIMARY KEY (`student_id`));  
14
```

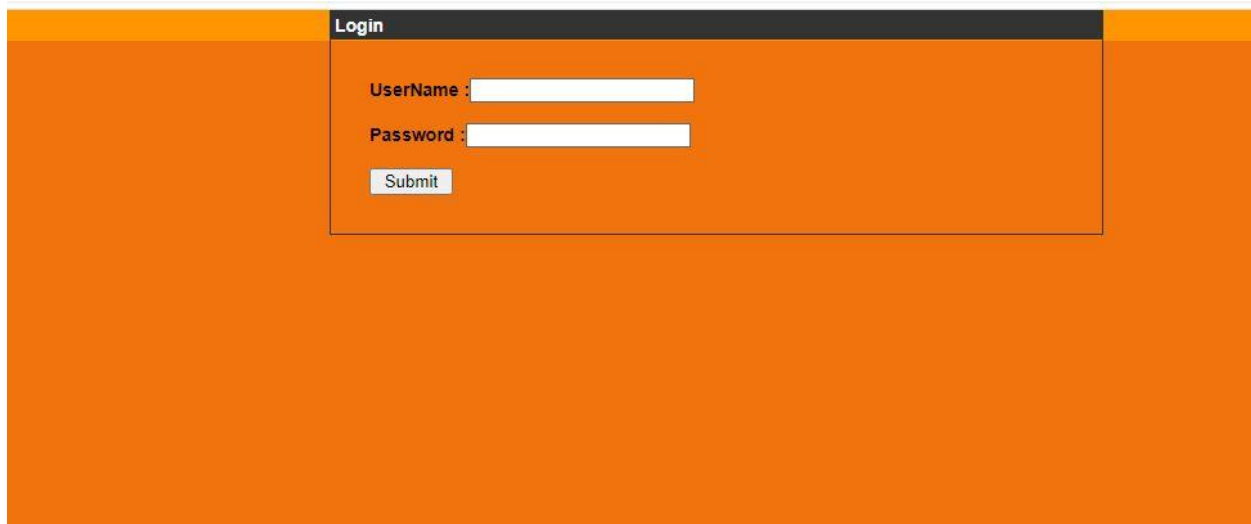
```
1 CREATE TABLE `hostel5`.`admin` (  
2   `admin_id` INT NOT NULL,  
3   `username` VARCHAR(45) NOT NULL,  
4   `password` VARCHAR(8) NULL,  
5   `position` VARCHAR(20) NULL,  
6   PRIMARY KEY (`admin_id`, `username`));  
7
```

```
1 CREATE TABLE `hostel5`.`room` (  
2   `room_no` INT NOT NULL,  
3   `seater` INT NULL,  
4   `student_id` INT NULL,  
5   PRIMARY KEY (`room_no`));  
6
```

Front End of System

And we have these pages for front end:

First we have login Page that admin or warden can log in by entering the user name and password that is already kept in database.



The screenshot shows a login page with an orange background. A dark grey header bar at the top contains the word "Login" in white. Below the header, there is a white rectangular box containing the login form. The form has two input fields: "UserName :" and "Password :". Below these fields is a "Submit" button.

After entering the correct username and password admin can enter to the system:



The screenshot shows the main dashboard of the "Hostel Management System". The page has an orange background. On the left side, there is a vertical navigation menu with buttons for "Home", "Student_register", "Rooms", "Visitors", "Attendance", and "Log Out". The "Home" button is highlighted. The main content area on the right has a yellow background. It features the title "Hostel Management System" in bold yellow text, followed by a paragraph describing the system's purpose. Below this, there is a section titled "Hostel Facilities" in bold orange text, which lists four facilities: "ROOM WITH TWO SEATER", "ROOM WITH THREE SEATER", "MESS FOOD", and "WIFI CONNECTION".

There are 6 tabs that each one doing some works and also there is logout button by clicking those button you will redirect to the login page.

If we click on student_register tab we see this screen:

The screenshot shows a web application interface with an orange background. On the left, there is a vertical sidebar with five tabs: 'Home', 'Student_register' (which is highlighted with a yellow background), 'Rooms', 'Visitors', and 'Attendance'. The main content area is titled 'Student Registration for accomodation' (note the spelling). Below the title, there is a note '* required field.' followed by a list of input fields: 'Student ID', 'First Name:', 'Last Name:', 'Phone Number:', 'E-mail:', 'Room No', 'Department', 'Duration', 'Amount of Fees per month', 'Amount of Mess bill per month', and 'Marital Status'. Each field has a corresponding white input box. At the bottom of the form, there are two buttons: 'Submit' and 'List of Students'.

We can fill the details of student in this form and by clicking submit it will be saved in to our database,

Also by pressing list of students' button we can read and see the list of all students in hostel.

Next tab is Room Tab by clicking this tab we can see this screen:

Rooms details

List of Rooms

Home

Student_register

Rooms

Visitors

Attendance

* required field.

Room NO:

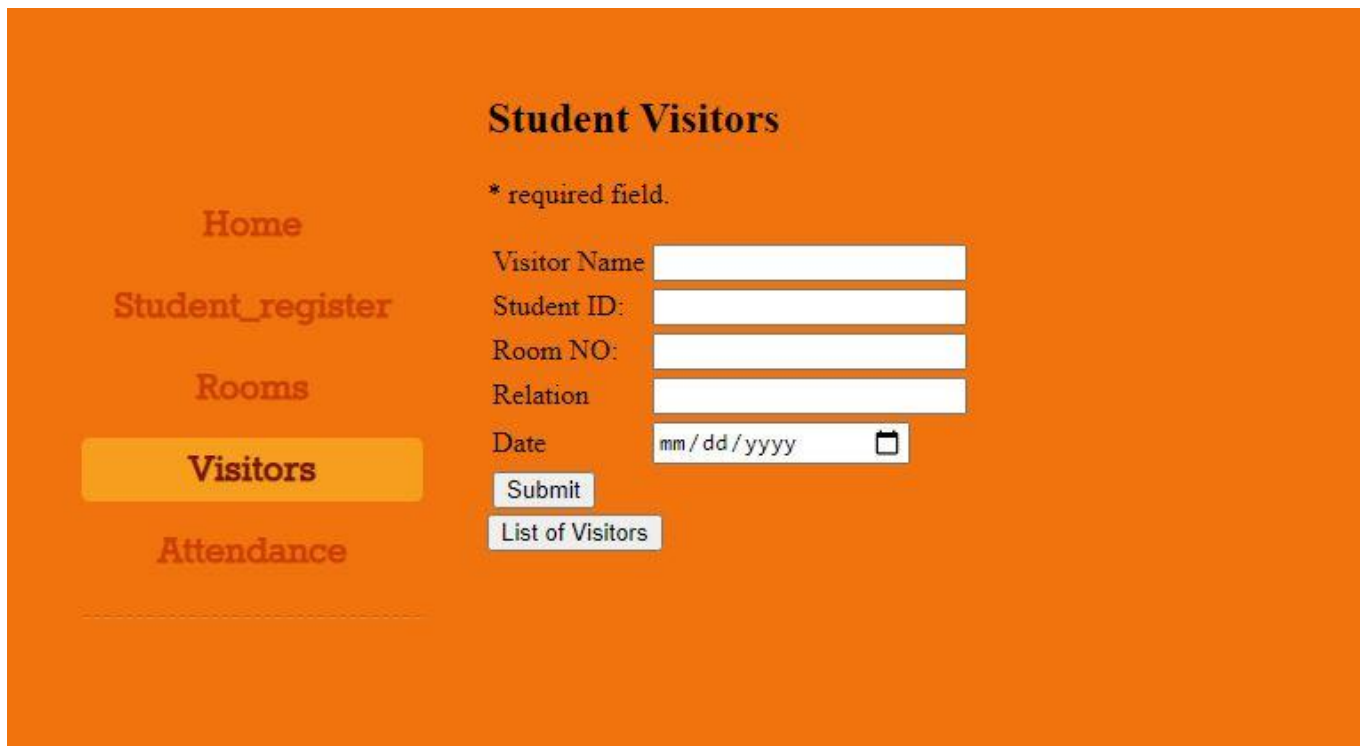
Seater

Floor

Submit

In here we can add the room details into database by entering the submit button and as its primary key it will not accept NULL value and by clicking on list of rooms we can read all the rooms details that are already in database or inserted in database.

Next tab is Visitors tab by clicking this tab we can see this screen:



In here we can add the name of visitors their relation with student and date of visit and we don't need to insert all details of student just we enter student ID.

And by clicking on list of visitors we can see the first name and last name of student because I have used view and by using Inner join we can join two tables and see the related data and also student id is foreign key of student id in student table.

Visitor name	Date	Relation	Student first name	Student Last name
sahar	2020-12-15	friend	sorya	ahmady
sahar	2020-12-15	friend	sorya	ahmady
sadaf	2020-12-14	cousin	sorya	ahmady
sadaf	2020-12-14	cousin	sorya	ahmady
sorya	2020-12-14	friend	akshi	jaa
sofya	2020-12-16	sister	mariam	popal

And the last tab is attendance tab by clicking this tab we can see this screen:

By entering the form details and by clicking submit button all the data will go to database and in here also we don't need to enter all details of student just we have to enter the student Id and by clicking on attendance of students we will see the student name and their room number because of joining two tables by using common student ID.

Student Name	Room No	Date	Attendance
sorya	12	2020-12-20	present
sorya	12	0000-00-00	absent
akshi	4	2020-12-20	absent
akshi	4	2020-12-14	present
mariam	7	2020-12-14	present
akshi	4	2020-12-14	present
mariam	7	2020-12-14	present
nilum	8	2020-12-19	present

Problems That I have faced during design of this system:

First I have designed my database using oracle in SQL developer but during connection with PHP I faced to problem ,So I have used MySQL in phpmyadmin instead of oracle to create my database.

Future Plan

I want to improve this project by adding more features to make it more interesting project.

- Search feature
- Delete feature
- User for students
- And many features I want to add to this project.