



Group 1

# Student Information management system

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# Group 1 - Members

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# Outline



INTRODUCTION



FUNCTION  
REQUIREMENT



NON-FUNCTION  
REQUIREMENT



IMPLEMENT



EVALUATION SOLID  
PRINCIPLE IN THE  
PROJECT



CONCLUSION

# Introduction

In the digital era, universities need **efficient and scalable** solutions for managing student information. Traditional paper-based or outdated systems cause **inefficiencies, data inconsistency, and security risks**.

To solve these issues, our team is developing a **Student Information Management System (SIMS)** that ensures **secure, seamless, and modern** student data management. The system follows **OOP principles, SOLID design, clean coding practices, and multiple design patterns** to ensure **scalability, maintainability, and robustness**.

# Project objective

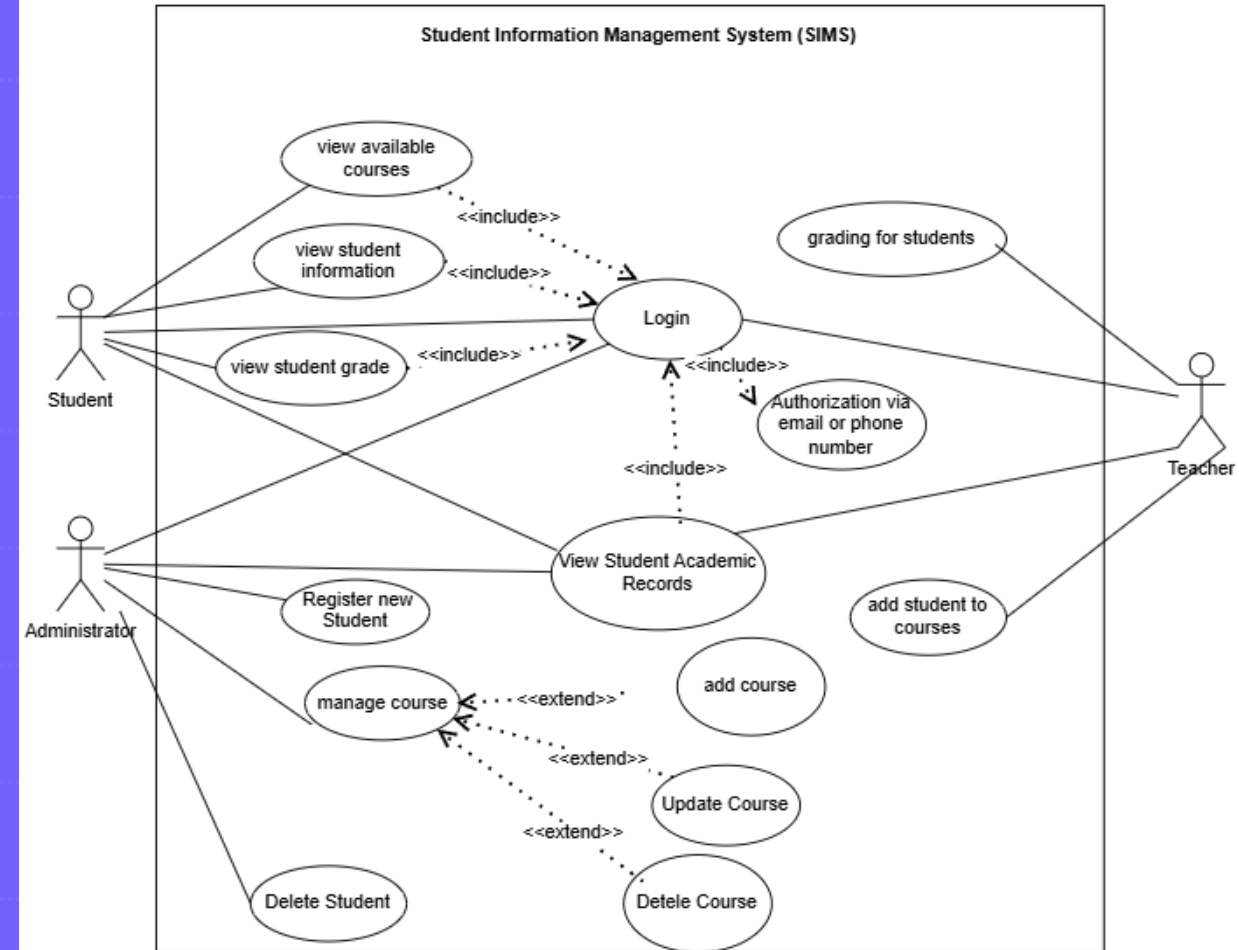
- ✚ Build a modern, scalable Student Information Management System (SIMS)
- ✚ Enhance efficiency, security, and maintainability

## Key Goals:

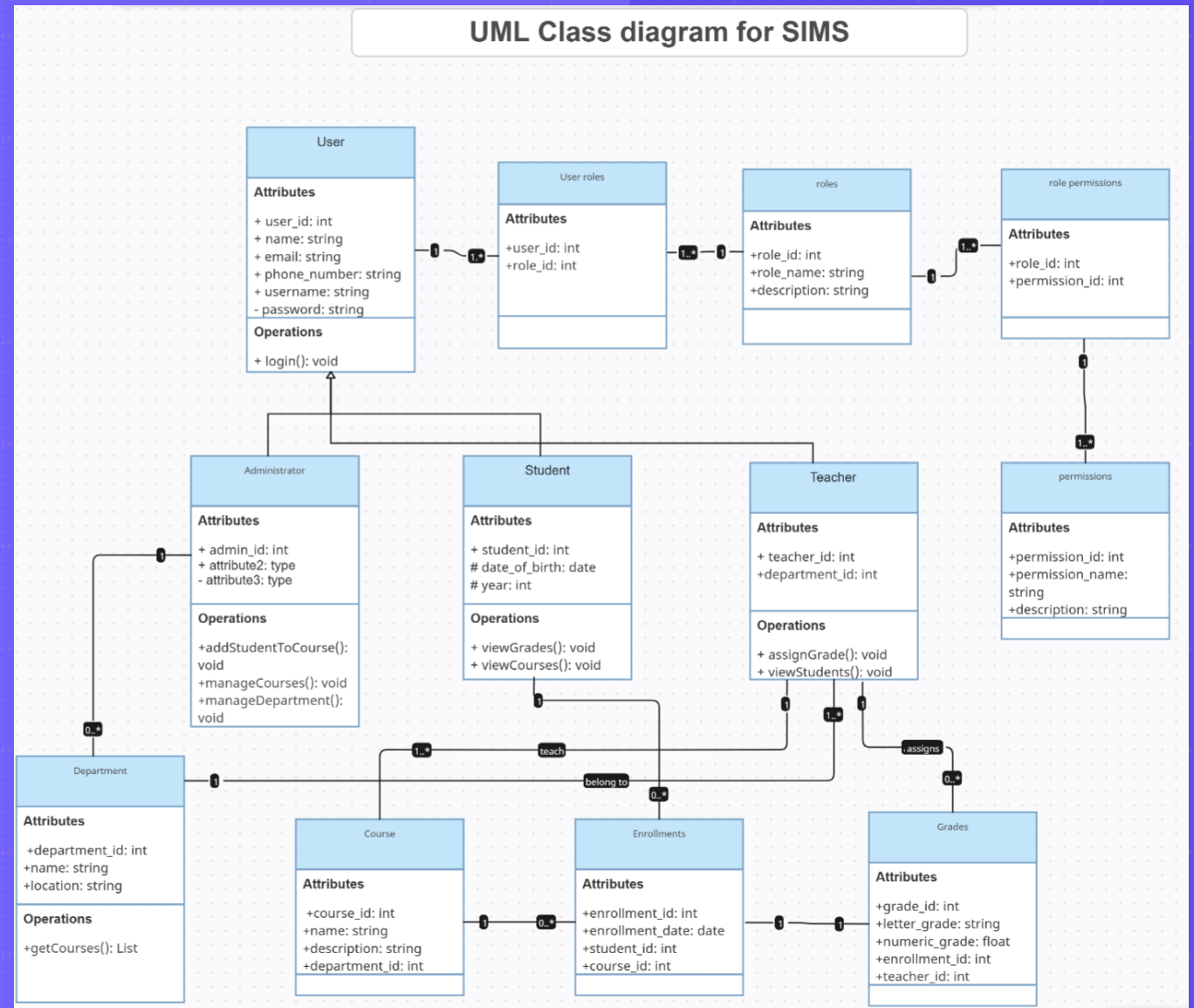
- ✓ Admin Register an account and assign a student, teacher to a class and a subject
- ✓ Course Management
- ✓ Secure Authentication – Role-based access control
- ✓ Student views course and grades
- ✓ The teacher assigns a grade to a student and views the class they teach –  
Protect data & ensure system uptime
- ✓ Usability & Accessibility – User-friendly & inclusive design



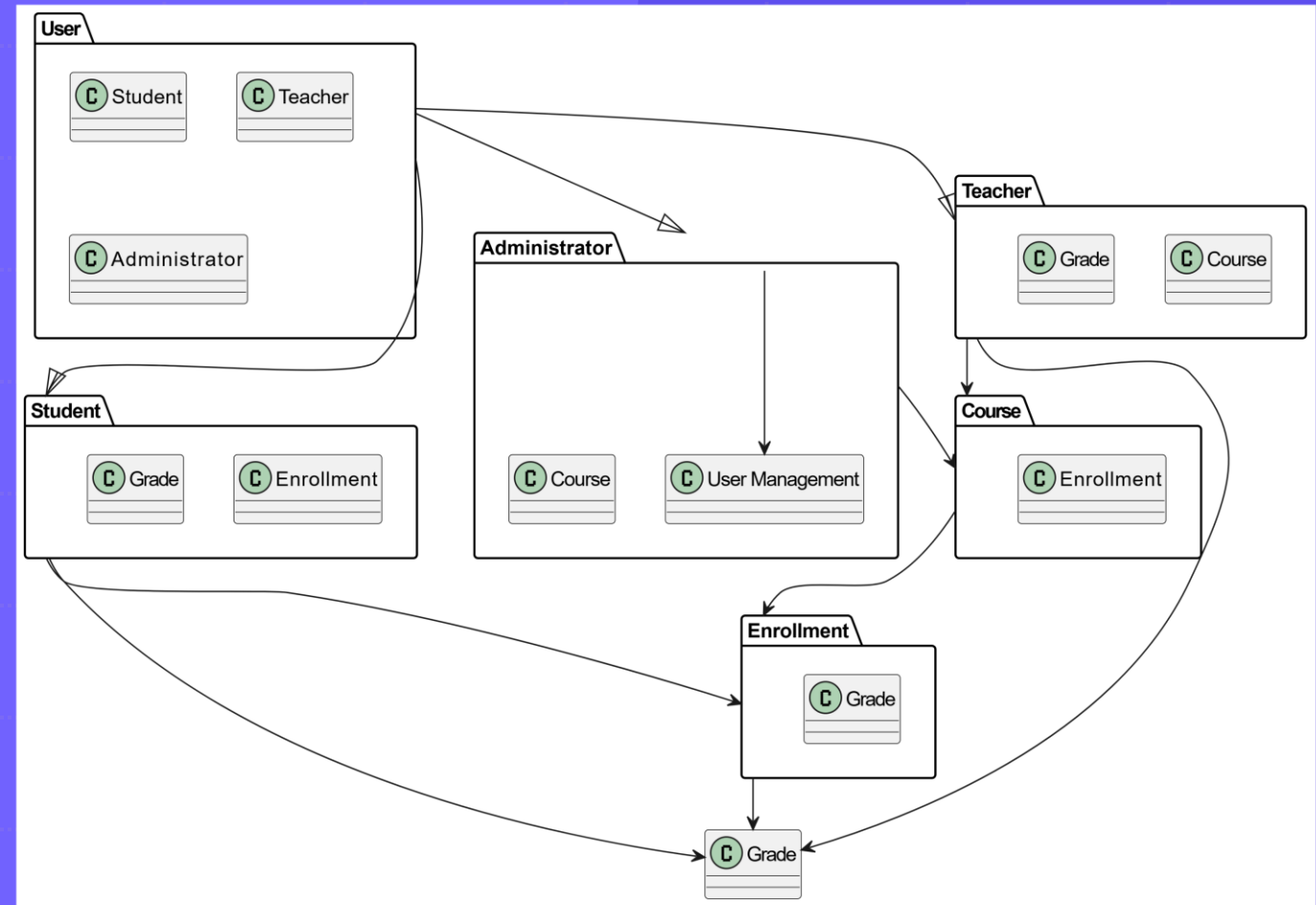
# Function requirement



# Class diagram



# Packet Diagram





# Non-Function requirement

Beyond functionality, **SIMS** will be designed to meet several critical **non-functional requirements**:

- **Scalability:** Supporting an increasing number of students and courses as the university grows.
- **Performance:** Ensuring fast response times, even under heavy usage.
- **Security:** Implementing strong encryption and authentication protocols to safeguard sensitive student data.
- **Usability & Accessibility:** Creating an intuitive and accessible user interface that accommodates users of different technical expertise levels.
- **Reliability:** Minimizing downtime and ensuring consistent system availability



## Implement(Screenshots)

### 1. Login page

- First page you can login account follow the roles such as admin, teacher and student.
- Admin role: 1
- Teacher role: 2
- Student role: 3

## Student Information Management System



Welcome back!

Sign in to your account to continue

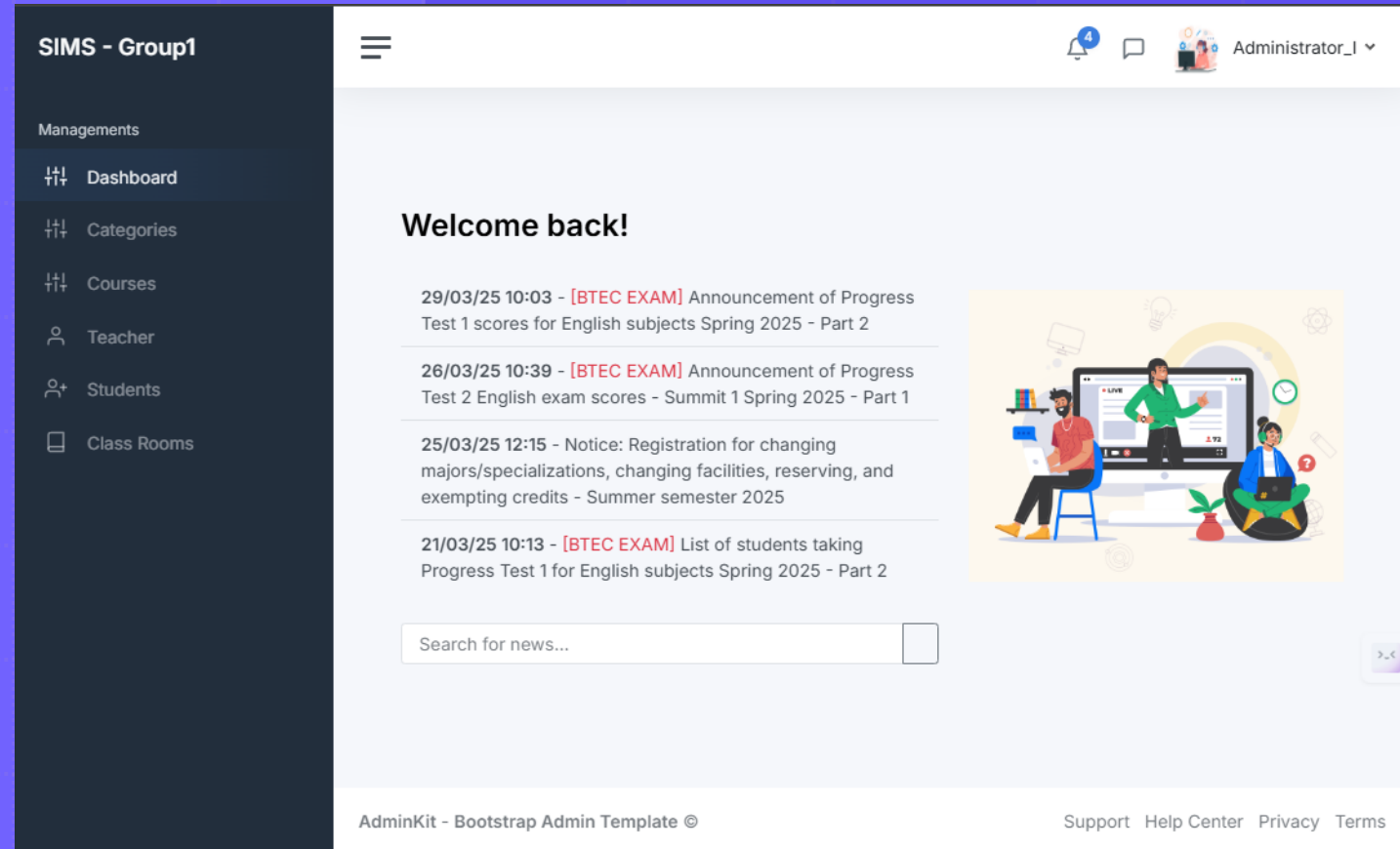
Email

Password

Sign in

## 2. Dashboard

- When the login action successful, you can see this page
- In this page you can see the information latest of your college
- Information such as Exam, Progress Test and honor students



# 3. categories

- This is Admin's Page
- Admin can see and edit all categories of subjects for college
- Such as in Business have courses political economy, microeconomics, macroeconomics.

SIMS - Group1

Managements

- Dashboard
- Categories
- Courses
- Teacher
- Students
- Class Rooms

4

Administrator\_I

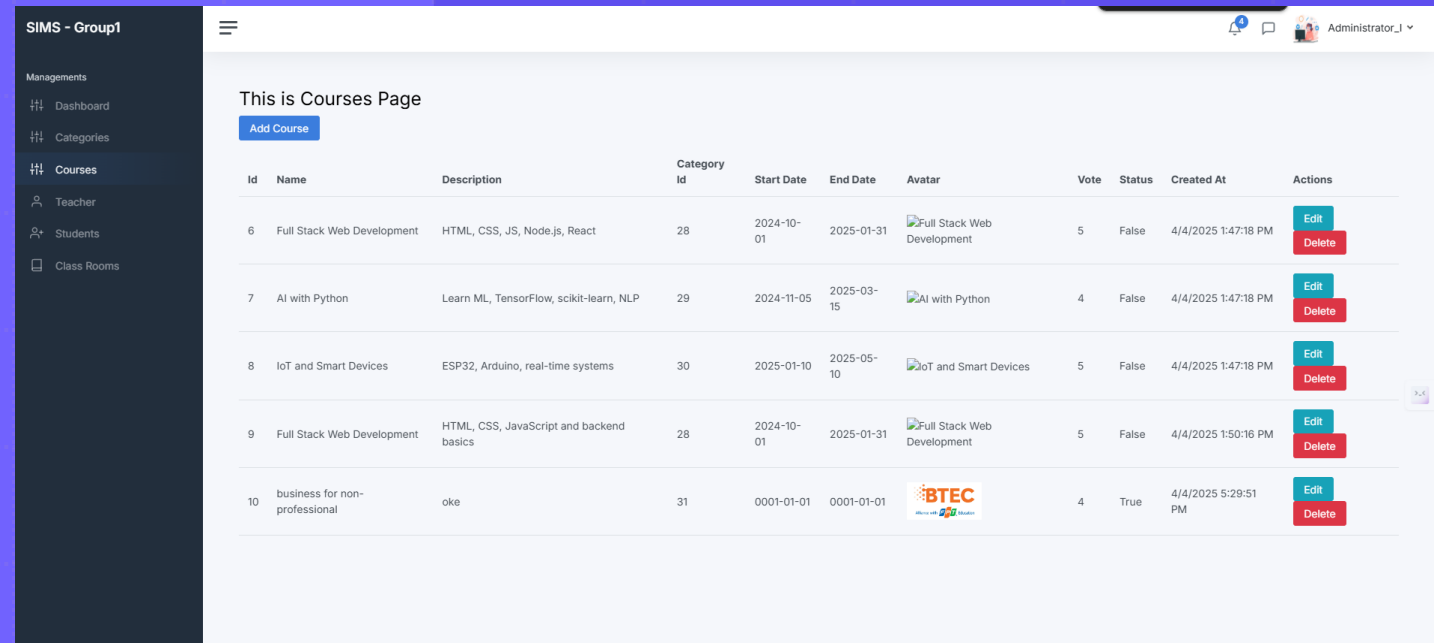
List of Categories

+ Create New Category






ID	Category Name	Description	Avatar	Status	Created At	Actions
28	Web Development	Courses about HTML, CSS, JS, and web frameworks	No Avatar	Active	04/04/2025	Delete
29	Artificial Intelligence	Courses about machine learning, deep learning and AI tools	No Avatar	Active	04/04/2025	Delete
30	Internet of Things	Courses related to embedded systems and smart devices	No Avatar	Active	04/04/2025	Delete
31	Business	learn subjects about business such as communication with customer	Pea1	Active	04/04/2025	Delete

## 4. Course page

- This course page is admin's Page
- Admin can edit, delete and add name, information and data of courses

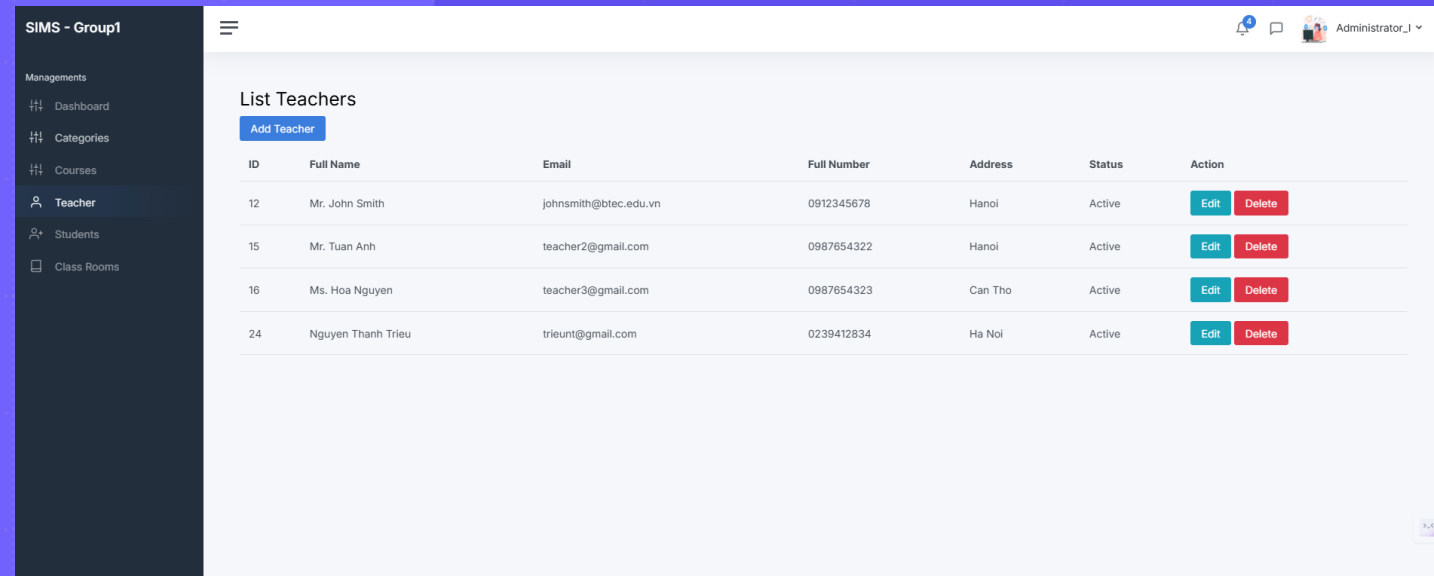


The screenshot displays the 'SIMS - Group1' admin interface. The sidebar on the left contains a 'Managements' section with links to Dashboard, Categories, Courses (highlighted), Teacher, Students, and Class Rooms. The main content area is titled 'This is Courses Page' and includes an 'Add Course' button. Below this is a table listing five courses with columns for Id, Name, Description, Category Id, Start Date, End Date, Avatar, Vote, Status, Created At, and Actions. Each course entry has 'Edit' and 'Delete' buttons in the Actions column.

Id	Name	Description	Category Id	Start Date	End Date	Avatar	Vote	Status	Created At	Actions
6	Full Stack Web Development	HTML, CSS, JS, Node.js, React	28	2024-10-01	2025-01-31		5	False	4/4/2025 1:47:18 PM	<a href="#">Edit</a> <a href="#">Delete</a>
7	AI with Python	Learn ML, TensorFlow, scikit-learn, NLP	29	2024-11-05	2025-03-15		4	False	4/4/2025 1:47:18 PM	<a href="#">Edit</a> <a href="#">Delete</a>
8	IoT and Smart Devices	ESP32, Arduino, real-time systems	30	2025-01-10	2025-05-10		5	False	4/4/2025 1:47:18 PM	<a href="#">Edit</a> <a href="#">Delete</a>
9	Full Stack Web Development	HTML, CSS, JavaScript and backend basics	28	2024-10-01	2025-01-31		5	False	4/4/2025 1:50:16 PM	<a href="#">Edit</a> <a href="#">Delete</a>
10	business for non-professional	oke	31	0001-01-01	0001-01-01		4	True	4/4/2025 5:29:51 PM	<a href="#">Edit</a> <a href="#">Delete</a>

## 5. Teacher page of admin

- This also of admin's page
- Admin can edit, delete and add account, information for Teachers



SIMS - Group1

Managements

- Dashboard
- Categories
- Courses
- Teacher**
- Students
- Class Rooms

List Teachers

[Add Teacher](#)

ID	Full Name	Email	Full Number	Address	Status	Action
12	Mr. John Smith	johnsmith@btcc.edu.vn	0912345678	Hanoi	Active	<a href="#">Edit</a> <a href="#">Delete</a>
15	Mr. Tuan Anh	teacher2@gmail.com	0987654322	Hanoi	Active	<a href="#">Edit</a> <a href="#">Delete</a>
16	Ms. Hoa Nguyen	teacher3@gmail.com	0987654323	Can Tho	Active	<a href="#">Edit</a> <a href="#">Delete</a>
24	Nguyen Thanh Trieu	trieunt@gmail.com	0239412834	Ha Noi	Active	<a href="#">Edit</a> <a href="#">Delete</a>

## 6. Page of teacher

- This is teacher's page that Teacher can check profile and give student grade and view classes where they teach

**SIMS - Group1**

Managements

- Dashboard
- Teacher
- Class Rooms

**Teacher Profile**

Nguyen Thanh Trieu

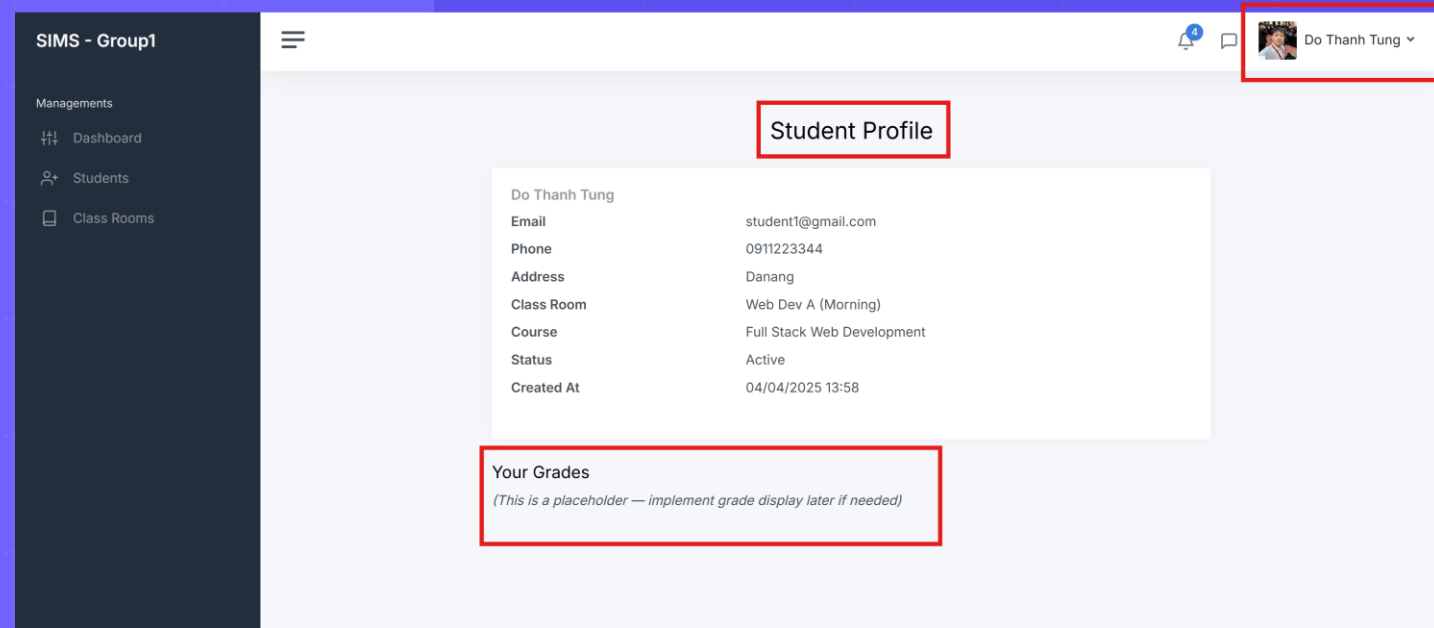
Email	trieunt@gmail.com
Phone	0239412834
Address	Ha Noi
Course	Full Stack Web Development
Status	Active
Created At	05/04/2025 17:00

**Your Classes**

You are not assigned to any class yet.

## 6. Student page

- This page student can view profile and check the grade





# Conclusion

The **Student Information Management System (SIMS)** represents a significant advancement in student data management, ensuring efficiency, security, and accessibility for universities. By integrating modern software design principles and robust security measures, SIMS will provide a reliable and scalable solution for handling student records and course management. As a result, universities will benefit from a streamlined administrative process, improved data integrity, and enhanced user experience for students, faculty, and administrators. This project underscores the importance of leveraging technology to optimize academic operations, ultimately contributing to a more efficient and future-ready educational institution.



**THANKS FOR  
WATCHING**