Group 1

Student Information management system

Author-Do Thanh Tung

Group 1 - Members

1. Do Thanh Tung (Leader)
2. Nguyen Thi Cam Ly
3. Nguyen Huu Hoang
4. Nguyen Do Truong Giang
5. Nguyen Van Huy

Outline

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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 Traditional paper-based or outdated systems cause **inefficiencies, data inconsistency, and security risks**.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

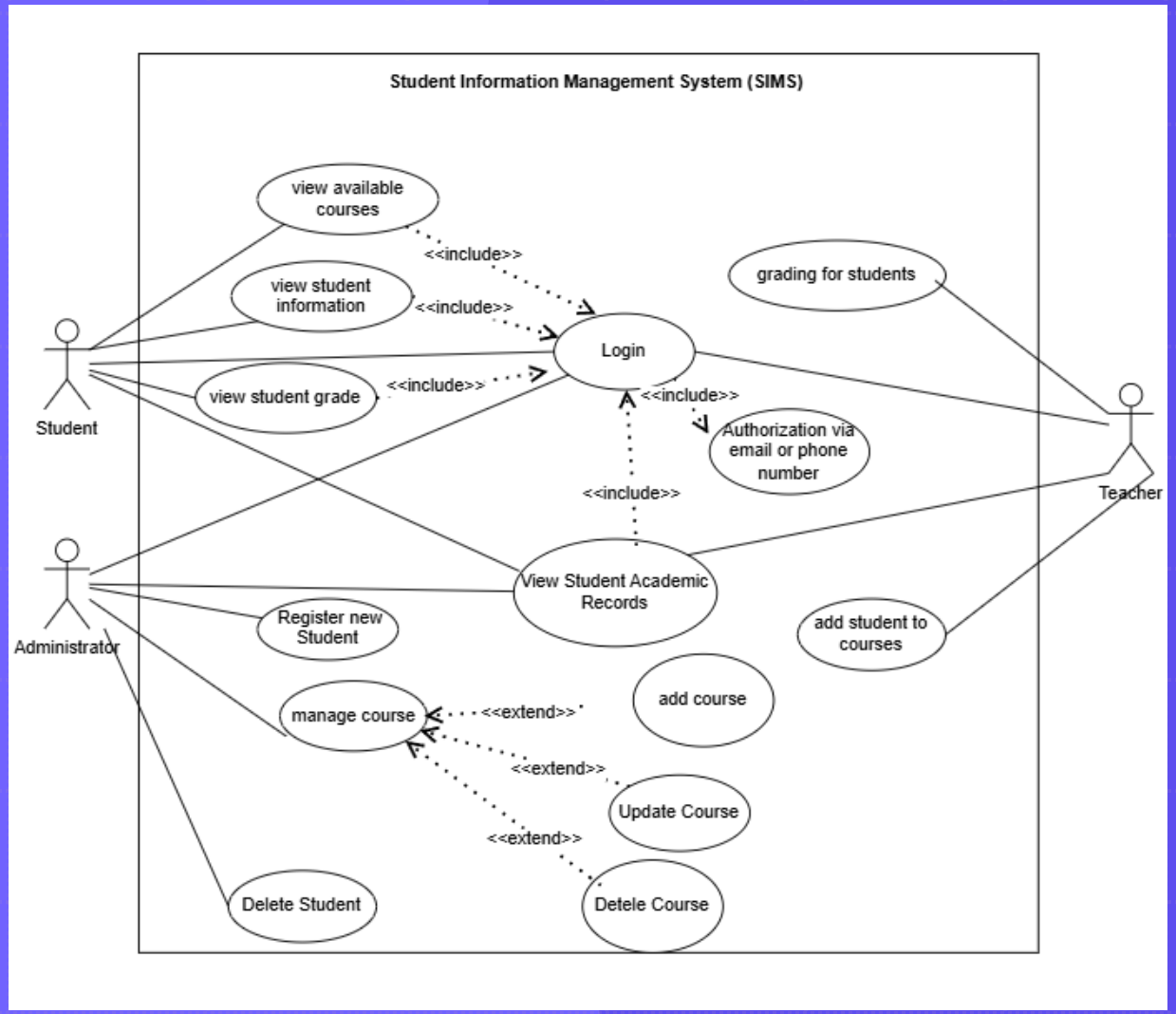
📌 **Build a modern, scalable Student Information Management System (SIMS)**

📌 **Enhance efficiency, security, and maintainability**

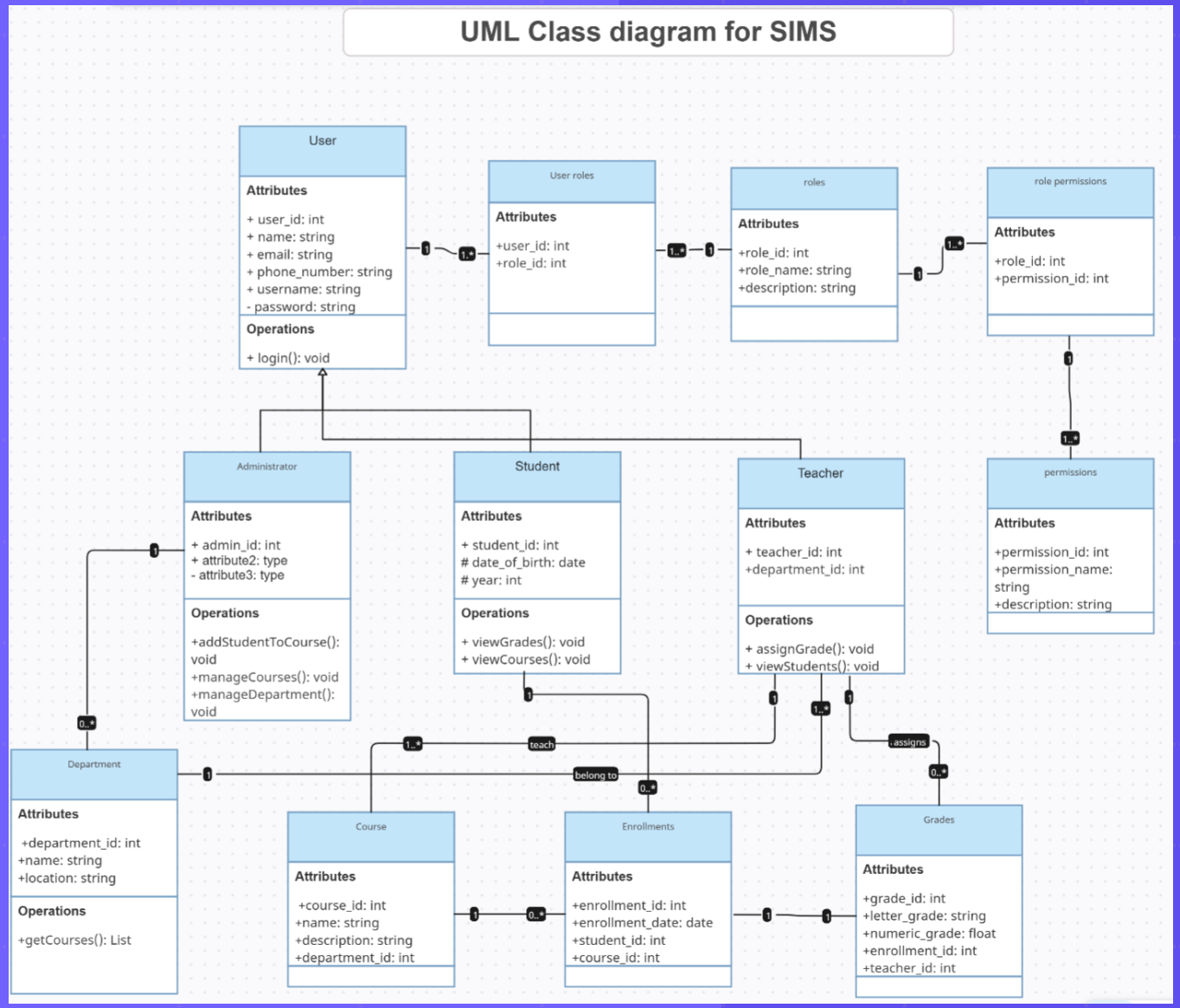
Key Goals:

✓ **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

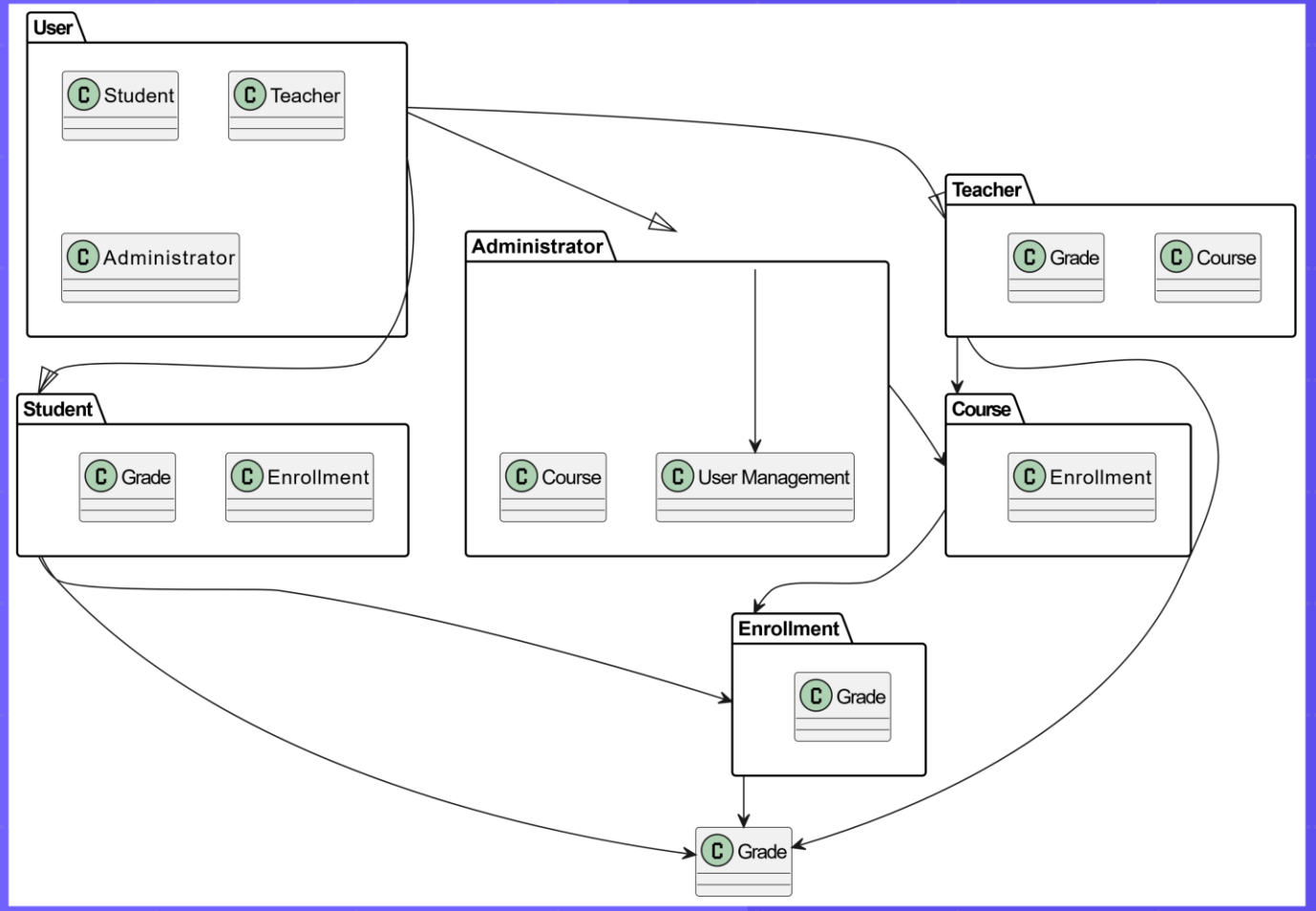
Function requirement



Class diagram



Packet Diagram



Non-Function requirement

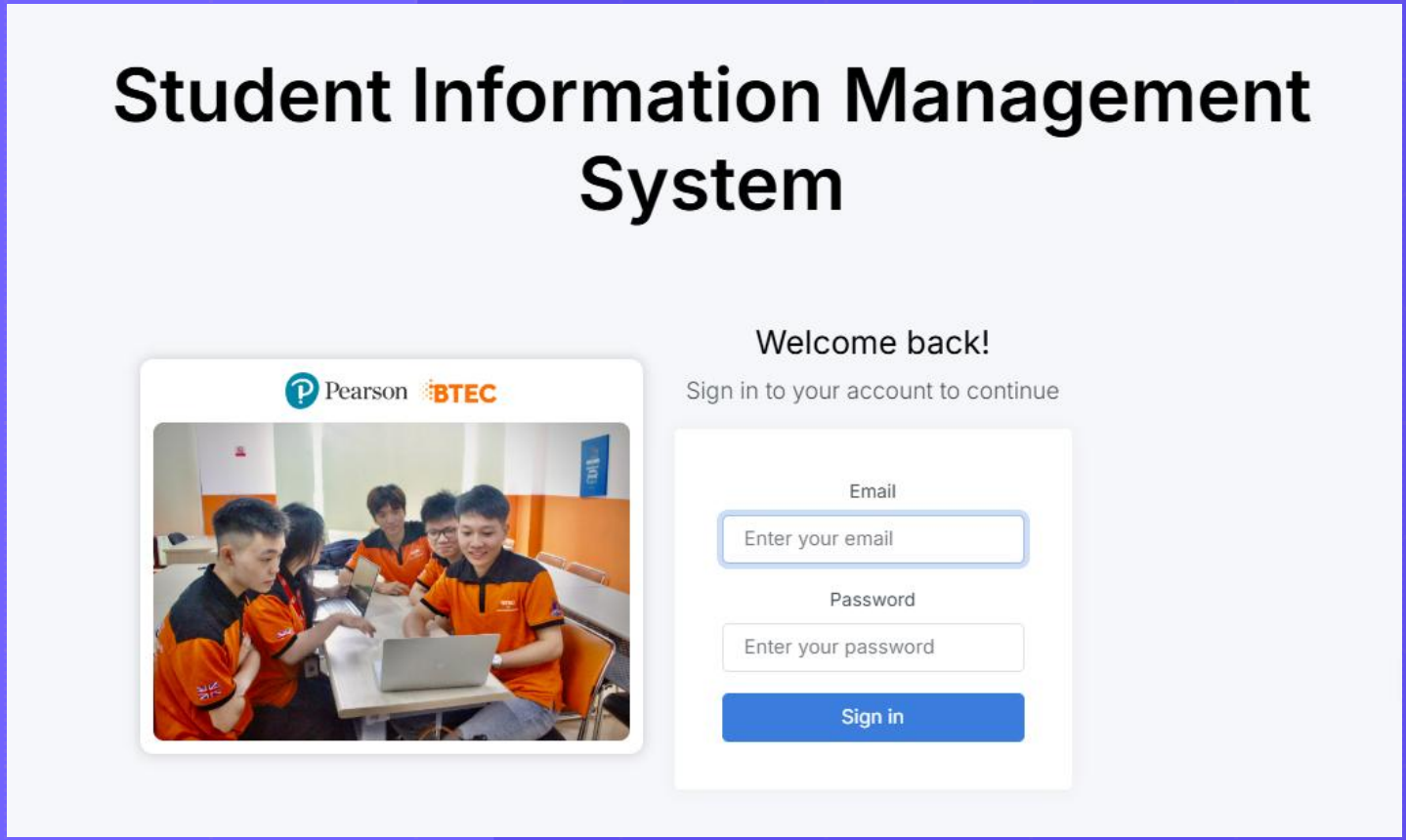
Beyond functionality, **SIMS** will be designed to meet several critical **non-functional requirements**:

- **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)

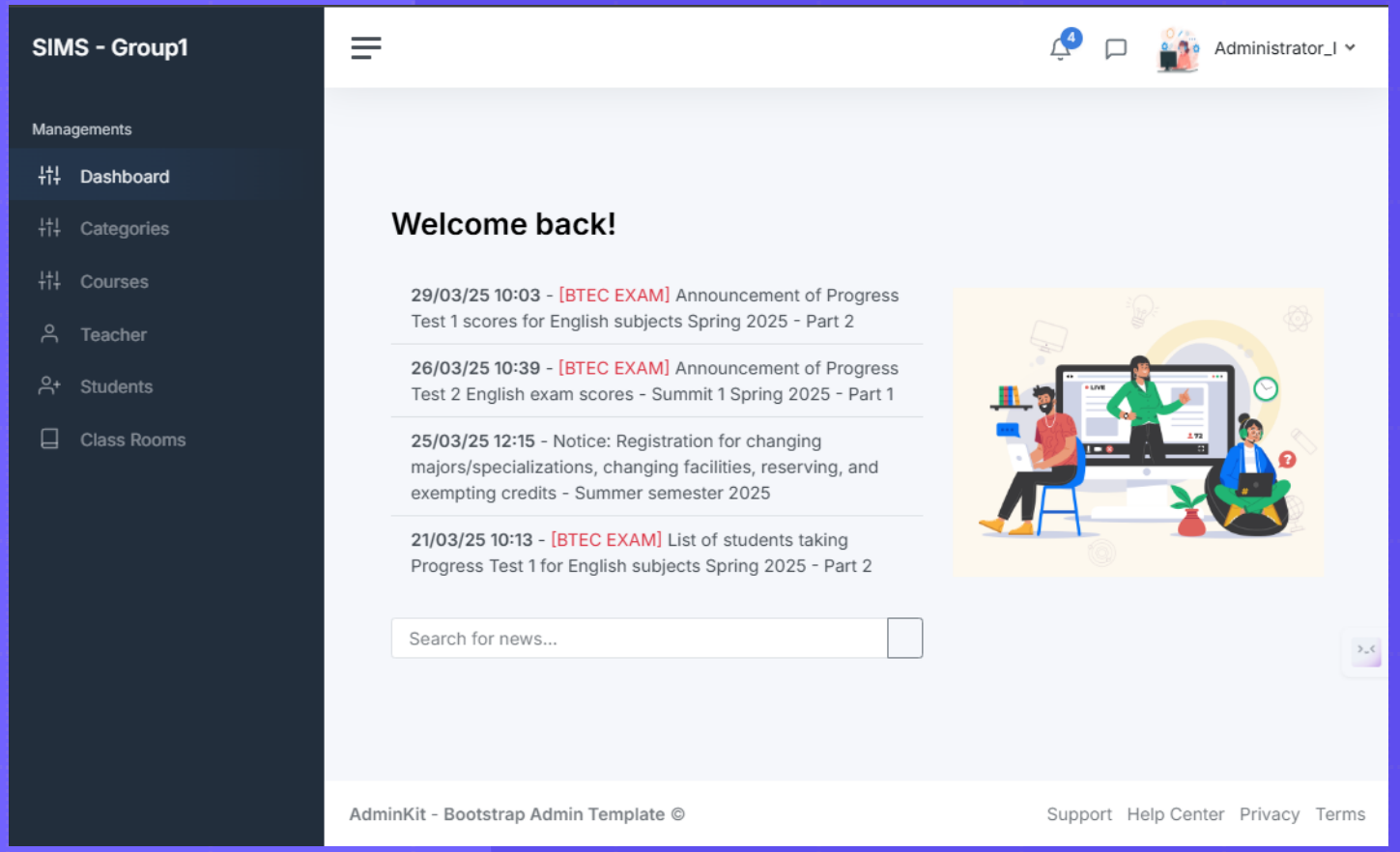
1. **Login page**

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



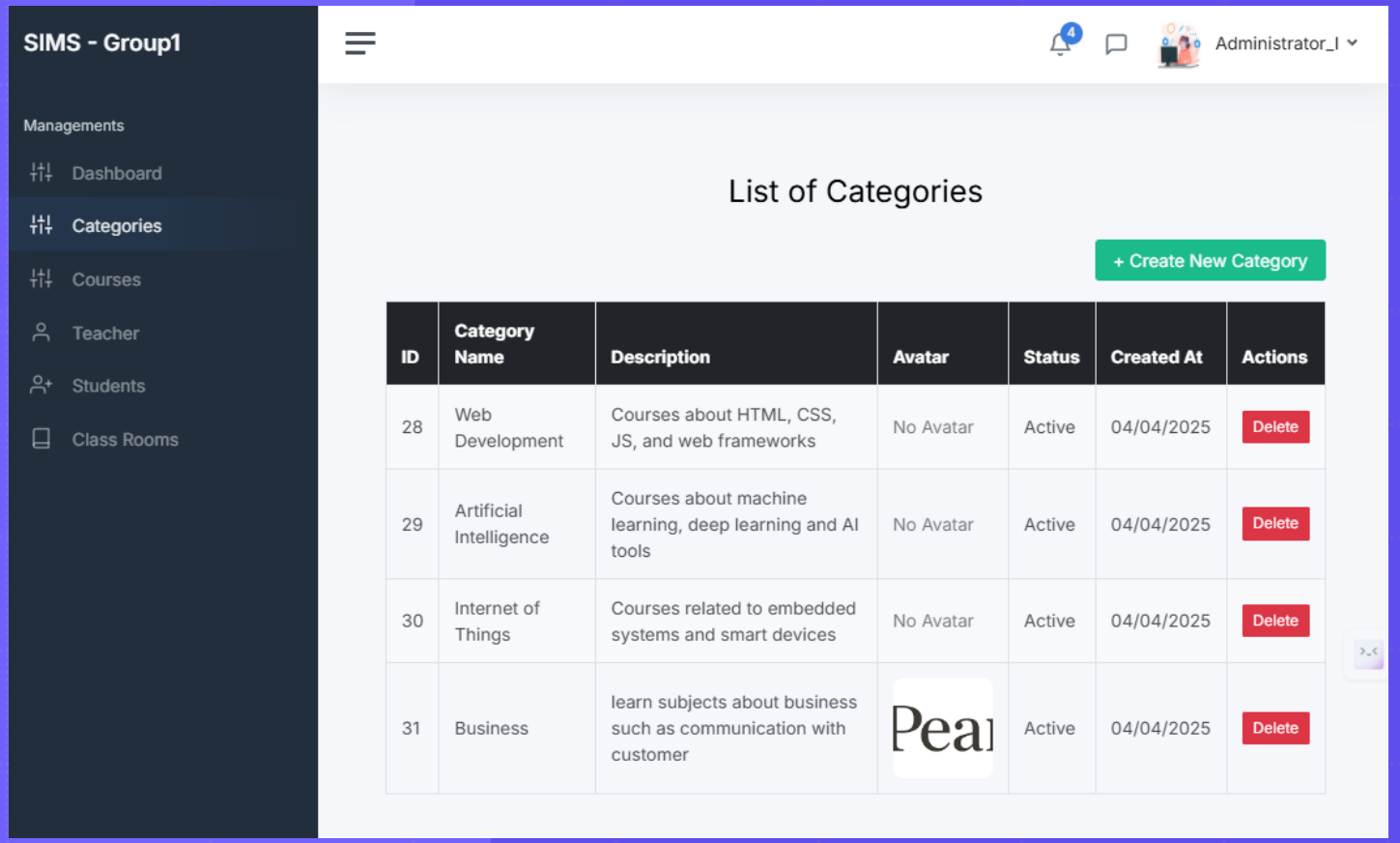
2. Dashboard

- 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



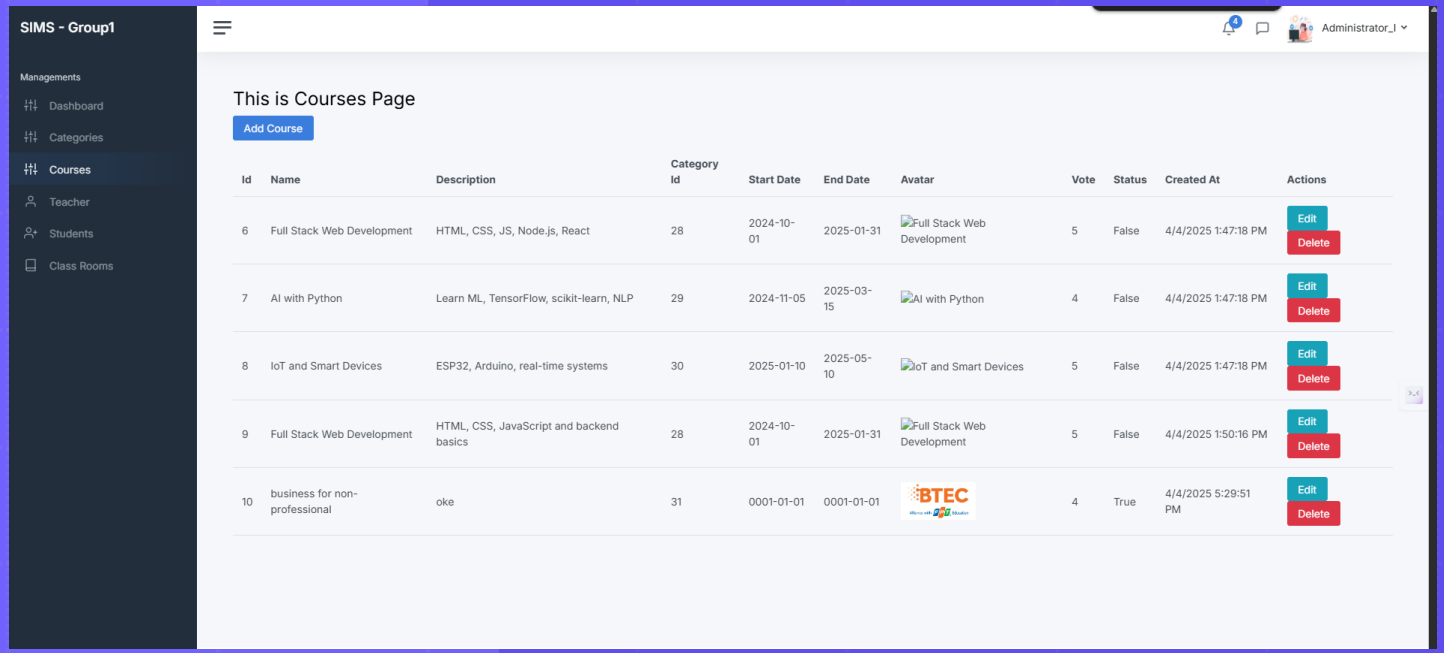
3. categories

- 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.



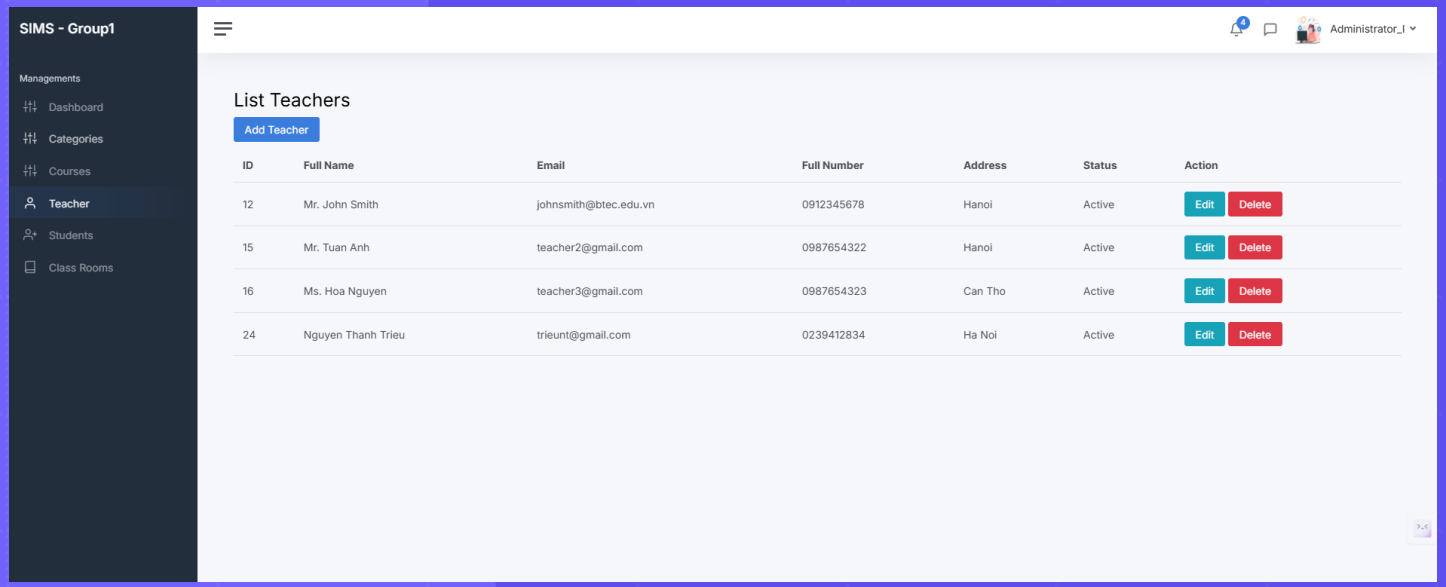
4. Course page

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



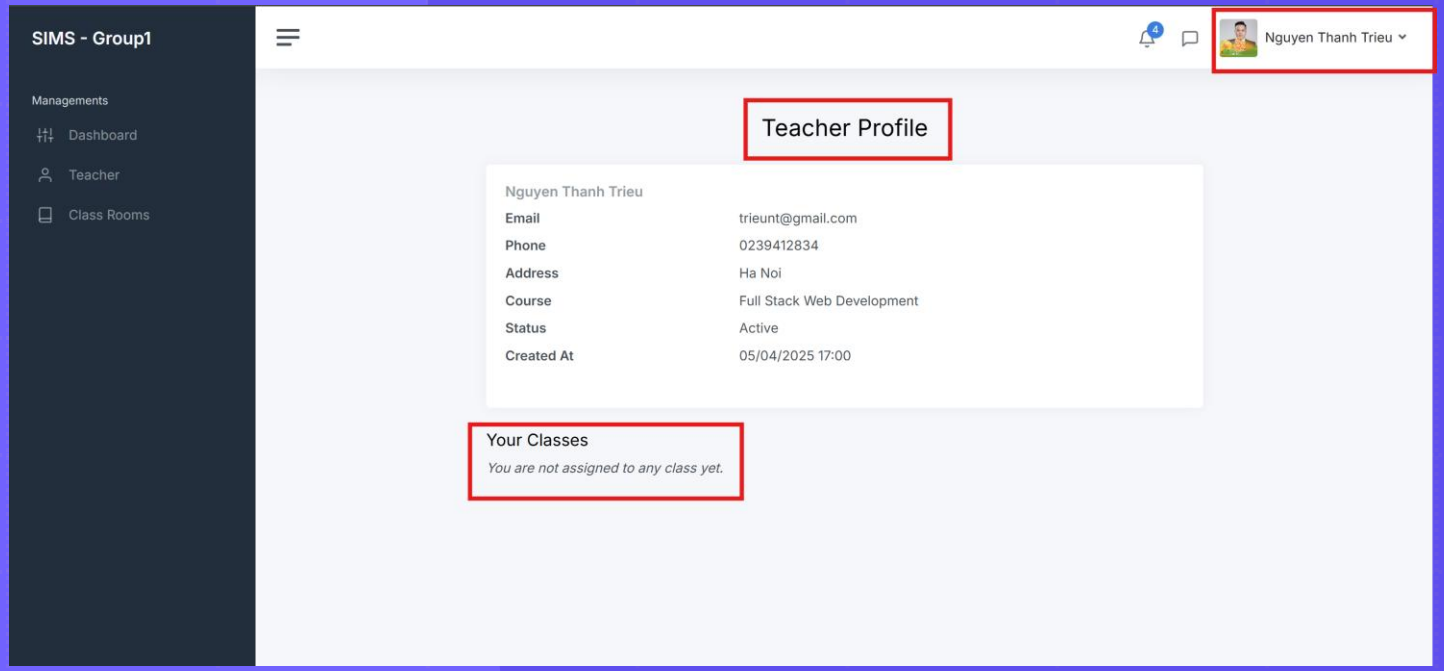
5. Teacher page of admin

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



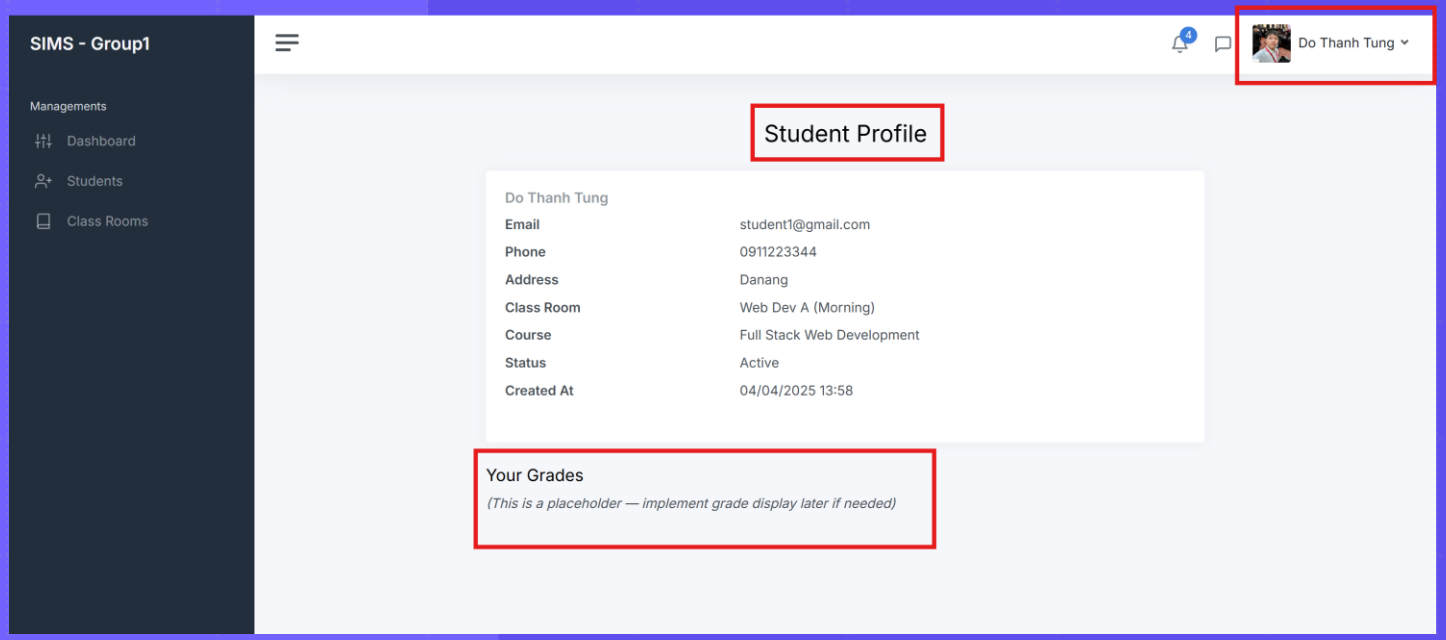
6. Page of teacher

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



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.