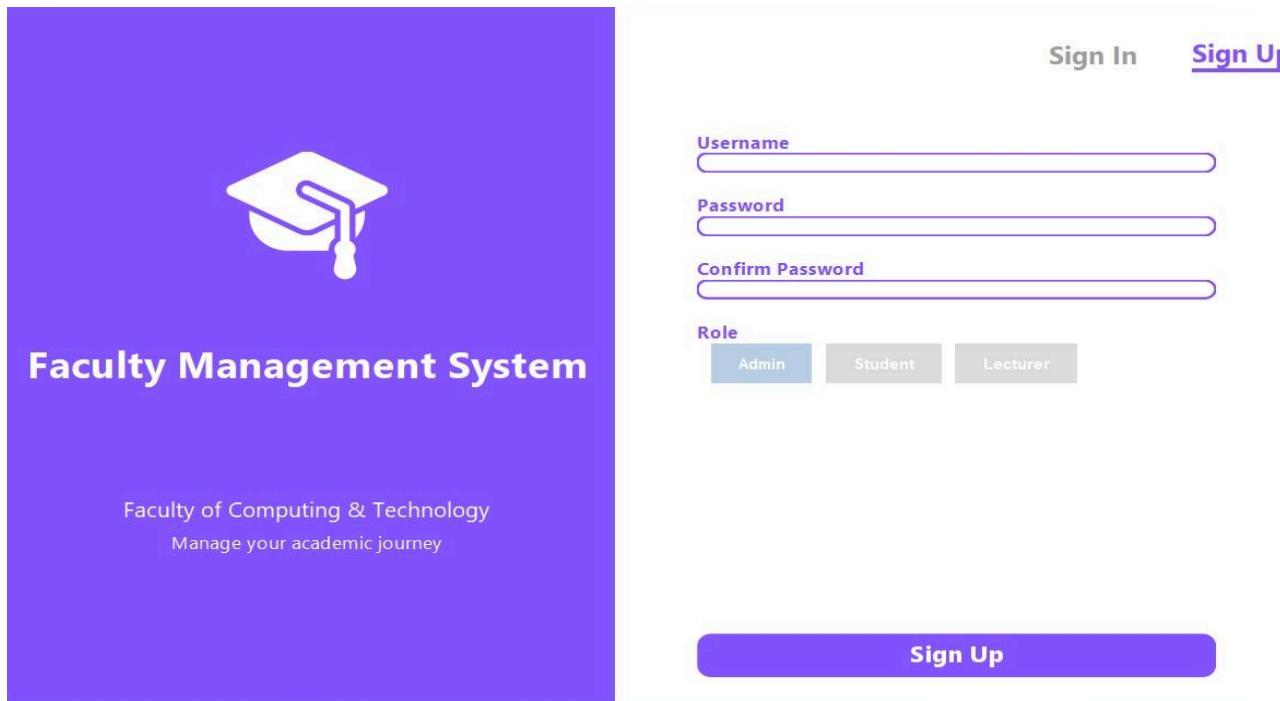Object-oriented-programming

Faculty Management System (FMS)

Project Documentation

FMS-Group05

Group members:

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Project Overview

The Faculty Management System (FMS) is a Java-based application developed to manage academic information such as students, faculty members, courses, and timetables. The system follows the MVC (Model–View–Controller) architecture and uses MySQL as the backend database. It provides role-based access for administrators and students.

Submission Information

GitHub Repository URL:

https://github.com/FMS-Group05/faculty-management-system

Demo Video Link:

The GitHub repository includes the following items:

- Complete Java source code
- Database SQL files:
    - schema.sql
    - sample_data.sql
- Project documentation (**FMS-Group05.pdf**)
- Demo video link

Database Overview

The system uses **MySQL** as the database management system.

Database Tables

- Students
- Faculty
- Courses
- Timetable
- Users
- Roles

Database Relationships

- Students are enrolled in multiple courses
- Faculty members are assigned to courses
- User roles define access permissions (Admin, Student)

All SQL scripts are included in the database/ folder of the repository.

System Features

Authentication

- Secure login system
- Role-based access control (Admin and Student)

Student Features

- View personal profile information
- View enrolled courses
- View timetable

Admin Features

- Create, Read, Update, Delete (CRUD) operations for:
    - Students
    - Faculty members
    - Courses
    - Timetables

Code Structure Overview

The project follows the **MVC architecture**.

Package Structure

- controller – Handles user actions and application flow
- dao – Manages database operations
- model – Represents system entities
- view – User interface components
- util – Utility and helper classes
- main – Application entry point

Demo Video Description

The demo video demonstrates the following:

1. Database tables and relationships
2. Application execution
3. Login as different roles (Admin and Student)
4. Student feature walkthrough
5. Admin CRUD operations
6. Code walkthrough using IntelliJ IDEA
7. GitHub repository tour and commit history

All the works were completed using a separate Git branch to ensure project stability.

Conclusion

The Faculty Management System (Group 05) successfully fulfills all project requirements by implementing database integration, role-based authentication, and MVC architecture. All required deliverables have been included according to the submission guidelines.

Thank you