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Section: BSCS 2A

Subject Code: DC 101 and CC 105

Student Management System

Project Report

1. Introduction

A **Student Management System** is a web-based application designed to efficiently manage student-related information in an educational institution. Its purpose is to centralize and organize data such as student records, courses, attendance, and class schedules. The system helps administrators and instructors streamline daily operations, reduce manual paperwork, improve data accuracy, and easily track academic activities through a single, user-friendly interface.

2. Databased design

The system uses a relational database to store and manage activity data efficiently. The database design follows normalization principles to reduce redundancy and maintain data integrity.

Entites and Table

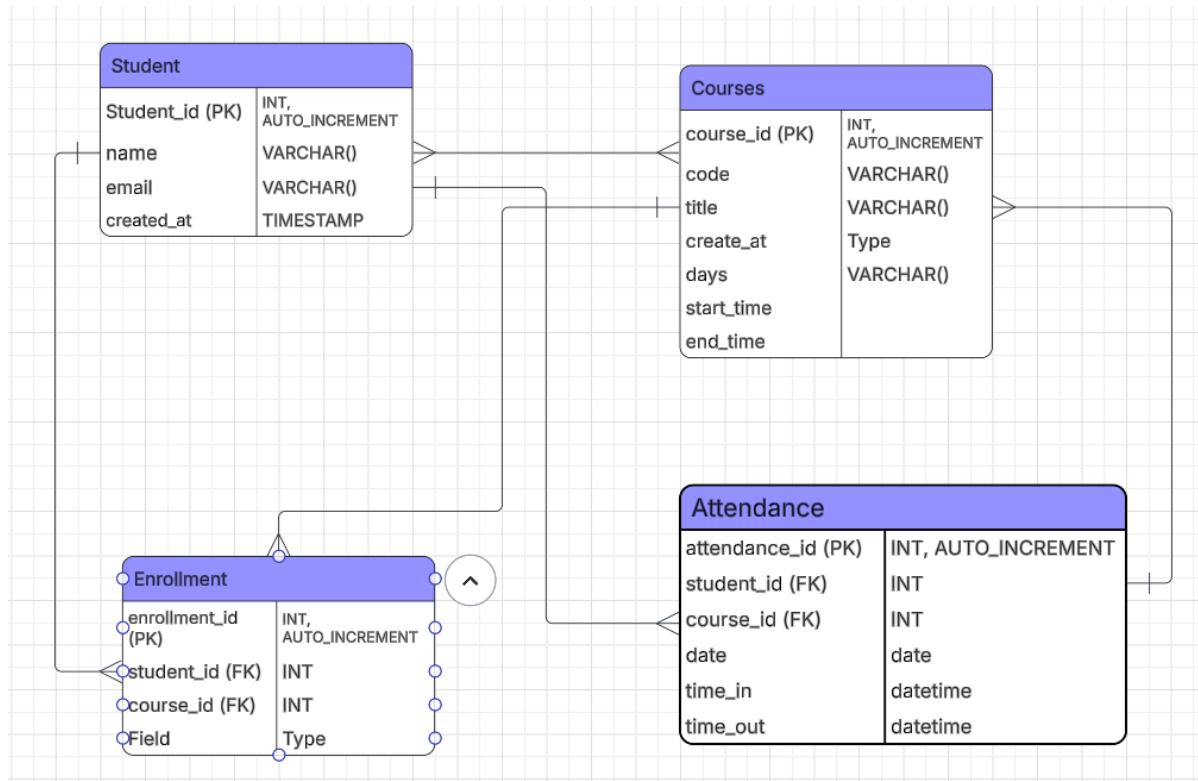
- **Student**
- **Course**
- **Enrollment**
- **Attendance**

Relationship

Relationship	Type
Student → Enrollment	One-to-Many
Course → Enrollment	One-to-Many
Student ↔ Course	Many-to-Many (via Enrollment)
Student → Attendance	One-to-Many
Course → Attendance	One-to-Many

ER Diagram descriptions

The Student Management System consists of four main entities: Student, Course, Enrollment, and Attendance. These entities are related to support student registration, class scheduling, and attendance tracking.



3. Web Interface

The web interface is designed using HTML, CSS, and JavaScript to provide a clean and user-friendly experience.

Key pages and functionalities

Dashboard Page

- Serves as the main landing page after login
- Provides an overview of system modules
- Allows quick navigation to Students, Courses, Attendance, and Schedule Generator pages

Students Page

- Add new student records
- Store student details such as name and email
- Display a list of all registered students in tabular form
- Manage student information (view, edit, delete)

Courses Page

- Create and manage courses
- Assign course codes, titles, and schedules
- Define class days and time periods
- View all courses and their schedules in a table
- Edit or remove existing course records

Attendance Page

- Record student time-in and time-out
- Select students and courses for attendance logging
- Automatically track attendance dates and times
- Display attendance history in a structured table
- Support monitoring of student participation

Schedule Generator Page

- Generate class schedules based on course data
- Ensure there are no scheduling conflicts
- Organize courses by day and time
- Present schedules in a clear, readable format

Challenges and learning

Some of challenges is that selecting a suitable system, designing effective and friendly ui/ux and managing the database. Overcoming these challenges strengthened my problem-solving skills and providing a clear understanding of how the system works. The development of the entire system is quite challenging, it requires a consistent testing and troubleshooting to ensure everything worked smoothly. My learning and understanding while doing this system is having the importance of proper planning, and creating a clear system plan, including database design and system flow, greatly contributes to building a more stable and reliable system. and seeking guidance when needed.

SCREENSHOT OF THE SYSTEM

SM

- Students
- Courses
- Attendance
- Schedule Generator

Dashboard

Welcome

Use the menu to manage students, courses, attendance, and generate schedules.

SM

- Dashboard
- Courses
- Attendance
- Schedule Generator

Students

Add Student

Name

Email

Add

All Students

ID	Name	Email	Actions
----	------	-------	---------

SM

Students

Add Student

Name

Email

Add

All Students

ID	Name	Email	Actions
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SM

Students

Add Student

Name

Email

Add

All Students

ID	Name	Email	Actions
1	kaycee brequilio	brequilio@gmail.com	Edit Delete



Courses

Create Course

Code

Title

Days (comma-separated)

Start time

 (

End time

 (Create

All Courses

ID	Code	Title	Days	Time	Actions
----	------	-------	------	------	---------



Create Course

Code

Title

Days (comma-separated)

Start time

 (

End time

 (Create

All Courses

ID	Code	Title	Days	Time	Actions
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1	DC-101	WebDev	Mon, Wed, Fri	07:30:00 - 09:00:00	Edit Delete
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SM

Dashboard
Students
Courses
Schedule Generator

Attendance

Time In

Student: kaycee brequilio Date: 08/01/2026

Time: 08/01/2026 01:29 am

Time In

Records

ID	Student	Date	In	Out	Actions
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SM

Dashboard
Students
Courses
Schedule Generator

Attendance

Time In

Time recorded successfully.

Student: -- select -- Date: 08/01/2026

Time: 08/01/2026 01:32 am

Time In

Records

ID	Student	Date	In	Out	Actions
1	kaycee brequilio	2026-01-08	2026-01-08 01:29:00	-	Time Out