Database Presentation

School Management System

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Attendance

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Bahasa Indonesia ⌄

board

| Attendance Summary | Total Sessions 4 | Total Attendance 0 | Not Attended 4 |

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Session	Attendance
1	✗
2	✗
3	✗
4	✗
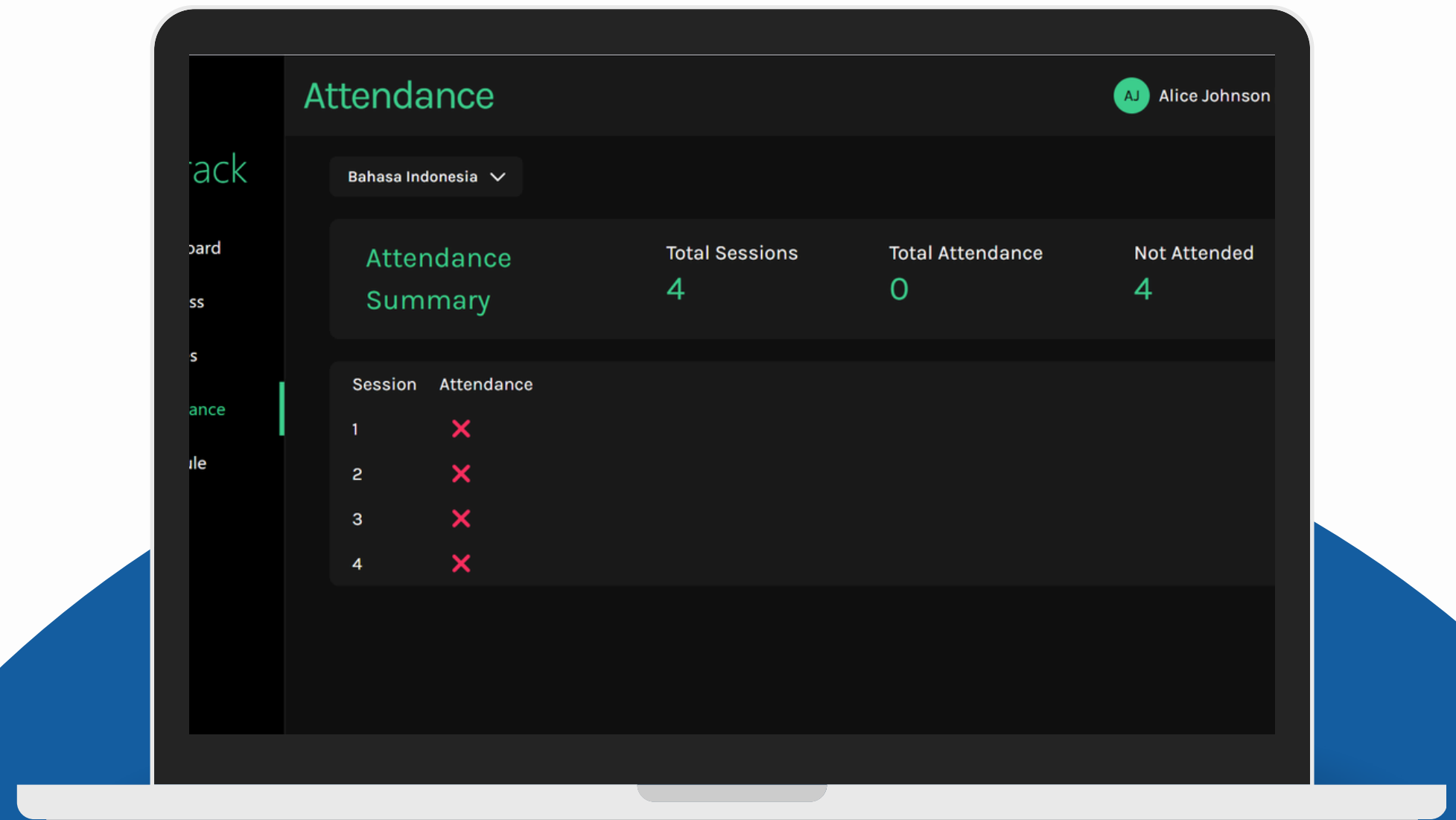
Introduction
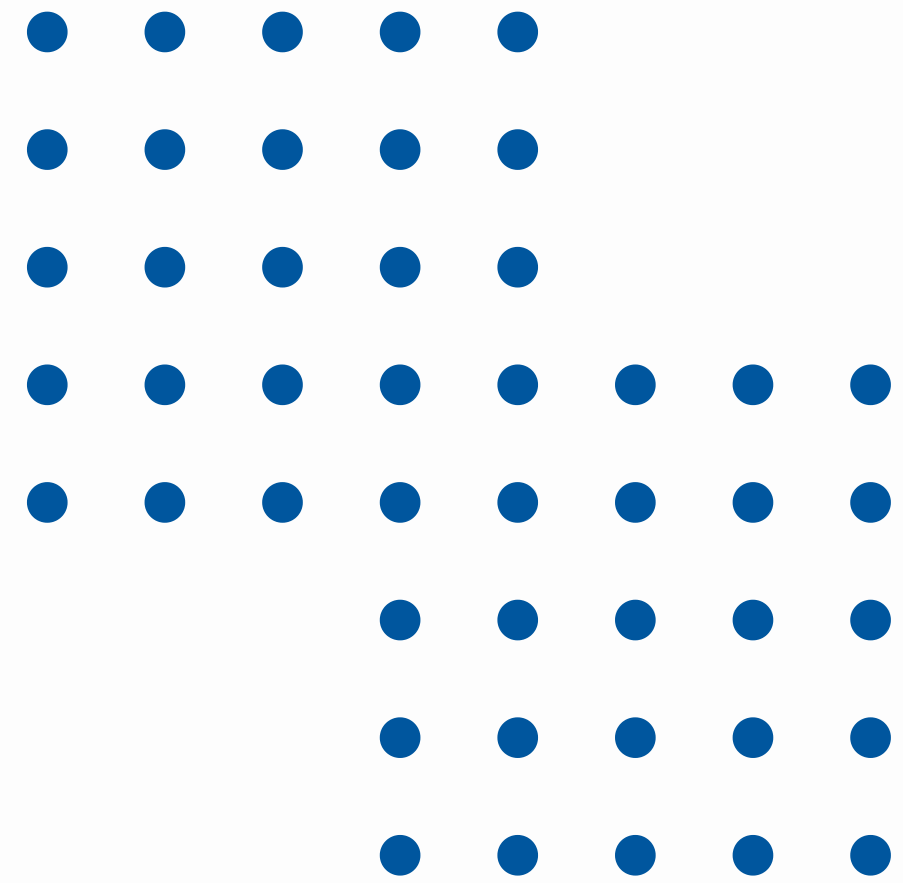
Streamline academic and administrative process

Simplified important managing features

Student's Features

- View other students' data
- View their
  - Courses
  - Attendance
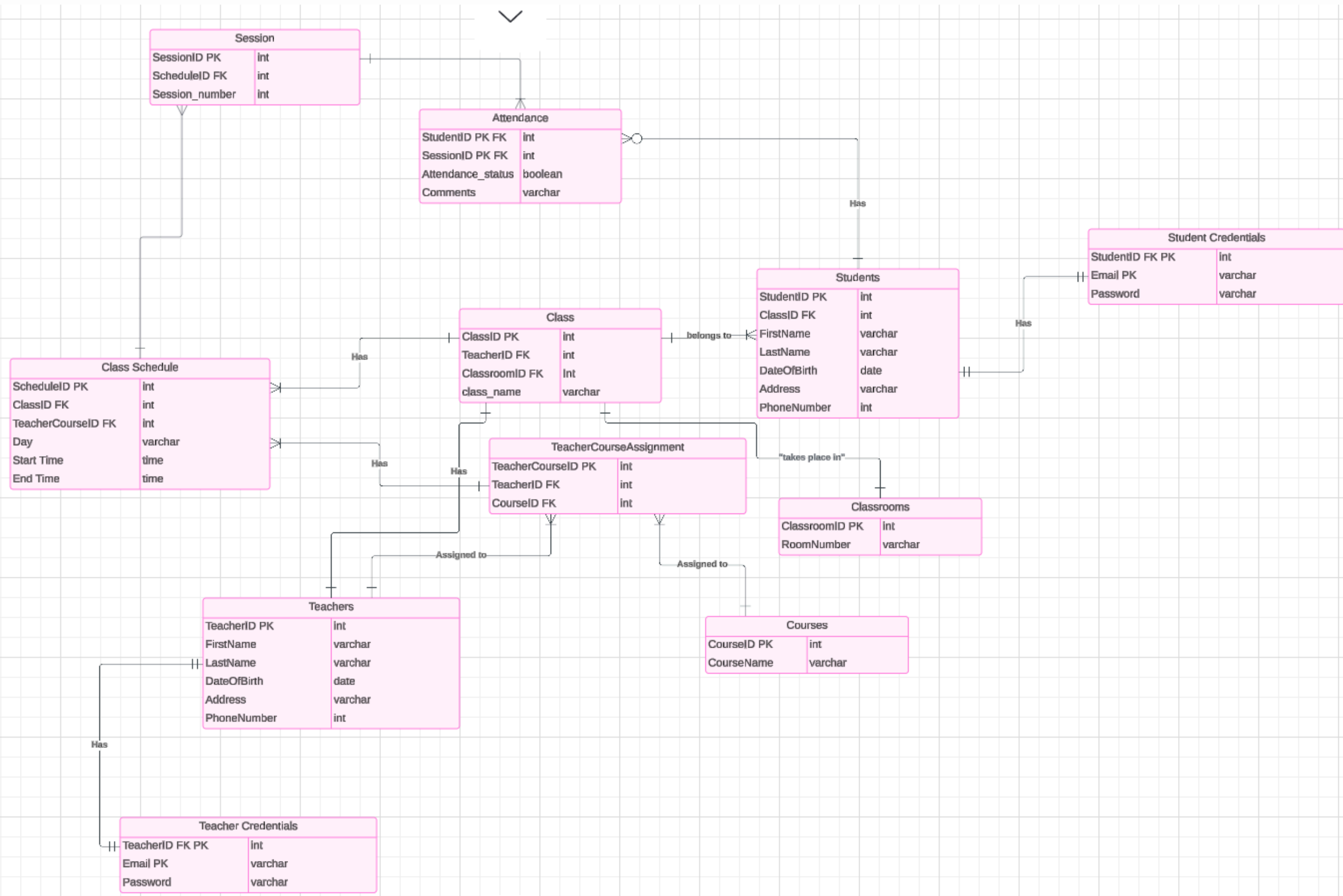 - Teacher
  - Classroom
  - Schedule

Teacher's features

- View their
  - Students' data
  - Courses
  - Students' attendance records
  - Classroom
  - Schedule
- Update and Insert attendance data for the students

Entity Relationship Diagram

Session

SessionID PK	int
ScheduleID FK	int
Session_number	int

Attendance

StudentID PK FK	int
SessionID PK FK	int
Attendance_status	boolean
Comments	varchar

Student Credentials

StudentID FK PK	int
Email PK	varchar
Password	varchar

Students

StudentID PK	int
ClassID FK	int
FirstName	varchar
LastName	varchar
DateOfBirth	date
Address	varchar
PhoneNumber	int

Class

ClassID PK	int
TeacherID FK	int
ClassroomID FK	Int
class_name	varchar

Class Schedule

ScheduleID PK	int
ClassID FK	int
TeacherCourseID FK	int
Day	varchar
Start Time	time
End Time	time

TeacherCourseAssignment

TeacherCourseID PK	int
TeacherID FK	int
CourseID FK	int

Classrooms

| ClassroomID PK | int |
| RoomNumber | varchar |

Teachers

TeacherID PK	int
FirstName	varchar
LastName	varchar
DateOfBirth	date
Address	varchar
PhoneNumber	int

Courses

| CourseID PK | int |
| CourseName | varchar |

Teacher Credentials

TeacherID FK PK	int
Email PK	varchar
Password	varchar

Relationships: Has, belongs to, "takes place in", Assigned to

Normalization

Normalization

1NF
First Normal Form
- Atomic Value
- Unique Identifier
- No Repeating Groups

2NF
Second Normal Form
- Is 1NF
- No Partial Dependencies

3NF
Third Normal Form
- Is 2NF
- No Transitive Dependencies

Table Structure

Table Structure

Table	Column Name	Data Type	Primary Key	Foreign Key	Constraints
Students	StudentID	INT	Yes		not null, auto_increment, unique
	first_name	VARCHAR(50)			not null
	last_name	VARCHAR(50)			not null
	date_of_birth	date			not null
	address	VARCHAR(50)			
	phone_number	INT			
	ClassID	INT		Class(ClassID)	not null
Teachers	TeacherID	INT	Yes		not null, auto_increment, unique
	first_name	VARCHAR(255)			not null
	last_name	VARCHAR(255)			not null
	date_of_birth	date			not null
	address	VARCHAR(50)			
	phone_number	INT			
Class	ClassID	INT	Yes		not null, auto_increment, unique
	class_name	VARCHAR(50)			not null
	TeacherID	INT		Teachers(TeacherID)	not null
	ClassroomID	INT		Classrooms(ClassroomID)	not null

Table Structure

Table	Column Name	Data Type	Primary Key	Foreign Key	Constraints
Classrooms	ClassroomID	INT	Yes		not null, auto_increment, unique
	room_number	varchar(50)			not null
Courses	CourseID	INT	Yes		not null, auto_increment, unique
	course_name	VARCHAR(50)			not null
Sessions	SessionID	INT	Yes		not null, auto_increment, unique
	session_number	INT			not null
	ScheduleID	INT		ClassSchedule(ScheduleID)	not null
Attendance	SessionID	INT	Yes (Composite)	Sessions(SessionID)	not null
	StudentID	INT	Yes (Composite)	Students(StudentID)	not null
	attendance_status	BOOLEAN			not null
	comments	VARCHAR(255)			
ClassSchedule	ScheduleID	INT	Yes		not null, auto_increment, unique
	ClassID	INT		Class(ClassID)	not null
	TeacherCourseID	INT		TeacherCourseAssignment(TeacherCourseID)	not null
	day_of_week	VARCHAR(10)			not null
	start_time	TIME			not null
	end_time	TIME			not null

Table Structure

Table	Column Name	Data Type	Primary Key	Foreign Key	Constraints
TeacherCourseAssignment	TeacherCourseID	INT	Yes		not null, auto_increment, unique
	TeacherID	INT		Teachers(TeacherID)	not null
	CourseID	INT			not null
Students Credentials	StudentID	Int	Yes (Composite)		not null
	student_email	varchar(50)	Yes (Composite)		not null
	student_password	varchar(50)			not null
Teachers Credentials	TeacherID	Int	Yes (Composite)	Teachers(TeacherID)	not null
	teacher_email	varchar(50)	Yes (Composite)		not null
	teacher_password	varchar(50)			not null

User Interface

SQL Code

THANK YOU!