NATIONAL UNIVERSITY OF MODERN LANGUAGES

DATABASE MANAGEMENT SYSTEM ASSIGNMENT - 2

NAME: Abdul Rafay

ROLL NO: FL23791

PROGRAM: BSSE (4th Semester)

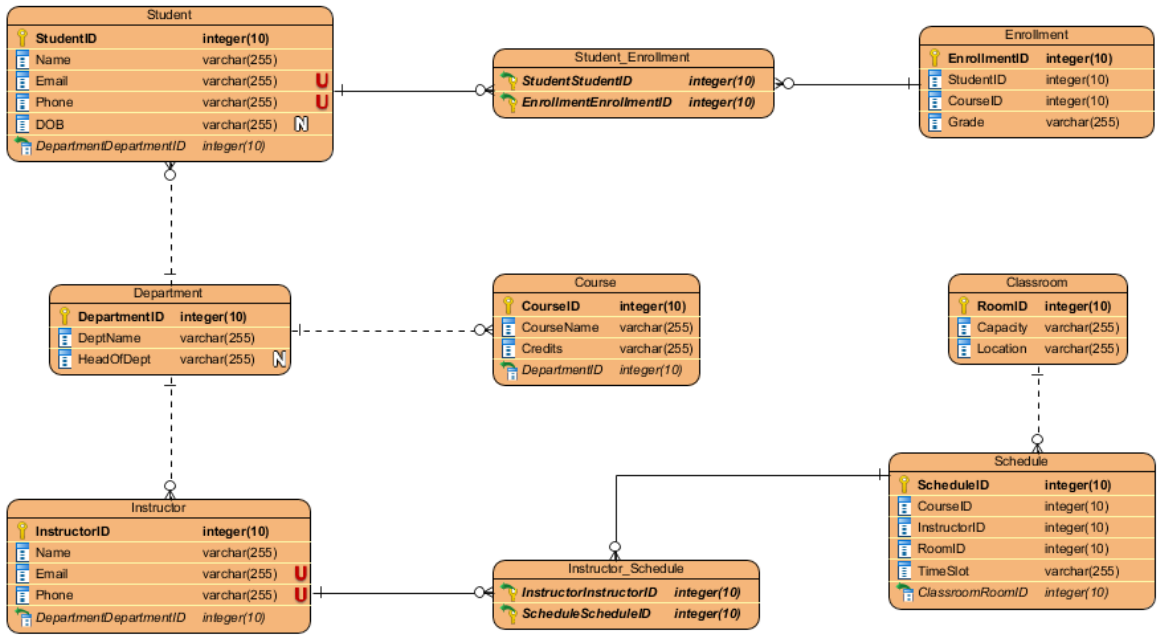
COURSE: DATABASE MANAGEMENT SYSTEM

SUBMITTED TO: Sir Waqar

DATE: May 18, 2025 **DAY: SUNDAY**

Title: Designing an ER Model and Relational Schema for a University Management System

ER Diagram :



Converting ER Into Relational DATABASE :

STUDENT (StudentID INT PRIMARY KEY, Name VARCHAR(100) NOT NULL, Email VARCHAR(100) UNIQUE NOT NULL, Phone VARCHAR(20), DOB DATE, DepartmentID INT, FOREIGN KEY (DepartmentID) REFERENCES DEPARTMENT(DepartmentID))	INSTRUCTOR (InstructorID INT PRIMARY KEY, Name VARCHAR(100) NOT NULL, Email VARCHAR(100) UNIQUE NOT NULL, Phone VARCHAR(20), DepartmentID INT, FOREIGN KEY (DepartmentID) REFERENCES DEPARTMENT(DepartmentID))
DEPARTMENT (DepartmentID INT PRIMARY KEY, DeptName VARCHAR(100) UNIQUE NOT NULL, HeadOfDept VARCHAR(100))	COURSE (CourseID INT PRIMARY KEY, CourseName VARCHAR(100) NOT NULL, Credits INT, DepartmentID INT, FOREIGN KEY (DepartmentID) REFERENCES DEPARTMENT(DepartmentID))

```
CLASSROOM (
   RoomID INT PRIMARY KEY,
   Capacity INT CHECK (Capacity > 0),
   Location VARCHAR(100)
)
```

```
ENROLLMENT (
   EnrollmentID INT PRIMARY KEY,
   StudentID INT,
   CourseID INT,
   Grade VARCHAR(2),

   FOREIGN KEY (StudentID)
   REFERENCES STUDENT(StudentID),

   FOREIGN KEY (CourseID)
   REFERENCES COURSE(CourseID),
)
```

```
SCHEDULE (
   ScheduleID INT PRIMARY KEY,
   CourseID INT,
   InstructorID INT,
   RoomID INT,
   TimeSlot VARCHAR(50),

   FOREIGN KEY (CourseID)
   REFERENCES COURSE(CourseID),

   FOREIGN KEY (InstructorID)
   REFERENCES INSTRUCTOR(InstructorID),

   FOREIGN KEY (RoomID)
   REFERENCES CLASSROOM(RoomID)
)
```