LMS Database Design

A. ER Diagram
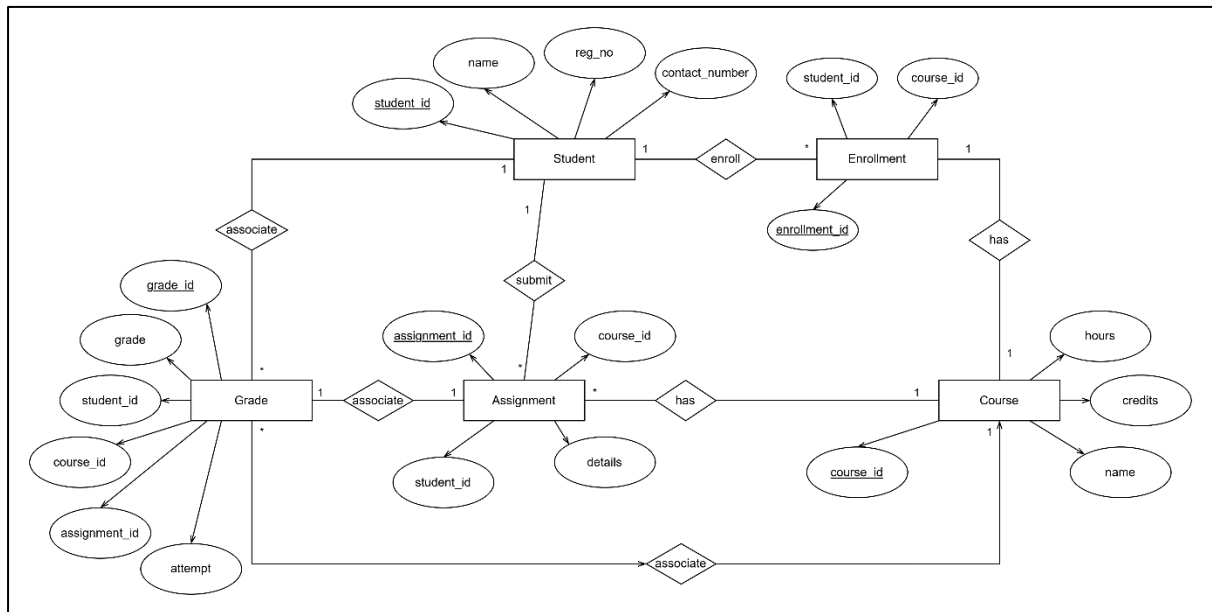
Tables:

Student

Columns	Data Type
Student_id	int (primary key)
Name	Varchar (255)
Reg_no	Varchar(255)
Contact_no	Varchar(255)

Course

Columns	Data Type
Course_id	int (primary key)
Name	Varchar (255)
Credits	int
Hours	int

Assignment

Columns	Data Type
Assignment_id	int (primary key)
Course_id	int (foreign key)
Student_id	int (foreign key)
Details	text

Grade

Columns	Data Type
Grade_id	int (primary key)
Student_id	int (foreign key)
Assignment_id	int (foreign key)
Course_id	int (foreign key)
Grade	Varchar(2)
Attempt	int

Enrollment

Columns	Data Type
Enrollment_id	int (primary key)
Student_id	int (foreign key)
Course_id	int (foreign key)

Assumptions made:

- A course examination can be attempted multiple times where grades have to be stored multiple times, and hence the column attempt is introduced.
- An assignment would only be graded once

SQL Queries

B. List all students enrolled in a specific course.

SELECT * FROM Student INNER JOIN Enrollment ON Enrollment.Student_id = Student. Student_id WHERE Enrollment.Course_id = 1

// Assuming the specific course id is 1

C. Insert grades for a particular assignment.

INSERT INTO Grade(Student_id, Assignment_id, Course_id, "Grade", "Attempt") VALUES (1, 1, 1, "B-", 1);