

## **DBMS - session 4 Homework**

### **1: ER Model to Tables**

**Refer to the given ER Diagram (School Management System).**

#### **Entities:**

- Student (RollNo, Name, Email, phone\_no, Gender, Age)
- Course (CourseID, Title, Credits)
- Teacher (TeacherID, Name, phone\_no, Subject)
- Enrollment (RollNo, CourseID)

#### **Relationships:**

- Student ENROLLS in Course
- Teacher TEACHES Course

### **1: Draw the ER diagram in your notebook (or use online tool).**

**: Convert ER model into SQL tables with proper constraints:**

- Primary Key (PK)
- NOT NULL, UNIQUE, DEFAULT constraints
- Appropriate Data Types

### **2: Create and Insert Data**

- 1. Create all 4 tables (Student, Course, Teacher, Enrollment).**
- 2. Insert:**
  - At least 5 Students
  - At least 2 Teachers
- 3. Insert at least one student with NULL Age (test NULL handling).**
- 4. Try inserting duplicate RollNo and Email → note the error message.**

### 3: Select Queries (DQL)

1. Show all students (SELECT \*).
2. Show only Names and Emails.
3. Use aliasing: Show Name as StudentName and Email as ContactEmail.
4. Show Enrollment details (RollNo, CourseID).

### 4: Reflection Questions

1. What happens when you try inserting duplicate RollNo?
2. Why do we use constraints like NOT NULL, UNIQUE, DEFAULT?
3. Which order did you observe in SELECT query execution (FROM → WHERE → SELECT → ORDER BY)?

### Submission:

- Submit a text file or SQL file with your queries and outputs (screenshots allowed).
- Include your ER Diagram as an image/photo.
- Deadline: Before the next lecture.