

## Learning Entity-Relationship Diagrams (ERD) in My LMS Project! 📊

I'm excited to share the next step in my journey of understanding database design through Entity-Relationship Diagrams (ERD) as part of my Learning Management System (LMS) project.

### Key Entities in the LMS ERD:

#### 1. User

Attributes: User\_ID (PK), Name, Email, Role (Student, Instructor, Admin), Password

#### 2. Course

Attributes: Course\_ID (PK), Course\_Name, Description, Duration, Start\_Date, End\_Date

#### 3. Enrollment

Attributes: Enrollment\_ID (PK), User\_ID (FK), Course\_ID (FK), Enrollment\_Date, Status

#### 4. Module

Attributes: Module\_ID (PK), Course\_ID (FK), Module\_Name, Module\_Content

#### 5. Assignment

Attributes: Assignment\_ID (PK), Course\_ID (FK), Assignment\_Title, Assignment\_Description, Due\_Date

#### 6. Submission

Attributes: Submission\_ID (PK), Assignment\_ID (FK), User\_ID (FK), Submission\_Date, Grade

#### 7. Discussion Forum

Attributes: Forum\_ID (PK), Course\_ID (FK), Forum\_Title, Created\_Date

#### 8. Forum Post

Attributes: Post\_ID (PK), Forum\_ID (FK), User\_ID (FK), Post\_Content, Post\_Date

#### 9. Quiz

Attributes: Quiz\_ID (PK), Course\_ID (FK), Quiz\_Title, Total\_Marks

#### 10. Quiz Attempt

Attributes: Attempt\_ID (PK), Quiz\_ID (FK), User\_ID (FK), Attempt\_Date, Marks\_Obtained

### Relationships:

- A User can enroll in multiple Courses.
- A Course can have multiple Modules, Assignments, Quizzes, and Discussion\_Forums.
- A Student can submit multiple Submissions for different Assignments.
- A User can make multiple Forum\_Posts in a Discussion\_Forum.
- A Student can attempt multiple Quizzes for a Course.

