Assignment-1 Phase-1

Under oversight: D. ALI ZIDANE

Course Name: IS211-SIS211 INTRODUCTION TO DATABASE SYSTEMS

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Course Management System - ERD Phase 1

ERD Requirements and Description

- This ERD includes the following entities:

  - Student

  - Instructor

  - Course

  - Enrollment (Weak Entity)

  - Test

  - Quiz

  - Exercise

  - StudentGrade (Weak Entity)

- The ERD includes at least one many-to-many relationship:

  - Between Student and Course via the Enrollment entity.

Weak Entities:

  - Enrollment (depends on Student and Course)

  - StudentGrade (depends on Student and Course)

- Primary keys and foreign keys are clearly marked in the ERD.

Relationships in the ERD

1. Teaches (Instructor - Course)

   - One instructor can teach many courses.

   - Each course is taught by one instructor.

2. Enrolls In (Student - Course) via Enrollment (Weak Entity)

   Many students can enroll in many courses (Many-to-Many).

   - Enrollment stores the EnrollmentDate.

3. Includes (Course - Test)

   - Each course can include multiple tests.

4. Includes (Course - Quiz)

   - Each course can include multiple quizzes.

5. Includes (Course - Exercise)

   - Each course can include multiple exercises.

6. **Receives (Student - StudentGrade)**

   - A student receives grades in courses through the StudentGrade weak entity.

7. **Registered (Enrollment - Student)**

   - Connects students to the enrollment record.

8. **Registered (Enrollment - Course)**

   - Connects courses to the enrollment record.

9. **Includes (Course - StudentGrade)**

   - A course includes grades recorded in the StudentGrade entity.

10. **Includes (Course - Enrollment)**

    - A course includes multiple enrollment records.

Course Management System - ERD Phase 1