

Database Management Systems
Lab Assignment I: Relational Design
Topic: Online Course Management Platform
Due: January 14, 2026, 5PM (Individual Submission)

An Educational Technology Company offers Massively Online Open Courses to its customers. You have to build a platform to manage all the data related to the courses, teachers, partner universities, and students. You need to organize the data in the form of an ER diagram before you start the relational database design.

The database should contain data about but not restricted to the following aspects –

- A. Various courses, as part of certificate/diploma/degree programs of varying duration, and categorized into topics. The courses have online contents as books, videos, and notes.
- B. Instructors who would be teaching the courses.
- C. Partner universities who participate to delivering the courses.
- D. Students who take these courses. They may be from various categories and skills levels, age and countries. Evaluation data of the students also needs to be stored.

Certain constraints that need to be specified:

- 1. A course can have one or more topic.
- 2. A course has exactly one partner university.
- 3. Evaluation of a student in a course has a value in the range 0-100.
- 4. A course may have one or more instructor.
- 5. A course should have at least one student.
- 6. Every course name is unique
- 7. Every student has a unique ID
- 8. A student may do multiple but at least one course.
- 9. An instructor may not teach any course or may teach more than one course.
- 10. Every course has a text book but multiple courses can have the same text book.

Examples of such online educational platforms include: Coursera, UpGrad, Udemy etc

Deliverable: ER Diagram as a single PDF File. Name the file as *rollnumber_A1.pdf*

Time: 1 week.