

EE436L: Database Engineering

Department of Electrical Engineering
University of Engineering and Technology Lahore 2019
Instructor: Mr. Umer Shahid
Lab Instructor: Ms. Sana Younas

Name _____
Registration Number _____

Lab Title: Data modeling using the Entity-Relationship Model

Exercise: Consider the following university management system.

- I. Create Entity-relationship diagram both on a piece of paper and MySQL workbench.
- II. Identify entity types, attributes, candidate keys, any relationships, cardinality ratios, and total and partial participation between different entities.
- III. State any assumptions that you make while drawing the ERD.

- The university has many departments of various disciplines, each having a unique department id and a unique name.
- Each department has many faculty members with a unique faculty id and a name.
- Many students are enrolled in the university and belong to a certain department. Each student has a unique roll no., a name, and a session in which the student took admission in the university.
- Many courses are offered by a single department. A course, with a unique course id, name, and credit hours, can have many sections.
- Each student is enrolled in various sections (one section per course) at one time. Each section has a unique section id and a limited capacity.