

Case 1

Prepare an E-R diagram for a real estate firm that lists properties for sale. The following describes this organization:

- The firm has a number of sales offices in several states. Attributes of sales office include Office_Number and Location.
- Each sales office is assigned one or more employees. Attributes of employee include Employee_ID and Employee_Name.
- An employee must be assigned to only one sales office.
- For each sales office, there is always one employee assigned to manage that office.
- The firm lists property for sale. Attributes of property include Property_ID and Location. Components of Location include Address, City, State, and Zip_Code.
- Each property must be listed with one (and only one) of the sales offices. A sales office may have any number of properties listed, or may have no properties listed.
- Each property may have zero or more owners. Attributes of owners are Owner_ID and Owner_Name.
- An owner may own one or more properties. The system stores the percent owned by each owner in each property

Case 2

ITI has decided to store information about its Students and curriculums in a database. ITI has wisely chosen to hire you as a database designer. Prepare an E-R diagram for ITI that describes its activities according to The following Description:

- ITI has a number of students in different departments(tracks), each student has St_id(unique),studentName(Fname,Lname),St_age,st_address
- Each department has dept_id(unique), dep_name
- Students takes many Courses, each course has crs_id, crs_name, crs_duration and crs_Description
- Student has a grade in each course
- Each department contains a set of instructor and each instructor is located in one department, each instructor has ins_id, ins_name, ins_salary, ins_hourRate, ins_bouns,ins_address
- For each Department, there is always one instructor assigned to manage that Department and each manager has a hiring Date
- Instructor may teach many courses and each course may be conducted by many instructors, each instructor has evaluation in each course
- Course is classified under one topic, each topic may have many courses, and each topic has top_name and top_id