

LAB MANUAL

FOR

Data Base Management
System
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Lab 7

Question 1: Draw EER Diagram on Visio/Drawio

An organization depends on a number of different types of persons for its successful operation. The organization is interested in the following attributes for all these persons: SSN (identifier), Name, Address and phone_numbers. A person may have multiple phone_numbers and his name can be further categorized to first_name and last_name. Three types of persons are of greatest interests: employees, volunteers and donors. Employees only have a Date_Hired attribute and volunteers only have a Skill attribute. A volunteer may have multiple skills. Donors only have a relationship (named Donates) with an item that has number and name. A donor must have donated one or more items, and an item may have no donors or one donor.

There are persons other than employees, volunteers, and donors who are of interest to the organization, so that a person need not belong to any of these three groups. On the other hand, at a given time a person may belong to two or more of these groups (for example employees and donors).

Question 1: Draw ER Diagram on Visio/Drawio

Create an ER diagram for the **COMPANY**. The company is organized into **DEPARTMENTS**. Each department has a name, number and an employee who manages the department. We keep track of the start date of the department manager. Each department controls a number of **PROJECTS**. Each project has a name, number and is located at a single location. We store each **EMPLOYEE's** social security number, address, salary, gender, and birthdate. Each employee works for one department but may work on several projects. We keep track of the number of hours per week that an employee currently works on each project. We also keep track of the direct supervisor of each employee. Each employee may have a number of **DEPENDENTS**. For each dependent, we keep track of their name, gender, birthdate, and relationship to employee.

Question 2: Draw ER Diagram on Visio/Drawio

The Firm has a number of sales offices in several states. Attributes of sales office include office_Number (identifier) and location. Each sales office is assigned to one or more employees having an employee_id (identifier), employee_name and employee_expertise. An employee may have more than one employee_expertise.

- An employee has dependent which assists him in his work and depends on Employee. The attributes of dependent are name and gender.
- An employee must be assigned to only one sales office. For each sale office, there is always one employee assigned to manage the office. An employee may manage only the sales office to which he is assigned.
- The firm lists property for sale. Attributes of property are property_id (identifier) and location. Component of location include address, city, state and zip code. Each unit of property must be listed with only one of the sales offices. A sales office may have any number of properties listed, or may have no properties listed.
- Each unit of property has one or more owners. Attributes of owners are owner_id and owner_name. An owner may own one or more units of property. An attribute of the relationship between property and owner is percent_owned.