

Draw the entity and attributes for the following examples:

e.g. 1/ The company employees: each employee has an employee number, an employee name, an employee address, and a phone number.

e.g. 2/ The company employees: each employee has an employee ID, an employee name, an employee address, and phone numbers.

Draw the entities, attributes, and relationships for the following examples:

e.g. 3/ A company database which contains data about employees and departments.

- An employee, is described by an employee number (identifier), name (consists of first name, and last name), address, phone numbers, and salary.
- Each department, is described by department number (identifier), department name, and locations.
- Each department must be managed by an employee and an employee can be a manager of a department.

e.g. 4/ Consider the following set of information and requirements for a company. It contains data and business rules to make a design for their system:

1. An employee is described by an employee number (identifier), name (consists of first name, middle name and last name), addresses, a phone number, salary, and date of birth.
2. Each department is described by department number (identifier), department name (unique), and department location.
3. Each task is described by task name (identifier), start date, end date, and duration of the task that is calculated from start date and end date.
4. A department must be managed by one employee.
5. An employee can be a manager of a department.
6. An employee may have many tasks to finish them.
7. A task must be worked on by one employee or more.

e.g. 5/ Consider the following set of information about a commerce company system. Design and draw only one ER diagram that captures all information about the company.

1. Each category has a category number (Primary Key), category name, and description of category.
2. Each product has a product number (Primary Key), product name (consists of business name, and scientific name), expiry date, price, quantity, and subtotal of the price which is calculated from price and quantity.
3. Each customer has a customer ID (Primary Key), customer name, and a phone number (unique), and address.
4. Each category may have many products.
5. Each product must belong to one category.
6. Each customer can order many products.
7. A product can be ordered by more than one customer.