

CSC380 Tutorial # 3

Entity Relationship Model (ER)

Problem 1:

Draw an ER diagram for the following situation.

State any assumptions you believe you have to make in order to develop a complete diagram.

Projects, Inc., is an engineering firm with approximately 500 employees. A database is required to keep track of all employees, projects assigned, and departments worked in. Every employee has a unique number assigned by the firm, required to store his or her name and date of birth. If an employee is currently married to another employee of Projects, Inc., the date of marriage and who is married to whom must be stored; however, no record of marriage is required if an employee's spouse is not also an employee. Each employee is given a job title (for example, engineer, secretary, and so on).

An employee does only one type of job at any given time, and it is only needed to retain information for an employee's current job.

There are 11 different departments, each with a unique name. An employee can report to only one department. Each department has a phone number.

To procure various kinds of equipment, each department deals with many vendors. A vendor typically supplies equipment to many departments. It is required to store the name and address of each vendor and the date of the last meeting between a department and a vendor.

Many employees can work on a project. An employee can work on many projects. Projects are distinguished by project number, and the estimated cost of each project must be stored.

Problem 2:

Draw an ER diagram for the following situation.

State any assumptions you believe you have to make in order to develop a complete diagram.

Stillwater Antiques buys and sells one-of-a-kind antiques of all kinds (for example, furniture, jewelry, china, and clothing). Each item is uniquely identified by an item number and is also characterized by a description, asking price, condition, and open-ended comments. Stillwater works with many different individuals, called clients, who sell items to and buy items from the store. Some clients only sell items to Stillwater, some only buy items, and some others both sell and buy. A client is identified by a client number and is also described by a client name and client address.

When Stillwater sells an item in stock to a client, the owners want to record the commission paid, the actual selling price, sales tax, and date sold. When Stillwater buys an item from a client, the owners want to record the purchase cost, date purchased, and condition at time of purchase.