

IT 468

Assignment 5

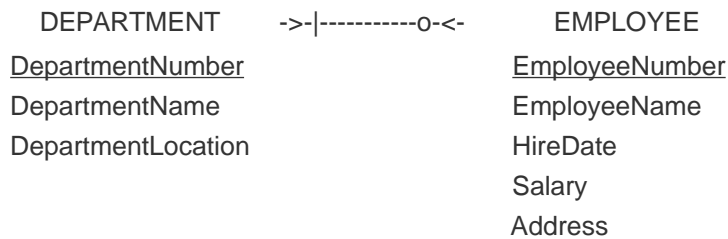
1. List and give an example of the three types of binary relationships (1:1, 1:N, N:M) other than the ones used in this book. Draw an IE Crow's Foot E-R diagram for each.

a) One-to-One Relationship [1:1]- COMPUTER-ASSIGNMENT: SOLDIER-|-o-----||- COMPUTER

b) One-to-Many Relationship [1:N]- FORD-MODELS: FORD->-|-o-----o-<-VEHICLES

c) Many-to-Many Relationship [N:M]- VEHICLES-OWNERS: VEHICLES->-o-----|-<-OWNERS

2. Draw an IE Crow's Foot E-R diagram for the entities DEPARTMENT and EMPLOYEE and the 1:N relationship between them. Assume that a DEPARTMENT does not need to have an EMPLOYEE, but that every EMPLOYEE is assigned to a DEPARTMENT. Include appropriate identifiers and attributes for each entity.



3. Create example properties for the attributes in your E-R diagram for DEPARTMENT and EMPLOYEE in question 2.

DEPARTMENT Attributes

- *DepartmentNumber*: 3838
- *DepartmentName*: Human Resources
- *DepartmentLocation*: Building 15

EMPLOYEE Attributes

- *EmployeeNumber*: 4
- *EmployeeName*: Jane Doe
- *HireDate*: 2/29/2008
- *Salary*: \$125,000
- *Address*: 123 Lewis Street, Seattle, WA 98199

4. Give an example of a business rule for your work for question 2.

- The minimum salary of any employee cannot be less than \$25,000.
- There can be no more than 4 departments in the same location.
- There can be no more than 25 employees in a department.

5. Consider the following business rules: A course can generate many classes. Each class is generated by a course. A course may or may not generate a class. The following figure shows sample Instances of the COURSE Entity. In the CLASS entity, we have attributes CLASS_CODE, CLASS_SECTION, and CLASS_TIME. Draw an IE Crow's Foot E-R diagram.



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