CIS430/530 Lab Assignment 2_1

Creating an E-R Model in E-R Diagram with Identifying Entities, Attributes and Relationships between two Entities to Create a Company Database Scheme

1. Create an E-R Model in E-R Diagram using the symbols of E-R Diagram below.
   To create the E-R Diagram for the Company database, we identified 4 Entities in class as below.

For each Entity given below:

2. Identify all the attributes for each Entity
3. Identify the Attribute Types: Key attributes, Multi-Valued Attributes, Composite Attributes, and Derived Attributes.

For any two entities and the given Compamy rules below:

4. Identify all relationships between 4 Entities below to create E-R Model for the Company database scheme.

Entities:

- Employee
- Department
- Dependent
- Project

Company Rules:

- Every employee should work for one department.
- Every employees should work on the projects.
- A Manager is the one who manages a Department.
- Every Department can have only one manager.
- A Supervisor is the one who supervises his/her employees.
- A department controlls projects.
- A project can be controlled by only one department.
- Some departments are located in multiple office locations

For each realtionship you identified,

- Name the realtionship
- Identify the cardinality of the relationship between two entities as either
  1 – 1
  1 – N or N – 1
  N – M
- Identify participant types: Total or Partial Participation for each entity

Submission:

Submit your Lab2_1 report in doc file with your E-R diagram (either in print or pencel and paper would be ok).
Give a brief explaination of the identified relationships and cardinality of each realtionship in your E-R diagram.
Submit Both on Blackboard and a printout in Class.

Example of a Relationship with Cardinality between Employee and Departmemnt in E-R diagram

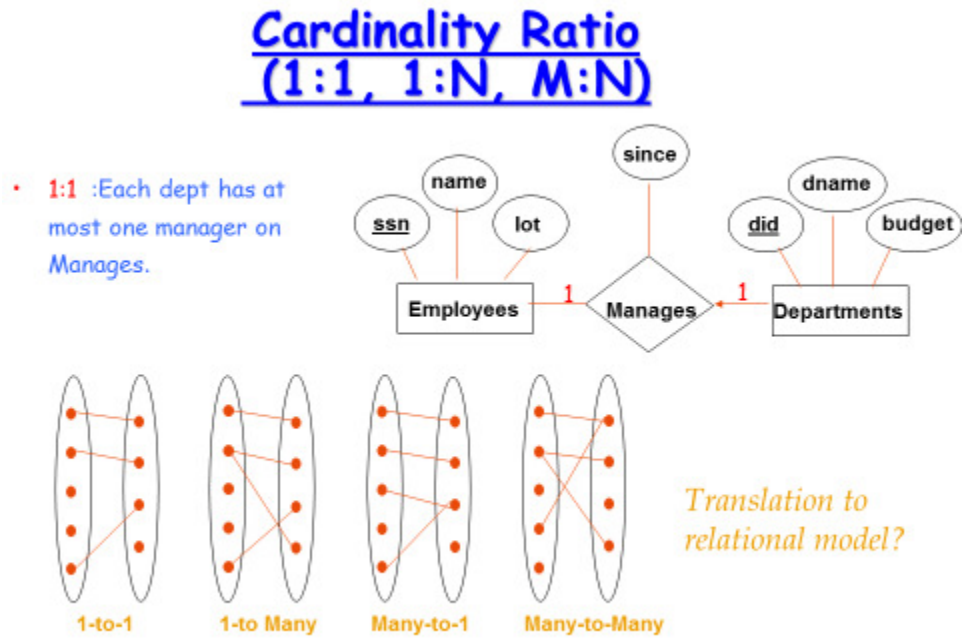

Figure 3. Symbols of ER diagrams

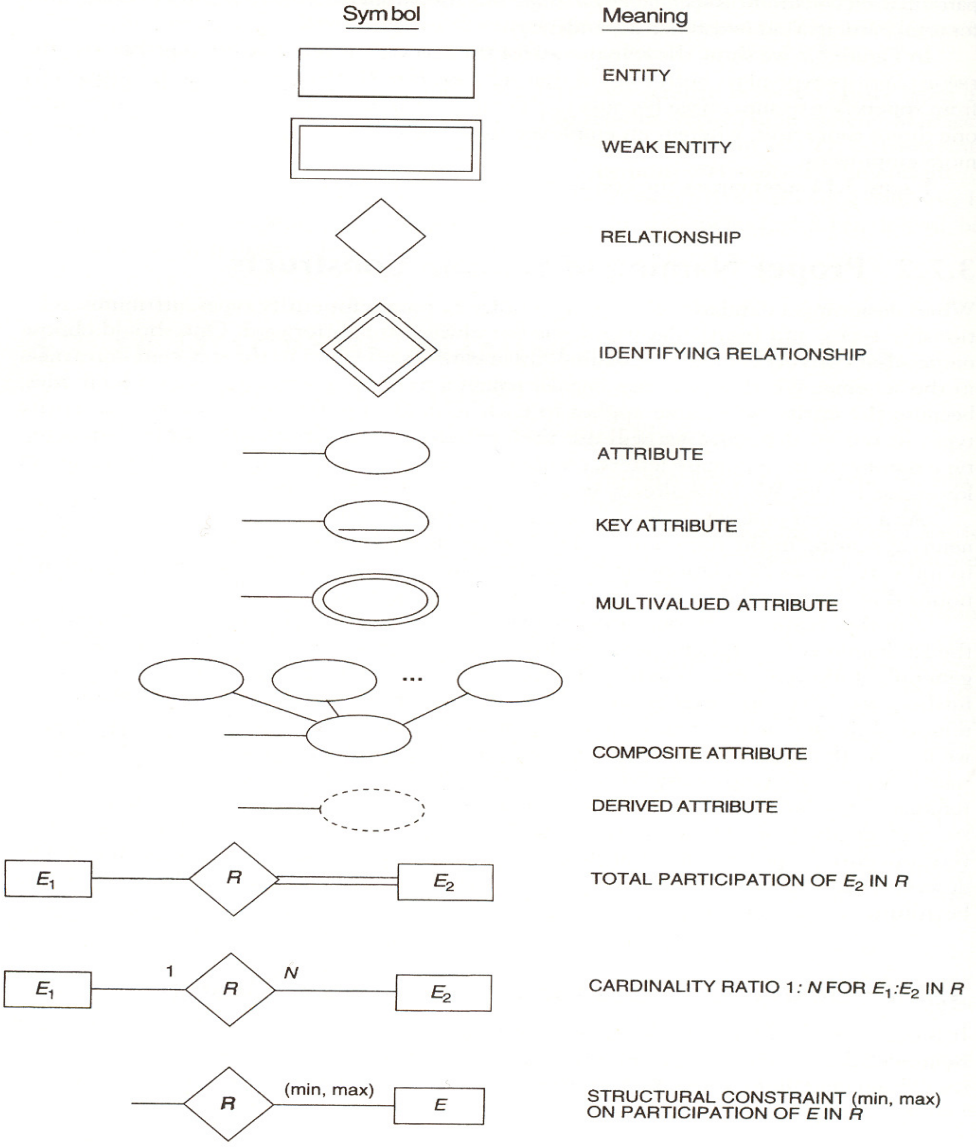

FIGURE 3.14 Summary of the notation for ER diagrams.

Company

EMPLOYEE

NAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPERSSN
John B Smith	123456789	09-Jan-55	731 Fondren, Houston, TX	M	30000	987654321
Franklin T Wong	333445555	08-Dec-45	638 Voss, Houston, TX	M	40000	888665555
Joyce A English	453453453	31-Jul-62	5631 Rice, Houston, TX	F	25000	333445555
Ramesh K Narayan	666884444	15-Sep-52	975 Fire Oak, Humble, TX	M	38000	333445555
James E Borg	888665555	10-Nov-27	450 Stone, Houston, TX	M	55000	
Jennifer S Wallace	987654321	20-Jun-31	291 Berry, Bellaire, TX	F	43000	888665555
Ahmad V Jabbar	987987987	29-Mar-59	980 Dallas, Houston, TX	M	25000	987654321
Alicia J Zelaya	999887777	19-Jul-58	3321 Castle, SPring, TX	F	25000	987654321

DEPARTMENT

DNAME	DNUMBER	MGRSSN	MGRSTARTDATE	DLOCATION
Headquarters	1	888665555	19-Jun-71	Houston
Administration	4	987654321	01-Jan-85	Stafford
Research	5	333445555	22-May-78	Bellaire, Sugarland, Houston
Automation	7	123456789	06-Oct-05	Cleveland

DEPENDENT

ESSN	DEPENDENT_NAME	SEX	BDATE	RELATIONSHIP
123456789	Alice	F	31-Dec-78	Daughter
123456789	Elizabeth	F	05-May-57	Spouse
123456789	Michael	M	01-Jan-78	Son
333445555	Alice	F	05-Apr-76	Daughter
333445555	Joy	F	03-May-48	Spouse
333445555	Theodore	M	25-Oct-73	Son
987654321	Abner	M	29-Feb-32	Spouse

PROJECT

PNAME	PNUMBER	PLOCATION	DNUM
ProductX	1	Bellaire	5
ProductY	2	Sugarland	5
ProductZ	3	Houston	5
Computerization	10	Stafford	4
Reorganization	20	Houston	1
Newbenefits	30	Stafford	4