

e.g. Data Description [Elmasri and Navathe]

- Company organized into department which have unique name, unique number, manager and date manager started.
- A Department has many locations and controls projects
- Each project has a name and unique location
- Employee information includes: name, sin number, address, salary, sex, and birth date. An employee works for one department, but may work on several projects (which could be from different departments)
- Employees have a supervisor and we want to keep track of the number of hours per week they spend on each project
- For insurance purposes the company keeps track of an employees depends. It records the dependents name, sex, birthdate, and relationship to the employee

Company Relational Database Schema [Elmasri and Navathe]

EMPLOYEE

fname	minit	lname	<u>ssn</u>	bdate	address	sex	salary	superssn	dno
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DEPARTMENT

dname	<u>dnumber</u>	mgrssn	mgrstartdate
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DEPT_LOCATIONS

<u>dnumber</u>	<u>dlocation</u>
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PROJECT

pname	<u>pnumber</u>	plocation	dnum
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WORKS_ON

<u>essn</u>	<u>pno</u>	hours
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DEPENDENT

<u>essn</u>	<u>dependent_name</u>	sex	bdate	relationship
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Note:

Attributes referring to the same thing can have different name

(pnumber vs. pno)

Attributes referring to different things can have the same name
(name of employee or
name of department)

Company Relations

EMPLOYEE									
FNAME	INIT	LNAME	SSN	BDATE	ADDRESS	SEX	SALARY	SUPERSSN	DNO
John	B	Smith	123456789	9-Jan-55	731 Fondern	M	30000	333445555	5
Franklin	T	Wong	333445555	8-Dec-45	638 Voss	M	40000	888665555	5
Alicia	J	Zelaya	999887777	19-Jul-58	3321 Castle	F	25000	987987987	4
Jennifer	S	Wallace	987654321	20-Jun-31	291 Berry	F	43000	888665555	4
Ramesh	K	Narayan	666884444	15-Sep-52	975 Fire Oak	M	38000	333445555	5
Joyce	A	English	453453453	31-Jul-62	5631 Rice	F	25000	333445555	5
Ahmad	V	Jabber	987987987	29-Mar-59	980 Dallas	M	25000	987654321	4
James	E	Borg	888665555	10-Nov-27	450 Stone	M	55000	NULL	1

DEPARTMENT			
DNAME	DNUMBER	MGRSSN	MGRSTARTDATE
Research	5	333445555	22-May-78
Administration	4	987654321	1-Jan-85
Headquarters	1	888665555	19-Jun-71

...Company Relations

DEPT_LOCATIONS	
DNUMBER	DLOCATION
1	Houston
4	Stafford
5	Bellaire
5	Sugarland
5	Houston

WORKS_ON		
ESSN	PNO	HOURS
123456789	1	32.50
123456789	2	7.50
666884444	3	40.00
453453453	1	20.00
453453453	2	20.00
333445555	2	10.00
333445555	3	10.00
333445555	10	10.00
333445555	20	10.00
999887777	30	30.00
999887777	10	10.00
987987987	10	35.00
987987987	30	5.00
987654321	30	20.00
987654321	20	15.00
888665555	20	NULL

...Company Relations

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

DEPENDENT				
ESSN	D_NAME	SEX	BDATE	RELATIONSHIP
333445555	Alice	F	5-Apr-76	DAUGHTER
333445555	Theodore	M	25-Oct-73	SON
333445555	Joy	F	3-May-48	SPOUSE
987654321	Abner	M	29-Feb-32	SPOUSE
123456789	Michael	M	1-Jan-78	SON
123456789	Alice	F	31-Jan-78	DAUGHTER
123456789	Elizabeth	F	5-May-57	SPOUSE