

1. Starting Point... two unrelated tables

EMPLOYEE							
EMPLOYEEID	SSN	LN	FN	HIREDATE	SALARY	QUOTA	COMMRATE
1	984823725	Bedecs	Anna	6/4/2007	\$69,700.00		
2	474786543	Gratacos Solsona	Antonio	8/8/1994	\$88,100.00	\$220,000.00	0.08
3	986423451	Axen	Thomas	7/6/1986	\$31,300.00		
4	901790450	Lee	Christina	9/9/1999	\$76,100.00		
5	039041052	O'Donnell	Martin	1/6/1988	\$57,800.00		
6	721861418	Pérez-Olaeta	Francisco	4/13/1993	\$43,200.00		
7	496594379	Xie	Ming-Yang	12/20/1990	\$29,800.00		
8	120773574	Andersen	Elizabeth	5/10/1977	\$76,500.00		
9	719812127	Mortensen	Sven	3/8/2000	\$70,900.00		
10	060242117	Wacker	Roland	3/26/1999	\$30,900.00		
11	793611853	Krschne	Peter	2/26/1999	\$75,600.00		
12	281808212	Edwards	John	4/24/1985	\$41,400.00		
13	842579377	Ludick	Andre	7/24/1975	\$88,400.00	\$280,000.00	0.065
14	288545317	Grilo	Carlos	1/28/1987	\$87,900.00		
15	663441331	Kupkova	Helena	11/23/1998	\$23,500.00		
16	723061381	Goldschmidt	Daniel	1/24/1978	\$60,500.00		
17	415831208	Bagel	Philippe	9/26/1975	\$26,700.00		
18	707052140	Autier Miconi	Catherine	8/8/2000	\$58,900.00	\$390,000.00	0.03
19	749936468	Eggerer	Alexander	7/21/1978	\$51,300.00		
20	479164762	Li	George	3/3/2005	\$71,300.00		
21	775793547	Tham	Bernard	5/23/1980	\$44,900.00		
22	323275414	Ramos	Luciana	1/6/1998	\$23,900.00		
23	919836801	Entin	Michael	1/9/1983	\$35,500.00		
24	367505261	Hasselberg	Jonas	2/3/2001	\$64,000.00		
25	912953305	Rodman	John	1/28/1987	\$50,400.00		

DEPARTMENT		
DEPTID	DEPTNAME	DEPTFAX
1	Accounting	480-423-6000
2	Sales	480-423-6100
3	Maintenance	480-423-7100
4	Human Resources	480-423-7500

Department(DeptID, DeptName, DeptFax)

Employee (EmployeeID, SSN, LN, FN, Hire Date, Salary, Quota, CommRate)

2. Include a foreign key to build a 1:M Relationship

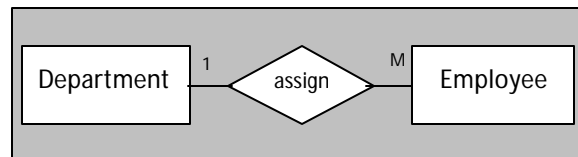
EMPLOYEE								
EMPLOYEEID	SSN	LN	FN	HIREDATE	SALARY	QUOTA	COMMRATE	DEPTID
1	984823725	Bedecs	Anna	6/4/2007	\$69,700.00			1
2	474786543	Gratacos Solsona	Antonio	8/8/1994	\$88,100.00	\$220,000.00	0.08	3
3	986423451	Axen	Thomas	7/6/1986	\$31,300.00			2
4	901790450	Lee	Christina	9/9/1999	\$76,100.00			2
5	039041052	O'Donnell	Martin	1/6/1988	\$57,800.00			1
6	721861418	Pérez-Olaeta	Francisco	4/13/1993	\$43,200.00			
7	496594379	Xie	Ming-Yang	12/20/1990	\$29,800.00			
8	120773574	Andersen	Elizabeth	5/10/1977	\$76,500.00			
9	719812127	Mortensen	Sven	3/8/2000	\$70,900.00			
10	060242117	Wacker	Roland	3/26/1999	\$30,900.00			
11	793611853	Krschne	Peter	2/26/1999	\$75,600.00			
12	281808212	Edwards	John	4/24/1985	\$41,400.00			
13	842579377	Ludick	Andre	7/24/1975	\$88,400.00	\$280,000.00	0.065	
14	288545317	Grilo	Carlos	1/28/1987	\$87,900.00			
15	663441331	Kupkova	Helena	11/23/1998	\$23,500.00			
16	723061381	Goldschmidt	Daniel	1/24/1978	\$60,500.00			
17	415831208	Bagel	Philippe	9/26/1975	\$26,700.00			
18	707052140	Autier Miconi	Catherine	8/8/2000	\$58,900.00	\$390,000.00	0.03	
19	749936468	Eggerer	Alexander	7/21/1978	\$51,300.00			
20	479164762	Li	George	3/3/2005	\$71,300.00			
21	775793547	Tham	Bernard	5/23/1980	\$44,900.00			
22	323275414	Ramos	Luciana	1/6/1998	\$23,900.00			
23	919836801	Entin	Michael	1/9/1983	\$35,500.00			
24	367505261	Hasselberg	Jonas	2/3/2001	\$64,000.00			
25	912953305	Rodman	John	1/28/1987	\$50,400.00			

DEPARTMENT		
DEPTID	DEPTNAME	DEPTFAX
1	Accounting	480-423-6000
2	Sales	480-423-6100
3	Maintenance	480-423-7100
4	Human Resources	480-423-7500

Department(DEPTID, DeptName, DeptFax)

Employee (EmployeeID, SSN, LN, FN, Hire Date, Salary, Quota, CommRate, DeptID)

foreign key: DeptID to Department relation



3. Remove Quota and COMM to save space wasted by Null values

EMPLOYEE						
EMPLOYEEID	SSN	LN	FN	HIREDATE	SALARY	DEPTID
1	984823725	Bedecs	Anna	6/4/2007	\$69,700.00	1
2	474786543	Gratacos Solsona	Antonio	8/8/1994	\$88,100.00	3
3	986423451	Axen	Thomas	7/6/1986	\$31,300.00	2
4	901790450	Lee	Christina	9/9/1999	\$76,100.00	2
5	039041052	O'Donnell	Martin	1/6/1988	\$57,800.00	1
6	721861418	Pérez-Olaeta	Francisco	4/13/1993	\$43,200.00	
7	496594379	Xie	Ming-Yang	12/20/1990	\$29,800.00	
8	120773574	Andersen	Elizabeth	5/10/1977	\$76,500.00	
9	719812127	Mortensen	Sven	3/8/2000	\$70,900.00	
10	060242117	Wacker	Roland	3/26/1999	\$30,900.00	
11	793611853	Krschne	Peter	2/26/1999	\$75,600.00	
12	281808212	Edwards	John	4/24/1985	\$41,400.00	
13	842579377	Ludick	Andre	7/24/1975	\$88,400.00	
14	288545317	Grilo	Carlos	1/28/1987	\$87,900.00	
15	663441331	Kupkova	Helena	11/23/1998	\$23,500.00	
16	723061381	Goldschmidt	Daniel	1/24/1978	\$60,500.00	
17	415831208	Bagel	Philippe	9/26/1975	\$26,700.00	
18	707052140	Autier Miconi	Catherine	8/8/2000	\$58,900.00	
19	749936468	Eggerer	Alexander	7/21/1978	\$51,300.00	
20	479164762	Li	George	3/3/2005	\$71,300.00	
21	775793547	Tham	Bernard	5/23/1980	\$44,900.00	
22	323275414	Ramos	Luciana	1/6/1998	\$23,900.00	
23	919836801	Entin	Michael	1/9/1983	\$35,500.00	
24	367505261	Hasselberg	Jonas	2/3/2001	\$64,000.00	
25	912953305	Rodman	John	1/28/1987	\$50,400.00	

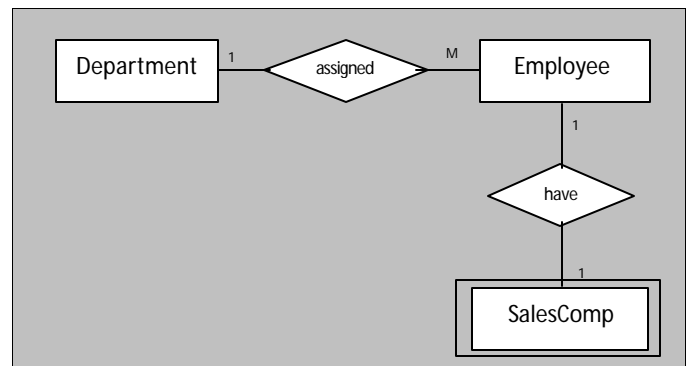
SALESCOMP		
EMPLOYEEID	QUOTA	COMMRATE
2	\$220,000.00	0.08
13	\$280,000.00	0.065
18	\$390,000.00	0.03

DEPARTMENT		
DEPTID	DEPTNAME	DEPTFAX
1	Accounting	480-423-6000
2	Sales	480-423-6100
3	Maintenance	480-423-7100
4	Human Resources	480-423-7500

Department(DeptID, DeptName, DeptFax)

Employee (EmployeeID, SSN, LN, FN, Hire Date, Salary, DeptID)
foreign key: DEPTID to Department relation

SalesComp(EmployeeeID, Quota, CommRate)
foreign key: EmployeeeID to Employee relation



4. Remove SSN and Salary to control field access

EMPLOYEE				
EMPLOYEEID	LN	FN	HIREDATE	DEPTID
1	Bedecs	Anna	6/4/2007	1
2	Gratacos Solsona	Antonio	8/8/1994	3
3	Axen	Thomas	7/6/1986	2
4	Lee	Christina	9/9/1999	2
5	O'Donnell	Martin	1/6/1988	1
6	Pérez-Olaeta	Francisco	4/13/1993	
7	Xie	Ming-Yang	12/20/1990	
8	Andersen	Elizabeth	5/10/1977	
9	Mortensen	Sven	3/8/2000	
10	Wacker	Roland	3/26/1999	
11	Krschne	Peter	2/26/1999	
12	Edwards	John	4/24/1985	
13	Ludick	Andre	7/24/1975	
14	Grilo	Carlos	1/28/1987	
15	Kupkova	Helena	11/23/1998	
16	Goldschmidt	Daniel	1/24/1978	
17	Bagel	Jean Philippe	9/26/1975	
18	Autier Miconi	Catherine	8/8/2000	
19	Eggerer	Alexander	7/21/1978	
20	Li	George	3/3/2005	
21	Tham	Bernard	5/23/1980	
22	Ramos	Luciana	1/6/1998	
23	Entin	Michael	1/9/1983	
24	Hasselberg	Jonas	2/3/2001	
25	Rodman	John	1/28/1987	

EMPLOYEECONFID		
EMPLOYEEID	SSN	SALARY
1	984823725	\$69,700.00
2	474786543	\$88,100.00
3	986423451	\$31,300.00
4	901790450	\$76,100.00
5	039041052	\$57,800.00
6	721861418	\$43,200.00
7	496594379	\$29,800.00
8	120773574	\$76,500.00
9	719812127	\$70,900.00
10	060242117	\$30,900.00
11	793611853	\$75,600.00
12	281808212	\$41,400.00
13	842579377	\$88,400.00
14	288545317	\$87,900.00
15	663441331	\$23,500.00
16	723061381	\$60,500.00
17	415831208	\$26,700.00
18	707052140	\$58,900.00
19	749936468	\$51,300.00
20	479164762	\$71,300.00
21	775793547	\$44,900.00
22	323275414	\$23,900.00
23	919836801	\$35,500.00
24	367505261	\$64,000.00
25	912953305	\$50,400.00

SALESCOMP		
EMPLOYEEID	QUOTA	COMMRATE
2	\$220,000.00	0.08
13	\$280,000.00	0.065
18	\$390,000.00	0.03

DEPARTMENT		
DEPTID	DEPTNAME	DEPTFAX
1	Accounting	480-423-6000
2	Sales	480-423-6100
3	Maintenance	480-423-7100
4	Human Resources	480-423-7500

Department(DEPTID, DeptName, DeptFax)

Employee (EmployeeID, LN, FN, Hire Date, DEPTID)
foreign key: DEPTID to Department relation

SalesComp(EmployeeID, Quota, CommRate)
foreign key: EmployeeID to Employee relation

EmployeeConfid(EmployeeID, SSN, Salary)
foreign key: EmployeeID to Employee relation

