**Company Database Schema**

Here is the schema of a company database, please implement it on any RDBMS you like and then try to create the following requests (queries): "create only the dependent table with all data and relations"

create table dependent (

ESSN INT NOT NULL,

FOREIGN KEY (ESSN) REFERENCES employee(SSN),

DepName varchar(100) NOT NULL,

Dsex char(50) NOT NULL,

DBDate date ,

PRIMARY KEY (ESSN, DepName)

);

INSERT INTO dependent (ESSN, DepName, Dsex, DBDate) VALUES (112233, "Hala Saied Ali", "F", 18/10/1970);

INSERT INTO dependent (ESSN, DepName, Dsex, DBDate) VALUES (223344, "Ahmed Kamel Shawki", "M", 27/3/1998);

INSERT INTO dependent (ESSN, DepName, Dsex, DBDate) VALUES (223344, "Mona Adel Mohamed", "F", 25/4/1975);

INSERT INTO dependent (ESSN, DepName, Dsex, DBDate) VALUES (321654, "Ramy Amr Omran", "M", 26/1/1990);

INSERT INTO dependent (ESSN, DepName, Dsex, DBDate) VALUES (321654, "Omar Amr Omran", "M", 30/3/1993);

INSERT INTO dependent (ESSN, DepName, Dsex, DBDate) VALUES (321654, "Sanaa Gawish", "F", 16/5/1973);

INSERT INTO dependent (ESSN, DepName, Dsex, DBDate) VALUES (512463, "Sara Edward ", "F", 15/9/2001);

INSERT INTO dependent (ESSN, DepName, Dsex, DBDate) VALUES (512463, "Nora Ghaly", "F", 22/6/1976);

**Employee**:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Fname** | **Lname** | **SSN** | **BDATE** | **Addresss** | **Sex** | **Salary** | **Superssn** | **Dno** |
| Ahmed | Ali | 112233 | 1/1/1965 | 15 Ali fahmy St.Giza | M | 1300 | 223344 | 10 |
| Kamel | Mohamed | 223344 | 15/10/1970 | 38 Mohy el dien abo el Ezz St.Cairo | M | 1800 | 321654 | 10 |
| Hanaa | Sobhy | 123456 | 18/3/1973 | 38 Abdel Khalik Tharwat St. Downtown.Cairo | F | 800 | 223344 | 10 |
| Amr | Omran | 321654 | 14/9/1963 | 44 Hilopolis.Cairo | M | 2500 | null | null |
| Noha | Mohamed | 968574 | 1/2/1975 | 55 Orabi St. El Mohandiseen .Cairo | F | 1600 | 321654 | 20 |
| Edward | Hanna | 512463 | 19/8/1972 | 18 Abaas El 3akaad St. Nasr City.Cairo | M | 1500 | 321654 | 30 |
| Mariam | Adel | 669955 | 12/6/1982 | 269 El-Haram st. Giza | F | 750 | 512463 | 20 |
| Maged | Raoof | 521634 | 6/4/1980 | 18 Kholosi st.Shobra.Cairo | M | 1000 | 968574 | 30 |

**Department**

|  |  |  |  |
| --- | --- | --- | --- |
| **Dname** | **DNum** | **MGRSSN** | **MGRStart Date** |
| DP1 | 10 | 223344 | 1/1/2005 |
| DP2 | 20 | 968574 | 1/3/2006 |
| DP3 | 30 | 512463 | 1/6/2006 |

**Works\_for**

|  |  |  |
| --- | --- | --- |
| **ESSN** | **Pno** | **Hours** |
| 223344 | 100 | 10 |
| 223344 | 200 | 10 |
| 223344 | 300 | 10 |
| 112233 | 100 | 40 |
| 968574 | 400 | 15 |
| 968574 | 700 | 15 |
| 968574 | 300 | 10 |
| 669955 | 400 | 20 |
| 223344 | 500 | 10 |
| 669955 | 700 | 7 |
| 669955 | 300 | 10 |
| 512463 | 500 | 10 |
| 512463 | 600 | 25 |
| 521634 | 500 | 10 |
| 521634 | 600 | 20 |
| 521634 | 300 | 6 |
| 521634 | 400 | 4 |

**Project**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Pname** | **Pnumber** | **Plocation** | **City** | **Dnum** |
| AL Solimaniah | 100 | Cairo\_Alex Road | Alex | 10 |
| Al Rabwah | 200 | 6th of October City | Giza | 10 |
| Al Rawdah | 300 | Zaied City | Giza | 10 |
| Al Rowad | 400 | Cairo\_Faiyom Road | Giza | 20 |
| Al Rehab | 500 | Nasr City | Cairo | 30 |
| Pitcho american | 600 | Maady | Cairo | 30 |
| Ebad El Rahman | 700 | Ring Road | Cairo | 20 |

**Dependent**

|  |  |  |  |
| --- | --- | --- | --- |
| **ESSN** | **Dependent\_name** | **Sex** | **Bdate** |
| 112233 | Hala Saied Ali | F | 18/10/1970 |
| 223344 | Ahmed Kamel Shawki | M | 27/3/1998 |
| 223344 | Mona Adel Mohamed | F | 25/4/1975 |
| 321654 | Ramy Amr Omran | M | 26/1/1990 |
| 321654 | Omar Amr Omran | M | 30/3/1993 |
| 321654 | Sanaa Gawish | F | 16/5/1973 |
| 512463 | Sara Edward | F | 15/9/2001 |
| 512463 | Nora Ghaly | F | 22/6/1976 |

**Data Manipulating Language:**

1. Insert your personal data to the employee table as a new employee in department number 30, SSN = 102672, Superssn = 112233.

INSERT INTO employee (SSN, Fname, LName, Bdate, Address, gender, Salary, Superssn, Dno) VALUES (102672, "Nada", "Saeed", "1973-03-18 00:00:00.000000", "22 Sidi Bishr st Alex", "F" ,1500 , 112233, 30);

1. Insert another employee with, personal data your friend as new employee in department number 30, SSN = 102660, but don’t enter any value for salary or supervisor number to him.

INSERT INTO employee (SSN, Fname, LName, Bdate, Address, gender, Dno) VALUES (102660, "Radwa", "Hassan", "1973-03-18 00:00:00.000000", "22 Sidi Bishr st Alex", "F" , 30);

1. In the department table insert new department called "DEPT IT", with id 100, employee with SSN = 112233 as a manager for this department. The start date for this manager is '1-11-2006'

INSERT INTO departments VALUES ("DEPT IT", 100, 112233, "2006-01-11 00:00:00.000000");

1. Do what is required if you know that: Mrs.Noha Mohamed(SSN=968574) moved to be the manager of the new department (id = 100), and they give you (use your SSN from question1) her position (Dept. 20 manager)
   1. First try to update her record in the department table
   2. Update your record to be department 20 manager.
   3. Update your friend data (entered in question2) to be in your teamwork (supervised by you)

update departments set MGRSSN = 102672 where Dnum = 20;

update departments set MGRSSN = 968574 where Dnum = 100;

1. Unfortunately, the company ended the contract with Mr. Kamel Mohamed (SSN=223344) so try to delete his data from your database in case you know that your friend will be temporarily in his position.

Hint: (Check if Mr. Kamel has dependents, works as a department manager, supervises any employees or works in any projects and handle these cases).

delete from dependent where ESSN = 223344;

delete from works\_for where ESSN = 223344;

update from department set MGRSSN = 102660 where MGRSSN = 223344;

update from employee set Superssn = 102660 where Superssn = 223344;

delete from employee where SSN = 223344;

1. And your salary has been upgraded by 20 percent of its last value.

update employee set Salary = Salary\*1.2 where SSN = 102672;

**Try to create the following Queries:**

1. Display all the employees Data.

Select \* from employee;

1. Display the employee First name, last name, Salary and Department number.

select Fname,Lname,Salary, Dno from employee;

1. Display all the projects names, locations and the department which is responsible about it.

select Pname,Plocation,Dnum from Project;

1. If you know that the company policy is to pay an annual commission for each employee with specific percent equals 10% of his/her annual salary. Display each employee full name and his annual commission in an ANNUAL COMM column (alias).

select concat(Fname,' ',Lname) as `Full Name`, salary\*0.1 as commission from employee;

1. Display the employees Id, name who earns more than 1000 LE monthly.

select SSN,concat(Fname,' ',Lname) as `Full Name` from employee where salary > 1000;

1. Display the employees Id, name who earns more than 10000 LE annually.

select SSN,concat(Fname,' ',Lname) as `Full Name` from employee where salary\*12 > 10000;

1. Display the names and salaries of the female employees

select Fname, Salary from employee where gender = "F";

1. Display each department id, name which managed by a manager with id equals 968574.

select Dnum, Dname from departments where MGRSSN = 968574;

1. Display the IDs, names and locations of the pojects which controlled with department 10.

select Pnumber, Pname, Plocation from project where Dnum = 10;