

## 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):

### Employee:

Fname	Lname	SSN	BDATE	Addresss	Gender	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	DNumber	MGRSSN	MGRStartdate
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	6 <sup>th</sup> 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	Gender	Bdate
123456	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

### Queries:

1. Display the employee **First name**, **last name**, **Salary** and **Department number** in **department 30** whose **salary from 1000 to 2000 LE monthly**

```
select Fname, Lname, Salary, Dno
from Employee
where Dno = 30
and salary between 1000 and 2000
```

2. Display all the **projects names**, **locations** and the **department number which is managed by it**.

```
select Pname, Plocation, Dnum
from Project
```

3. If you know that the company policy is to pay an annual commission for each employee which 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 Fname+" "+Lname as [Full Name], (Salary*12*0.1) as [ANNUAL COMM]
from Employee
```

4. Display the **employees Id**, **fname** who earns more than 1000 LE.

```
select SSN, Fname
from Employee
where Salary > 1000
```

5. Display the **names** and **salaries** of **the female employees**

```
select Fname+" "+Lname as Names, Salary
from Employee
where gender = 'F'
```

```
select Pname, Plocation
from Project
where Pname like 'p*'
```

```
CREATE TABLE Dependent (
    ESSN INT NOT NULL,
    Dependent_name CHAR(50) NOT NULL,
    GENDER CHAR(1), Bdate DATE,
```

PRIMARY KEY (ESSN,Dependent\_name),  
FOREIGN KEY (ESSN) REFERENCES Employee(SSN)

);

2- Then Insert 3 rows only

INSERT INTO Dependent

values (123456, ' Hala Saied Ali ', 'F', '18/10/1970');

INSERT INTO Dependent

values (223344, ' Ahmed Kamel Shawki', 'M', '27/3/1998');

.

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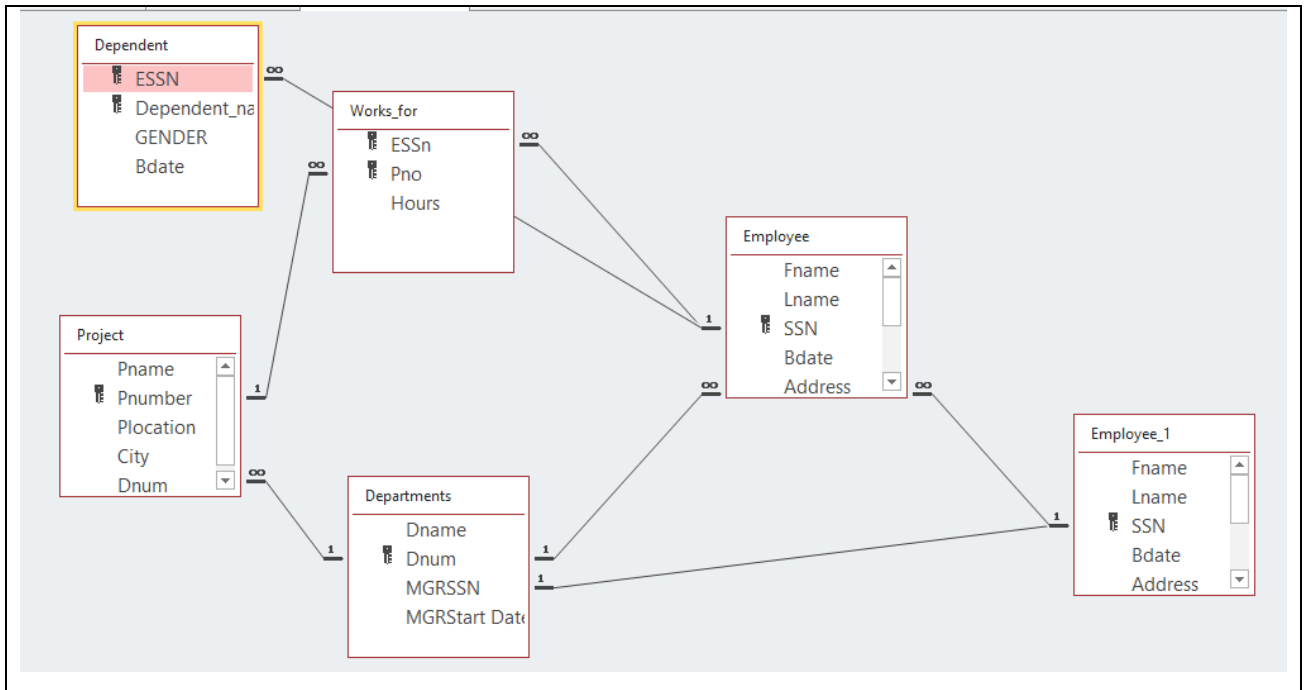
INSERT INTO Dependent

values (512463, 'Nora Ghaly', 'F', '22/6/1976');

All Dates					
Today					
Dependent					
Employee					
Older					
Departments					
Project					
Works_for					

ESSN	Dependent_	GENDER	Bdate	Click to
123456	Hala Saied Ali	F	18/10/1970	
223344	Ahmed Kamel	M	27/03/1998	
223344	Mona Adel Mo	F	25/04/1975	
321654	Omar Amr Om	M	30/03/1993	
321654	Ramy Amr Om	M	26/01/1990	
321654	Sanaa Gawish	F	16/05/1973	
512463	Nora Ghaly	F	22/06/1976	
512463	Sara Edward	F	15/09/2001	
*				



## Data Manipulating Language:

1. Insert new employee with **your personal data**, you will be in **department number 30**, your **SSN = 666666** & **Superssn = 112233**.

1- There's employee here SSN=666666, I deleted its row.

Doaa	Soleiman	666666					112233	30
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delete from Employee where SSN=666666;

2-

INSERT INTO Employee

values ('Mahmoud', 'Kamal', 666666, '07/03/1998', '1 Mandra Alex', 'M', 1100, 112233, 30);

Mahmoud	Kamal	666666	07/03/1998	1 Mandra Alex	M	1100	112233	30
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2. Insert another employee with **personal data your friend** as new employee in **department number 30** , **SSN = 555555**, but **don't enter any value for salary or manager number to him**.

INSERT INTO Employee(Fname, Lname, SSN, BDATE, Address, Gender, Dno)

values ('Amr', 'Adel', 555555, '23/07/1998', '1 Mandra Alex', 'M', 30);

Amr	Adel	555555	23/07/1998	1 Mandra Alex	M			30
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3. In the **department** table insert new department called **"DEPT IT"** , with **id 100**, **MgrSSN = 112233** as a manager for this department. The **start date for this manager is '08/12/2006'**

INSERT INTO Departments

values ('DEPT IT', 100, 112233, '08/12/2006');

Dname	Dnum	MGRSSN	MGRStart D
DP1	10	223344	01/01/2005
DP2	20	968574	03/01/2006
DP3	30	512463	06/01/2006
DEPT IT	100	112233	08/12/2006
*			



4. Do what is required if you know that : **Mrs.Noha Mohamed moved to be the manager of the new department (id = 100)**, and they give her position to your friend

**Steps:**

- Your friend will be the manager of **Dept 20** (her previous department)
- Update her record in your database to be a manager of **department 100**
- Update your friend data, add yourself as a supervisor for him (supervised by you)**

a. UPDATE Employee

Set Dno = 20

where SSN = 555555;

Amr	Adel	555555	23/07/1998	1 Mandra Alex	M			20
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UPDATE Departments

Set MGRSSN = 555555

where Dnum = 20;

b. UPDATE Employee

Set Dno = 100

where SSN = 968574;

Noha	Mohamed	968574	02/01/1975	55 Orabi St. El	F	1600	321654	100
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UPDATE Departments

Set MGRSSN = 968574

where Dnum = 100;

Dname	Dnum	MGRSSN	MGRStart Date
DP1	10	223344	01/01/2005
DP2	20	555555	03/01/2006
DP3	30	512463	06/01/2006
DEPT IT	100	968574	08/12/2006

c. UPDATE Employee

Set Superssn = 666666

where SSN = 555555;

Amr	Adel	555555	23/07/1998	1 Mandra Alex	M		666666	20
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5. Unfortunately the company ended the contract with **Mr.Kamel Mohamed** so **try to delete his data from your database**, in case you need, you can be temporary in his position.

Upgrade your salary by **20 present** of its last value.

UPDATE Employee

Set Superssn = 666666

where Superssn = 223344

Fname	Lname	SSN	Bdate	Address	gender	Salary	Superssn	Dno
Ahmed	Ali	112233	01/01/1965	15 Ali fahmy St	M	1300	666666	10
Hanaa	Sobhy	123456	18/03/1973	38 Abdel Khali	F	800	666666	10
Kamel	Mohamed	223344	15/10/1970	38 Mohy el die	M	1800	321654	10
Amr	Omran	321654	14/09/1963	44 Hilopolis.Ca	M	2500		
Edward	Hanna	512463	19/08/1972	18 Abaas El 3ah	M	1500	321654	30
Maged	Raof	521634	04/06/1980	18 Kholosi st.S	M	1000	968574	30
Amr	Adel	555555	23/07/1998	1 Mandra Alex	M		666666	20
Mahmoud	Kamal	666666	07/03/1998	1 Mandra Alex	M	1100	112233	30
Mariam	Adel	669955	06/12/1982	269 El-Haram s	F	750	512463	20
Noha	Mohamed	968574	02/01/1975	55 Orabi St. El	F	1600	321654	100

UPDATE Departments

Set MGRSSN = 666666

where Dnum = 10

Dname	Dnum	MGRSSN	MGRStart Date
DP1	10	666666	01/01/2005
DP2	20	555555	03/01/2006

UPDATE Works\_for

Set ESSn = 666666

where ESSn = 223344

ESSn	Pno	Hours
112233	100	40
512463	500	10
512463	600	25
521634	300	6
521634	400	4
521634	500	10
521634	600	20
666666	100	10
666666	200	10
666666	300	10
666666	500	10
669955	300	10
669955	400	20
669955	700	7
968574	300	10
968574	400	15
968574	700	15

Delete from Dependent  
where ESSN = 223344

Delete from employee  
where SSN = 223344

UPDATE Employee  
Set Salary = Salary + Salary\*0.2  
where SSN = 666666

Fname	Lname	SSN	Bdate	Address	gender	Salary	Superssn	Dno
Ahmed	Ali	112233	01/01/1965	15 Ali fahmy St	M	1300	666666	10
Hanaa	Sobhy	123456	18/03/1973	38 Abdel Khali	F	800	666666	10
Amr	Omran	321654	14/09/1963	44 Hilopolis, Ca	M	2500		
Edward	Hanna	512463	19/08/1972	18 Abaas El 3ak	M	1500	321654	30
Maged	Raoof	521634	04/06/1980	18 Kholosi st.S	M	1000	968574	30
Amr	Adel	555555	23/07/1998	1 Mandra Alex	M		666666	20
Mahmoud	Kamal	666666	07/03/1998	1 Mandra Alex	M	1320	112233	30
Mariam	Adel	669955	06/12/1982	269 El-Haram s	F	750	512463	20
Noha	Mohamed	968574	02/01/1975	55 Orabi St. El	F	1600	321654	100