

# Task 3

1-

WITH previous\_query AS (

select Dname as Department\_name, DNum as Department\_id ,MGRSSN as mg from departments)

SELECT previous\_query.Department\_id,previous\_query.Department\_name,

employee.ssn as ManagerID,employee.fname|| ' ' || employee.lname AS Manager

FROM previous\_query

**JOIN** employee

ON previous\_query.mg=employee.ssn;

	department_id integer	department_name character varying (50)	managerid integer	manager text
1	10	DP1	223344	Kamel Mohamed
2	30	DP3	512463	Edward Hanna
3	20	DP2	968574	Noha Mohamed

## **SELECT dname, pname**

#### FROM departments, project

### WHERE departments.dnum=project.dnum;

	dname character varying (50)	pname character varying (50)
1	DP1	AL Solimaniah
2	DP1	Al Rabwah
3	DP1	Al Rawdah
4	DP2	Al Rowad
5	DP3	Al Rehab
6	DP3	Pitcho american
7	DP2	Ebad El Rahman

3-

## ${\tt SELECT\ dependent.", employee.fname} || \verb|''|| employee.lname\ {\tt AS\ empName}$

#### FROM dependent ,employee

#### WHERE essn=ssn;

	_				
	essn [PK] integer	dependent_name [PK] character varying (255)	sex character varying (255)	bdate timestamp with time zone	empname text
1	112233	Hala Saied Ali	F	1970-10-18 00:00:00+02	Ahmed Ali
2	223344	Ahmed Kamel Shawki	M	1998-03-27 00:00:00+02	Kamel Mohamed
3	223344	Mona Adel Mohamed	F	1975-04-25 00:00:00+02	Kamel Mohamed
4	321654	Omar Amr Omran	M	1993-03-30 00:00:00+02	Amr Omran
5	321654	Ramy Amr Omran	М	1990-01-26 00:00:00+02	Amr Omran
6	321654	Sanaa Gawish	F	1973-05-16 00:00:00+03	Amr Omran
7	512463	Nora Ghaly	F	1976-06-22 00:00:00+03	Edward Hanna
8	512463	Sara Edward	F	2001-09-15 00:00:00+03	Edward Hanna

SELECT dependent.dependent\_name, dependent.Sex from dependent
where essn in (
select SSN from employee
where employee.sex = 'F')and dependent.sex = 'F'
UNION
SELECT dependent.dependent\_name, dependent.Sex from dependent
where essn in (
select SSN from employee where employee.sex ='M') and dependent.sex = 'M';

	dependent_name character varying (255)	sex character varying (255)
1	Ahmed Kamel Shawki	M
2	Omar Amr Omran	M
3	Ramy Amr Omran	M

### **SELECT pname, pnumber, plocation**

### FROM project

WHERE city in ('ALex', 'Cairo');

	pname character varying (50)	pnumber [PK] integer	plocation character varying (50)
1	Al Rehab	500	Nasr City
2	Pitcho american	600	Maady
3	Ebad El Rahman	700	Ring Road

## 6-

#### **SELECT \***

### FROM project

WHERE Pname like 'A%' or Pname like 'a%';

	haracter varying (50)	pnumber [PK] integer	plocation character varying (50)	city character varying (50)	dnum integer	•
A	AL Solimaniah	100	Cairo_Alex Road	Alex		10
A	Al Rabwah	200	6th of October City	Giza		10
A	Al Rawdah	300	Zaied City	Giza		10
A	Al Rowad	400	Cairo_Faiyom Road	Giza		20
A	Al Rehab	500	Nasr City	Cairo		30

#### **SELECT \***

#### **FROM employee**

#### WHERE dno=30 and (salary between 1000 and 2000);

fname character varying (50)	Iname character varying (50)	ssn [PK] integer	bdate timestamp with time zone	address character varying (50)	sex character varying (50)	salary integer	superssn integer	dno integer	,
Edward	Hanna	512463	1972-08-19 00:00:00+03	18 Abaas El 3akaad St. Nasr City.Cairo	M	1500	321654		30
Maged	Raoof	521634	1980-06-04 00:00:00+03	18 Kholosi st.Shobra.Cairo	M	1000	968574		30

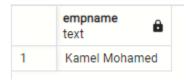
8-

 ${\tt SELECT\ employee.fname} || \ {\tt ''} || \ {\tt employee.lname\ AS\ empName}$ 

FROM employee join works\_for on employee.ssn=works\_for.essn and employee.dno=10

join project

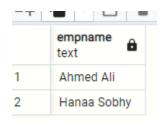
on works\_for.pno=project.pnumber and project.pname='Al Rabwah' and works\_for.hours>=10;



 ${\bf SELECT\ emp1.fname}|| \ {\bf ''} \ || \ {\bf emp1.lname\ AS\ empName}$ 

FROM employee as emp1, employee as emp2

WHERE emp1.Superssn=emp2.ssn and emp2.fname = 'Kamel'and emp2.lname = 'Mohamed';



## 10-

SELECT Pname, sum(Hours) AS Hours
FROM works\_for, project
WHERE works\_for.pno= project.pnumber

**GROUP BY 1**;

	pname character varying (50)	hours bigint	â
1	AL Solimaniah		50
2	Al Rabwah		10
3	Pitcho american		45
4	Al Rehab		30
5	Al Rawdah		36
6	Ebad El Rahman		22
7	Al Rowad		39

SELECT employee.fname||''|| employee.lname AS empName, project.pname
FROM employee, project, works\_for
WHERE works\_for.essn=employee.ssn and works\_for.pno=project.pnumber
ORDER BY 2;

	empname text	pname character varying (50)
	Kamel Mohamed	Al Rabwah
	Mariam Adel	Al Rawdah
	Kamel Mohamed	Al Rawdah
	Maged Raoof	Al Rawdah
	Noha Mohamed	Al Rawdah
	Edward Hanna	Al Rehab
	Maged Raoof	Al Rehab
	Kamel Mohamed	Al Rehab
	Noha Mohamed	Al Rowad
0	Mariam Adel	Al Rowad
1	Maged Raoof	Al Rowad
2	Ahmed Ali	AL Solimaniah
3	Kamel Mohamed	AL Solimaniah
4	Mariam Adel	Ebad El Rahman
5	Noha Mohamed	Ebad El Rahman
6	Maged Raoof	Pitcho american
7	Edward Hanna	Pitcho american

SELECT dno, dname, max(employee.salary) AS MAXSALARY, min(employee.salary) AS

MINSALARY, round(avg(employee.salary)) AS AVGSALARY

FROM departments, employee

WHERE departments.dnum=employee.dno

#### **GROUP BY 1, 2;**

	dno integer	dname character varying (50)	maxsalary integer	minsalary integer	numeric avgsalary
1	10	DP1	1800	800	1300
2	20	DP2	1600	750	1175
3	30	DP3	1500	1000	1250

# 13-

**SELECT departments.\*** 

FROM departments, employee

WHERE departments.dnum = employee.dno and employee.SSN in(select min(ssn) from employee);

dname character varying (50)	dnum [PK] integer	mgrssn integer	MGRStart Date /
DP1	10	223344	2005-01-01

SELECT e.fname||''|| e.lname AS empname

FROM employee AS e, departments AS d

WHERE e.ssn=d.mgrssn

and e.ssn NOT IN (select ESSN from dependent);



# 15-

SELECT e.dno, d.dname, count(e.ssn)

FROM employee AS e, departments AS d

WHERE e.dno=d.dnum

**GROUP BY e.dno, d.dname** 

HAVING avg(e.salary)<=(select avg(salary) from employee);</pre>

)	dn int	o eger	â	dname character varying (50)	count bigint	â
1		1	0	DP1		3
r 2		2	20	DP2		2
3		3	30	DP3		2

SELECT e.dno, e.lname, e.fname, p.pname

FROM works\_for AS w, employee AS e, project AS p

WHERE w.essn=e.ssn and w.pno=p.pnumber

ORDER BY e.dno, e.lname, e.fname;

dno integer	â	Iname character varying (50)	fname character varying (50)	pname character varying (50)
1	10	Ali	Ahmed	AL Solimaniah
1	10	Mohamed	Kamel	AL Solimaniah
1	10	Mohamed	Kamel	Al Rabwah
1	10	Mohamed	Kamel	Al Rawdah
1	10	Mohamed	Kamel	Al Rehab
2	20	Adel	Mariam	Al Rowad
2	20	Adel	Mariam	Ebad El Rahman
2	20	Adel	Mariam	Al Rawdah
2	20	Mohamed	Noha	Ebad El Rahman
2	20	Mohamed	Noha	Al Rawdah
2	20	Mohamed	Noha	Al Rowad
3	30	Hanna	Edward	Pitcho american
3	30	Hanna	Edward	Al Rehab
3	30	Raoof	Maged	Al Rowad
3	30	Raoof	Maged	Al Rawdah
3	30	Raoof	Maged	Al Rehab
3	30	Raoof	Maged	Pitcho american

SELECT p.pnumber, d.dname, e.lname, e.address, e.bdate

FROM employee AS e, departments AS d, project AS p

WHERE p.city like 'Cairo' and p.dnum=d.dnum and d.mgrssn=e.ssn;

	pnumber integer	dname character varying (50)	Iname character varying (50)	address character varying (50)	bdate timestamp with time zone
1	600	DP3	Hanna	18 Abaas El 3akaad St. Nasr City.Cairo	1972-08-19 00:00:00+03
2	500	DP3	Hanna	18 Abaas El 3akaad St. Nasr City.Cairo	1972-08-19 00:00:00+03
3	700	DP2	Mohamed	55 Orabi St. El Mohandiseen .Cairo	1975-01-02 00:00:00+02