SQL TASK 3

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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

2-

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-

SELECT dependent.*, employee.fname|| ' ' || employee.lname 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	M	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

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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

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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

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SELECT *

FROM project

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

pname character varying (50)	pnumber [PK] integer	plocation character varying (50)	city character varying (50)	dnum integer
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

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SELECT *

FROM employee

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

fname character varying (50)	lname 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

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SELECT employee.fname|| ' ' || 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;

	empname text 🔒
1	Kamel Mohamed

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SELECT emp1.fname|| ' ' || emp1.lname AS empName

FROM employee as emp1,employee as emp2

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

	empname 🔒 text
1	Ahmed Ali
2	Hanaa Sobhy

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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
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

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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

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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	avgsalary numeric
1	10	DP1	1800	800	1300
2	20	DP2	1600	750	1175
3	30	DP3	1500	1000	1250

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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 date
DP1	10	223344	2005-01-01

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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);

	empname 🔒 text
1	Noha Mohamed

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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);

	dno integer	dname character varying (50)	count bigint
1	10	DP1	3
2	20	DP2	2
3	30	DP3	2

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

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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)	lname 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