Company Database Schema

1. Display the **Department id**, **Department Name** and its **manager id** and the **Manager name.**

SELECT Dname, Dnum, MGRSSN, Fname +' '+ Lname as MGRname

FROM Departments as D , Employee as E

WHERE D.MGRSSN = E.ssn

Query1			
Dname	**Dnum**	**MGRSSN**	**MGRname**
DP1	10	223344	Kamel Mohamed
DP2	20	968574	Noha Mohamed
DP3	30	512463	Edward Hanna

2. Display the **project name** and **departments' name** that **control them**

SELECT Pname , Dname

FROM Project P , Departments D

WHERE P.Dnum = D.Dnum

Query1	
Pname	**Dname**
AL Solimaniah	DP1
Al Rabwah	DP1
Al Rawdah	DP1
Al Rowad	DP2
Ebad El Rahman	DP2
Al Rehab	DP3
Pitcho american	DP3

3. Display the **dependent name** for all the dependence and the **name of the employee** they depend on him/her.

SELECT Dependent_name , Fname + ' ' + Lname as Emp_name

FROM Dependent D , Employee E

WHERE D.ESSN = E.SSN

Query1	
Dependent_name	**Emp_name**
Hala Saied Ali	Hanaa Sobhy
Ahmed Kamel	Kamel Mohamed
Mona Adel Mohamed	Kamel Mohamed
Omar Amr Omran	Amr Omran
Ramy Amr Omran	Amr Omran
Sanaa Gawish	Amr Omran
Nora Ghaly	Edward Hanna
Sara Edward	Edward Hanna

4. Retrieve the employee **first name, project name** of all employees work in **department 10** who **works more than or equal 10 hours** ordered by **first name**.

SELECT Fname , Pname

FROM Employee E , Project P , Works_for W

WHERE E.SSN = W.ESSn

and P.Pnumber = W.Pno

and E.Dno = 10

and W.Hours >= 10

ORDER BY Fname

Query1	
Fname	**Pname**
Ahmed	AL Solimaniah
Kamel	Al Rehab
Kamel	Al Rawdah
Kamel	Al Rabwah
Kamel	AL Solimaniah

5. List the **last name** of all **managers** who have **no dependents.**

SELECT Lname

FROM Employee E

WHERE E.SSN IN (SELECT MGRSSN

FROM Departments

) AND E.SSN NOT IN (SELECT ESSN

FROM Dependent)

Query1
Lname
Mohamed

6. Display the **department name** which has the **smallest employee ID over all employees' ID.**

SELECT Dname

FROM Departments

WHERE Dnum = (SELECT Dno

FROM Employee

WHERE SSN < =ALL (SELECT SSN

FROM EMPLOYEE))

Query1
Dname
DP1

7. For each department >>> display **department name and number of its employees**
   -- if its **average salary is less than 1200**

SELECT Dname , COUNT(SSN)

FROM Departments D, Employee E

WHERE D.Dnum = E.Dno

GROUP BY Dname

HAVING AVG(Salary) < 1200

Query1	
Dname	**Expr1001**
DP2	2

8. Find the **fname** of the employees who **directly supervised** with '**Kamel Mohamed'.**

SELECT Fname

From Employee

WHERE Superssn = (SELECT SSN

FROM Employee

WHERE Fname ="Kamel")

Query1
Fname
Ahmed
Hanaa

9. Retrieve a list of employees (**fname**) and the projects (**project name**) they are working on ordered by **department no, last name, first name**.

SELECT Fname , Pname

FROM Employee E , Project P , Works_for W

WHERE E.SSN = W.ESSn

AND P.Pnumber = W.Pno

ORDER BY E.Dno , Lname , Fname

Query1	
Fname	**Pname**
Ahmed	AL Solimaniah
Kamel	AL Solimaniah
Kamel	Al Rabwah
Kamel	Al Rehab
Kamel	Al Rawdah
Mariam	Ebad El Rahman
Mariam	Al Rowad
Mariam	Al Rawdah
Noha	Al Rowad
Noha	Al Rawdah
Noha	Ebad El Rahman
Edward	Pitcho american
Edward	Al Rehab
Maged	Al Rehab
Maged	Al Rowad
Maged	Pitcho american
Maged	Al Rawdah

10.   Find the **project number**, the **controlling department name**, the **department manager last name**, address and **birthdate**. For each project located in '**Cairo'** City

SELECT Pname , P.Dnum , Lname , Address , Bdate

FROM Project P, Departments D, Employee E

WHERE P.City = "Cairo"

AND P.Dnum = D.Dnum

AND D.MGRSSN = E.SSN

Query1				
Pname	**Dnum**	**Lname**	**Address**	**Bdate**
Al Rehab	30	Hanna	18 Abaas El 3akaad St. Nasr City.Cairo	19/08/1972
Pitcho american	30	Hanna	18 Abaas El 3akaad St. Nasr City.Cairo	19/08/1972
Ebad El Rahman	20	Mohamed	55 Orabi St. El Mohandiseen .Cairo	02/01/1975

11.   For each department, retrieve the **department name** and the **maximum**, **minimum** and **average salary** of its employees.

SELECT Dname , Max(Salary) as Max_salary , Min(Salary) as Min_salary , Avg(Salary) as Avg_salary

From Departments D, Employee E

Where D.Dnum = E.Dno

GROUP BY Dname

Query1			
Dname	**Max_salary**	**Min_salary**	**Avg_salary**
DP1	1800	800	1300
DP2	1600	750	1175
DP3	1500	1000	1250