

## JOIN COMPANY DATABASE

1. Display the department ID, department name, manager ID, and the full name of the manager.

```
--Display the department ID, department name, manager ID, and the full name of the manager-----  
SELECT d.Dnum,  
       d.Dname,  
       d.MGRSSN,  
       e.Fname + ' ' + e.Lname AS Manager_Name  
FROM Departments d  
INNER JOIN Employee e  
ON d.MGRSSN = e.SSN;
```

	Dnum	Dname	MGRSSN	Manager_Name
1	10	DP1	223344	Kamel Mohamed
2	20	DP2	968574	Noha Mohamed
3	30	DP3	512463	Edward Hanna

2. Display the names of departments and the names of the projects they control.

```
----- Display the names of departments and the names of the projects they control-----  
SELECT d.Dname AS Department_Name,  
       p.Pname AS Project_Name  
FROM Departments d  
INNER JOIN Project p ON d.Dnum = p.Dnum;
```

100 %

	Department_Name	Project_Name
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. Display full data of all dependents, along with the full name of the employee they depend on.

```
SELECT dep.*,
       e.Fname + ' ' + e.Lname AS Employee_FullName
  FROM Dependent dep
 INNER JOIN Employee e
    ON dep.Essn = e.SSN;
```

The screenshot shows the SQL Server Management Studio interface with the 'Results' tab selected. The query has been executed, and the results are displayed in a table. The table has columns: ESSN, Dependent\_name, Sex, Bdate, and Employee\_FullName. The data shows various dependents with their names, genders, birthdates, and the full names of the employees they depend on.

ESSN	Dependent_name	Sex	Bdate	Employee_FullName
112233	Hala Saied Ali	F	1970-10-18 00:00:00.000	Ahmed Ali
223344	Ahmed Kamel Shawki	M	1998-03-27 00:00:00.000	Kamel Mohamed
223344	Mona Adel Mohamed	F	1975-04-25 00:00:00.000	Kamel Mohamed
321654	Omar Amr Omran	M	1993-03-30 00:00:00.000	Amr Omran
321654	Ramy Amr Omran	M	1990-01-26 00:00:00.000	Amr Omran
321654	Sanaa Gawish	F	1973-05-16 00:00:00.000	Amr Omran
512463	Nora Ghaly	F	1976-06-22 00:00:00.000	Edward Hanna
512463	Sara Edward	F	2001-09-15 00:00:00.000	Edward Hanna

4. Display the project ID, name, and location of all projects located in Cairo or Alex

-----Display all project data where the project name starts with the letter 'A'-----

```
SELECT *FROM Project
 WHERE Pname LIKE 'A%';
```

-----Display the project ID, name, and location of all projects located in Cairo or Alex-----

```
SELECT Pnumber AS Project_ID,
       Pname AS Project_Name,
       Plocation AS Project_Location,City
  FROM Project
 WHERE City IN ('Cairo', 'Alex');
SELECT*FROM Project;
```

The screenshot shows the SQL Server Management Studio interface with the 'Results' tab selected. The query has been executed, and the results are displayed in a table. The table has columns: Project\_ID, Project\_Name, Project\_Location, and City. The data shows four projects located in Cairo or Alex.

Project_ID	Project_Name	Project_Location	City
100	AL Solimaniah	Cairo_Alex Road	Alex
500	Al Rehab	Nasr City	Cairo
600	Pitcho american	Maady	Cairo
700	Ebad El Rahman	Ring Road	Cairo

5. Display all project data where the project name starts with the letter 'A'.

```
--Display all project data where the project name starts with the letter 'A'-----  
SELECT *FROM Project  
WHERE Pname LIKE 'A%';
```

	Pname	Pnumber	Plocation	City	Dnum
1	AL Solimaniah	100	Cairo_Alex Road	Alex	10
2	Al Rabwah	200	6th of October City	Giza	10
3	Al Rawdah	300	Zaied City	Giza	10
4	Al Rowad	400	Cairo_Faiyom Road	Giza	20
5	Al Rehab	500	Nasr City	Cairo	30

6. Display the IDs and names of employees in department 30 with a salary between 1000 and 2000 LE

```
---- Salary BETWEEN 1000 AND 2000  
SELECT SSN AS Employee_ID,  
       Fname + ' ' + Lname AS Employee_Name,  
       Dno  
  FROM Employee  
 WHERE Dno = 30  
   AND Salary BETWEEN 1000 AND 2000;
```

.00 %

Results Messages

	Employee_ID	Employee_Name	Dno
1	512463	Edward Hanna	30
2	521634	Maged Raoof	30

7. Retrieve the names of employees in department 10 who work  $\geq$  10 hours/week on the "AL Rabwah" project.

```

SELECT e.Fname + ' ' + e.Lname AS Employee_Name
FROM Employee e
JOIN Works_for wf ON e.SSN = wf.ESSn
JOIN Project p ON wf.Pno = p.Pnumber
WHERE e.Dno = 10
AND wf.Hours >= 10
AND p.Pname = 'AL Rabwah';

```

%	<
Results	Messages
Employee_Name	
Kamel Mohamed	

8.Find the names of employees who are directly supervised by "Kamel Mohamed"

```

SELECT e.Fname + ' ' + e.Lname AS Employee_Name
FROM Employee e
INNER JOIN Employee s ON e.SSN = s.Superssn
WHERE s.Fname = 'Kamel' AND s.Lname = 'Mohamed';

```

%	<
Results	Messages
Employee_Name	
Amr Omran	

9.Retrieve the names of employees and the names of the projects they work on, sorted by project name

```
SELECT e.Fname + ' ' + e.Lname AS Employee_Name,
       p.Pname AS Project_Name
  FROM Employee e
 JOIN Works_for wf ON e.SSN = wf.ESSn
 JOIN Project p ON wf.Pno = p.Pnumber
 ORDER BY p.Pname;
```

	Employee_Name	Project_Name
1	Kamel Mohamed	Al Rabwah
2	Kamel Mohamed	Al Rawdah
3	Maged Raof	Al Rawdah
4	Mariam Adel	Al Rawdah
5	Noha Mohamed	Al Rawdah
6	Kamel Mohamed	Al Rehab
7	Edward Hanna	Al Rehab
8	Maged Raof	Al Rehab
9	Maged Raof	Al Rowad
10	Mariam Adel	Al Rowad
11	Noha Mohamed	Al Rowad
12	Ahmed Ali	AL Solimaniah
13	Kamel Mohamed	AL Solimaniah
14	Mariam Adel	Ebad El Rahman
15	Noha Mohamed	Ebad El Rahman
16	Edward Hanna	Pitcho american
17	Maged Raof	Pitcho american

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

```
SELECT p.Pnumber AS Project_Number,
       d.Dname AS Department_Name,
       e.Lname AS Manager_LastName,
       e.Address,
       e.Bdate
  FROM Project p
 JOIN Departments d ON p.Dnum = d.Dnum
 JOIN Employee e ON d.MGRSSN = e.SSN
 WHERE p.City = 'Cairo';
```

Project_Number	Department_Name	Manager_LastName	Address	Bdate
500	DP3	Hanna	18 Abaas El Zakaad St. Nasr City.Cairo	1972-08-19 00:00:00.000
600	DP3	Hanna	18 Abaas El Zakaad St. Nasr City.Cairo	1972-08-19 00:00:00.000
700	DP2	Mohamed	55 Orabi St. El Mohandiseen .Cairo	1975-01-02 00:00:00.000

11.Display all data of managers in the company

```

SELECT e.*  

FROM Employee e  

JOIN Departments d ON e.SSN = d.MGRSSN;

```

% ▾

Fname	Lname	SSN	Bdate	Address	Sex	Salary	Superssn	Dno
Kamel	Mohamed	223344	1970-10-15 00:00:00.000	38 Mohy el dien abo el Ezz St.Cairo	M	1800	321654	10
Noha	Mohamed	968574	1975-01-02 00:00:00.000	55 Orabi St. El Mohandiseen Cairo	F	1600	321654	20
Edward	Hanna	512463	1972-08-19 00:00:00.000	18 Abaas El Zakaad St. Nasr City.Cairo	M	1575	321654	30

12. Display all employees and their dependents, even if some employees have no dependents

```

-----Display all employees and their dependents, even if some employees have no dependents-----

```

```

SELECT e.Fname + ' ' + e.Lname AS Employee_Name,  

       d.Dependent_name,  

       d.Sex,  

       d.Bdate,ESSN  

FROM Employee e  

LEFT JOIN Dependent d ON e.SSN = d.ESSN;

```

% ▾

Employee_Name	Dependent_name	Sex	Bdate	ESSN
MKM YourLastName	NULL	NULL	NULL	NULL
Ahmed Ali	Hala Saeid Ali	F	1970-10-18 00:00:00.000	112233
Hanaa Sobhy	NULL	NULL	NULL	NULL
Kamel Mohamed	Ahmed Kamel Shawki	M	1998-03-27 00:00:00.000	223344
Kamel Mohamed	Mona Adel Mohamed	F	1975-04-25 00:00:00.000	223344
Amr Omran	Omar Amr Omran	M	1993-03-30 00:00:00.000	321654
Amr Omran	Ramy Amr Omran	M	1990-01-26 00:00:00.000	321654
Amr Omran	Sanaa Gawish	F	1973-05-16 00:00:00.000	321654
Edward Hanna	Nora Ghaly	F	1976-06-22 00:00:00.000	512463
Edward Hanna	Sara Edward	F	2001-09-15 00:00:00.000	512463
Maged Raoof	NULL	NULL	NULL	NULL
Mariam Adel	NULL	NULL	NULL	NULL
Noha Mohamed	NULL	NULL	NULL	NULL