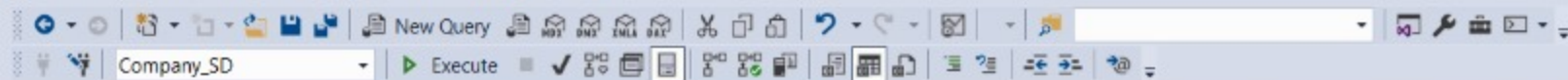


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SQLQuery1.sql - M...mpany_SD (sa (65))* Datatypes.sql - ME...mpany_SD (sa (70)) Day4.sql - MENNAS...pany_SD (sa (64))

```
1 --1. Display (Using Union Function)
2 --a. The name and the gender of the dependence that's gender is Female and depending on Female Employee.
3 --b. And the male dependence that depends on Male Employee.
4 select Dependent.Dependent_name , Dependent.Sex from Dependent inner join Employee on Employee.SSN = Dependent.ESSN and Employee.Sex='F' and Dependent.Sex='F'
5 union all
6 select Dependent.Dependent_name , Dependent.Sex from Dependent inner join Employee on Employee.SSN = Dependent.ESSN and Employee.Sex='M' and Dependent.Sex='M'
7
8
9
10
11
12
13
14
15
16
17
18
```

100 %

Results Messages

	Dependent_name	Sex
1	Ahmed Kamel Shawki	M
2	Omar Amr Omran	M
3	Ramy Amr Omran	M

SQLQuery1.sql - MENNAS-LAPTOP\MSSQLSERVER22.Company_SD (sa (65)) - Microsoft SQL Server Management Studio

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Company_SD

Execute

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SQLQuery1.sql - M...mpany_SD (sa (65))

Datatypes.sql - ME...mpany_SD (sa (70))

Day4.sql - MENNAS...pany_SD (sa (64))

1

--1. Display (Using Union Function)

2

--a. The name and the gender of the dependence that's gender is Female and depending on Female Employee.

3

--b. And the male dependence that depends on Male Employee.

4

select Dependent.Dependent_name , Dependent.Sex from Dependent inner join Employee on Employee.SSN = Dependent.ESSN and Employee.Sex='F' and Dependent.Sex='F'

5

union all

6

select Dependent.Dependent_name , Dependent.Sex from Dependent inner join Employee on Employee.SSN = Dependent.ESSN and Employee.Sex='M' and Dependent.Sex='M'

7

8

--2. For each project, list the project name and the total hours per week (for all employees) spent on that project.

9

select Project.Pname , sum(Works_for.Hours) as HourPerWeek from project left join Works_for on Project.Pnumber = Works_for.Pno

10

group by Pname

11

12

13

14

15

16

17

18

100 %

Results

Messages

	Pname	HourPerWeek
1	Al Rabwah	10
2	Al Rawdah	36
3	Al Rehab	30
4	Al Rowad	39
5	AL Solimaniah	50
6	Ebad El Rahman	22
7	Pitcho american	45

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SQLQuery1.sql - M...mpany_SD (sa (65))* Datatypes.sql - ME...mpany_SD (sa (70)) Day4.sql - MENNAS...pany_SD (sa (64))

```
3 --b. And the male dependence that depends on Male Employee.
4 select Dependent.Dependent_name , Dependent.Sex from Dependent inner join Employee on Employee.SSN = Dependent.ESSN and Employee.Sex='F' and Dependent.Sex='F'
5 union all
6 select Dependent.Dependent_name , Dependent.Sex from Dependent inner join Employee on Employee.SSN = Dependent.ESSN and Employee.Sex='M' and Dependent.Sex='M'
7
8 --2. For each project, list the project name and the total hours per week (for all employees) spent on that project.
9 select Project.Pname , sum(Works_for.Hours) as HourPerWeek from project left join Works_for on Project.Pnumber = Works_for.Pno
10 group by Pname
11
12 --3. Display the data of the department which has the smallest employee ID over all employees' ID.
13 select Departments.* from Employee inner join Departments on Departments.Dnum = Employee.Dno
14 where Employee.SSN =(select min(SSN) from Employee )
15
16
17
18
19
20
```

100 %

Results Messages

	Dname	Dnum	MGRSSN	MGRStart Date
1	DP3	30	512463	2006-01-06 00:00:00.000

Query executed successfully.

MENNAS-LAPTOP\MSSQLSERVER22... sa (65) Company_SD 00:00:00 1 row

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SQLQuery1.sql - M...mpany_SD (sa (65)) * Datatypes.sql - ME...mpany_SD (sa (70)) Day4.sql - MENNAS...pany_SD (sa (64))

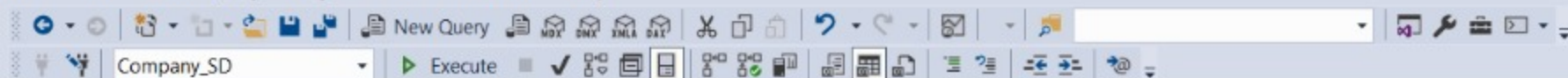
```
4 select Dependent.Dependent_name , Dependent.Sex from Dependent inner join Employee on Employee.SSN = Dependent.ESSN and Employee.Sex='F' and Dependent.Sex='F'
5 union all
6 select Dependent.Dependent_name , Dependent.Sex from Dependent inner join Employee on Employee.SSN = Dependent.ESSN and Employee.Sex='M' and Dependent.Sex='M'
7
8 --2. For each project, list the project name and the total hours per week (for all employees) spent on that project.
9 select Project.Pname , sum(Works_for.Hours) as HourPerWeek from project left join Works_for on Project.Pnumber = Works_for.Pno
10 group by Pname
11
12 --3. Display the data of the department which has the smallest employee ID over all employees' ID.
13 select Departments.* from Employee inner join Departments on Departments.Dnum = Employee.Dno
14 where Employee.SSN =(select min(SSN) from Employee )
15
16 --4. For each department, retrieve the department name and the maximum, minimum and average salary of its employees.
17 select Departments.Dname,Dnum , min(Salary) as minSalary ,max(Salary) as maxSalary,avg(Salary) as avgSalary from Departments
18 left join Employee on Departments.Dnum = Employee.Dno
19 group by Dname,Dnum
20
21
```

100 %

Results Messages

	Dname	Dnum	minSalary	maxSalary	avgSalary
1	DP1	10	1800	1800	1800
2	DP2	20	750	1600	1175
3	DP3	30	1000	3600	2033

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SQLQuery1.sql - M...mpany_SD (sa (65))* Datatypes.sql - ME...mpany_SD (sa (70)) Day4.sql - MENNAS...pany_SD (sa (64))

```
10 group by Pname
11
12 --3. Display the data of the department which has the smallest employee ID over all employees' ID.
13 select Departments.* from Employee inner join Departments on Departments.Dnum = Employee.Dno
14 where Employee.SSN =(select min(SSN) from Employee )
15
16 --4. For each department, retrieve the department name and the maximum, minimum and average salary of its employees.
17 select Departments.Dname,Dnum , min(Salary) as minSalary ,max(Salary) as maxSalary,avg(Salary) as avgSalary from Departments
18 left join Employee on Departments.Dnum = Employee.Dno
19 group by Dname,Dnum
20
21 --5. List the full name of all managers who have no dependents.
22 select Fname +' '+Lname as name , SSN FROM Employee a inner join Departments b
23 on a.SSN = b.MGRSSN and not exists (select * from Dependent where b.MGRSSN = Dependent.ESSN)
24
```

100 %

Results Messages

	name	SSN
1	Noha Mohamed	968574

SQLQuery1.sql - MENNAS-LAPTOP\MSSQLSERVER22.Company_SD (sa (65))* - Microsoft SQL Server Management Studio

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Company_SD Execute

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SQLQuery1.sql - M...mpany_SD (sa (65))* Datatypes.sql - ME...mpany_SD (sa (70)) Day4.sql - MENNAS...pany_SD (sa (64))

```
15
16 --4. For each department, retrieve the department name and the maximum, minimum and average salary of its employees.
17 select Departments.Dname,Dnum , min(Salary) as minSalary ,max(Salary) as maxSalary,avg(Salary) as avgSalary from Departments
18 left join Employee on Departments.Dnum = Employee.Dno
19 group by Dname,Dnum
20
21 --5. List the full name of all managers who have no dependents.
22 select Fname +' '+Lname as name , SSN FROM Employee a inner join Departments b
23 on a.SSN = b.MGRSSN and not exists (select * from Dependent where b.MGRSSN = Dependent.ESSN)
24
25 --6. For each department-- if its average salary is less than the average salary of all employees-- display its number, name and number of its employees.
26 select Dname,Dnum, count(Employee.SSN) ,avg(Salary) as avgSalary from Departments left join Employee on Departments.Dnum = Employee.Dno
27 group by Dname,Dnum
28 having avg(Salary) <(select avg(salary) from Employee)
29
```

100 %

Results Messages

	Dname	Dnum	(No column name)	avgSalary
1	DP2	20	2	1175

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Object Explorer SQLQuery1.sql - M...mpany_SD (sa (65))* Datatypes.sql - ME...mpany_SD (sa (70)) Day4.sql - MENNAS...pany_SD (sa (64))

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```
22 select Fname + ' '+Lname as name , SSN FROM Employee a inner join Departments b
23 on a.SSN = b.MGRSSN and not exists (select * from Dependent where b.MGRSSN = Dependent.ESSN)
24
25 --6. For each department-- if its average salary is less than the average salary of all employees-- display its number, name and number of its employees.
26 select Dname,Dnum, count(Employee.SSN) ,avg(Salary) as avgSalary from Departments left join Employee on Departments.Dnum = Employee.Dno
27 group by Dname,Dnum
28 having avg(Salary) <(select avg(salary) from Employee)
29
30 --7. Retrieve a list of employees names and the projects names they are working on ordered by department number and within each department,
31 --ordered alphabetically by last name, first name.
32 select Fname + ' '+Lname as name , Pname , d.Dnum FROM Employee as emp inner join Works_for as w on emp.SSN = w.ESSN
33 inner join Project as p on w.Pno = p.Pnumber inner join
34 Departments as d on d.Dnum = p.Dnum
35 order by d.Dnum , Lname,Fname
36
37
```

100 %

Results Messages

	name	Pname	Dnum
1	Mariam Adel	Al Rawdah	10
2	Ahmed Ali	AL Solimaniah	10
3	Kamel Mohamed	AL Solimaniah	10
4	Kamel Mohamed	Al Rabwah	10
5	Kamel Mohamed	Al Rawdah	10
6	Noha Mohamed	Al Rawdah	10
7	Maged Raouf	Al Rawdah	10
8	Mariam Adel	Al Rowad	20
9	Mariam Adel	Ebad El Rahman	20
10	Noha Mohamed	Al Rowad	20
11	Noha Mohamed	Ebad El Rahman	20
12	Maged Raouf	Al Rowad	20
13	Edward Hanna	Al Rehab	30
14	Edward Hanna	Pitcho american	30
15	Kamel Mohamed	Al Rehab	30
16	Maged Raouf	Al Rehab	30
17	Maged Raouf	Pitcho american	30



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SQLQuery1.sql - M...mpany_SD (sa (65))*

Datatypes.sql - ME...mpany_SD (sa (70))

Day4.sql - MENNAS...pany_SD (sa (64))

```
25 --6. For each department-- if its average salary is less than the average salary of all employees-- disp
26 select Dname,Dnum, count(Employee.SSN) ,avg(Salary) as avgSalary from Departments left join Employee on Dep
27 group by Dname,Dnum
28 having avg(Salary) <(select avg(salary) from Employee)
29
30 --7. Retrieve a list of employees names and the projects names they are working on ordered by department
31 --ordered alphabetically by last name, first name.
32 select Fname +' '+Lname as name , Pname , d.Dnum FROM Employee as emp inner join Works_for as w on emp.SSN
33 inner join Project as p on w.Pno = p.Pnumber inner join
34 Departments as d on d.Dnum = p.Dnum
35 order by d.Dnum , Lname,Fname
36
37 --8. Try to get the max 2 salaries using subquery
38 select top(2)salary as maxSalary from Employee
39 where salary in (select max(salary) from Employee group by Dno ) order by maxSalary desc
40
```

100 %

Results

Messages

	maxSalary
1	3600
2	2500

SQLQuery1.sql - MENNAS-LAPTOP\MSSQLSERVER22.Company_SD (sa (65))* - Microsoft SQL Server Management Studio

Quick Launch (Ctrl+Q)

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Company_SD Execute

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SQLQuery1.sql - M...mpany_SD (sa (65))* Datatypes.sql - ME...mpany_SD (sa (70)) Day4.sql - MENNAS...pany_SD (sa (64))

```
--7. Retrieve a list of employees names and the projects names they are working on ordered by department number and within each department,
--ordered alphabetically by last name, first name.
select Fname + ' '+Lname as name , Pname , d.Dnum FROM Employee as emp inner join Works_for as w on emp.SSN = w.ESSN
inner join Project as p on w.Pno = p.Pnumber inner join
Departments as d on d.Dnum = p.Dnum
order by d.Dnum , Lname,Fname

--8. Try to get the max 2 salaries using subquery
select top(2) salary as maxSalary from Employee
where salary in (select max(salary) from Employee group by Dno ) order by maxSalary desc

--9. Get the full name of employees that is similar to any dependent name
select distinct Fname + ' '+Lname as Fullname from Employee emp inner join Dependent D on emp.SSN = D.ESSN where d.Dependent_name like '%'+Fname + ' '+Lname+'%'
```

100 %

Results Messages

	Fullname
1	Amr Omran



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SQLQuery1.sql - M...mpany_SD (sa (65))*

Datatypes.sql - ME...mpany_SD (sa (70))

Day4.sql - MENNAS...pany_SD (sa (64))

```
34 departments as d on d.Dnum = p.Dnum
```

```
35 order by d.Dnum , Lname, Fname
```

```
36
```

```
37 -8. Try to get the max 2 salaries using subquery
```

```
38 select top(2) salary as maxSalary from Employee
```

```
39 here salary in (select max(salary) from Employee group by Dno ) order by maxSalary desc
```

```
40
```

```
41 -9. Get the full name of employees that is similar to any dependent name
```

```
42 select distinct Fname + ' ' + Lname as Fullname from Employee emp inner join Dependent D on emp.SSN = D.ESSN where d.Dependent_name
```

```
43
```

```
44 -10. Display the employee number and name if at least one of them have dependents (use exists keyword) self-study.
```

```
45 select Fname + ' ' + Lname as name , SSN , SSN FROM Employee a
```

```
46 here exists (select * from Dependent where a.SSN = Dependent.ESSN)
```

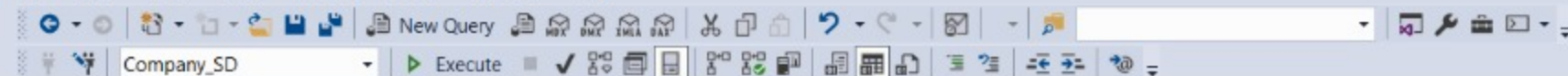
```
47
```

100 %

Results Messages

	name	SSN	SSN
1	Ahmed Ali	112233	112233
2	Kamel Mohamed	223344	223344
3	Amr Omran	321654	321654
4	Edward Hanna	512463	512463

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SQLQuery1.sql - M...mpny_SD (sa (65))* Datatypes.sql - ME...mpny_SD (sa (70)) Day4.sql - MENNAS...pany_SD (sa (64))

```
37 --8. Try to get the max 2 salaries using subquery
38 select top(2) salary as maxSalary from Employee
39 where salary in (select max(salary) from Employee group by Dno ) order by maxSalary desc
40
41 --9. Get the full name of employees that is similar to any dependent name
42 select distinct Fname + ' '+Lname as Fullname from Employee emp inner join Dependent D on emp.SSN = D.ESSN where d.Dependent_name like '%' + Fname + ' ' + Lname
43
44 --10. Display the employee number and name if at least one of them have dependents (use exists keyword) self-study.
45 select Fname + ' '+Lname as name , SSN , SSN FROM Employee a
46 where exists (select * from Dependent where a.SSN = Dependent.ESSN)
47
48 --11. In the department table insert new department called "DEPT IT" , with id 100, employee with SSN = 112233 as a manager for this department.
49 --The start date for this manager is '1-11-2006'
50 insert into Departments values('DEPT IT',100,112233,'1-11-2006')
```

100 %

Messages

(1 row affected)

Completion time: 2024-08-10T13:22:38.2325651+03:00

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Company_SD Execute

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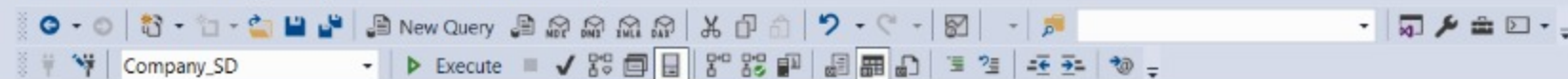
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SQLQuery1.sql - M...mpany_SD (sa (65))* Datatypes.sql - ME...mpany_SD (sa (70)) Day4.sql - MENNAS...pany_SD (sa (64))

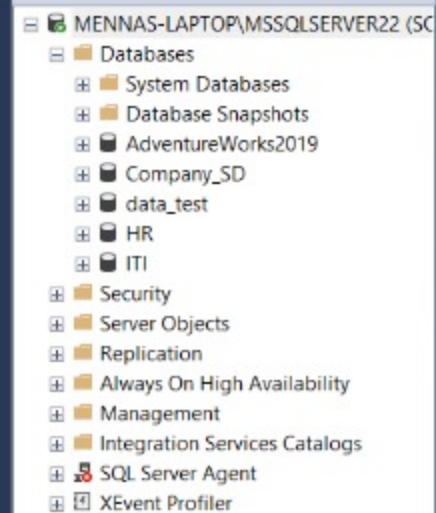
```
51
52 --12. Do what is required if you know that : Mrs.Noha Mohamed(SSN=968574) moved to be the manager of the new department (id = 100),
53 --and they give you(your SSN =102672) her position (Dept. 20 manager)
54 --a. First try to update her record in the department table
55 --b. Update your record to be department 20 manager.
56 --c. Update the data of employee number=102660 to be in your teamwork (he will be supervised by you) (your SSN =102672)
57 update Departments
58 set MGRSSN = 968574
59 ,[MGRStart Date]=GETDATE()
60 where Dnum =100
61 update Departments
62 set MGRSSN = 102672
63 ,[MGRStart Date]=GETDATE()
64 where Dnum =20
65 update Employee
66 set Dno = 20
67 where SSN=102672
68 update Employee
69 set Superssn = 102672
70 where SSN=102660
71
72
73
```

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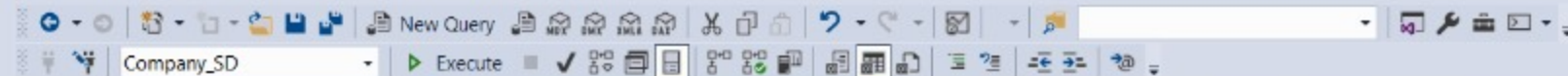
SQLQuery1.sql - M...mpany_SD (sa (65))* Datatypes.sql - ME...mpany_SD (sa (70)) Day4.sql - MENNAS...pany_SD (sa (64))

```
65 update Employee
66 set Dno = 20
67 where SSN=102672
68 update Employee
69 set Superssn = 102672
70 where SSN=102660
71
72 --13. Unfortunately the company ended the contract with Mr. Kamel Mohamed (SSN=223344) so try to delete his data from your database
73 --in case you know that you will be temporarily in his position.
74 --Hint: (Check if Mr. Kamel has dependents, works as a department manager, supervises any employees or works in any projects and handle these cases).
75 delete from Dependent where ESSN=223344
76 update Departments
77 set MGRSSN = 102672
78 where MGRSSN =223344
79 update Employee
80 set Superssn = 102672
81 where Superssn =223344
82 update Works_for
83 set ESSn = 102672
84 where ESSn =223344
85 delete from Employee where SSN=223344
86
87
```

100 %

Messages

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SQLQuery1.sql - M...mpany_SD (sa (65))* Datatypes.sql - ME...mpany_SD (sa (70)) Day4.sql - MENNAS...pany_SD (sa (64))

```
73 --in case you know that you will be temporarily in his position.
74 --Hint: (Check if Mr. Kamel has dependents, works as a department manager, supervises any employees or works in any projects and handle these cases).
75 delete from Dependent where ESSN=223344
76 update Departments
77 set MGRSSN = 102672
78 where MGRSSN =223344
79 update Employee
80 set Superssn = 102672
81 where Superssn =223344
82 update Works_for
83 set ESSn = 102672
84 where ESSn =223344
85 delete from Employee where SSN=223344
86
87
88 --14. Try to update all salaries of employees who work in Project Al Rabwah by 30%
89 update Employee
90 set Salary += Salary*.3
91 from Employee e inner join Works_for w on e.SSN= w.ESSn inner join Project p on p.Pnumber = w.Pno and p.Pname='Al Rabwah'
```