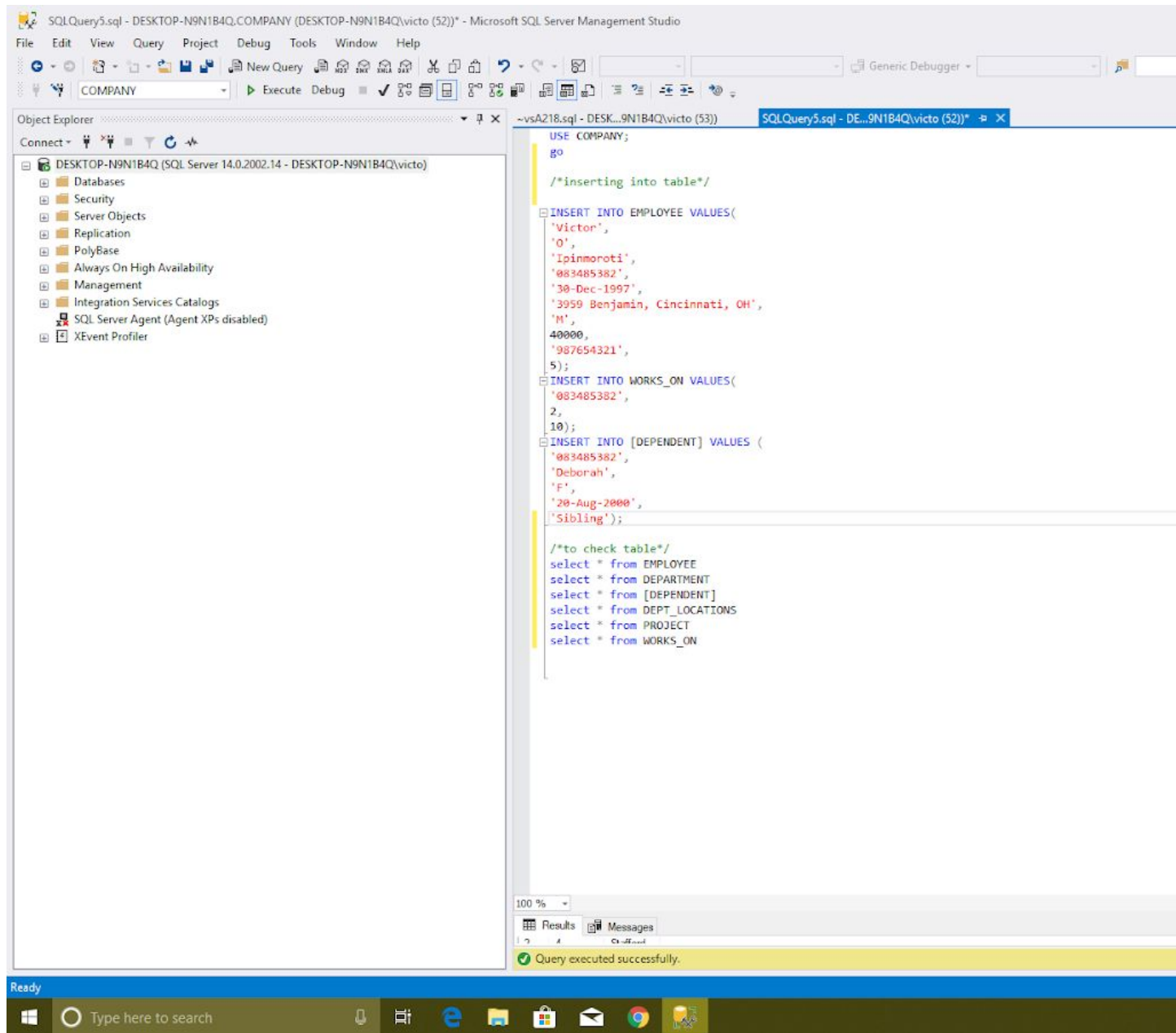


First of all we insert our information like so

```
INSERT INTO EMPLOYEE VALUES(  
'Victor',  
'O',  
'Ipinmoroti',  
'083485382',  
'30-Dec-1997',  
'3959 Benjamin, Cincinnati, OH',  
'M',  
40000,  
'987654321',  
5);  
INSERT INTO WORKS_ON VALUES(  
'083485382',  
2,  
10);  
INSERT INTO [DEPENDENT] VALUES (  
'083485382',  
'Deborah',  
'F',  
'20-Aug-2000',  
'Sibling');  
/*to check table*/  
select * from EMPLOYEE  
select * from DEPARTMENT  
select * from [DEPENDENT]  
select * from DEPT_LOCATIONS  
select * from PROJECT  
select * from WORKS_ON
```



Then we use the select statement to see the table information

SQLQuery5.sql - DESKTOP-N9N1B4Q.COMPANY (DESKTOP-N9N1B4Q\victo (52)) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

Connect - COMPANY Execute Debug

Object Explorer

- DESKTOP-N9N1B4Q (SQL Server 14.0.2002.14 - DESKTOP-N9N1B4Q\victo)
  - Databases
  - Security
  - Server Objects
  - Replication
  - PolyBase
  - Always On High Availability
  - Management
  - Integration Services Catalogs
  - SQL Server Agent (Agent XPs disabled)
  - XEvent Profiler

Results

	fname	minit	lname	ssn	bdate	address	sex	salary	super_ssn
1	Victor	O	Ipinmoroti	083485382	1997-12-30	3959 Benjamin, Cincinnati, OH	M	40000.00	987654321
2	John	B	Smith	123456789	1955-01-09	731 Fondren, Houston, TX	M	30000.00	987654321
3	Franklin	T	Wong	333445555	2045-12-08	638 Voss, Houston, TX	M	40000.00	888665555
4	Joyce	A	English	453453453	1962-07-31	5631 Rice, Houston, TX	F	25000.00	333445555
5	Ramesh	K	Narayan	666884444	1952-09-15	975 Fire Oak, Humble, TX	M	38000.00	333445555
6	James	E	Borg	888665555	2027-11-10	450 Stone, Houston, TX	M	55000.00	NULL
7	Jennifer	S	Wallace	987654321	2031-06-20	291 Bery, Bellaire, TX	F	43000.00	888665555
8	Ahmad	V	Jabbar	987987987	1959-03-29	980 Dallas, Houston, TX	M	25000.00	987654321

	dname	dnumber	mgr_ssn	mgr_start_date
1	Headquarters	1	888665555	1971-06-19
2	Administration	4	987654321	1985-01-01
3	Research	5	333445555	1978-05-22
4	Automation	7	123456789	2006-10-05

	essn	dependent_name	sex	bdate	relationship
1	083485382	Deborah	F	2000-08-20	Sibling
2	123456789	Alice	F	1978-12-31	Daughter
3	123456789	Elizabeth	F	1957-05-05	Spouse
4	123456789	Michael	M	1978-01-01	Son
5	333445555	Alice	F	1976-04-05	Daughter
6	333445555	Joy	F	2048-05-03	Spouse
7	333445555	Theodore	M	1973-10-25	Son
8	987654321	Abner	M	2032-02-29	Spouse

	dnumber	dlocation
1	1	Houston
2	4	Stafford
3	5	Bellaire
4	5	Houston
5	5	Sugarl...

	pname	pnumber	plocation	pdrum
1	ProductX	1	Bellaire	5
2	ProductY	2	Sugarland	5
3	ProductZ	3	Houston	5
4	Comput...	10	Stafford	4
5	Reorga...	20	Houston	1
6	Newbe...	30	Stafford	4

	essn	pno	hours
10	666884444	3	40.0
11	888665555	20	0.0
12	987654321	20	15.0

Query executed successfully.

Ready

Type here to search

Next we retrieve the personal information we just entered

**SELECT \* FROM EMPLOYEE E, WORKS\_ON W, DEPENDENT D WHERE E.SSN = '083485382' AND D.Essn = E.SSN AND W.Essn = E.SSN;**

The screenshot shows the Microsoft SQL Server Enterprise Manager interface. The Object Explorer on the left displays the server structure for 'DESKTOP-N9N1B4Q'. The central query window shows the following SQL code:

```
USE COMPANY;
GO
/*retriving personal information*/
SELECT *
FROM EMPLOYEE E, WORKS_ON W, DEPENDENT D
WHERE E.SSN = '083485382' AND D.Essn = E.SSN AND W.Essn = E.SSN;
```

The Results pane at the bottom displays the query output as a table with 14 columns: fname, mname, lname, ssn, bdate, address, sex, salary, super\_ssn, dno, esn, pno, hours, and esn. The first row of data is for employee Victor.

	fname	mname	lname	ssn	bdate	address	sex	salary	super_ssn	dno	esn	pno	hours	esn
1	Victor	O	Ipinmoroti	083485382	1997-12-30	3959 Benjamin, Cincinnati, OH	M	40000.00	987654321	5	083485382	2	10.0	083485382

A status bar at the bottom indicates 'Query executed successfully.'

The we get the and address of all people related to smith in the company

**SELECT P.Pnumber FROM PROJECT P WHERE P.Pnumber IN ( SELECT P.Pnumber FROM PROJECT P, DEPARTMENT D, EMPLOYEE E WHERE D.mgr\_SSN = E.SSN AND P.Dnum = D.Dnumber AND E.Lname = 'Smith') OR P.Pnumber IN ( SELECT W.Pno FROM WORKS\_ON W, EMPLOYEE E WHERE W.ESSN = E.SSN AND E.Lname = 'Smith');**

SQLQuery1.sql - DESKTOP-N9N1B4Q.COMPANY (DESKTOP-N9N1B4Q\victo (57)) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

COMPANY Execute Debug

Object Explorer

Connect

DESKTOP-N9N1B4Q (SQL Server 14.0.2002.14 - DESKTOP-N9N1B4Q\victo)

Databases Security Server Objects Replication PolyBase Always On High Availability Management Integration Services Catalogs SQL Server Agent (Agent XPs disabled) XEvent Profiler

SQLQuery1.sql - DE...9N1B4Q\victo (57)) \* ~vsA218.sql - DESK...9N1B4Q\victo (53)) \* SQLQuery5.sq

```
USE COMPANY;
go

/* name and adress of all people related to smith by supervisor or manager */

SELECT E1.fname, E1.lname, E2.fname, E2.lname
FROM EMPLOYEE E1 LEFT OUTER JOIN EMPLOYEE E2
ON E1.Super_SSN = E2.SSN;
```

100 %

Results Messages

	fname	lname	fname	lname
1	Victor	Ipinmoroti	Jennifer	Wallace
2	John	Smith	Jennifer	Wallace
3	Franklin	Wong	James	Borg
4	Joyce	English	Franklin	Wong
5	Ramesh	Narayan	Franklin	Wong
6	James	Borg	NULL	NULL
7	Jennifer	Wallace	James	Borg
8	Ahmad	Jabbar	Jennifer	Wallace
9	Alicia	Zelaya	Jennifer	Wallace

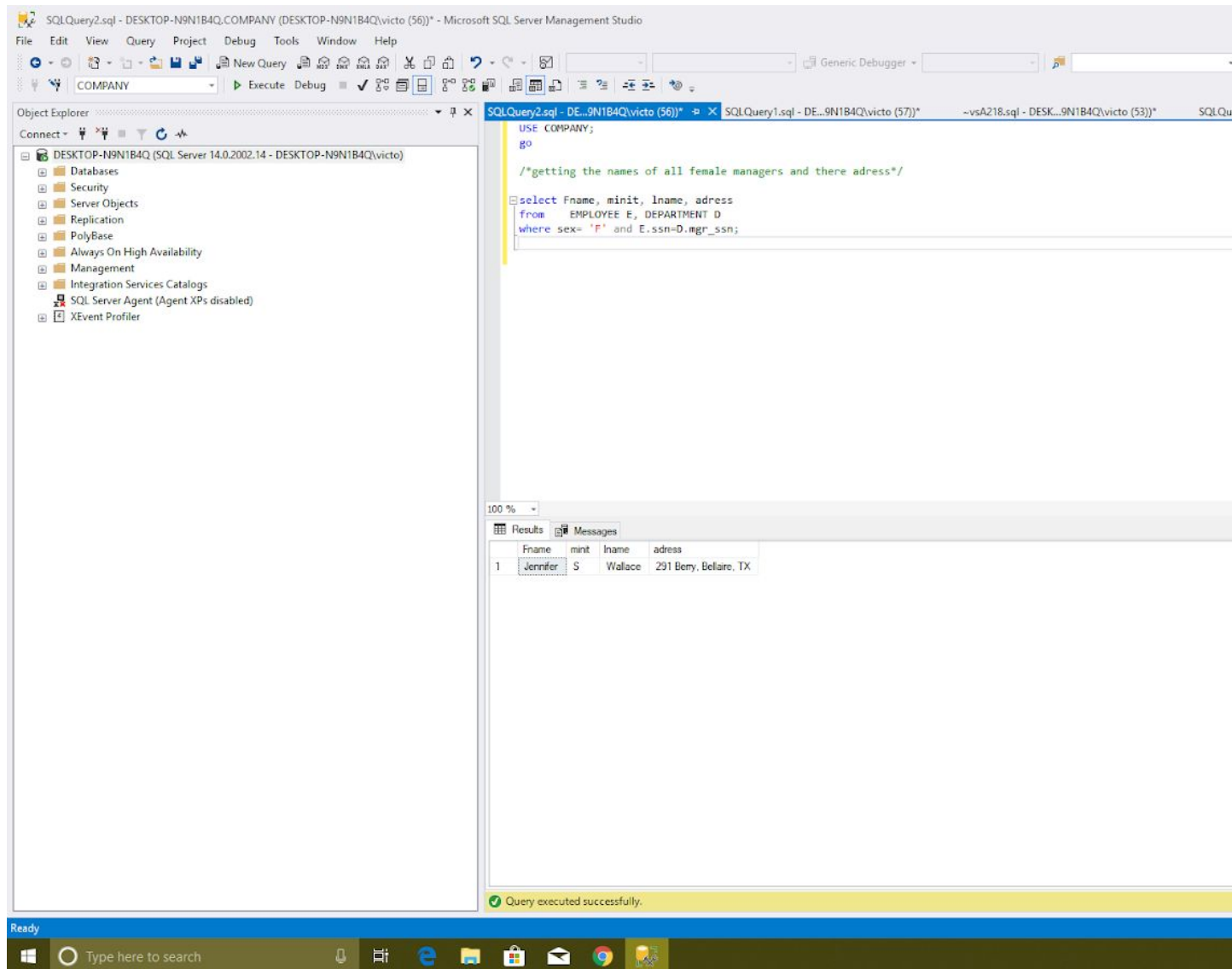
Query executed successfully.

Ready

Type here to search

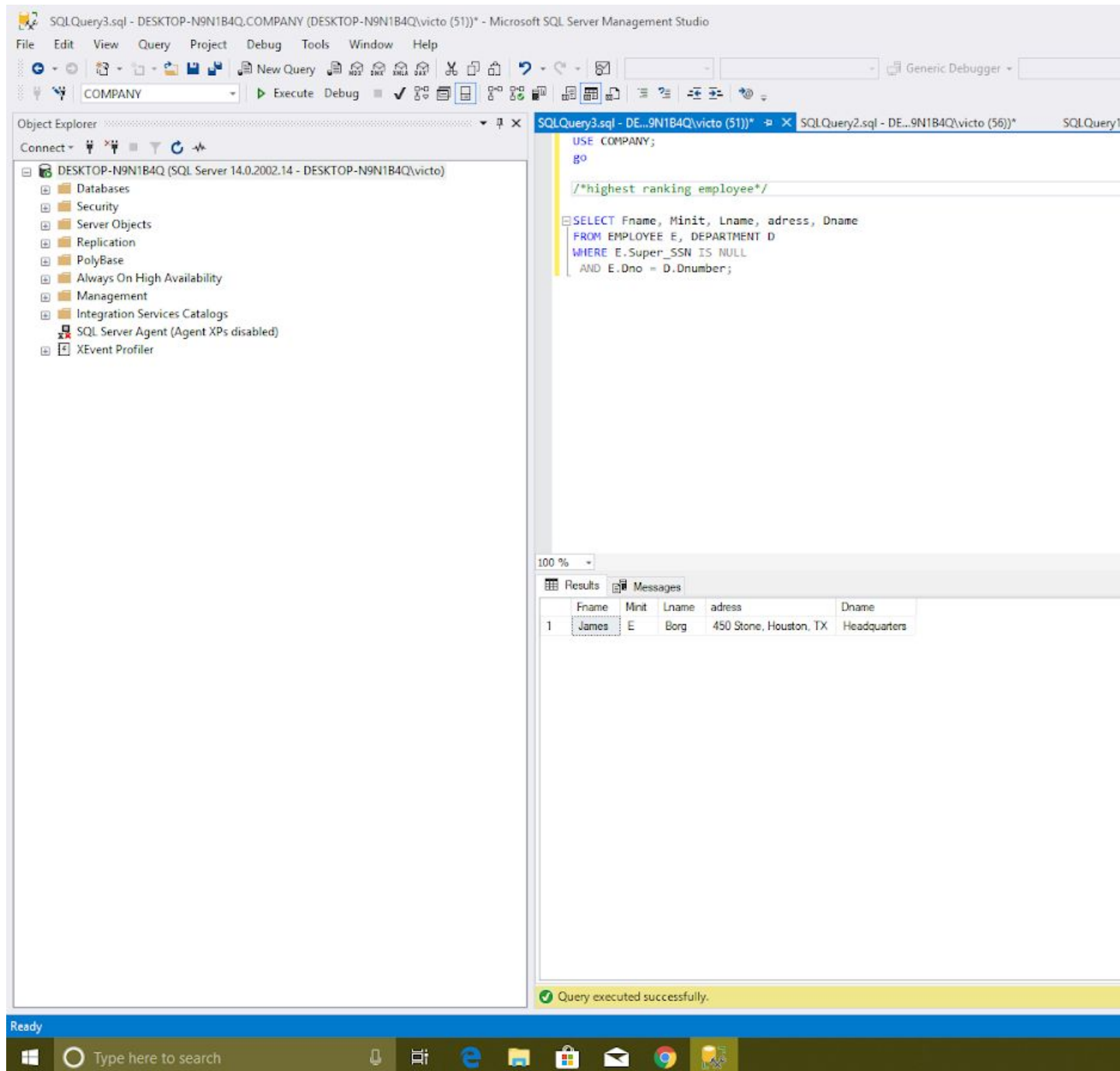
Then we get the names of all female managers

**SELECT E1.fname, E1.lname, E2.fname, E2.lname FROM EMPLOYEE E1 LEFT OUTER JOIN EMPLOYEE E2 ON E1.Super\_SSN = E2.SSN;**



Now we get the highest ranking person

```
SELECT fname, minit, lname, Address, Dname FROM EMPLOYEE E, DEPARTMENT D  
WHERE E.super_SSN IS NULL AND E.Dno = D.Dnumber;
```



Then we get first and last name of the employees with their supervisors.

```
SELECT D.Dnumber, D.DName, E.FNAME, E.LNAME, S.FNAME, S.LNAME FROM  
DEPARTMENT D, EMPLOYEE E, EMPLOYEE S Where D.Dnumber = E.Dno And  
E.super_ssn = S.SSN Order BY D.Dnumber, D.Dname;
```



SQLQuery4.sql - DESKTOP-N9N1B4Q.COMPANY (DESKTOP-N9N1B4Q\victo (59)) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

COMPANY Execute Debug

Object Explorer

Connect

- DESKTOP-N9N1B4Q (SQL Server 14.0.2002.14 - DESKTOP-N9N1B4Q\victo)
- Databases
- Security
- Server Objects
- Replication
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- SQL Server Agent (Agent XPs disabled)
- XEvent Profiler

SQLQuery4.sql - DE...9N1B4Q\victo (59)) \* SQLQuery3.sql - DE...9N1B4Q\victo (51)) \* SQLQuery2.sql - DE...9N1B4Q\victo (56))

```
USE COMPANY;
go

/* first and last name of employees who are working in the department with the thier immdiate super
SELECT D.Dnumber, D.DName, E.FNAME, E.LNAME, S.FNAME, S.LNAME
FROM DEPARTMENT D, EMPLOYEE E, EMPLOYEE S
Where D.Dnumber = E.Dno And E.super_ssn = S.SSN
Order BY D.Dnumber, D.Dname;
```

100 %

Results Messages

	Dnumber	DName	FNAME	LNAME	FNAME	LNAME
1	4	Administration	Jennifer	Wallace	James	Borg
2	4	Administration	Ahmad	Jabbar	Jennifer	Wallace
3	4	Administration	Alicia	Zelaya	Jennifer	Wallace
4	5	Research	Victor	Ipinmoroti	Jennifer	Wallace
5	5	Research	John	Smith	Jennifer	Wallace
6	5	Research	Franklin	Wong	James	Borg
7	5	Research	Joyce	English	Franklin	Wong
8	5	Research	Ramesh	Narayan	Franklin	Wong

Query executed successfully.

Ready

Type here to search