

Name: Victor Ipinmoroti

CIS: 430

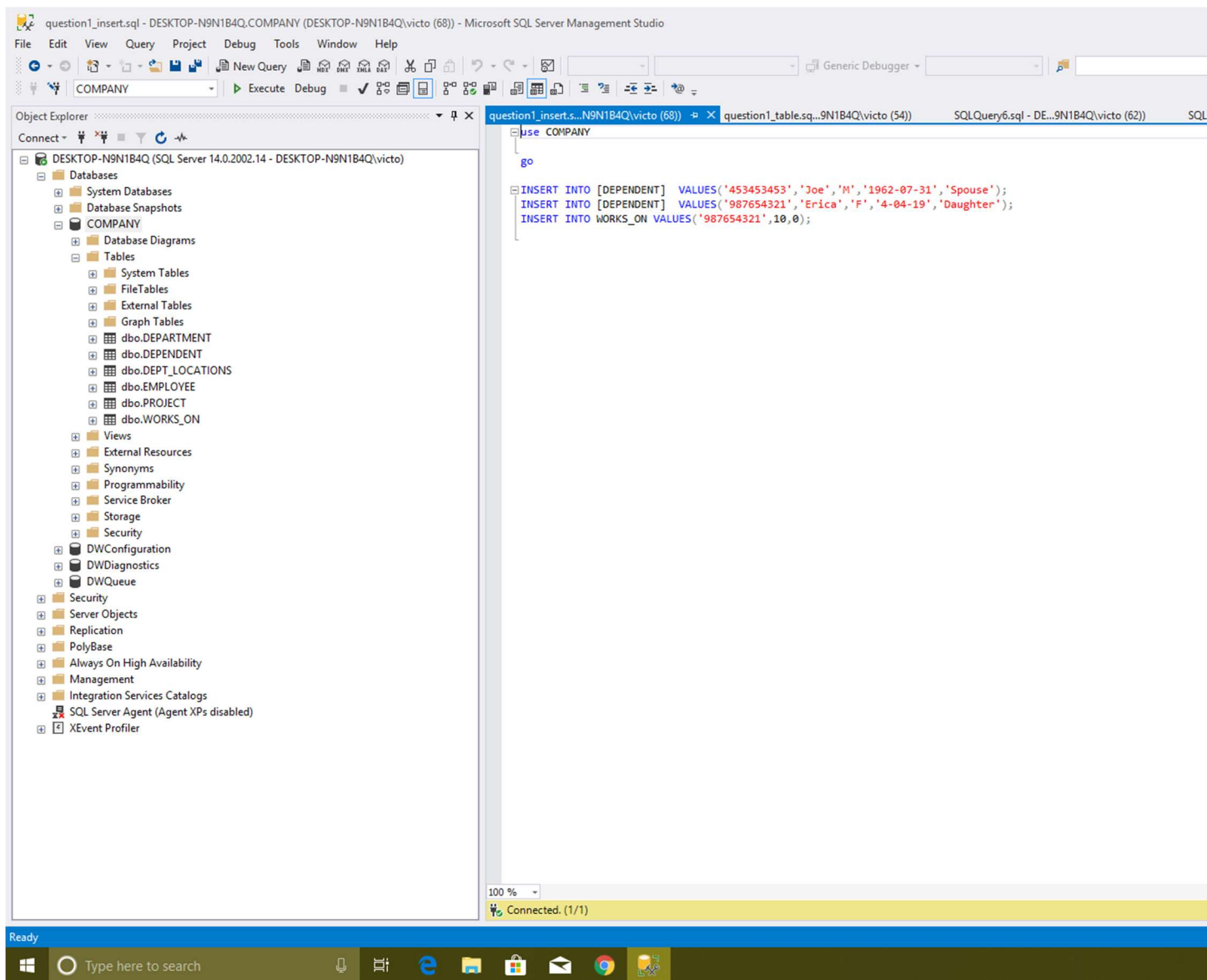
Question 1

First we insert the new information into the table like so

use COMPANY

go

```
INSERT INTO [DEPENDENT] VALUES('453453453','Joe','M','1962-07-31','Spouse');  
INSERT INTO [DEPENDENT] VALUES('987654321','Erica','F','4-04-19','Daughter');  
INSERT INTO WORKS_ON VALUES('987654321',10,0);
```



SQLQuery2.sql - DESKTOP-N9N1B4Q.COMPANY (DESKTOP-N9N1B4Q\victo (54)) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

COMPANY Execute Debug

Object Explorer: DESKTOP-N9N1B4Q (SQL Server 14.0.2002.14 - DESKTOP-N9N1B4Q\victo)

- Databases
 - System Databases
 - Database Snapshots
 - COMPANY
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - External Tables
 - Graph Tables
 - dbo.DEPARTMENT
 - dbo.DEPENDENT
 - dbo.DEPT_LOCATIONS
 - dbo.EMPLOYEE
 - dbo.PROJECT
 - dbo.WORKS_ON
 - Views
 - External Resources
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security
 - DWConfiguration
 - DWDiagnostics
 - DWQueue
 - Security
 - Server Objects
 - Replication
 - PolyBase
 - Always On High Availability
 - Management
 - Integration Services Catalogs
 - SQL Server Agent (Agent XPs disabled)
 - XEvent Profiler

SQLQuery2.sql - DE...9N1B4Q\victo (54)) SQLQuery6.sql - DE...9N1B4Q\victo (62)) SQLQuery5.sql - DE...9N1B4Q\victo (61))

```

use COMPANY
go

SELECT * FROM [DEPENDENT] ;

SELECT * FROM WORKS_ON ;
  
```

100 %

Results Messages

	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	453453453	Joe	M	1962-07-31	Spouse
9	987654321	Abner	M	2032-02-29	Spouse

	essn	pno	hours
11	888665555	20	0.0
12	987654321	10	0.0
13	987654321	20	15.0
14	987654321	30	20.0
15	987987987	10	35.0
16	987987987	30	5.0
17	999887777	10	10.0
18	999887777	30	30.0

Query executed successfully.

Ready

Type here to search

Question 2

First we do part A

```
use COMPANY;
```

```
go
```

```

Select E.Fname, E.Lname, E.Dno, E.Super_ssn, D.Dnumber
From Department D LEFT OUTER JOIN Employee E
On D.Dnumber = E.dno;
  
```

Out put

question2_q1.sql - DESKTOP-N9N1B4Q.COMPANY (DESKTOP-N9N1B4Q\victo (54)) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

COMPANY

Execute Debug

Object Explorer

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

- Databases
 - System Databases
 - Database Snapshots
 - COMPANY
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - External Tables
 - Graph Tables
 - dbo.DEPARTMENT
 - dbo.DEPENDENT
 - dbo.DEPT_LOCATIONS
 - dbo.EMPLOYEE
 - dbo.PROJECT
 - dbo.WORKS_ON
 - Views
 - External Resources
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security
 - DWConfiguration
 - DWDiagnostics
 - DWQueue
- Security
 - Server Objects
 - Replication
 - PolyBase
 - Always On High Availability
 - Management
 - Integration Services Catalogs
 - SQL Server Agent (Agent XPs disabled)
 - XEvent Profiler

question2_q1.sql - ...N9N1B4Q\victo (54)) SQLQuery1.sql - DE...9N1B4Q\victo (53))*

```
use COMPANY;  
  
go  
  
Select E.Fname, E.Lname, E.Dno, E.Super_ssn, D.Dnumber  
From Department D LEFT OUTER JOIN Employee E  
On D.Dnumber = E.dno;
```

100 %

Results Messages

	Fname	Lname	Dno	Super_ssn	Dnumber
1	James	Borg	1	NULL	1
2	Jennifer	Wallace	4	888665555	4
3	Ahmad	Jabber	4	987654321	4
4	Alicia	Zelaya	4	987654321	4
5	Victor	Ipinmoroti	5	987654321	5
6	John	Smith	5	987654321	5
7	Franklin	Wong	5	888665555	5
8	Joyce	English	5	333445555	5
9	Ramesh	Narayan	5	333445555	5
10	NULL	NULL	NULL	NULL	7

Query executed successfully.

Ready

Type here to search

For the second part we do the same command but this time we use the right join

```
use COMPANY;
```

```
go
```

```
Select E.Fname, E.Lname, E.Dno, E.Super_ssn, D.Dnumber  
From Department D right OUTER JOIN Employee E  
On D.Dnumber = E.dno
```

question2_q1_1.sql - DESKTOP-N9N1B4Q.COMPANY (DESKTOP-N9N1B4Q(victo) (52)) - Microsoft SQL Server Management Studio

File Edit View Query Project Debug Tools Window Help

COMPANY Execute Debug

Object Explorer

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

Databases

- System Databases
- Database Snapshots
- COMPANY
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - External Tables
 - Graph Tables
 - dbo.DEPARTMENT
 - dbo.DEPENDENT
 - dbo.DEPT_LOCATIONS
 - dbo.EMPLOYEE
 - dbo.PROJECT
 - dbo.WORKS_ON
 - Views
 - External Resources
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security
 - DWConfiguration
 - DWDiagnostics
 - DWQueue
 - Security
 - Server Objects
 - Replication
 - PolyBase
 - Always On High Availability
 - Management
 - Integration Services Catalogs
 - SQL Server Agent (Agent XPs disabled)
 - XEvent Profiler

question2_q1_1.sql...9N1B4Q(victo) (52) SQLQuery1.sql - DE...9N1B4Q(victo) (53))

```
use COMPANY;
go
Select E.Fname, E.Lname, E.Dno, E.Super_ssn, D.Dnumber
From Department D right OUTER JOIN Employee E
On D.Dnumber = E.dno;
```

100 %

Results Messages

	Fname	Lname	Dno	Super_ssn	Dnumber
1	Victor	Ipinmoroti	5	987654321	5
2	John	Smith	5	987654321	5
3	Franklin	Wong	5	888665555	5
4	Joyce	English	5	333445555	5
5	Ramesh	Narayan	5	333445555	5
6	James	Borg	1	NULL	1
7	Jennifer	Wallace	4	888665555	4
8	Ahmad	Jabber	4	987654321	4
9	Alicia	Zelaya	4	987654321	4

Query executed successfully.

Ready

Type here to search

For question 2 of part 2

First, we find where employee SSN is equal to dependent ssn then we make sure it is a female employee and the relationship is a spouse. Then we loop through the works on table to get the amount of times the employee as worked on the project.

```
use COMPANY;
```

```
go
```

```
Select e.SSN, e.LNAME
From Employee e, Dependent d
Where e.SSN=d.essn AND e.SEX='F' AND d.relationship='spouse' AND
e.SSN IN (Select w.Essn
From WORKS_ON w
```

Group By w.Essn
Having COUNT(w.Essn)>=3);

The screenshot shows the Microsoft SQL Server Management Studio interface. The query window contains the following SQL code:

```

use COMPANY;
go

Select e.SSN, e.LNAME
From Employee e, Dependent d
Where e.SSN=d.essn AND e.SEX='F' AND d.relationship='spouse' AND
e.SSN IN (Select w.Essn
From WORKS_ON w
Group By w.Essn
Having COUNT(w.Essn)>=3);

```

The Results pane shows the following data:

	SSN	LNAME
1	987654321	Wallace

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

For the third question we first make sure the relationship is a spouse or married then we search in the research department for some one who have no son or daughter.

Use Company;
go

```

Select e.FNAME, e.LNAME
From Employee e
Where Exists (Select A.essn
              From Dependent A
              Where e.SSN=A.essn AND A.relationship='spouse') /* first we get spouses*/
              AND Exists (Select B.DNAME
                          From Department B
                          Where B.DNAME='RESEARCH')

```

```

Where e.DNO=B.DNUMBER AND B.DNAME='Research')
AND NOT Exists (Select C.essn/* then we get those who have children
in research compare and take the missing row */
From Dependent C
Where e.SSN=C.essn AND (C.relationship='daughter' OR C.relationship='son'))

```

The screenshot shows the Microsoft SQL Server Management Studio interface. The Object Explorer on the left displays the database structure for 'COMPANY'. The main window shows a SQL query being executed. The query is as follows:

```

Use Company;
go

Select e.FNAME, e.LNAME
From Employee e
Where Exists (Select A.essn
From Dependent A
Where e.SSN=A.essn AND A.relationship='spouse') /* first we get spouses*/
AND Exists (Select B.DNAME
From Department B
Where e.DNO=B.DNUMBER AND B.DNAME='Research')
AND NOT Exists (Select C.essn/* then we get those who have children in research
From Dependent C
Where e.SSN=C.essn AND (C.relationship='daughter' OR C.relationship='son'))

```

The Results pane at the bottom shows the output of the query:

	FNAME	LNAME
1	Joyce	English

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

We do some thing similar for question four but this time we are looking for daughter instead. Thus

```

Use Company;
go

Select e.LNAME
From Employee e

```



```

Where Exists (Select f.essn
From Dependent f
Where e.SSN=f.essn AND f.relationship='spouse')
AND Exists (Select g.essn
From Dependent g
Where e.SSN=g.essn AND g.relationship='daughter')
AND NOT Exists (Select h.essn
From Dependent h
Where e.SSN=h.essn AND h.relationship='son')

```

The screenshot displays the Microsoft SQL Server Management Studio interface. The Object Explorer on the left shows the database structure for 'COMPANY'. The query editor in the center contains a SQL query that selects employee last names based on specific relationship criteria. The query has been executed successfully, as indicated by the status bar at the bottom. The Results pane on the right shows a single result: 'Wallace'.

```

question2_q4.sql - DESKTOP-N9N1B4Q\COMPANY (DESKTOP-N9N1B4Q\victo (52)) - Microsoft SQL Server Management Studio
File Edit View Query Project Debug Tools Window Help
COMPANY Execute Debug
Object Explorer Execute (F5)
DESKTOP-N9N1B4Q (SQL Server 14.0.2002.14 - DESKTOP-N9N1B4Q\victo)
Databases
System Databases
Database Snapshots
COMPANY
Database Diagrams
Tables
System Tables
FileTables
External Tables
Graph Tables
dbo.DEPARTMENT
dbo.DEPENDENT
dbo.DEPT_LOCATIONS
dbo.EMPLOYEE
dbo.PROJECT
dbo.WORKS_ON
Views
External Resources
Synonyms
Programmability
Service Broker
Storage
Security
DWConfiguration
DWDiagnostics
DWQueue
Security
Server Objects
Replication
PolyBase
Always On High Availability
Management
Integration Services Catalogs
SQL Server Agent (Agent XPs disabled)
XEvent Profiler
question2_q3.sql - ...N9N1B4Q\victo (58)
question2_q4.sql - ...N9N1B4Q\victo (52)
SQLQuery2.sql - DE...9N1B4Q\victo
Use Company;
go
Select e.LNAME
From Employee e
Where Exists (Select f.essn
From Dependent f
Where e.SSN=f.essn AND f.relationship='spouse')
AND Exists (Select g.essn
From Dependent g
Where e.SSN=g.essn AND g.relationship='daughter')
AND NOT Exists (Select h.essn
From Dependent h
Where e.SSN=h.essn AND h.relationship='son')
100 %
Results Messages
1 LNAME
Wallace
Query executed successfully.
Ready
Type here to search

```

Then in 5 we try to get project with more female than male by last name

```
Use Company;
```

```
go
```

```

Select e.LNAME , e.SSN
From Employee e , WORKS_ON w ,
    (Select a.Pno , COUNT ( a.Essn)
    From WORKS_ON a , Employee e
    Where a.Essn = e.SSN AND e.SEX = 'F'
    Group By a.Pno ) as female (Pno, Fcount),

    (Select b.Pno, COUNT (b.Essn)
    From WORKS_ON b, Employee f
    Where b.Essn = f.SSN AND f.SEX = 'M'
    Group by b.Pno ) as male (Pno, Mcount)
Where e.SSN = w.Essn AND w.Pno = female.Pno AND female.Pno = male.Pno AND female.Fcount >
male.Mcount ;

```


question2_q5.sql - DESKTOP-N9N1B4Q.COMPANY (DESKTOP-N9N1B4Q\victo (52)) - 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
 - System Databases
 - Database Snapshots
 - COMPANY
 - Database Diagrams
 - Tables
 - System Tables
 - FileTables
 - External Tables
 - Graph Tables
 - dbo.DEPARTMENT
 - dbo.DEPENDENT
 - dbo.DEPT_LOCATIONS
 - dbo.EMPLOYEE
 - dbo.PROJECT
 - dbo.WORKS_ON
 - Views
 - External Resources
 - Synonyms
 - Programmability
 - Service Broker
 - Storage
 - Security
 - DWConfiguration
 - DWDiagnostics
 - DWQueue
- Security
- Server Objects
 - Replication
 - PolyBase
 - Always On High Availability
 - Management
 - Integration Services Catalogs
 - SQL Server Agent (Agent XPs disabled)
 - XEvent Profiler

question2_q5.sql - ...N9N1B4Q\victo (52)) SQLQuery2.sql - DE...9N1B4Q\victo (54))

```
Use Company;
go

Select e.LNAME , e.SSN
From Employee e , WORKS_ON w ,
(Select a.Pno , COUNT ( a.Essn)
From WORKS_ON a , Employee e
Where a.Essn = e.SSN AND e.SEX = 'F'
Group By a.Pno ) as female (Pno, Fcount),

(Select b.Pno, COUNT (b.Essn)
From WORKS_ON b , Employee f
Where b.Essn = f.SSN AND f.SEX = 'M'
Group by b.Pno ) as male (Pno, Mcount)
Where e.SSN = w.Essn AND w.Pno = female.Pno AND female.Pno = male.Pno AND female.Fcount > male.Mcount
```

100 %

Results Messages

	LNAME	SSN
1	Wallace	987654321
2	Jabber	987987987
3	Zelaya	999887777

Query executed successfully.

Ready

Type here to search

Windows taskbar icons: File Explorer, Edge, Mail, Chrome, VS Code, Word.