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CIS: 430
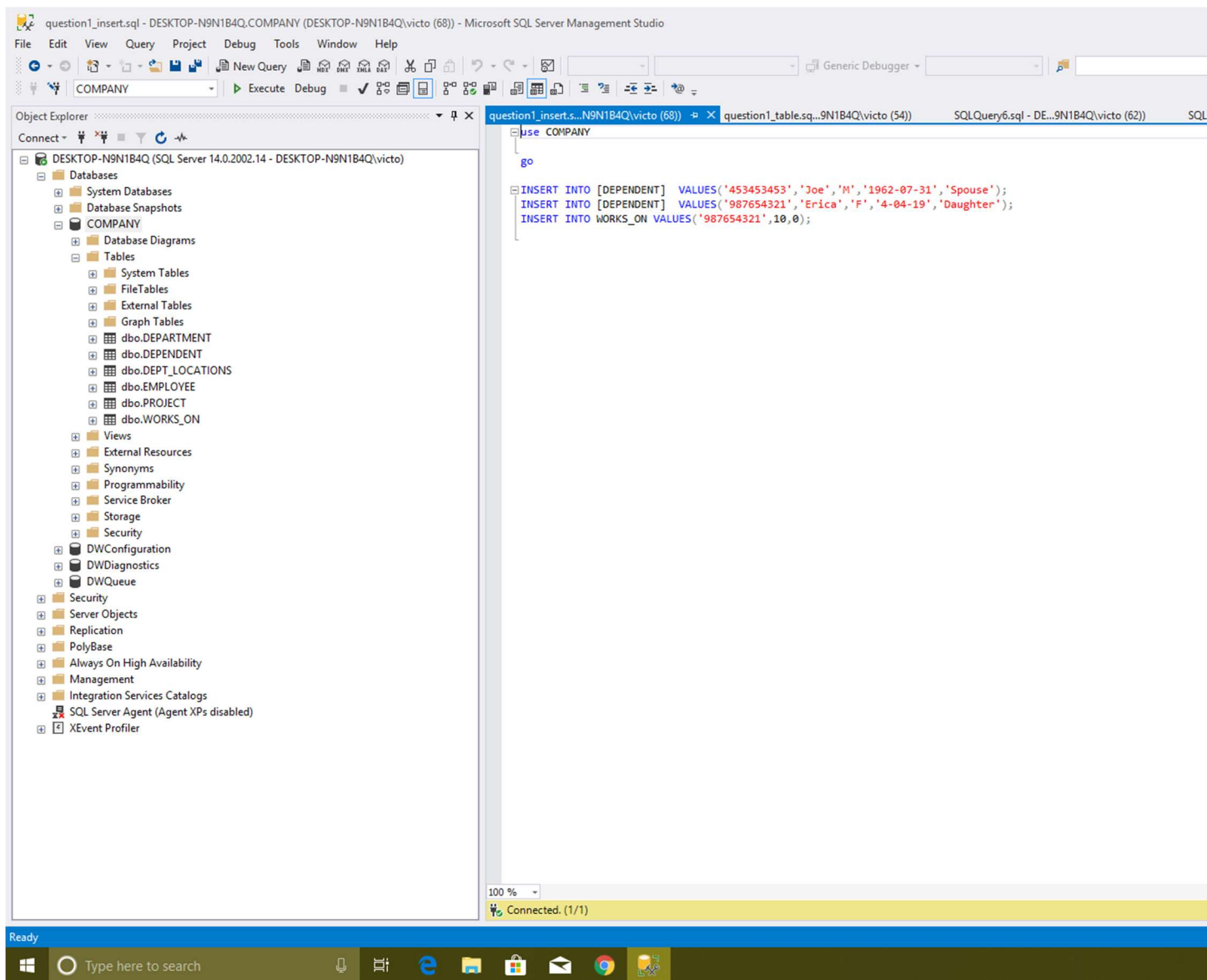
Question 1

First we insert the new information into the table like so

```sql
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);
```

Question 2

First we do part A

```sql
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
```

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

```sql
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
```

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.

```sql
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);
```


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 sposes*/
                    AND Exists (Select B.DNAME
From Department B
```

```sql
                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'))
```


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

```sql
Use Company;
go

Select e.LNAME
From Employee e
```

```sql
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')
```


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

```sql
Use Company;

go
```

```sql
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 ;
```

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))*

```sql
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
```

100 %

Results   Messages

	LNAME	SSN
1	Wallace	987654321
2	Jabber	987987987
3	Zelaya	999887777

✓ Query executed successfully.

Ready