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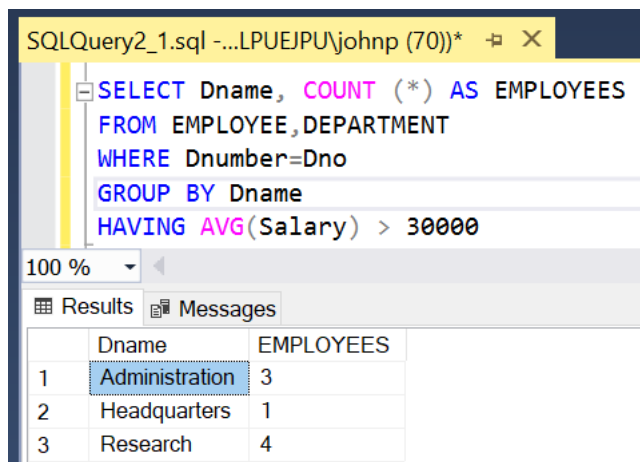
Assignment 08

Question1

Specify the following additional queries on the database of Figure 5.5 in SQL. Show the query results if applied to the database of Figure 5.6.

- (a) For each department, whose average employee salary is more than \$30,000, retrieve the department name and the number of employees working for that department.

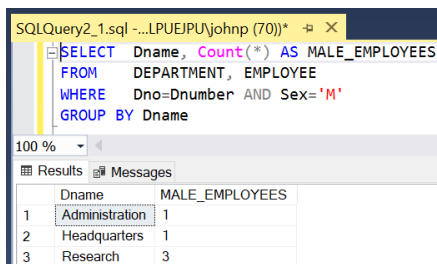
```
SELECT Dname, Count (*) AS EMPLOYEES
FROM EMPLOYEE, DEPARTMENT
WHERE Dnumber = Dno
GROUP BY Dname
HAVING AVG (Salary) > 30000
```



	Dname	EMPLOYEES
1	Administration	3
2	Headquarters	1
3	Research	4

- (b) Suppose we want the number of *male* employees in each department rather than all employees. Can we specify this query in SQL? Why or why not?

Yes, we can specify this query in SQL. This can be achieved using a nested query instead of simple query statements by connecting DEPARTMENT and EMPLOYEE table using Dnumber.



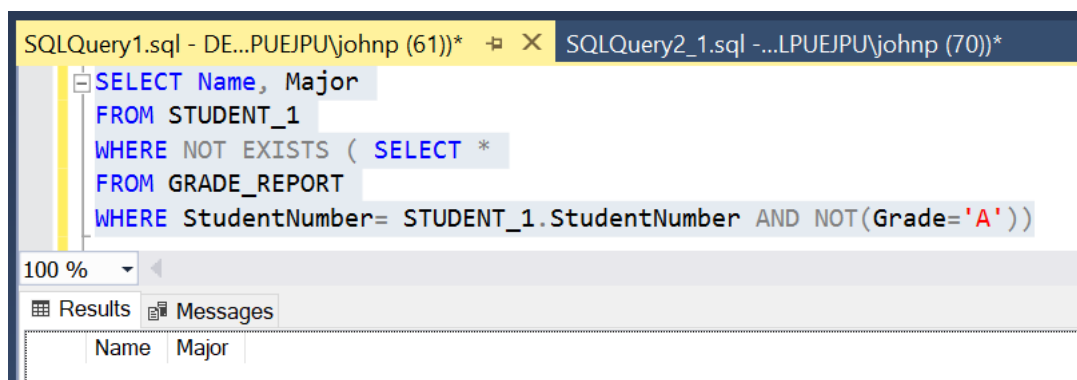
	Dname	MALE_EMPLOYEES
1	Administration	1
2	Headquarters	1
3	Research	3

Question 2

Specify the following queries in SQL on the database schema of Figure 1.2.

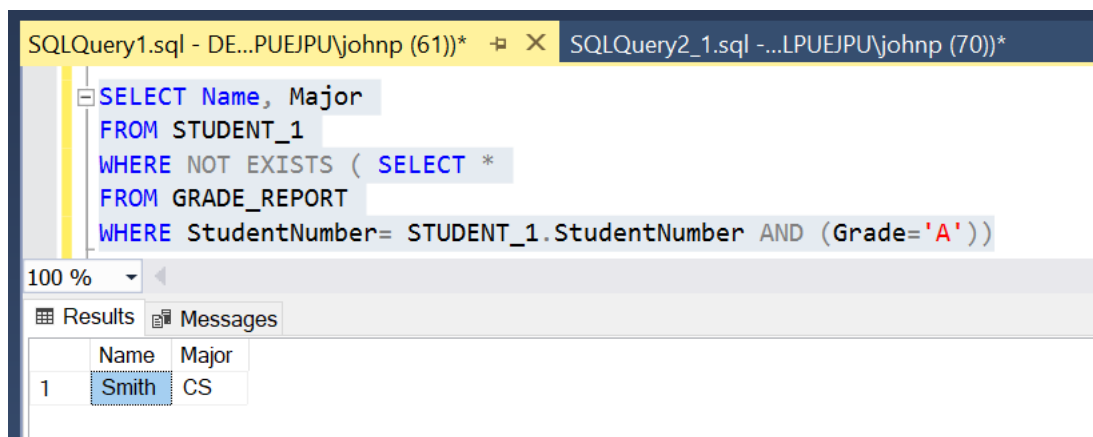
- (a) Retrieve the names and major departments of all straight-A students (students who have a grade of A in all their courses).

```
SELECT Name, Major
FROM STUDENT
WHERE NOT EXISTS (
  SELECT * FROM GRADE_REPORT
  WHERE Student_number = STUDENT.Student_number AND NOT ((Grade = 'A'))
)
```



- (b) Retrieve the names and major departments of all students who do not have any grade of A in any of their courses.

```
SELECT Name, Major
FROM STUDENT
WHERE NOT EXISTS (
  SELECT * FROM GRADE_REPORT
  WHERE Student_number = STUDENT.Student_number AND ((Grade = 'A'))
)
```



Question 3

In SQL, specify the following queries on the database specified in Figure 5.5 using the concept of nested queries and the concepts described in chapter 7.

- a. Retrieve the names of all employees who work in the department that has the employee with the highest salary among all employees.

```
SELECT Lname
FROM EMPLOYEE
WHERE Dno = ( SELECT Dno
FROM EMPLOYEE
WHERE Salary = ( SELECT MAX(Salary)
FROM EMPLOYEE ))
```

- a. Retrieve the names of all employees whose supervisor's supervisor has '888665555' for Ssn.

```
SELECT Lname
FROM EMPLOYEE
WHERE Super_ssn IN ( SELECT Ssn
FROM EMPLOYEE
WHERE Super_ssn = '888665555' )
```

- b. Retrieve the names of employees who make at least \$10,000 more than the employee who is paid the least in the company.

```
SELECT Lname
FROM EMPLOYEE
WHERE Salary >= 10000 + ( SELECT MIN (Salary)
FROM EMPLOYEE )
```