CIS 430

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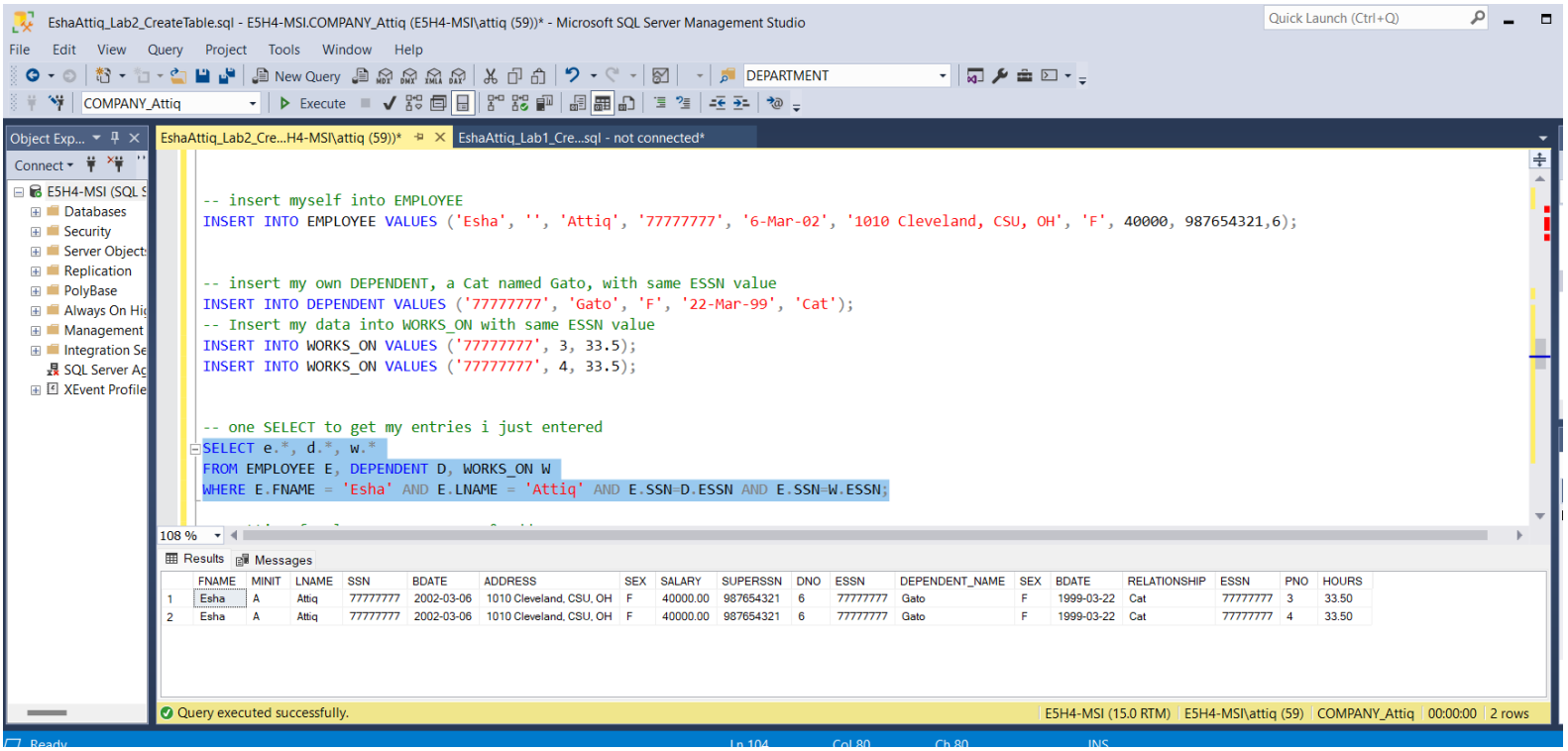
Lab Assignment 3

Objective: Querying a Relational Database COMPANY Database

*note: this is Lab 3, I did it inside my previous Lab 2 since it's using the same data

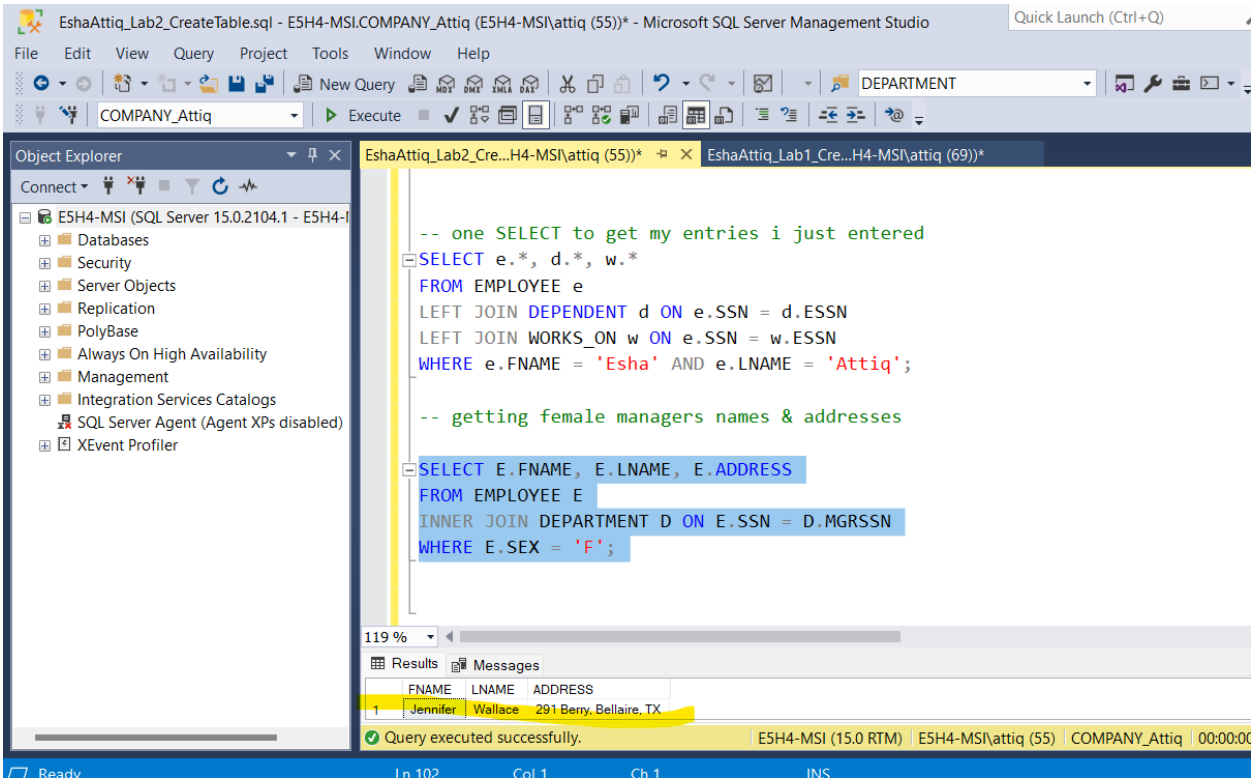
1. Added myself inside EMPLOYEE, DEPENDENT, WORKS_ON table then used a single SELECT to get my entries.

```
-- insert myself into EMPLOYEE
INSERT INTO EMPLOYEE VALUES ('Esha', '', 'Attiq', '77777777', '6-Mar-02', '1010 Cleveland,
CSU, OH', 'F', 40000, 987654321,6);


-- insert my own DEPENDENT, a Cat named Gato, with same ESSN value
INSERT INTO DEPENDENT VALUES ('77777777', 'Gato', 'F', '22-Mar-99', 'Cat');
-- Insert my data into WORKS_ON with same ESSN value
INSERT INTO WORKS_ON VALUES ('77777777', 3, 33.5);
INSERT INTO WORKS_ON VALUES ('77777777', 4, 33.5);


-- one SELECT to get my entries i just entered
SELECT e.*, d.*, w.*
FROM EMPLOYEE E, DEPENDENT D, WORKS_ON W
WHERE E.FNAME = 'Esha' AND E.LNAME = 'Attiq' AND E.SSN=D.ESSN AND E.SSN=W.ESSN;
```



Q1) Getting female managers names & addresses

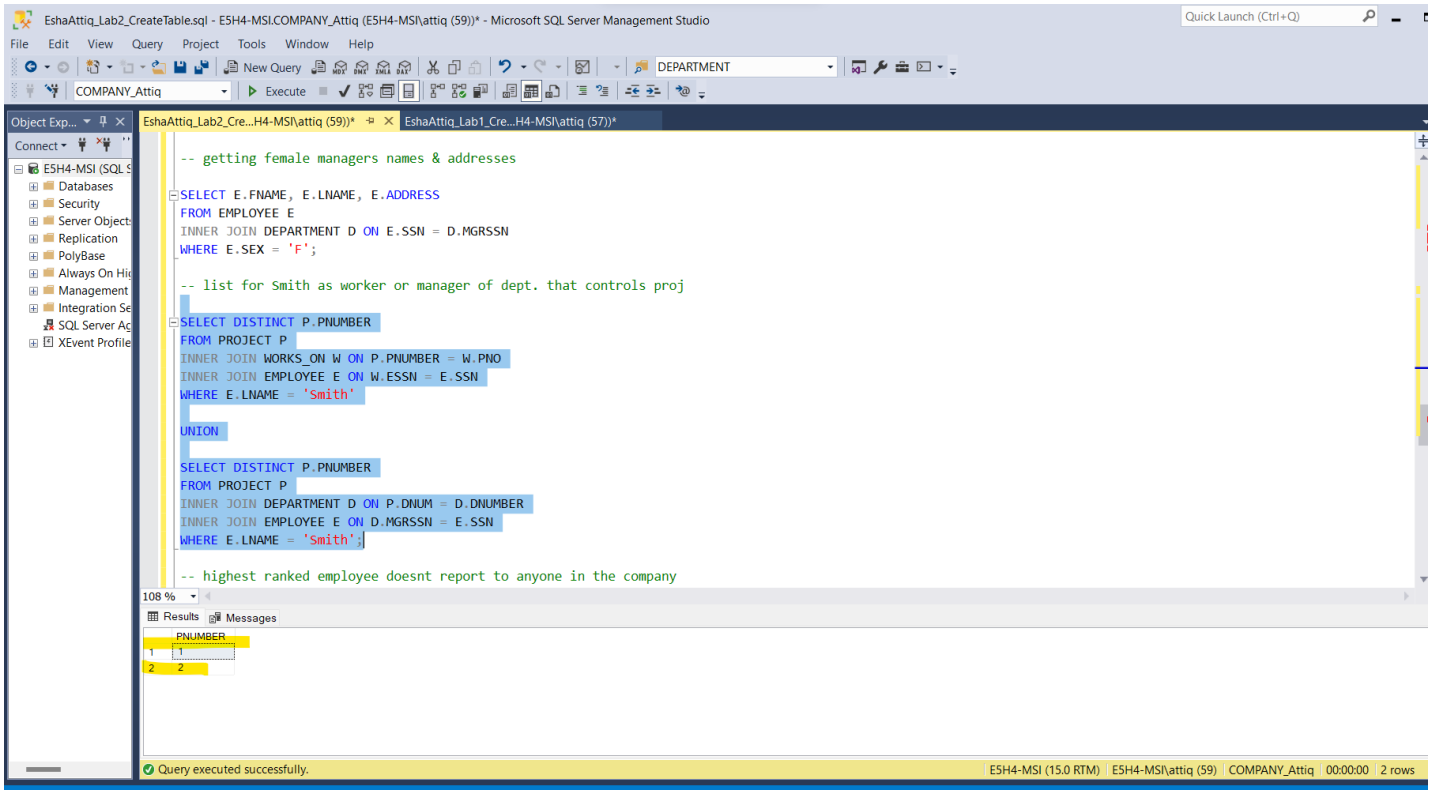
```
-- getting female managers names & addresses

SELECT E.FNAME, E.LNAME, E.ADDRESS
FROM EMPLOYEE E
INNER JOIN DEPARTMENT D ON E.SSN = D.MGRSSN
WHERE E.SEX = 'F';
```



Q2) A list of all project number's for projects that involve an employee whos last name is smith, either as a worker or as a manager of the dept. that controls the project.

```
-- list for Smith as worker or manager of dept. that controls proj

SELECT DISTINCT P.PNUMBER
FROM PROJECT P
INNER JOIN WORKS_ON W ON P.PNUMBER = W.PNO
INNER JOIN EMPLOYEE E ON W.ESSN = E.SSN
WHERE E.LNAME = 'Smith'

UNION

SELECT DISTINCT P.PNUMBER
```

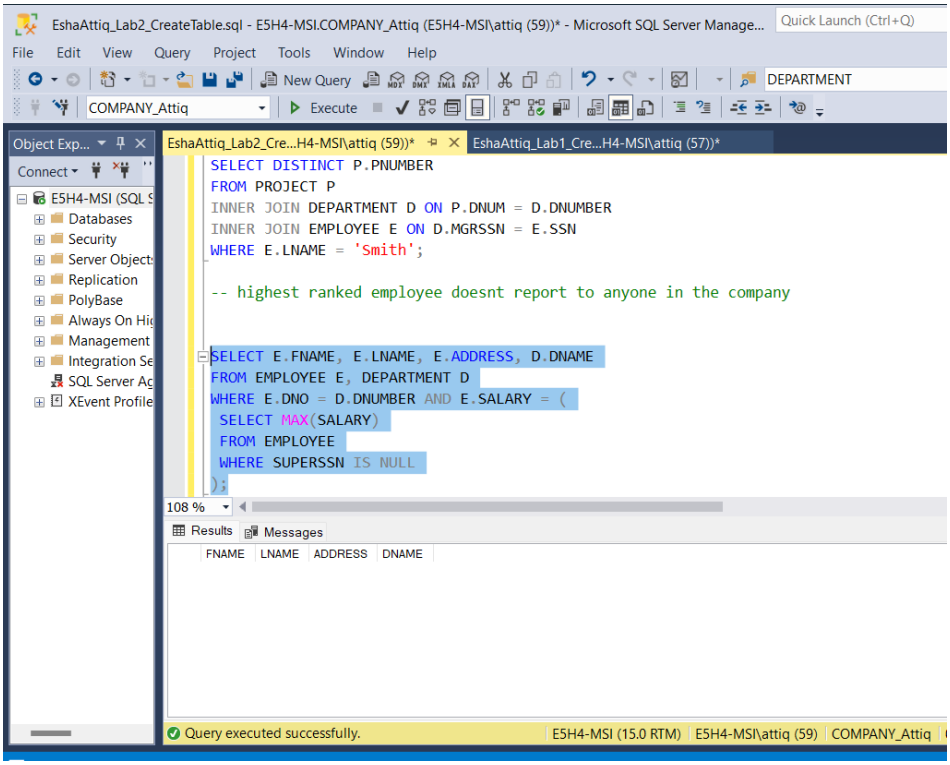
```
FROM PROJECT P
INNER JOIN DEPARTMENT D ON P.DNUM = D.DNUMBER
INNER JOIN EMPLOYEE E ON D.MGRSSN = E.SSN
        WHERE E.LNAME = 'Smith';
```

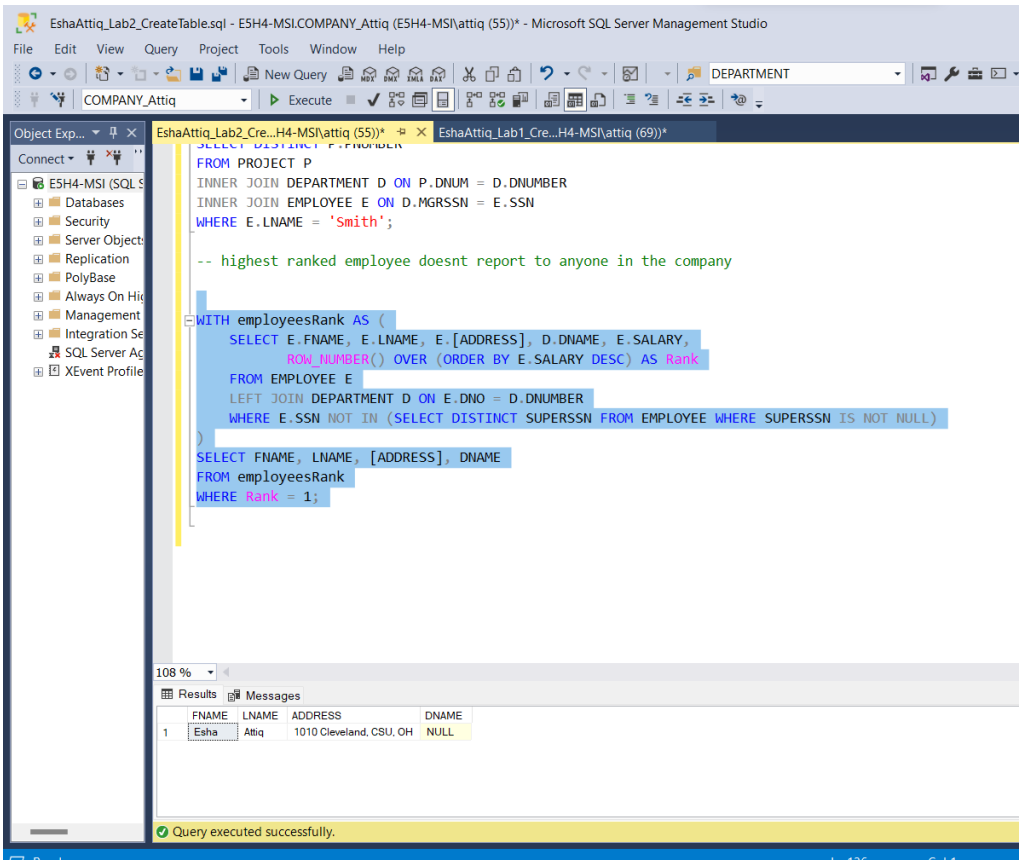


Q3) : Retrieve the name and address and his/her department name of the highest ranked employee who does not report to anybody in the company.

(I tried 2 approaches but I keep getting odd outputs, I'll have both screenshots)

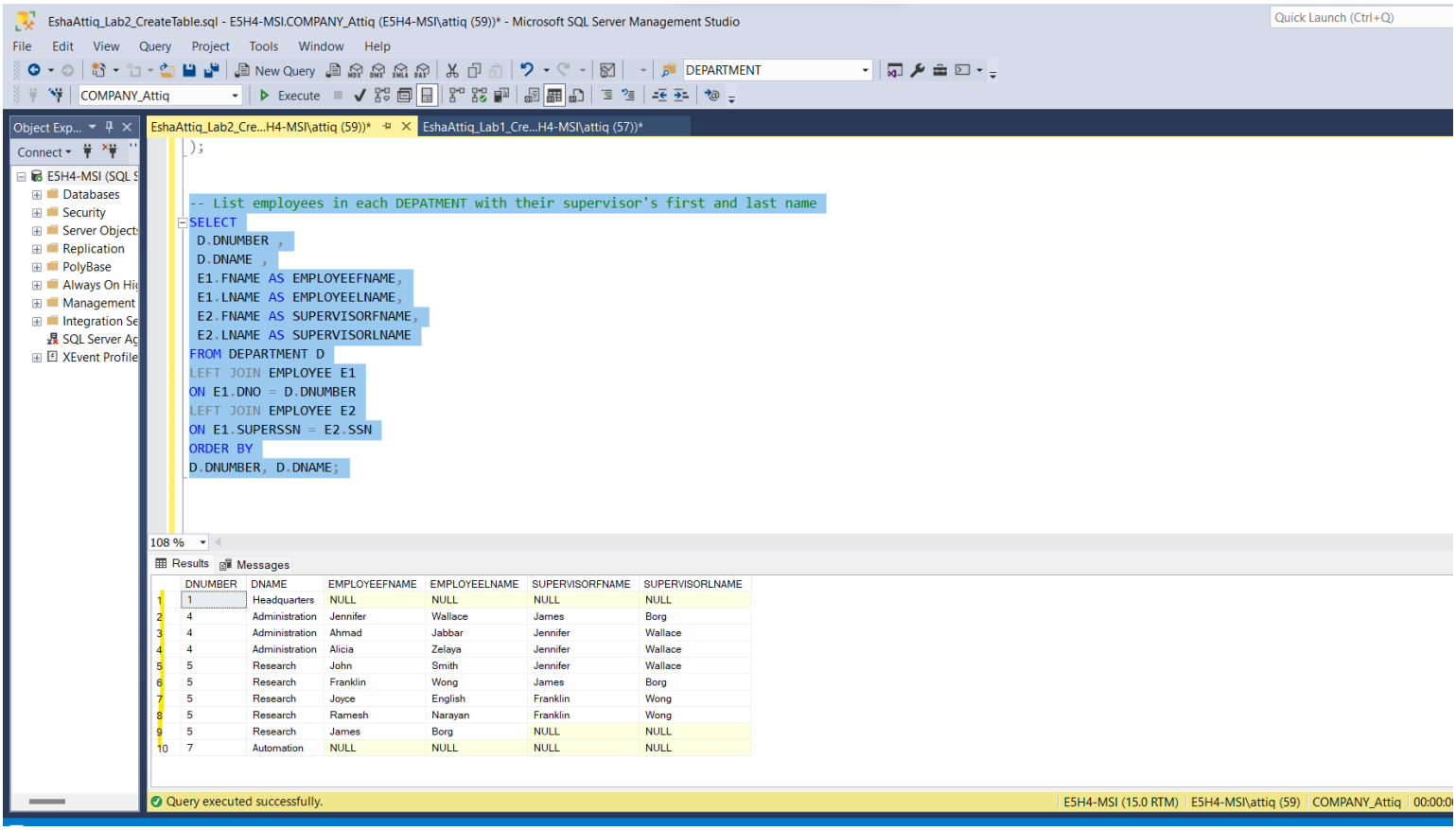
```
-- highest ranked employee doesnt report to anyone in the company

SELECT E.FNAME, E.LNAME,
E.ADDRESS, D.DNAME
FROM EMPLOYEE E,
DEPARTMENT D
WHERE E.DNO = D.DNUMBER
AND E.SALARY = (
 SELECT MAX(SALARY)
 FROM EMPLOYEE
 WHERE SUPERSSN IS NULL
       );
```





Q4) For each department, list all the employees who are working in the department with the employee's first and last name and first and last name of his or her immediate supervisor. List the result in the order of each department number and department name. (it works fine, I am doing it correct. but my James Borg Headquarters is glitching)

```
-- List employees in each DEPATMENT with their supervisor's first and last name
SELECT
 D.DNUMBER ,
 D.DNAME ,
 E1.FNAME AS EMPLOYEEFNAME,
 E1.LNAME AS EMPLOYEELNAME,
 E2.FNAME AS SUPERVISORFNAME,
 E2.LNAME AS SUPERVISORLNAME
FROM DEPARTMENT D
LEFT JOIN EMPLOYEE E1
ON E1.DNO = D.DNUMBER
LEFT JOIN EMPLOYEE E2
ON E1.SUPERSSN = E2.SSN
ORDER BY
       D.DNUMBER, D.DNAME;
```



EXTRA BONUS POINT!!!

```
-- List employees in each DEPATMENT with their supervisor's first and last name
SELECT
 D.DNUMBER ,
 D.DNAME ,
 E1.FNAME AS EMPLOYEEFNAME,
 E1.LNAME AS EMPLOYEELNAME,
 E2.FNAME AS SUPERVISORFNAME,
 E2.LNAME AS SUPERVISORLNAME
FROM DEPARTMENT D
JOIN EMPLOYEE E1 -- changed left join to just join to remove the DEPARTMENTS without any
employees
ON E1.DNO = D.DNUMBER
LEFT JOIN EMPLOYEE E2
ON E1.SUPERSSN = E2.SSN
ORDER BY
D.DNUMBER, D.DNAME;
```

We just changed that LEFT JOIN to JOIN