WEEK 8 SQL – Joins: inner, outer; Sub queries

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D SECTION

1. Using nested query retrieves the names of all employees who have two or more dependents.

```
You are now connected to database "company" as user "postgres".
company=# SELECT FNAME,LNAME FROM EMPLOYEE WHERE (SELECT COUNT(*) FROM DEPENDENT WHERE SSN=ESSN) >= 2;
  fname    | lname
----------+-------
 John     | Smith
 Franklin | Wong
(2 rows)
```

2. Using nested query Retrieve the name of each employee who has a dependent with the same first name and is the same sex as the employee

```
company=# SELECT E.FNAME,E.LNAME FROM EMPLOYEE AS E WHERE E.SSN IN (SELECT ESSN FROM DEPENDENT WHERE E.FNAME=DEPENDENT_NAME AND E.GENDER=GENDER);
 fname | lname
-------+-------
(0 rows)
```

3. Using nested query retrieves names of employees whose salary is greater than the salary of all the employees in department 5.

```
company=# SELECT FNAME,LNAME FROM EMPLOYEE WHERE SALARY>ALL ( SELECT SALARY FROM EMPLOYEE WHERE DNO=5);
  fname    |  lname
----------+----------
 James    | Borg
 Jennifer | Wallace
(2 rows)
```

4. Retrieve the names of employees who have no dependents (use Exists/Not Exists)

```
company=# SELECT FNAME, LNAME FROM EMPLOYEE WHERE NOT EXISTS ( SELECT * FROM DEPENDENT WHERE SSN=ESSN);
 fname   | lname
--------+----------
 James  | Borg
 Alicia | Zelaya
 Ramesh | Narayan
 Joyce  | English
 Ahmed  | Jabbar
(5 rows)
```

5. List the names of managers who have at least one dependent

```
company=# SELECT FNAME, LNAME FROM EMPLOYEE WHERE  EXISTS ( SELECT * FROM DEPENDENT WHERE SSN=ESSN) AND EXISTS(SELECT * FROM DEPARTMENT WHERE SSN=MGR_SSN);
  fname    |  lname
-----------+---------
 Franklin  | Wong
 Jennifer  | Wallace
(2 rows)
```

6. Using natural Joins, retrieve the name and address of every employee who works for the 'Research' department

```
company=# SELECT FNAME, LNAME, ADDRESS FROM EMPLOYEE NATURAL JOIN DEPARTMENT AS DEPT(Dname,Dno,Mssn,Msdate) WHERE Dname='Research';
  fname    |  lname   |          address
-----------+----------+--------------------------
 John      | Smith    | 731 Fondren,Houston,TX
 Franklin  | Wong     | 638 voss,Houston,TX
 Ramesh    | Narayan  | 975 Fire Oak, Humble, TX
 Joyce     | English  | 5631 Rice,Houston,TX
(4 rows)
```