

WEEK 8

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SRN – PES2UG19CS076

SQL - Joins: inner, outer; Sub queries

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

```
company=# SELECT fname, minit, lname
company=# FROM employee
company=# WHERE (SELECT COUNT(*) FROM dependent WHERE essn=ssn)>=2;
  fname  | minit | lname
-----+-----+-----
  John   |  B    |  Smith
Franklin |  T    |  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.minit, e.lname
company=# FROM employee AS e
company=# WHERE e.ssn IN (SELECT essn FROM dependent WHERE e.fname=dependent_name AND e.gender=gender);
  fname | minit | lname
-----+-----+-----
(0 rows)
```

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

```
company=# SELECT fname, minit, lname
company=# FROM employee
company=# WHERE salary > ALL(SELECT salary FROM employee WHERE dno=5);
  fname  | minit | lname
-----+-----+-----
  James   |  E    |  Borg
Jennifer |  S    |  Wallace
(2 rows)
```

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

```
company=# SELECT fname, minit, lname
company=# FROM employee
company=# WHERE NOT EXISTS (SELECT* FROM dependent WHERE ssn=essn);
 fname | minit | lname
-----+-----+-----
 James | E     | Borg
Alicia | J     | Zelaya
Ramesh | K     | Narayan
Joyce  | A     | English
Ahmed  | V     | Jabbar
(5 rows)
```

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

```
company=# SELECT fname, minit, lname
company=# FROM employee
company=# WHERE EXISTS (SELECT* FROM dependent WHERE ssn=essn)
company=# AND
company=# EXISTS (SELECT* FROM department WHERE ssn=mgr_ssn);
 fname | minit | lname
-----+-----+-----
Franklin | T     | Wong
Jennifer | S     | Wallace
(2 rows)
```

- 6) Using natural Join retrieve the name and address of every employee who works for the 'Research' department.

```
company=# SELECT fname, minit, lname, address
company=# FROM employee NATURAL JOIN department
company=# WHERE dname='Research' AND dno=dnumber;
 fname | minit | lname | address
-----+-----+-----+-----
 John   | B     | Smith | 731 Fondren,Houston,TX
Franklin | T     | Wong  | 638 voss,Houston,TX
Ramesh | K     | Narayan | 975 Fire Oak, Humble, TX
Joyce  | A     | English | 5631 Rice,Houston,TX
(4 rows)
```