DBMS Lab 7 - Set Operations

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1. Make a list of all project numbers for projects that involve an employee whose last name is 'Smith', either as a worker or as the manager of the department that controls the project.

2. Retrieve the names of the employees who do not have dependents.

3. Retrieve the Social Security Numbers of all employees who either work in department 5 or directly supervise an employee who works in department 5.

```
company=# select Ssn from employee where Dno = 5
company-# UNION
company-# select Super_ssn from employee where Dno = 5;
    ssn
-----------
 123456789
 333445555
 453453453
 666884444
 888665555
(5 rows)
```
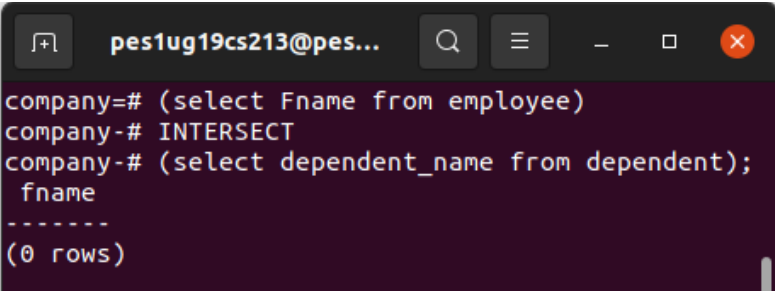
4. Using Intersect, find all projects that are controlled by department 5, and have employee SSN 123456789 working in that project.

```
company=# (select pnumber from project where dnum = 5)
INTERSECT
(select pno from works_on where Essn = '123456789');
 pnumber
---------
       1
       2
(2 rows)
```

5. Using Except, find the SSNs of all employees who work in department 5, but not the Bellaire location.

```
company=# select distinct Essn from works_on where Pno in
(select Pnumber from project where Dnum = 5
EXCEPT
select Pnumber from project where Plocation = 'Bellaire');
   essn
-----------
 123456789
 333445555
 453453453
 666884444
(4 rows)
```

6. Find the name of the employee who has the same name as the dependent of another employee (use Intersect).

```
company=# (select Fname from employee)
company-# INTERSECT
company-# (select dependent_name from dependent);
 fname
-------
(0 rows)
```