# DBMS LAB
# WEEK 7


## PES1UG19CS592
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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 a manager of the department that controls the project.

```
postgres=# \c company
You are now connected to database "company" as user "postgres".
company=# (SELECT DISTINCT PNUMBER
company(# FROM PROJECT, DEPARTMENT, EMPLOYEE
company(# WHERE DNUM = DNUMBER AND MGR_SSN = SSN AND LNAME = 'Smith')
company-# UNION
company-# (SELECT DISTINCT PNUMBER
company(# FROM PROJECT, WORKS_ON, EMPLOYEE
company(# WHERE PNUMBER = PNO AND ESSN = SSN AND LNAME = 'Smith');
 pnumber
---------
       1
       2
(2 rows)


company=#
```

2. Retrieve the names of the employee who does not have dependents.

```
company=# SELECT FNAME, MINIT, LNAME FROM EMPLOYEE WHERE SSN NOT IN ((SELECT SSN FROM EMPLOYEE) INTERSECT (SELECT ESSN FROM DEPENDENT));
 fname  | minit |  lname
--------+-------+---------
 James  | E     | Borg
 Alicia | J     | Zelaya
 Ramesh | K     | Narayan
 Joyce  | A     | English
 Ahmed  | V     | Jabbar
(5 rows)


company=#
```

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 controlled by the department 5 and has employee ssn 123456789 working in that project.

```
company=# (SELECT PNUMBER FROM PROJECT WHERE DNUM=5)
company-# INTERSECT
company-# (SELECT PNO FROM WORKS_ON WHERE Essn='123456789');
 pnumber
---------
       1
       2
(2 rows)
```

5. Using Except find all ssn of employees who works in department 5 but not in Bellaire location.

```
company=# (SELECT SSN FROM EMPLOYEE WHERE DNO=5)
company-# EXCEPT
company-# (SELECT E.SSN FROM EMPLOYEE E, PROJECT P, WORKS_ON W WHERE P.PLOCATION='Bellaire' AND W.PNO=P.PNUMBER AND W.ESSN=E.SSN);
    ssn
-----------
 666884444
 333445555
(2 rows)
```

6. Find the name of the employee who has the same name as the dependent of any employee (use intersect ).

```
company=# (SELECT FNAME FROM EMPLOYEE)
company-# INTERSECT
company-# (SELECT DEPENDENT_NAME FROM DEPENDENT);
 fname
-------
(0 rows)


company=#
```