DBMS LAB

WEEK 6

Yashi Chawla

PES1UG19CS592

1. Show the resulting salaries if every employee working on the ‘ProductX’ project is given a 10% raise.

```
company=# select fname, ssn, 1.1*salary from employee as e, works_on as w, project as p where e.ssn=w.essn and p.pnumber=w.pno and p.pname='ProductX';
 fname |    ssn    | ?column?
-------+-----------+-----------
 John  | 123456789 | 33000.000
 Joyce | 453453453 | 27500.000
(2 rows)
```

2. Find the sum of the salaries of all employees of the ‘Research’ department, as well as the maximum salary, the minimum salary, and the average salary in this department.

```
company=# select sum(salary) as total_salary, max(salary) as max_salary, min(salary) as min_salary, avg(salary) as avg_salary from employee, department where
 employee.dno=department.dnumber and department.dname='Research';
 total_salary | max_salary | min_salary |     avg_salary
--------------+------------+------------+--------------------
    133000.00 |   40000.00 |   25000.00 | 33250.000000000000
(1 row)
```

3. Count the number of distinct salary values in the database.

```
company=# select count(distinct salary) from employee;
 count
-------
     6
(1 row)
```

4. Retrieve the names of all employees who have two or more dependents.

```
company=# select fname, lname from employee where (select count(*) from dependent where ssn=essn)>=2;
  fname   | lname
----------+-------
 John     | Smith
 Franklin | Wong
(2 rows)
```

5. For each department, retrieve the department number, the number of employees in the department, and their average salary.

```
company=# select dnumber, count(ssn), avg(salary)
company-# from employee as e, department as d
company-# group by d.dnumber, e.dno
company-# having d.dnumber=e.dno;
 dnumber | count |        avg
---------+-------+--------------------
       1 |     1 | 55000.000000000000
       5 |     4 | 33250.000000000000
       4 |     3 | 31000.000000000000
(3 rows)
```

6. Retrieve the names of employees who make at least $10,000 more than the employee who is paid the least in the company.

```
company=# select fname, lname
company-# from employee
company-# where employee.salary > (select min(salary) from employee)+10000;
  fname   |  lname
----------+---------
 James    | Borg
 Franklin | Wong
 Jennifer | Wallace
 Ramesh   | Narayan
(4 rows)
```

7. Retrieve the names of all employees who work in the department that has the employee with the highest salary among all employees.

```
company=# select fname, lname
company-# from employee as e
company-# where e.dno = (select dno from employee
company(# where salary=(select max(salary) from employee));
 fname | lname
-------+-------
 James | Borg
(1 row)
```

8. Count the total number of employees whose salaries exceed $40,000 in each department

```
company=# select dno, salary, count(*)
company-# from employee
company-# group by dno, salary
company-# having salary>40000;
 dno |  salary  | count
-----+----------+-------
   1 | 55000.00 |     1
   4 | 43000.00 |     1
(2 rows)
```