SQL Assignment 1

Creating the Tables

```
bajaj=#
bajaj=# create table employeeDetails(
bajaj(# emp_id int primary key not null,
bajaj(# manager_id int not null,
bajaj(# emp_name varchar(50) not null,
bajaj(# project varchar(10) not null,
bajaj(# city varchar(20) not null);
CREATE TABLE
bajaj=# select * from employeeDetails;
 emp_id | manager_id | emp_name | project | city
--------+------------+----------+---------+------
(0 rows)


bajaj=# create table employeeSalary(
bajaj(# eid int primary key not null,
bajaj(# salary real,
bajaj(# constraint employeeSalary_fk foreign key(eid) references employeeDetails(emp_id));
CREATE TABLE
bajaj=# select * from employeeSalary;
 eid | salary
-----+--------
(0 rows)
```

Inserting values in EmployeeDetails

```
bajaj=# insert into employeeDetails values(1, 101, 'Sayak Banerjee', 'P1', 'Kolkata');
INSERT 0 1
bajaj=# insert into employeeDetails values(2, 103, 'Arin', 'P3', 'Kolkata');
INSERT 0 1
bajaj=# insert into employeeDetails values(3, 101, 'Mayukh', 'P1', 'Vellore');
INSERT 0 1
bajaj=# insert into employeeDetails values(4, 102, 'Ramiz', 'P2', 'Mumbai');
INSERT 0 1
bajaj=# insert into employeeDetails values(5, 103, 'Ritayan', 'P3', 'Pune');
INSERT 0 1
bajaj=# select * from employeeDetails;
 emp_id | manager_id |    emp_name    | project |  city
--------+------------+----------------+---------+---------
      1 |        101 | Sayak Banerjee | P1      | Kolkata
      2 |        103 | Arin           | P3      | Kolkata
      3 |        101 | Mayukh         | P1      | Vellore
      4 |        102 | Ramiz          | P2      | Mumbai
      5 |        103 | Ritayan        | P3      | Pune
(5 rows)
```

Inserting values in EmployeeSalary

```
bajaj=# insert into employeeSalary values(1, 100000);
INSERT 0 1
bajaj=# insert into employeeSalary values(2, 80000);
INSERT 0 1
bajaj=# insert into employeeSalary values(3, 120000);
INSERT 0 1
bajaj=# insert into employeeSalary values(4, 50000);
INSERT 0 1
bajaj=# insert into employeeSalary values(5, 100000);
INSERT 0 1
bajaj=# select * from employeeSalary;
 eid | salary
-----+--------
   1 | 100000
   2 |  80000
   3 | 120000
   4 |  50000
   5 | 100000
(5 rows)
```

1) **Query 1:**

```
bajaj=# select emp_id, emp_name from employeeDetails where manager_id = 101;
 emp_id |    emp_name
--------+----------------
      1 | Sayak Banerjee
      3 | Mayukh
(2 rows)
```

2) **Query 2:**

```
bajaj=# select count(emp_id) as totalcount from employeeDetails where project = 'P1';
 totalcount
------------
          2
(1 row)
```

3) **Query 3:**

```
bajaj=# select min(salary), max(salary), avg(salary) from employeeSalary;
  min  |  max   |  avg
-------+--------+-------
 50000 | 120000 | 90000
(1 row)
```

4) Query 4:

```
bajaj=# insert into employeeDetails values(6, 110, 'Ram', 'P4', 'Delhi');
INSERT 0 1
bajaj=# insert into employeeDetails values(7, 109, 'Ayush', 'P7', 'Mohali');
INSERT 0 1
bajaj=# insert into employeeSalary values(6, 12000);
INSERT 0 1
bajaj=# insert into employeeSalary values(7, 14500);
INSERT 0 1
bajaj=# SELECT eid FROM employeeSalary where salary between 10000 AND 15000;
 eid
-----
   6
   7
(2 rows)
```

5) Query 5:

```
bajaj=#
bajaj=# alter table employeeSalary add column variablePay real;
ALTER TABLE
bajaj=# update employeeSalary set variablePay = 0.25*salary;
UPDATE 7
bajaj=# select * from employeeSalary;
 eid | salary | variablepay
-----+--------+-------------
   1 | 100000 |       25000
   2 |  80000 |       20000
   3 | 120000 |       30000
   4 |  50000 |       12500
   5 | 100000 |       25000
   6 |  12000 |        3000
   7 |  14500 |        3625
(7 rows)


bajaj=# select eid, salary+variable as grosspay from employeeSalary;
ERROR:  column "variable" does not exist
LINE 1: select eid, salary+variable as grosspay from employeeSalary;
                           ^
HINT:  Perhaps you meant to reference the column "employeesalary.variablepay".
bajaj=# select eid, salary+variablepay as grosspay from employeeSalary;
 eid | grosspay
-----+----------
   1 |   125000
   2 |   100000
   3 |   150000
   4 |    62500
   5 |   125000
   6 |    15000
   7 |    18125
(7 rows)
```

6) **Query 6:**

```
bajaj=# select emp_id from employeeDetails intersect select eid from employeeSalary;
 emp_id
--------
      5
      4
      6
      2
      7
      1
      3
(7 rows)
```

7) **Query 7:**

```
bajaj=# select upper(emp_name), lower(city) from employeeDetails;
     upper      |  lower
----------------+---------
 SAYAK BANERJEE | kolkata
 ARIN           | kolkata
 MAYUKH         | vellore
 RAMIZ          | mumbai
 RITAYAN        | pune
 RAM            | delhi
 AYUSH          | mohali
(7 rows)
```

8) **Query 8:**

```
bajaj=# select project, count(emp_id) as count from employeeDetails group by project order by count desc;
 project | count
---------+-------
 P1      |     2
 P3      |     2
 P2      |     1
 P7      |     1
 P4      |     1
(5 rows)
```

9) **Query 9:**

```
bajaj=# select * from employeeDetails where mod(emp_id, 2) = 1;
 emp_id | manager_id |    emp_name    | project |  city
--------+------------+----------------+---------+---------
      1 |        101 | Sayak Banerjee | P1      | Kolkata
      3 |        101 | Mayukh         | P1      | Vellore
      5 |        103 | Ritayan        | P3      | Pune
      7 |        109 | Ayush          | P7      | Mohali
(4 rows)
```

10) Query 10:

```
bajaj=# select salary from employeeSalary order by salary desc offset 2 limit 1;
 salary
--------
 100000
(1 row)
```

Didn’t know how to find without using limit.