Assignment 1

Create a Database name entri_assignment

Create a Table with name `departments`

`Department_id  (pk) Department_name Location_id+`

```
mysql> DESCRIBE departments;
+-----------------+-------------+------+-----+---------+----------------+
| Field           | Type        | Null | Key | Default | Extra          |
+-----------------+-------------+------+-----+---------+----------------+
| Department_id   | int         | NO   | PRI | NULL    | auto_increment |
| Department_name | varchar(100) | YES  |     | NULL    |                |
| Location_id     | int         | YES  |     | NULL    |                |
+-----------------+-------------+------+-----+---------+----------------+
3 rows in set (0.01 sec)
```

Create a Table with name `employees`

`Employee_id  (pk)  ,first_name,last_name ,email,phone_number,hire_date,`

`job_id, salary, commission_pct, manager_id, department_id (fk reference`

```
mysql> describe employees;
+----------------+-------------+------+-----+---------+-------+
| Field          | Type        | Null | Key | Default | Extra |
+----------------+-------------+------+-----+---------+-------+
| EMPLOYEE_ID    | int         | NO   | PRI | NULL    |       |
| FIRST_NAME     | varchar(20) | YES  |     | NULL    |       |
| LAST_NAME      | varchar(25) | YES  |     | NULL    |       |
| EMAIL          | varchar(25) | YES  |     | NULL    |       |
| PHONE_NUMBER   | varchar(20) | YES  |     | NULL    |       |
| HIRE_DATE      | date        | YES  |     | NULL    |       |
| JOB_ID         | varchar(10) | YES  |     | NULL    |       |
| SALARY         | decimal(8,2) | YES  |     | NULL    |       |
| COMMISSION_PCT | decimal(4,2) | YES  |     | NULL    |       |
| MANAGER_ID     | int         | YES  |     | NULL    |       |
| DEPARTMENT_ID  | int         | YES  | MUL | NULL    |       |
+----------------+-------------+------+-----+---------+-------+
11 rows in set (0.00 sec)
```

```
## Insert into Departments table
 INSERT INTO departments VALUES ( 170 , 'Payroll' , 1700);
```

```
mysql> select * from departments;
+---------------+-----------------+-------------+
| Department_id | Department_name | Location_id |
+---------------+-----------------+-------------+
|           170 | Payroll         |        1700 |
+---------------+-----------------+-------------+
1 row in set (0.00 sec)
```

```
employees table

; INSERT INTO employees V

## Insert into employees VALUES (101, 'Neena' , 'Kochhar' ,
'NKOCHHAR' , '515.123.4568' , '1989-11-21' , 'AD_VP' , 17000 , NULL ,
100 , 20);

INSERT INTO employees VALUES (102 , 'Lex' , 'De Haan' , 'LDEHAAN' ,
'515.123.4569' , '1993-09-12' , 'AD_VP' , 17000 , NULL , 100 , 30);

INSERT INTO employees VALUES (104 , 'Bruce' , 'Ernst' , 'BERNST' ,
'590.423.4568' , '1991-05-21',  'IT_PROG' , 6000 , NULL , 103 , 60);

INSERT INTO employees VALUES (105 , 'David' , 'Austin' , 'DAUSTIN' ,
'590.423.4569' , '1997-06-25',  'IT_PROG' , 4800 , NULL , 103 , 60);

INSERT INTO employees VALUES (106 , 'Valli' , 'Pataballa' ,
'VPATABAL' , '590.423.4560' , '1998-02-05',  'IT_PROG' , 4800 , NULL
, 103 , 40);
```

```
INSERT INTO employees VALUES (107 , 'Diana' , 'Lorentz' , 'DLORENTZ'
, '590.423.5567' , '1999-02-09',  'IT_PROG' , 4200 , NULL , 103 ,
40);

INSERT INTO employees VALUES (108 , 'Nancy' , 'Greenberg' ,
'NGREENBE' , '515.124.4569' , '1994-08-17',  'FI_MGR' , 12000 , NULL
, 101 , 100);

INSERT INTO employees VALUES (109 , 'Daniel' , 'Faviet' , 'DFAVIET' ,
'515.124.4169' , '1994-08-12',  'FI_ACCOUNT' , 9000 , NULL , 108 ,
170);

INSERT INTO employees VALUES (110 , 'John' , 'Chen' , 'JCHEN' ,
'515.124.4269' , '1997-04-09',  'FI_ACCOUNT' , 8200 , NULL , 108 ,
170);

INSERT INTO employees VALUES (111 , 'Ismael' , 'Sciarra' , 'ISCIARRA'
, '515.124.4369' , '1997-02-01',  'FI_ACCOUNT' , 7700 , NULL , 108 ,
160);

INSERT INTO employees VALUES (112 , 'Jose Manuel' , 'Urman' ,
'JMURMAN' , '515.124.4469' , '1998-06-03', 'FI_ACCOUNT' , 7800 , NULL
8 , 150);

INSERT INTO employees VALUES (114 , 'Den' , 'Raphaely' , 'DRAPHEAL' ,
'515.127.4561' , '1994-11-08',  'PU_MAN' , 11000 , NULL , 100 , 30);

INSERT INTO employees VALUES (115 , 'Alexander' , 'Khoo' , 'AKHOO' ,
'515.127.4562' , '1995-05-12',  'PU_CLERK' , 3100 , NULL , 114 , 80);

INSERT INTO employees VALUES (116 , 'Shelli' , 'Baida' , 'SBAIDA' ,
'515.127.4563' ,'1997-12-13', 'PU_CLERK' , 2900 , NULL , 114 , 70);
```

```
INSERT INTO employees VALUES (117 , 'Sigal' , 'Tobias' , 'STOBIAS' ,
'515.127.4564' , '1997-09-10', 'PU_CLERK' , 2800 , NULL , 114 , 30);

INSERT INTO employees VALUES (118 , 'Guy' , 'Himuro' , 'GHIMURO' ,
'515.127.4565' , '1998-01-02',  'PU_CLERK' , 2600 , NULL , 114 , 60);

INSERT INTO employees VALUES (119 , 'Karen' , 'Colmenares' ,
'KCOLMENA' , '515.127.4566' , '1999-04-08',  'PU_CLERK' , 2500 , NULL
, 114 , 130);

INSERT INTO employees VALUES (120 , 'Matthew' , 'Weiss' , 'MWEISS' ,
'650.123.1234' ,'1996-07-18',  'ST_MAN' , 8000 , NULL , 100 , 50);

INSERT INTO employees VALUES (122 , 'Payam' , 'Kaufling' , 'PKAUFLIN'
, '650.123.3234' ,'1995-05-01',  'ST_MAN' , 7900 , NULL , 100 , 40);

INSERT INTO employees VALUES (123 , 'Shanta' , 'Vollman' , 'SVOLLMAN'
, '650.123.4234' , '1997-10-12',  'ST_MAN' , 6500 , NULL , 100 , 50);

INSERT INTO employees VALUES (124, 'Kevin' , 'Mourgos' , 'KMOURGOS' ,
'650.123.5234' , '1999-11-12',  'ST_MAN' , 5800 , NULL , 100 , 80);

INSERT INTO employees VALUES (125, 'Julia' , 'Nayer' , 'JNAYER' ,
'650.124.1214' , '1997-07-02',  'ST_CLERK' , 3200 , NULL , 120 , 50);

INSERT INTO employees VALUES (126, 'Irene' , 'Mikkilineni' ,
'IMIKKILI' , '650.124.1224' , '1998-11-12', 'ST_CLERK' , 2700 , NULL
, 120 , 50);

INSERT INTO employees VALUES (127, 'James' , 'Landry' , 'JLANDRY' ,
'650.124.1334' , '1999-01-02' , 'ST_CLERK' , 2400 , NULL , 120 , 90);
```

```
INSERT INTO employees VALUES (128, 'Steven' , 'Markle' , 'SMARKLE' , '650.124.1434' , '2000-03-04' , 'ST_CLERK' , 2200 , NULL , 120 , 50);
```

```
INSERT INTO employees VALUES (130, 'Mozhe' , 'Atkinson' , 'MATKINSO' , '650.124.6234' , '1997-10-12' , 'ST_CLERK' , 2800 , NULL , 121 , 110);
```

```
mysql> INSERT INTO employees VALUES (130, 'Mozhe' , 'Atkinson' , 'MATKINSO' , '650.124.6234' , '1997-10-12' , 'ST_CLERK' , 2800 , NULL , 121 , 110);
Query OK, 1 row affected (0.04 sec)

mysql> select * from employees;
+-------------+------------+-------------+----------+--------------+------------+------------+----------+----------------+------------+---------------+
| EMPLOYEE_ID | FIRST_NAME | LAST_NAME   | EMAIL    | PHONE_NUMBER | HIRE_DATE  | JOB_ID     | SALARY   | COMMISSION_PCT | MANAGER_ID | DEPARTMENT_ID |
+-------------+------------+-------------+----------+--------------+------------+------------+----------+----------------+------------+---------------+
|         101 | Neena      | Kochhar     | NKOCHHAR | 515.123.4568 | 1989-11-21 | AD_VP      | 17000.00 |           NULL |        100 |            20 |
|         102 | Lex        | De Haan     | LDEHAAN  | 515.123.4569 | 1993-09-12 | AD_VP      | 17000.00 |           NULL |        100 |            30 |
|         104 | Bruce      | Ernst       | BERNST   | 590.423.4568 | 1991-05-21 | IT_PROG    |  6000.00 |           NULL |        103 |            60 |
|         105 | David      | Austin      | DAUSTIN  | 590.423.4569 | 1997-06-25 | IT_PROG    |  4800.00 |           NULL |        103 |            60 |
|         106 | Valli      | Pataballa   | VPATABAL | 590.423.4560 | 1998-02-05 | IT_PROG    |  4800.00 |           NULL |        103 |            40 |
|         107 | Diana      | Lorentz     | DLORENTZ | 590.423.5567 | 1999-02-09 | IT_PROG    |  4200.00 |           NULL |        103 |            40 |
|         108 | Nancy      | Greenberg   | NGREENBE | 515.124.4569 | 1994-08-17 | FI_MGR     | 12000.00 |           NULL |        101 |           100 |
|         109 | Daniel     | Faviet      | DFAVIET  | 515.124.4169 | 1994-08-12 | FI_ACCOUNT |  9000.00 |           NULL |        108 |           170 |
|         110 | John       | Chen        | JCHEN    | 515.124.4269 | 1997-04-09 | FI_ACCOUNT |  8200.00 |           NULL |        108 |           170 |
|         111 | Ismael     | Sciarra     | ISCIARRA | 515.124.4369 | 1997-02-01 | FI_ACCOUNT |  7700.00 |           NULL |        108 |           160 |
|         112 | Jose Manuel | Urman       | JMURMAN  | 515.124.4469 | 1998-06-03 | FI_ACCOUNT |  7800.00 |           NULL |          8 |           150 |
|         114 | Den        | Raphaely    | DRAPHEAL | 515.127.4561 | 1994-11-08 | PU_MAN     | 11000.00 |           NULL |        100 |            30 |
|         115 | Alexander  | Khoo        | AKHOO    | 515.127.4562 | 1995-05-12 | PU_CLERK   |  3100.00 |           NULL |        114 |            80 |
|         116 | Shelli     | Baida       | SBAIDA   | 515.127.4563 | 1997-12-13 | PU_CLERK   |  2900.00 |           NULL |        114 |            70 |
|         117 | Sigal      | Tobias      | STOBIAS  | 515.127.4564 | 1997-09-10 | PU_CLERK   |  2800.00 |           NULL |        114 |            30 |
|         118 | Guy        | Himuro      | GHIMURO  | 515.127.4565 | 1998-01-02 | PU_CLERK   |  2600.00 |           NULL |        114 |            60 |
|         119 | Karen      | Colmenares  | KCOLMENA | 515.127.4566 | 1999-04-08 | PU_CLERK   |  2500.00 |           NULL |        114 |           130 |
|         120 | Matthew    | Weiss       | MWEISS   | 650.123.1234 | 1996-07-18 | ST_MAN     |  8000.00 |           NULL |        100 |            50 |
|         122 | Payam      | Kaufling    | PKAUFLIN | 650.123.3234 | 1995-05-01 | ST_MAN     |  7900.00 |           NULL |        100 |            40 |
|         123 | Shanta     | Vollman     | SVOLLMAN | 650.123.4234 | 1997-10-12 | ST_MAN     |  6500.00 |           NULL |        100 |            50 |
|         124 | Kevin      | Mourgos     | KMOURGOS | 650.123.5234 | 1999-11-12 | ST_MAN     |  5800.00 |           NULL |        100 |            80 |
|         125 | Julia      | Nayer       | JNAYER   | 650.124.1214 | 1997-07-02 | ST_CLERK   |  3200.00 |           NULL |        120 |            50 |
|         126 | Irene      | Mikkilineni | IMIKKILI | 650.124.1224 | 1998-11-12 | ST_CLERK   |  2700.00 |           NULL |        120 |            50 |
|         127 | James      | Landry      | JLANDRY  | 650.124.1334 | 1999-01-02 | ST_CLERK   |  2400.00 |           NULL |        120 |            90 |
|         128 | Steven     | Markle      | SMARKLE  | 650.124.1434 | 2000-03-04 | ST_CLERK   |  2200.00 |           NULL |        120 |            50 |
|         130 | Mozhe      | Atkinson    | MATKINSO | 650.124.6234 | 1997-10-12 | ST_CLERK   |  2800.00 |           NULL |        121 |           110 |
+-------------+------------+-------------+----------+--------------+------------+------------+----------+----------------+------------+---------------+
26 rows in set (0.03 sec)
```

Solve SQL Exercises

1. Select employees first name, last name, job_id and salary whose first name starts with alphabet S

```
mysql> select first_name,last_name,job_id,salary from employees where first_name like 's%';
+------------+-----------+----------+---------+
| first_name | last_name | job_id   | salary  |
+------------+-----------+----------+---------+
| Shelli     | Baida     | PU_CLERK | 2900.00 |
| Sigal      | Tobias    | PU_CLERK | 2800.00 |
| Shanta     | Vollman   | ST_MAN   | 6500.00 |
| Steven     | Markle    | ST_CLERK | 2200.00 |
+------------+-----------+----------+---------+
4 rows in set (0.00 sec)
```

2. Write a query to select employee with the highest salary (using an inner query)

```
mysql> select * from employees where salary=(select max(salary) from employees);
+-------------+------------+-----------+----------+--------------+------------+--------+----------+----------------+------------+---------------+
| EMPLOYEE_ID | FIRST_NAME | LAST_NAME | EMAIL    | PHONE_NUMBER | HIRE_DATE  | JOB_ID | SALARY   | COMMISSION_PCT | MANAGER_ID | DEPARTMENT_ID |
+-------------+------------+-----------+----------+--------------+------------+--------+----------+----------------+------------+---------------+
|         101 | Neena      | Kochhar   | NKOCHHAR | 515.123.4568 | 1989-11-21 | AD_VP  | 17000.00 |           NULL |        100 |            20 |
|         102 | Lex        | De Haan   | LDEHAAN  | 515.123.4569 | 1993-09-12 | AD_VP  | 17000.00 |           NULL |        100 |            30 |
+-------------+------------+-----------+----------+--------------+------------+--------+----------+----------------+------------+---------------+
2 rows in set (0.06 sec)
```

3. Select employee with the second highest salary

```
mysql> select * from employees where salary=(select max(salary) from employees where salary<(select max(salary) from employees));
+-------------+------------+-----------+----------+--------------+------------+--------+----------+----------------+------------+---------------+
| EMPLOYEE_ID | FIRST_NAME | LAST_NAME | EMAIL    | PHONE_NUMBER | HIRE_DATE  | JOB_ID | SALARY   | COMMISSION_PCT | MANAGER_ID | DEPARTMENT_ID |
+-------------+------------+-----------+----------+--------------+------------+--------+----------+----------------+------------+---------------+
|         108 | Nancy      | Greenberg | NGREENBE | 515.124.4569 | 1994-08-17 | FI_MGR | 12000.00 |           NULL |        101 |           100 |
+-------------+------------+-----------+----------+--------------+------------+--------+----------+----------------+------------+---------------+
1 row in set (0.01 sec)

mysql> select employee_id,first_name,salary from employees where salary=(select max(salary) from employees where salary<(select max(salary) from employees))
;
+-------------+------------+----------+
| employee_id | first_name | salary   |
+-------------+------------+----------+
|         108 | Nancy      | 12000.00 |
+-------------+------------+----------+
1 row in set (0.00 sec)
```

4. Write a query to select employees and their corresponding managers and their salaries

```
mysql> select e.employee_id as id,e.first_name as emp_name,e.salary as emp_salary,m.employee_id as manager_id,m.first_name as manager_name,m.salary as manag
er_salary from employees e left join employees m on m.employee_id=e.manager_id;
+-----+-------------+------------+------------+--------------+----------------+
| id  | emp_name    | emp_salary | manager_id | manager_name | manager_salary |
+-----+-------------+------------+------------+--------------+----------------+
| 101 | Neena       |   17000.00 |       NULL | NULL         |           NULL |
| 102 | Lex         |   17000.00 |       NULL | NULL         |           NULL |
| 104 | Bruce       |    6000.00 |       NULL | NULL         |           NULL |
| 105 | David       |    4800.00 |       NULL | NULL         |           NULL |
| 106 | Valli       |    4800.00 |       NULL | NULL         |           NULL |
| 107 | Diana       |    4200.00 |       NULL | NULL         |           NULL |
| 108 | Nancy       |   12000.00 |        101 | Neena        |       17000.00 |
| 109 | Daniel      |    9000.00 |        108 | Nancy        |       12000.00 |
| 110 | John        |    8200.00 |        108 | Nancy        |       12000.00 |
| 111 | Ismael      |    7700.00 |        108 | Nancy        |       12000.00 |
| 112 | Jose Manuel |    7800.00 |       NULL | NULL         |           NULL |
| 114 | Den         |   11000.00 |       NULL | NULL         |           NULL |
| 115 | Alexander   |    3100.00 |        114 | Den          |       11000.00 |
| 116 | Shelli      |    2900.00 |        114 | Den          |       11000.00 |
| 117 | Sigal       |    2800.00 |        114 | Den          |       11000.00 |
| 118 | Guy         |    2600.00 |        114 | Den          |       11000.00 |
| 119 | Karen       |    2500.00 |        114 | Den          |       11000.00 |
| 120 | Matthew     |    8000.00 |       NULL | NULL         |           NULL |
| 122 | Payam       |    7900.00 |       NULL | NULL         |           NULL |
| 123 | Shanta      |    6500.00 |       NULL | NULL         |           NULL |
| 124 | Kevin       |    5800.00 |       NULL | NULL         |           NULL |
| 125 | Julia       |    3200.00 |        120 | Matthew      |        8000.00 |
| 126 | Irene       |    2700.00 |        120 | Matthew      |        8000.00 |
| 127 | James       |    2400.00 |        120 | Matthew      |        8000.00 |
| 128 | Steven      |    2200.00 |        120 | Matthew      |        8000.00 |
| 130 | Mozhe       |    2800.00 |       NULL | NULL         |           NULL |
+-----+-------------+------------+------------+--------------+----------------+
26 rows in set (0.04 sec)
```

5. Write a query to select employees and their corresponding managers and their salaries (SELF Join)

```
mysql> select e.employee_id as id,e.first_name as emp_name,e.salary as emp_salary,m.employee_id as manager_id,m.first_name as manager_name,m.salary as manag
er_salary from employees e left join employees m on m.employee_id=e.manager_id;
+-----+-------------+------------+------------+--------------+----------------+
| id  | emp_name    | emp_salary | manager_id | manager_name | manager_salary |
+-----+-------------+------------+------------+--------------+----------------+
| 101 | Neena       |   17000.00 |       NULL | NULL         |           NULL |
| 102 | Lex         |   17000.00 |       NULL | NULL         |           NULL |
| 104 | Bruce       |    6000.00 |       NULL | NULL         |           NULL |
| 105 | David       |    4800.00 |       NULL | NULL         |           NULL |
| 106 | Valli       |    4800.00 |       NULL | NULL         |           NULL |
| 107 | Diana       |    4200.00 |       NULL | NULL         |           NULL |
| 108 | Nancy       |   12000.00 |        101 | Neena        |       17000.00 |
| 109 | Daniel      |    9000.00 |        108 | Nancy        |       12000.00 |
| 110 | John        |    8200.00 |        108 | Nancy        |       12000.00 |
| 111 | Ismael      |    7700.00 |        108 | Nancy        |       12000.00 |
| 112 | Jose Manuel |    7800.00 |       NULL | NULL         |           NULL |
| 114 | Den         |   11000.00 |       NULL | NULL         |           NULL |
| 115 | Alexander   |    3100.00 |        114 | Den          |       11000.00 |
| 116 | Shelli      |    2900.00 |        114 | Den          |       11000.00 |
| 117 | Sigal       |    2800.00 |        114 | Den          |       11000.00 |
| 118 | Guy         |    2600.00 |        114 | Den          |       11000.00 |
| 119 | Karen       |    2500.00 |        114 | Den          |       11000.00 |
| 120 | Matthew     |    8000.00 |       NULL | NULL         |           NULL |
| 122 | Payam       |    7900.00 |       NULL | NULL         |           NULL |
| 123 | Shanta      |    6500.00 |       NULL | NULL         |           NULL |
| 124 | Kevin       |    5800.00 |       NULL | NULL         |           NULL |
| 125 | Julia       |    3200.00 |        120 | Matthew      |        8000.00 |
| 126 | Irene       |    2700.00 |        120 | Matthew      |        8000.00 |
| 127 | James       |    2400.00 |        120 | Matthew      |        8000.00 |
| 128 | Steven      |    2200.00 |        120 | Matthew      |        8000.00 |
| 130 | Mozhe       |    2800.00 |       NULL | NULL         |           NULL |
+-----+-------------+------------+------------+--------------+----------------+
26 rows in set (0.04 sec)
```

6. Find the count of employees in each department

```
mysql> select department_id,count(employee_id) as employee_count from employees group by department_id order by employee_count;
+---------------+----------------+
| department_id | employee_count |
+---------------+----------------+
|            20 |              1 |
|            70 |              1 |
|            90 |              1 |
|           100 |              1 |
|           110 |              1 |
|           130 |              1 |
|           150 |              1 |
|           160 |              1 |
|            80 |              2 |
|           170 |              2 |
|            30 |              3 |
|            40 |              3 |
|            60 |              3 |
|            50 |              5 |
+---------------+----------------+
14 rows in set (0.00 sec)
```

7. Create a view for the above query

```
mysql> create view employeemanagerdetails as
    -> select e.employee_id as id,
    ->          e.first_name as emp_name,
    ->         e.salary as emp_salary,
    ->         m.employee_id as manager_id,
    ->         m.first_name as manager_name,
    ->         m.salary as manager_salary
    ->         from employees e
    ->         left join employees m on m.employee_id=e.manager_id;
Query OK, 0 rows affected (0.09 sec)

mysql> select * from employeemanagerdetails;
+-----+-------------+------------+------------+--------------+----------------+
| id  | emp_name    | emp_salary | manager_id | manager_name | manager_salary |
+-----+-------------+------------+------------+--------------+----------------+
| 101 | Neena       |   17000.00 |       NULL | NULL         |           NULL |
| 102 | Lex         |   17000.00 |       NULL | NULL         |           NULL |
| 104 | Bruce       |    6000.00 |       NULL | NULL         |           NULL |
| 105 | David       |    4800.00 |       NULL | NULL         |           NULL |
| 106 | Valli       |    4800.00 |       NULL | NULL         |           NULL |
| 107 | Diana       |    4200.00 |       NULL | NULL         |           NULL |
| 108 | Nancy       |   12000.00 |        101 | Neena        |       17000.00 |
| 109 | Daniel      |    9000.00 |        108 | Nancy        |       12000.00 |
| 110 | John        |    8200.00 |        108 | Nancy        |       12000.00 |
| 111 | Ismael      |    7700.00 |        108 | Nancy        |       12000.00 |
| 112 | Jose Manuel |    7800.00 |       NULL | NULL         |           NULL |
| 114 | Den         |   11000.00 |       NULL | NULL         |           NULL |
| 115 | Alexander   |    3100.00 |        114 | Den          |       11000.00 |
| 116 | Shelli      |    2900.00 |        114 | Den          |       11000.00 |
| 117 | Sigal       |    2800.00 |        114 | Den          |       11000.00 |
| 118 | Guy         |    2600.00 |        114 | Den          |       11000.00 |
| 119 | Karen       |    2500.00 |        114 | Den          |       11000.00 |
| 120 | Matthew     |    8000.00 |       NULL | NULL         |           NULL |
| 122 | Payam       |    7900.00 |       NULL | NULL         |           NULL |
| 123 | Shanta      |    6500.00 |       NULL | NULL         |           NULL |
| 124 | Kevin       |    5800.00 |       NULL | NULL         |           NULL |
| 125 | Julia       |    3200.00 |        120 | Matthew      |        8000.00 |
| 126 | Irene       |    2700.00 |        120 | Matthew      |        8000.00 |
| 127 | James       |    2400.00 |        120 | Matthew      |        8000.00 |
```

8. Write a query to show the count of employees under each manager in descending order (from view)

```
mysql> select manager_id,manager_name,count(id) as employee_count from employeemanagerdetails where manager_id is not NULL GROUP BY manager_id,manager_name
order by employee_count desc;
+------------+--------------+----------------+
| manager_id | manager_name | employee_count |
+------------+--------------+----------------+
|        114 | Den          |              5 |
|        120 | Matthew      |              4 |
|        108 | Nancy        |              3 |
|        101 | Neena        |              1 |
+------------+--------------+----------------+
4 rows in set (0.00 sec)
```

9. Get the count of employees hired year wise

```
mysql> select year(hire_date) as hire_year,count(employee_id) as employee_count from employees group by hire_date order by employee_count;
+-----------+----------------+
| hire_year | employee_count |
+-----------+----------------+
|      1989 |              1 |
|      1993 |              1 |
|      1991 |              1 |
|      1997 |              1 |
|      1998 |              1 |
|      1999 |              1 |
|      1994 |              1 |
|      1994 |              1 |
|      1997 |              1 |
|      1997 |              1 |
|      1998 |              1 |
|      1994 |              1 |
|      1995 |              1 |
|      1997 |              1 |
|      1997 |              1 |
|      1998 |              1 |
|      1999 |              1 |
|      1996 |              1 |
|      1995 |              1 |
|      1999 |              1 |
|      1997 |              1 |
|      1998 |              1 |
|      1999 |              1 |
|      2000 |              1 |
|      1997 |              2 |
+-----------+----------------+
```

10.Select the employees whose first_name contains “an”

```
mysql> select * from employees where first_name like '%an%';
+-------------+------------+-----------+----------+--------------+------------+------------+----------+----------------+------------+---------------+
| EMPLOYEE_ID | FIRST_NAME | LAST_NAME | EMAIL    | PHONE_NUMBER | HIRE_DATE  | JOB_ID     | SALARY   | COMMISSION_PCT | MANAGER_ID | DEPARTMENT_ID |
+-------------+------------+-----------+----------+--------------+------------+------------+----------+----------------+------------+---------------+
|         107 | Diana      | Lorentz   | DLORENTZ | 590.423.5567 | 1999-02-09 | IT_PROG    |  4200.00 |           NULL |        103 |            40 |
|         108 | Nancy      | Greenberg | NGREENBE | 515.124.4569 | 1994-08-17 | FI_MGR     | 12000.00 |           NULL |        101 |           100 |
|         109 | Daniel     | Faviet    | DFAVIET  | 515.124.4169 | 1994-08-12 | FI_ACCOUNT |  9000.00 |           NULL |        108 |           170 |
|         112 | Jose Manuel | Urman     | JMURMAN  | 515.124.4469 | 1998-06-03 | FI_ACCOUNT |  7800.00 |           NULL |          8 |           150 |
|         115 | Alexander  | Khoo      | AKHOO    | 515.127.4562 | 1995-05-12 | PU_CLERK   |  3100.00 |           NULL |        114 |            80 |
|         123 | Shanta     | Vollman   | SVOLLMAN | 650.123.4234 | 1997-10-12 | ST_MAN     |  6500.00 |           NULL |        100 |            50 |
+-------------+------------+-----------+----------+--------------+------------+------------+----------+----------------+------------+---------------+
6 rows in set (0.03 sec)
```

11.create a stored procedure to get the “ Get the count of employees hired in the input year”(IN year , OUT count)

```
50      delimiter ^^
51  •   create procedure out_count_employees (IN input_year INT, OUT employee_count INT)
52      begin
53
54          select COUNT(*) into employee_count
55          from employees
56          WHERE YEAR(hire_date) = input_year ;
57      end ^^
58      delimiter ;
59
60  •   CALL out_count_employees (1994, @employee_count);
61  •   SELECT @employee_count AS total_employees_hired_in_1994;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

total_employees_hired_in_1994
3

12. Select employee first name and the corresponding phone number in the format (_ _ _)-(_ _ _)-(_ _ _ _)

```
mysql> SELECT
    ->     first_name,
    ->     CONCAT('(', SUBSTRING(phone_number, 1, 3), ')-(', SUBSTRING(phone_number, 4, 3), ')-(', SUBSTRING(phone_number, 7, 4), ')') AS formatted_phone_nu
mber
    -> FROM
    ->     employees;
+-------------+-----------------------+
| first_name  | formatted_phone_number |
+-------------+-----------------------+
| Neena       | (515)-(.12)-(3.45)    |
| Lex         | (515)-(.12)-(3.45)    |
| Bruce       | (590)-(.42)-(3.45)    |
| David       | (590)-(.42)-(3.45)    |
| Valli       | (590)-(.42)-(3.45)    |
| Diana       | (590)-(.42)-(3.55)    |
| Nancy       | (515)-(.12)-(4.45)    |
| Daniel      | (515)-(.12)-(4.41)    |
| John        | (515)-(.12)-(4.42)    |
| Ismael      | (515)-(.12)-(4.43)    |
| Jose Manuel | (515)-(.12)-(4.44)    |
| Den         | (515)-(.12)-(7.45)    |
| Alexander   | (515)-(.12)-(7.45)    |
| Shelli      | (515)-(.12)-(7.45)    |
| Sigal       | (515)-(.12)-(7.45)    |
| Guy         | (515)-(.12)-(7.45)    |
| Karen       | (515)-(.12)-(7.45)    |
| Matthew     | (650)-(.12)-(3.12)    |
| Payam       | (650)-(.12)-(3.32)    |
| Shanta      | (650)-(.12)-(3.42)    |
| Kevin       | (650)-(.12)-(3.52)    |
| Julia       | (650)-(.12)-(4.12)    |
| Irene       | (650)-(.12)-(4.12)    |
| James       | (650)-(.12)-(4.13)    |
| Steven      | (650)-(.12)-(4.14)    |
| Mozhe       | (650)-(.12)-(4.62)    |
+-------------+-----------------------+
26 rows in set (0.04 sec)
```

13. Find the employees who joined in August, 1994.

```
mysql> select * from employees where year (hire_date)=1994 and month(hire_date) = 8;
+-------------+----------+----------+----------+--------------+------------+------------+---------+--------------+------------+---------------+
| Employee_id | firstname | lastname | email    | phonenumber  | hire_date  | job_id     | salary  | commision_pct | manager_id | Department_id |
+-------------+----------+----------+----------+--------------+------------+------------+---------+--------------+------------+---------------+
|         108 | Nancy     | Greenberg | NGREENBE | 515.124.4569 | 1994-08-17 | FI_MGR     | 12000.00 |          NULL |        101 |           100 |
|         109 | Daniel    | Faviet    | DFAVIET  | 515.124.4169 | 1994-08-12 | FI_ACCOUNT |  9000.00 |          NULL |        108 |           170 |
+-------------+----------+----------+----------+--------------+------------+------------+---------+--------------+------------+---------------+
2 rows in set (0.01 sec)
```

14. Find the maximum salary from each department.

```
mysql> select department_id,max(salary) as max_salary from employees group by department_id;
+---------------+------------+
| department_id | max_salary |
+---------------+------------+
|            20 |   17000.00 |
|            30 |   17000.00 |
|            40 |    7900.00 |
|            50 |    8000.00 |
|            60 |    6000.00 |
|            70 |    2900.00 |
|            80 |    5800.00 |
|            90 |    2400.00 |
|           100 |   12000.00 |
|           110 |    2800.00 |
|           130 |    2500.00 |
|           150 |    7800.00 |
|           160 |    7700.00 |
|           170 |    9000.00 |
+---------------+------------+
14 rows in set (0.00 sec)
```

15.Write a SQL query to display the 5 least earning employees

```
mysql> select employee_id,first_name,salary  from employees order by salary limit 5;
+-------------+------------+---------+
| employee_id | first_name | salary  |
+-------------+------------+---------+
|         128 | Steven     | 2200.00 |
|         127 | James      | 2400.00 |
|         119 | Karen      | 2500.00 |
|         118 | Guy        | 2600.00 |
|         126 | Irene      | 2700.00 |
+-------------+------------+---------+
5 rows in set (0.00 sec)
```

16. Find the employees hired in the 80s

```
mysql> select first_name,hire_date from employees where year(hire_date) BETWEEN 1980 AND 1989;
+------------+------------+
| first_name | hire_date  |
+------------+------------+
| Neena      | 1989-11-21 |
+------------+------------+
1 row in set (0.01 sec)
```

17. Find the employees who joined the company after 15th of the month

```
mysql> select employee_id,first_name as employee_name,hire_date from employees where day(hire_date)>15;
+-------------+---------------+------------+
| employee_id | employee_name | hire_date  |
+-------------+---------------+------------+
|         101 | Neena         | 1989-11-21 |
|         104 | Bruce         | 1991-05-21 |
|         105 | David         | 1997-06-25 |
|         108 | Nancy         | 1994-08-17 |
|         120 | Matthew       | 1996-07-18 |
+-------------+---------------+------------+
5 rows in set (0.03 sec)
```