Assignment 1

Create a Database name entri_assignment

Create a Table with name `departments`

`Department_id  (pk) Department_name Location_id+`

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`

```sql
CREATE DATABASE entri_assignment;
USE entri_assignment;
CREATE TABLE departments (
    Department_id INT PRIMARY KEY,
    Department_name VARCHAR(255),
    Location_id INT
);
CREATE TABLE employees (
    Employee_id INT PRIMARY KEY,
    First_name VARCHAR(255),
    Last_name VARCHAR(255),
    Email VARCHAR(255),
    Phone_number VARCHAR(20),
    Hire_date DATE,
    Job_id VARCHAR(10),
    Salary DECIMAL(10, 2),
    Commission_pct DECIMAL(4, 2),
    Manager_id INT,
    Department_id INT,
    FOREIGN KEY (Department_id) REFERENCES departments(Department_id)
```

```
## Insert into Departments table
 INSERT INTO departments VALUES ( 20,'Marketing',  180);

 INSERT INTO departments VALUES ( 30,'Purchasing',  1700);

 INSERT INTO departments VALUES ( 40, 'Human Resources',  2400);

 INSERT INTO departments VALUES ( 50, 'Shipping',  1500);

 INSERT INTO departments VALUES ( 60 , 'IT',  1400);

 INSERT INTO departments VALUES ( 70, 'Public Relations',  2700);

 INSERT INTO departments VALUES ( 80 , 'Sales',  2500 );

 INSERT INTO departments VALUES ( 90 , 'Executive',  1700);

 INSERT INTO departments VALUES ( 100 , 'Finance',  1700);

 INSERT INTO departments VALUES ( 110 , 'Accounting',  1700);

 INSERT INTO departments VALUES ( 120 , 'Treasury' ,  1700);

 INSERT INTO departments VALUES ( 130 , 'Corporate Tax' ,  1700 );

 INSERT INTO departments VALUES ( 140, 'Control And Credit' ,  1700);

 INSERT INTO departments VALUES ( 150 , 'Shareholder Services',
1700);

 INSERT INTO departments VALUES ( 160 , 'Benefits', 1700);

 INSERT INTO departments VALUES ( 170 , 'Payroll' , 1700);
```

```
22 •   INSERT INTO departments VALUES ( 20, 'Marketing', 180);
23 •   INSERT INTO departments VALUES ( 30, 'Purchasing', 1700);
24 •   INSERT INTO departments VALUES ( 40,'Human Resources', 2400);
25 •   INSERT INTO departments VALUES ( 50, 'Shipping', 1500);
26 •   INSERT INTO departments VALUES ( 60, 'IT', 1400);
27 •   INSERT INTO departments VALUES ( 70, 'Public Relations', 2700);
28 •   INSERT INTO departments VALUES ( 80, 'Sales', 2500 );
29 •   INSERT INTO departments VALUES ( 90, 'Executive', 1700);
30 •   INSERT INTO departments VALUES ( 100, 'Finance', 1700);
31 •   INSERT INTO departments VALUES ( 110, 'Accounting', 1700);
32 •   INSERT INTO departments VALUES ( 120, 'Treasury', 1700);
33 •   INSERT INTO departments VALUES ( 130, 'Corporate Tax', 1700 );
34 •   INSERT INTO departments VALUES ( 140, 'Control And Credit', 1700);
35 •   INSERT INTO departments VALUES ( 150, 'Shareholder Services', 1700);
36 •   INSERT INTO departments VALUES ( 160, 'Benefits', 1700);
37 •   INSERT INTO departments VALUES ( 170, 'Payroll', 1700);
```

employees table

```
INSERT INTO employees VALUES (100, 'Steven', 'King', 'SKING',
'515.123.4567', '1987-06-17' , 'AD_PRES', 24000 , NULL, NULL, 20);

 Insertinto 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);
```

```
39 • INSERT INTO employees VALUES (100, 'Steven', 'King', 'SKING', '515.123.4567', '1987-06-17' , 'AD_PRES', 24000 , NULL, NULL, 20);
40 • INSERT INTO employees VALUES (101, 'Neena' , 'Kochhar' , 'NKOCHHAR' , '515.123.4568' , '1989-11-21' , 'AD_VP' , 17000 , NULL , 100 , 20);
41 • INSERT INTO employees VALUES (102 , 'Lex' , 'De Haan' , 'LDEHAAN' , '515.123.4569' , '1993-09-12' , 'AD_VP' , 17000 , NULL , 100 , 30);
42 • INSERT INTO employees VALUES (104 , 'Bruce' , 'Ernst' , 'BERNST' , '590.423.4568' , '1991-05-21',  'IT_PROG' , 6000 , NULL , 103 , 60);
43 • INSERT INTO employees VALUES (105 , 'David' , 'Austin' , 'DAUSTIN' , '590.423.4569' , '1997-06-25',  'IT_PROG' , 4800 , NULL , 103 , 60);
44 • INSERT INTO employees VALUES (106 , 'Valli' , 'Pataballa' , 'VPATABAL' , '590.423.4560' , '1998-02-05',  'IT_PROG' , 4800 , NULL , 103 ,
45 • INSERT INTO employees VALUES (107 , 'Diana' , 'Lorentz' , 'DLORENTZ' , '590.423.5567' , '1999-02-09',  'IT_PROG' , 4200 , NULL , 103 , 40
46 • INSERT INTO employees VALUES (108 , 'Nancy' , 'Greenberg' , 'NGREENBE' , '515.124.4569' , '1994-08-17',  'FI_MGR' , 12000 , NULL , 101 ,
47 • INSERT INTO employees VALUES (109 , 'Daniel' , 'Faviet' , 'DFAVIET' , '515.124.4169' , '1994-08-12',  'FI_ACCOUNT' , 9000 , NULL , 108 ,
48 • INSERT INTO employees VALUES (110 , 'John' , 'Chen' , 'JCHEN' , '515.124.4269' , '1997-04-09',  'FI_ACCOUNT' , 8200 , NULL , 108 , 170);
49 • INSERT INTO employees VALUES (111 , 'Ismael' , 'Sciarra' , 'ISCIARRA' , '515.124.4369' , '1997-02-01',  'FI_ACCOUNT' , 7700 , NULL, 108,
50 • INSERT INTO employees VALUES (112 , 'Jose Manuel' , 'Urman' , 'JMURMAN' , '515.124.4469' , '1998-06-03', 'FI_ACCOUNT' , 7800 , NULL, 108,
51 • INSERT INTO employees VALUES (114 , 'Den' , 'Raphaely' , 'DRAPHEAL' , '515.127.4561' , '1994-11-08',  'PU_MAN' , 11000 , NULL , 100 , 30)
52 • INSERT INTO employees VALUES (115 , 'Alexander' , 'Khoo' , 'AKHOO' , '515.127.4562' , '1995-05-12',  'PU_CLERK' , 3100 , NULL , 114 , 80)
53 • INSERT INTO employees VALUES (116 , 'Shelli' , 'Baida' , 'SBAIDA' , '515.127.4563' ,'1997-12-13', 'PU_CLERK' , 2900 , NULL , 114 , 70);
54 • INSERT INTO employees VALUES (117 , 'Sigal' , 'Tobias' , 'STOBIAS' , '515.127.4564' , '1997-09-10', 'PU_CLERK' , 2800 , NULL , 114 , 30);
55 • INSERT INTO employees VALUES (118 , 'Guy' , 'Himuro' , 'GHIMURO' , '515.127.4565' , '1998-01-02',  'PU_CLERK' , 2600 , NULL , 114 , 60);
56 • INSERT INTO employees VALUES (119 , 'Karen' , 'Colmenares' , 'KCOLMENA' , '515.127.4566' , '1999-04-08',  'PU_CLERK' , 2500 , NULL , 114
57 • INSERT INTO employees VALUES (120 , 'Matthew' , 'Weiss' , 'MWEISS' , '650.123.1234' ,'1996-07-18',  'ST_MAN' , 8000 , NULL , 100 , 50);
58 • INSERT INTO employees VALUES (122 , 'Payam' , 'Kaufling' , 'PKAUFLIN' , '650.123.3234' ,'1995-05-01',  'ST_MAN' , 7900 , NULL , 100 , 40)
59 • INSERT INTO employees VALUES (123 , 'Shanta' , 'Vollman' , 'SVOLLMAN' , '650.123.4234' , '1997-10-12',  'ST_MAN' , 6500 , NULL , 100 , 50
60 • INSERT INTO employees VALUES (124, 'Kevin' , 'Mourgos' , 'KMOURGOS' , '650.123.5234' , '1999-11-12',  'ST_MAN' , 5800 , NULL , 100 , 80);
61 • INSERT INTO employees VALUES (125, 'Julia' , 'Nayer' , 'JNAYER' , '650.124.1214' , '1997-07-02',  'ST_CLERK' , 3200 , NULL , 120 , 50);
62 • INSERT INTO employees VALUES (126, 'Irene' , 'Mikkilineni' , 'IMIKKILI' , '650.124.1224' , '1998-11-12', 'ST_CLERK' , 2700 , NULL , 120 ,
63 • INSERT INTO employees VALUES (127, 'James' , 'Landry' , 'JLANDRY' , '650.124.1334' , '1999-01-02' , 'ST_CLERK' , 2400 , NULL , 120 , 90);
64 • INSERT INTO employees VALUES (128, 'Steven' , 'Markle' , 'SMARKLE' , '650.124.1434' , '2000-03-04' , 'ST_CLERK' , 2200 , NULL , 120 , 50)
65 • INSERT INTO employees VALUES (130, 'Mozhe' , 'Atkinson' , 'MATKINSO' , '650.124.6234' , '1997-10-12' , 'ST_CLERK' , 2800 , NULL , 121 , 1
```

Solve SQL Exercises

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

```
5 •  SELECT First_name, Last_name, Job_id, Salary FROM employees WHERE First_name LIKE 'S%';
```

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

First_name	Last_name	Job_id	Salary
Steven	King	AD_PRES	24000.00
Shelli	Baida	PU_CLERK	2900.00
Sigal	Tobias	PU_CLERK	2800.00
Shanta	Vollman	ST_MAN	6500.00
Steven	Markle	ST_CLERK	2200.00

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

```
7 •  SELECT Employee_id, First_name, Last_name, Job_id, Salary FROM employees WHERE Salary = (SELECT MAX(Salary) FROM employees);
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Employee_id	First_name	Last_name	Job_id	Salary
100	Steven	King	AD_PRES	24000.00
NULL	NULL	NULL	NULL	NULL

3. Select employee with the second highest salary

```
5 •  SELECT First_name, Last_name, Job_id, Salary FROM employees WHERE First_name LIKE 'S%';
6
7 •  SELECT Employee_id, First_name, Last_name, Job_id, Salary FROM employees WHERE Salary = (SELECT MAX(Salary) FROM employees);
8
9 •  SELECT Employee_id, First_name, Last_name, Job_id, Salary FROM employees
10    WHERE Salary = (SELECT MAX(Salary) FROM employees WHERE Salary < (SELECT MAX(Salary) FROM employees));
11
12
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Employee_id	First_name	Last_name	Job_id	Salary
101	Neena	Kochhar	AD_VP	17000.00
102	Lex	De Haan	AD_VP	17000.00
NULL	NULL	NULL	NULL	NULL

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

```
mysql> SELECT e.Employee_id AS Employee_ID,
    ->        e.First_name AS Employee_First_Name,
    ->        e.Last_name AS Employee_Last_Name,
    ->        e.Salary AS Employee_Salary,
    ->        m.Employee_id AS Manager_ID,
    ->        m.First_name AS Manager_First_Name,
    ->        m.Last_name AS Manager_Last_Name,
    ->        m.Salary AS Manager_Salary
    -> FROM employees e
    -> LEFT JOIN employees m ON e.Manager_id = m.Employee_id;
+-------------+---------------------+--------------------+-----------------+------------+--------------------+--------------------+----------------+
| Employee_ID | Employee_First_Name | Employee_Last_Name | Employee_Salary | Manager_ID | Manager_First_Name | Manager_Last_Name | Manager_Salary |
+-------------+---------------------+--------------------+-----------------+------------+--------------------+--------------------+----------------+
|         100 | Steven              | King               |        24000.00 |       NULL | NULL               | NULL               |           NULL |
|         101 | Neena               | Kochhar            |        17000.00 |        100 | Steven             | King               |       24000.00 |
|         102 | Lex                 | De Haan            |        17000.00 |        100 | Steven             | King               |       24000.00 |
|         104 | Bruce               | Ernst              |         6000.00 |       NULL | NULL               | NULL               |           NULL |
|         105 | David               | Austin             |         4800.00 |       NULL | NULL               | NULL               |           NULL |
|         106 | Valli               | Pataballa          |         4800.00 |       NULL | NULL               | NULL               |           NULL |
|         107 | Diana               | Lorentz            |         4200.00 |       NULL | NULL               | NULL               |           NULL |
|         108 | Nancy               | Greenberg          |        12000.00 |        101 | Neena              | Kochhar            |       17000.00 |
|         109 | Daniel              | Faviet             |         9000.00 |        108 | Nancy              | Greenberg          |       12000.00 |
|         110 | John                | Chen               |         8200.00 |        108 | Nancy              | Greenberg          |       12000.00 |
|         111 | Ismael              | Sciarra            |         7700.00 |        108 | Nancy              | Greenberg          |       12000.00 |
|         112 | Jose Manuel         | Urman              |         7800.00 |        108 | Nancy              | Greenberg          |       12000.00 |
|         114 | Den                 | Raphaely           |        11000.00 |        100 | Steven             | King               |       24000.00 |
|         115 | Alexander           | Khoo               |         3100.00 |        114 | Den                | Raphaely           |       11000.00 |
|         116 | Shelli              | Baida              |         2900.00 |        114 | Den                | Raphaely           |       11000.00 |
|         117 | Sigal               | Tobias             |         2800.00 |        114 | Den                | Raphaely           |       11000.00 |
|         118 | Guy                 | Himuro             |         2600.00 |        114 | Den                | Raphaely           |       11000.00 |
|         119 | Karen               | Colmenares         |         2500.00 |        114 | Den                | Raphaely           |       11000.00 |
|         120 | Matthew             | Weiss              |         8000.00 |        100 | Steven             | King               |       24000.00 |
|         122 | Payam               | Kaufling           |         7900.00 |        100 | Steven             | King               |       24000.00 |
|         123 | Shanta              | Vollman            |         6500.00 |        100 | Steven             | King               |       24000.00 |
|         124 | Kevin               | Mourgos            |         5800.00 |        100 | Steven             | King               |       24000.00 |
|         125 | Julia               | Nayer              |         3200.00 |        120 | Matthew            | Weiss              |        8000.00 |
|         126 | Irene               | Mikkilineni        |         2700.00 |        120 | Matthew            | Weiss              |        8000.00 |
|         127 | James               | Landry             |         2400.00 |        120 | Matthew            | Weiss              |        8000.00 |
|         128 | Steven              | Markle             |         2200.00 |        120 | Matthew            | Weiss              |        8000.00 |
|         130 | Mozhe               | Atkinson           |         2800.00 |       NULL | NULL               | NULL               |           NULL |
+-------------+---------------------+--------------------+-----------------+------------+--------------------+--------------------+----------------+
```

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

```
mysql> SELECT e.Employee_id AS Employee_ID,
    ->        e.First_name AS Employee_First_Name,
    ->        e.Last_name AS Employee_Last_Name,
    ->        e.Salary AS Employee_Salary,
    ->        m.Employee_id AS Manager_ID,
    ->        m.First_name AS Manager_First_Name,
    ->        m.Last_name AS Manager_Last_Name,
    ->        m.Salary AS Manager_Salary
    -> FROM employees e
    -> JOIN employees m ON e.Manager_id = m.Employee_id;
+-------------+---------------------+--------------------+-----------------+------------+--------------------+--------------------+----------------+
| Employee_ID | Employee_First_Name | Employee_Last_Name | Employee_Salary | Manager_ID | Manager_First_Name | Manager_Last_Name | Manager_Salary |
+-------------+---------------------+--------------------+-----------------+------------+--------------------+--------------------+----------------+
|         101 | Neena               | Kochhar            |        17000.00 |        100 | Steven             | King               |       24000.00 |
|         102 | Lex                 | De Haan            |        17000.00 |        100 | Steven             | King               |       24000.00 |
|         108 | Nancy               | Greenberg          |        12000.00 |        101 | Neena              | Kochhar            |       17000.00 |
|         109 | Daniel              | Faviet             |         9000.00 |        108 | Nancy              | Greenberg          |       12000.00 |
|         110 | John                | Chen               |         8200.00 |        108 | Nancy              | Greenberg          |       12000.00 |
|         111 | Ismael              | Sciarra            |         7700.00 |        108 | Nancy              | Greenberg          |       12000.00 |
|         112 | Jose Manuel         | Urman              |         7800.00 |        108 | Nancy              | Greenberg          |       12000.00 |
|         114 | Den                 | Raphaely           |        11000.00 |        100 | Steven             | King               |       24000.00 |
|         115 | Alexander           | Khoo               |         3100.00 |        114 | Den                | Raphaely           |       11000.00 |
|         116 | Shelli              | Baida              |         2900.00 |        114 | Den                | Raphaely           |       11000.00 |
|         117 | Sigal               | Tobias             |         2800.00 |        114 | Den                | Raphaely           |       11000.00 |
|         118 | Guy                 | Himuro             |         2600.00 |        114 | Den                | Raphaely           |       11000.00 |
|         119 | Karen               | Colmenares         |         2500.00 |        114 | Den                | Raphaely           |       11000.00 |
|         120 | Matthew             | Weiss              |         8000.00 |        100 | Steven             | King               |       24000.00 |
|         122 | Payam               | Kaufling           |         7900.00 |        100 | Steven             | King               |       24000.00 |
|         123 | Shanta              | Vollman            |         6500.00 |        100 | Steven             | King               |       24000.00 |
|         124 | Kevin               | Mourgos            |         5800.00 |        100 | Steven             | King               |       24000.00 |
|         125 | Julia               | Nayer              |         3200.00 |        120 | Matthew            | Weiss              |        8000.00 |
|         126 | Irene               | Mikkilineni        |         2700.00 |        120 | Matthew            | Weiss              |        8000.00 |
|         127 | James               | Landry             |         2400.00 |        120 | Matthew            | Weiss              |        8000.00 |
|         128 | Steven              | Markle             |         2200.00 |        120 | Matthew            | Weiss              |        8000.00 |
+-------------+---------------------+--------------------+-----------------+------------+--------------------+--------------------+----------------+
```

6. Create a view for the above query

```
24 •    CREATE VIEW Employee_Manager_View AS
25      SELECT e.Employee_id AS Employee_ID,
26             e.First_name AS Employee_First_Name,
27             e.Last_name AS Employee_Last_Name,
28             e.Salary AS Employee_Salary,
29             m.Employee_id AS Manager_ID,
30             m.First_name AS Manager_First_Name,
31             m.Last_name AS Manager_Last_Name,
32             m.Salary AS Manager_Salary
33      FROM employees e
34      JOIN employees m ON e.Manager_id = m.Employee_id;
```

```
mysql> SELECT * FROM Employee_Manager_View;
+-------------+---------------------+--------------------+-----------------+------------+---------------------+--------------------+-----------------+
| Employee_ID | Employee_First_Name | Employee_Last_Name | Employee_Salary | Manager_ID | Manager_First_Name  | Manager_Last_Name  | Manager_Salary  |
+-------------+---------------------+--------------------+-----------------+------------+---------------------+--------------------+-----------------+
|         101 | Neena               | Kochhar            |        17000.00 |        100 | Steven              | King               |        24000.00 |
|         102 | Lex                 | De Haan            |        17000.00 |        100 | Steven              | King               |        24000.00 |
|         108 | Nancy               | Greenberg          |        12000.00 |        101 | Neena               | Kochhar            |        17000.00 |
|         109 | Daniel              | Faviet             |         9000.00 |        108 | Nancy               | Greenberg          |        12000.00 |
|         110 | John                | Chen               |         8200.00 |        108 | Nancy               | Greenberg          |        12000.00 |
|         111 | Ismael              | Sciarra            |         7700.00 |        108 | Nancy               | Greenberg          |        12000.00 |
|         112 | Jose Manuel         | Urman              |         7800.00 |        108 | Nancy               | Greenberg          |        12000.00 |
|         114 | Den                 | Raphaely           |        11000.00 |        100 | Steven              | King               |        24000.00 |
|         115 | Alexander           | Khoo               |         3100.00 |        114 | Den                 | Raphaely           |        11000.00 |
|         116 | Shelli              | Baida              |         2900.00 |        114 | Den                 | Raphaely           |        11000.00 |
|         117 | Sigal               | Tobias             |         2800.00 |        114 | Den                 | Raphaely           |        11000.00 |
|         118 | Guy                 | Himuro             |         2600.00 |        114 | Den                 | Raphaely           |        11000.00 |
|         119 | Karen               | Colmenares         |         2500.00 |        114 | Den                 | Raphaely           |        11000.00 |
|         120 | Matthew             | Weiss              |         8000.00 |        100 | Steven              | King               |        24000.00 |
|         122 | Payam               | Kaufling           |         7900.00 |        100 | Steven              | King               |        24000.00 |
|         123 | Shanta              | Vollman            |         6500.00 |        100 | Steven              | King               |        24000.00 |
|         124 | Kevin               | Mourgos            |         5800.00 |        100 | Steven              | King               |        24000.00 |
|         125 | Julia               | Nayer              |         3200.00 |        120 | Matthew             | Weiss              |         8000.00 |
|         126 | Irene               | Mikkilineni        |         2700.00 |        120 | Matthew             | Weiss              |         8000.00 |
|         127 | James               | Landry             |         2400.00 |        120 | Matthew             | Weiss              |         8000.00 |
|         128 | Steven              | Markle             |         2200.00 |        120 | Matthew             | Weiss              |         8000.00 |
+-------------+---------------------+--------------------+-----------------+------------+---------------------+--------------------+-----------------+
```

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

```
36 •    SELECT Manager_ID,
37             Manager_First_Name,
38             Manager_Last_Name,
39             COUNT(Employee_ID) AS Employee_Count
40      FROM Employee_Manager_View
41      GROUP BY Manager_ID, Manager_First_Name, Manager_Last_Name
42      ORDER BY Employee_Count DESC;
43
44
```

Manager_ID	Manager_First_Name	Manager_Last_Name	Employee_Count
100	Steven	King	7
114	Den	Raphaely	5
108	Nancy	Greenberg	4
120	Matthew	Weiss	4
101	Neena	Kochhar	1

8. Find the count of employees in each department

```
46 •  SELECT d.Department_id, d.Department_name, COUNT(e.Employee_id) AS Employee_Count
47    FROM departments d
48    LEFT JOIN employees e ON d.Department_id = e.Department_id
49    GROUP BY d.Department_id, d.Department_name;
50
51
```

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

Department_id	Department_name	Employee_Count
20	Marketing	2
30	Purchasing	3
40	Human Resources	3
50	Shipping	5
60	IT	3
70	Public Relations	1
80	Sales	2
90	Executive	1
100	Finance	1
110	Accounting	1
120	Treasury	0
130	Corporate Tax	1
140	Control And Credit	0
150	Shareholder Servi...	1
160	Benefits	1
170	Payroll	2

9. Get the count of employees hired year wise

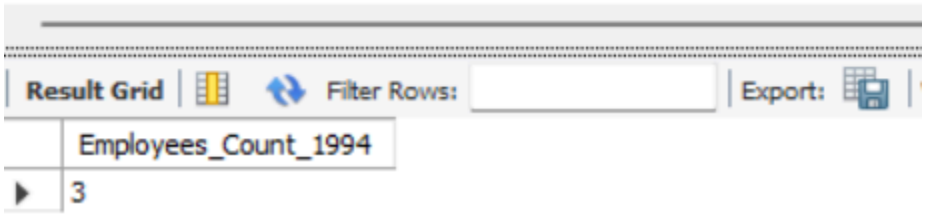
```
52 •  SELECT YEAR(hire_date) AS Hire_Year, COUNT(Employee_id) AS Employee_Count FROM employees
53    GROUP BY YEAR(hire_date)
54    ORDER BY Hire_Year;
55
```

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

Hire_Year	Employee_Count
1987	1
1989	1
1991	1
1993	1
1994	3
1995	2
1996	1
1997	8
1998	4
1999	4
2000	1

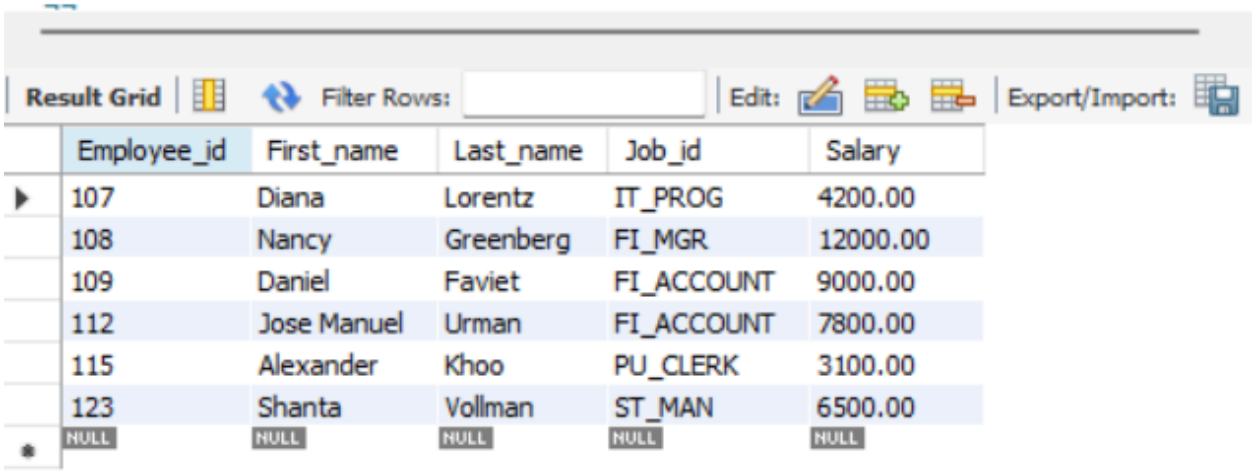
10 . create a stored procedure to get the " Get the count of employees hired in the input year"(IN year , OUT count)

```
59  CREATE PROCEDURE EmployeeCountByYear(
60      IN input_year INT,
61      OUT employee_count INT
62  )
63  BEGIN
64      SELECT COUNT(*) INTO employee_count
65      FROM employees
66      WHERE YEAR(hire_date) = input_year;
67  END //
68
69  DELIMITER ;
70
71  CALL EmployeeCountByYear(1994, @count);
72  SELECT @count AS Employees_Count_1994;
73
```



11.Select the employees whose first_name contains “an”

```
75 •    SELECT Employee_id, First_name, Last_name, Job_id, Salary
76      FROM employees WHERE First_name LIKE '%an%';
```



Employee_id	First_name	Last_name	Job_id	Salary
107	Diana	Lorentz	IT_PROG	4200.00
108	Nancy	Greenberg	FI_MGR	12000.00
109	Daniel	Faviet	FI_ACCOUNT	9000.00
112	Jose Manuel	Urman	FI_ACCOUNT	7800.00
115	Alexander	Khoo	PU_CLERK	3100.00
123	Shanta	Vollman	ST_MAN	6500.00
NULL	NULL	NULL	NULL	NULL

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

```
mysql> SELECT First_name, Phone_number FROM employees;
+-------------+--------------+
| First_name  | Phone_number |
+-------------+--------------+
| Steven      | 515.123.4567 |
| Neena       | 515.123.4568 |
| Lex         | 515.123.4569 |
| Bruce       | 590.423.4568 |
| David       | 590.423.4569 |
| Valli       | 590.423.4560 |
| Diana       | 590.423.5567 |
| Nancy       | 515.124.4569 |
| Daniel      | 515.124.4169 |
| John        | 515.124.4269 |
| Ismael      | 515.124.4369 |
| Jose Manuel | 515.124.4469 |
| Den         | 515.127.4561 |
| Alexander   | 515.127.4562 |
| Shelli      | 515.127.4563 |
| Sigal       | 515.127.4564 |
| Guy         | 515.127.4565 |
| Karen       | 515.127.4566 |
| Matthew     | 650.123.1234 |
| Payam       | 650.123.3234 |
| Shanta      | 650.123.4234 |
| Kevin       | 650.123.5234 |
| Julia       | 650.124.1214 |
| Irene       | 650.124.1224 |
| James       | 650.124.1334 |
| Steven      | 650.124.1434 |
| Mozhe       | 650.124.6234 |
+-------------+--------------+
```

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

```
82 •  SELECT Employee_id, First_name, Last_name, hire_date
83    FROM employees WHERE YEAR(hire_date) = 1994 AND MONTH(hire_date) = 8;
84
85
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Employee_id	First_name	Last_name	hire_date
108	Nancy	Greenberg	1994-08-17
109	Daniel	Faviet	1994-08-12
NULL	NULL	NULL	NULL

14. Find the maximum salary from each department.

```
86 •  SELECT d.Department_id, d.Department_name, MAX(e.Salary) AS Max_Salary
87    FROM departments d
88    LEFT JOIN employees e ON d.Department_id = e.Department_id
89    GROUP BY d.Department_id, d.Department_name
90    ORDER BY d.Department_id;
```

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

Department_id	Department_name	Max_Salary
20	Marketing	24000.00
30	Purchasing	17000.00
40	Human Resources	7900.00
50	Shipping	8000.00
60	IT	6000.00
70	Public Relations	2900.00
80	Sales	5800.00
90	Executive	2400.00
100	Finance	12000.00
110	Accounting	2800.00
120	Treasury	NULL
130	Corporate Tax	2500.00
140	Control And Credit	NULL
150	Shareholder Servi...	7800.00
160	Benefits	7700.00
170	Payroll	9000.00

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

```
93 •  SELECT Employee_id, First_name, Last_name, Salary
94    FROM employees
95    ORDER BY Salary LIMIT 5;
96
97
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: | Fetch rows:

Employee_id	First_name	Last_name	Salary
128	Steven	Markle	2200.00
127	James	Landry	2400.00
119	Karen	Colmenares	2500.00
118	Guy	Himuro	2600.00
126	Irene	Mikkilineni	2700.00
NULL	NULL	NULL	NULL

16. Find the employees hired in the 80s

```
98 •  SELECT Employee_id, First_name, Last_name, hire_date
99    FROM employees
100   WHERE YEAR(hire_date) >1979 AND  YEAR(hire_date) < 1990;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Employee_id	First_name	Last_name	hire_date
100	Steven	King	1987-06-17
101	Neena	Kochhar	1989-11-21
NULL	NULL	NULL	NULL

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

```
104 •  SELECT Employee_id, First_name, Last_name, hire_date
105    FROM employees WHERE DAY(hire_date) > 15;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Employee_id	First_name	Last_name	hire_date
100	Steven	King	1987-06-17
101	Neena	Kochhar	1989-11-21
104	Bruce	Ernst	1991-05-21
105	David	Austin	1997-06-25
108	Nancy	Greenberg	1994-08-17
120	Matthew	Weiss	1996-07-18
NULL	NULL	NULL	NULL