Exercises 2

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 |
+------------+-----------+----------+--------+
| Steven     | King      | AD_PRES  |  24000 |
| Shelli     | Baida     | PU_CLERK |   2900 |
| Sigal      | Tobias    | PU_CLERK |   2800 |
| Shanta     | Vollman   | ST_MAN   |   6500 |
| Steven     | Markle    | ST_CLERK |   2200 |
+------------+-----------+----------+--------+
5 rows in set (0.06 sec)
```

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

```
mysql> select concat(first_name,' ',last_name) name , salary from employees  where salary = (select max(salary) from employees);
+-------------+--------+
| name        | salary |
+-------------+--------+
| Steven King |  24000 |
+-------------+--------+
1 row in set (0.00 sec)
```

3. **Select employee with the second highest salary**

```
mysql> select concat(first_name,' ',last_name) name , salary from employees  where salary = (select max(salary) from employees where salary < (select max(salary) from e
mployees));
+--------------+--------+
| name         | salary |
+--------------+--------+
| Neena Kochhar |  17000 |
| Lex De Haan   |  17000 |
+--------------+--------+
2 rows in set (0.00 sec)
```

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

```
mysql> select concat(e.first_name,' ',e.last_name) employee, e.employee_id, e.salary AS employee_salary, concat(m.first_name,' ',m.last_name) manager_name,m.salary AS m
anager_salary from  employees e inner join employees m ON e.manager_id = m.employee_id;
+-------------------+-------------+-----------------+-----------------+----------------+
| employee          | employee_id | employee_salary | manager_name    | manager_salary |
+-------------------+-------------+-----------------+-----------------+----------------+
| Neena Kochhar     |         101 |           17000 | Steven King     |          24000 |
| Lex De Haan       |         102 |           17000 | Steven King     |          24000 |
| Alexander Hunold  |         103 |            9000 | Lex De Haan     |          17000 |
| Bruce Ernst       |         104 |            6000 | Alexander Hunold |           9000 |
| David Austin      |         105 |            4800 | Alexander Hunold |           9000 |
| Valli Pataballa   |         106 |            4800 | Alexander Hunold |           9000 |
| Diana Lorentz     |         107 |            4200 | Alexander Hunold |           9000 |
| Nancy Greenberg   |         108 |           12000 | Neena Kochhar   |          17000 |
| Daniel Faviet     |         109 |            9000 | Nancy Greenberg |          12000 |
| John Chen         |         110 |            8200 | Nancy Greenberg |          12000 |
| Ismael Sciarra    |         111 |            7700 | Nancy Greenberg |          12000 |
| Jose Manuel Urman |         112 |            7800 | Nancy Greenberg |          12000 |
| Luis Popp         |         113 |            6900 | Nancy Greenberg |          12000 |
| Den Raphaely      |         114 |           11000 | Steven King     |          24000 |
| Alexander Khoo    |         115 |            3100 | Den Raphaely    |          11000 |
| Shelli Baida      |         116 |            2900 | Den Raphaely    |          11000 |
| Sigal Tobias      |         117 |            2800 | Den Raphaely    |          11000 |
| Guy Himuro        |         118 |            2600 | Den Raphaely    |          11000 |
| Karen Colmenares  |         119 |            2500 | Den Raphaely    |          11000 |
| Matthew Weiss     |         120 |            8000 | Steven King     |          24000 |
| Adam Fripp        |         121 |            8200 | Steven King     |          24000 |
| Payam Kaufling    |         122 |            7900 | Steven King     |          24000 |
| Shanta Vollman    |         123 |            6500 | Steven King     |          24000 |
| Kevin Mourgos     |         124 |            5800 | Steven King     |          24000 |
| Julia Nayer       |         125 |            3200 | Matthew Weiss   |           8000 |
| Irene Mikkilineni |         126 |            2700 | Matthew Weiss   |           8000 |
| James Landry      |         127 |            2400 | Matthew Weiss   |           8000 |
| Steven Markle     |         128 |            2200 | Matthew Weiss   |           8000 |
| Laura Bissot      |         129 |            3300 | Adam Fripp      |           8200 |
| Mozhe Atkinson    |         130 |            2800 | Adam Fripp      |           8200 |
+-------------------+-------------+-----------------+-----------------+----------------+
30 rows in set (0.00 sec)
```


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


```
mysql> select concat(e.first_name,' ',e.last_name) employee, e.employee_id, e.salary AS employee_salary, concat(m.first_name,' ',m.last_name) manager_name,m.salary AS
anager_salary from  employees e inner join employees m ON e.manager_id = m.employee_id;
+-------------------+-------------+-----------------+-----------------+----------------+
| employee          | employee_id | employee_salary | manager_name    | manager_salary |
+-------------------+-------------+-----------------+-----------------+----------------+
| Neena Kochhar     |         101 |           17000 | Steven King     |          24000 |
| Lex De Haan       |         102 |           17000 | Steven King     |          24000 |
| Alexander Hunold  |         103 |            9000 | Lex De Haan     |          17000 |
| Bruce Ernst       |         104 |            6000 | Alexander Hunold |           9000 |
| David Austin      |         105 |            4800 | Alexander Hunold |           9000 |
| Valli Pataballa   |         106 |            4800 | Alexander Hunold |           9000 |
| Diana Lorentz     |         107 |            4200 | Alexander Hunold |           9000 |
| Nancy Greenberg   |         108 |           12000 | Neena Kochhar   |          17000 |
| Daniel Faviet     |         109 |            9000 | Nancy Greenberg |          12000 |
| John Chen         |         110 |            8200 | Nancy Greenberg |          12000 |
| Ismael Sciarra    |         111 |            7700 | Nancy Greenberg |          12000 |
| Jose Manuel Urman |         112 |            7800 | Nancy Greenberg |          12000 |
| Luis Popp         |         113 |            6900 | Nancy Greenberg |          12000 |
| Den Raphaely      |         114 |           11000 | Steven King     |          24000 |
| Alexander Khoo    |         115 |            3100 | Den Raphaely    |          11000 |
| Shelli Baida      |         116 |            2900 | Den Raphaely    |          11000 |
| Sigal Tobias      |         117 |            2800 | Den Raphaely    |          11000 |
| Guy Himuro        |         118 |            2600 | Den Raphaely    |          11000 |
| Karen Colmenares  |         119 |            2500 | Den Raphaely    |          11000 |
| Matthew Weiss     |         120 |            8000 | Steven King     |          24000 |
| Adam Fripp        |         121 |            8200 | Steven King     |          24000 |
| Payam Kaufling    |         122 |            7900 | Steven King     |          24000 |
| Shanta Vollman    |         123 |            6500 | Steven King     |          24000 |
| Kevin Mourgos     |         124 |            5800 | Steven King     |          24000 |
| Julia Nayer       |         125 |            3200 | Matthew Weiss   |           8000 |
| Irene Mikkilineni |         126 |            2700 | Matthew Weiss   |           8000 |
| James Landry      |         127 |            2400 | Matthew Weiss   |           8000 |
| Steven Markle     |         128 |            2200 | Matthew Weiss   |           8000 |
| Laura Bissot      |         129 |            3300 | Adam Fripp      |           8200 |
| Mozhe Atkinson    |         130 |            2800 | Adam Fripp      |           8200 |
+-------------------+-------------+-----------------+-----------------+----------------+
30 rows in set (0.00 sec)
```

Activate Windows
Go to Settings to activate Windows.

6. Create a view for the above query

```
mysql> create view manager_v1 AS
    -> select concat(e.first_name,' ',e.last_name) employee, e.employee_id, e.salary AS employee_salary, concat(m.first_name,' ',m.last_name) manager_name,m.salary AS m
anager_salary from  employees e inner join employees m ON e.manager_id = m.employee_id;
Query OK, 0 rows affected (0.12 sec)

mysql>
```

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

```
mysql> select distinct(manager_name),count(employee) from manager_v1 group by manager_name order by manager_name desc;
+------------------+-----------------+
| manager_name     | count(employee) |
+------------------+-----------------+
| Steven King      |               8 |
| Neena Kochhar    |               1 |
| Nancy Greenberg  |               5 |
| Matthew Weiss    |               4 |
| Lex De Haan      |               1 |
| Den Raphaely     |               5 |
| Alexander Hunold |               4 |
| Adam Fripp       |               2 |
+------------------+-----------------+
8 rows in set (0.03 sec)
```

8. Find the count of employees in each department

```
mysql> select concat(e.first_name,' ',e.last_name) employee_name,d.Department_name from employees e inner join departments d ON e.Department_id=d.department_id order by
 Department_name, employee_name;
+------------------+---------------------+
| employee_name    | Department_name     |
+------------------+---------------------+
| Moshe Atkinson   | Accounting          |
| Ismael Sciarra   | Benefits            |
| Luis Popp        | Control And Credit  |
| Karen Colmenares | Corporate Tax       |
| James Landry     | Executive           |
| Nancy Greenberg  | Finance             |
| Diana Lorentz    | Human Resources     |
| Payam Kaufling   | Human Resources     |
| Valli Pataballa  | Human Resources     |
| Alexander Hunold | IT                  |
| Bruce Ernst      | IT                  |
| David Austin     | IT                  |
| Guy Himuro       | IT                  |
| Neena Kochhar    | Marketing           |
| Steven King      | Marketing           |
| Daniel Faviet    | Payroll             |
| John Chen        | Payroll             |
| Shelli Baida     | Public Relations    |
| Den Raphaely     | Purchasing          |
| Lex De Haan      | Purchasing          |
| Sigal Tobias     | Purchasing          |
| Alexander Khoo   | Sales               |
| Kevin Mourgos    | Sales               |
| Jose Manuel Urman | Shareholder Services |
| Adam Fripp       | Shipping            |
| Irene Mikkilineni | Shipping            |
| Julia Nayer      | Shipping            |
| Laura Bissot     | Shipping            |
| Matthew Weiss    | Shipping            |
| Shanta Vollman   | Shipping            |
| Steven Markle    | Shipping            |
+------------------+---------------------+
31 rows in set (0.00 sec)
```


9. Get the count of employees hired year wise

```
mysql> select COUNT( Employee_id) EMPLOYEE_COUNT, concat(first_name,' ',last_name) NAME, hire_date from employees GROUP BY NAME,hire_date ORDER BY hire_date;
+----------------+-----------------+------------+
| EMPLOYEE_COUNT | NAME            | hire_date  |
+----------------+-----------------+------------+
|              1 | Steven King     | 1987-06-17 |
|              1 | Neena Kochhar   | 1989-11-21 |
|              1 | Alexander Hunold| 1990-09-30 |
|              1 | Bruce Ernst     | 1991-05-21 |
|              1 | Lex De Haan     | 1993-09-13 |
|              1 | Daniel Faviet   | 1994-08-16 |
|              1 | Nancy Greenberg | 1994-08-17 |
|              1 | Den Raphaely    | 1994-12-08 |
|              1 | Payam Kaufling  | 1995-05-01 |
|              1 | Alexander Khoo  | 1995-05-18 |
|              1 | Matthew Weiss   | 1996-07-18 |
|              1 | Ismael Sciarra  | 1997-09-30 |
|              1 | John Chen       | 1997-09-28 |
|              1 | David Austin    | 1997-06-25 |
|              1 | Julia Nayer     | 1997-07-16 |
|              1 | Adam Fripp      | 1997-08-10 |
|              1 | Sigal Tobias    | 1997-07-24 |
|              1 | Laura Bissot    | 1997-08-20 |
|              1 | Shanta Vollman  | 1997-10-17 |
|              1 | Mozhe Atkinson  | 1997-10-30 |
|              1 | Shelli Baida    | 1997-12-24 |
|              1 | Guy Himuro      | 1998-11-15 |
|              1 | Alexis Bull     | 1998-02-20 |
|              1 | Jose Manuel Urman | 1998-03-07 |
|              1 | Irene Mikkilineni | 1998-09-28 |
|              1 | James Landry    | 1999-01-14 |
|              1 | Diana Lorentz   | 1999-02-07 |
|              1 | Karen Colmenares | 1999-08-10 |
|              1 | Kevin Mourgos   | 1999-11-16 |
|              1 | Luis Popp       | 1999-12-07 |
|              1 | Steven Markle   | 2000-03-08 |
+----------------+-----------------+------------+
31 rows in set (0.00 sec)
```

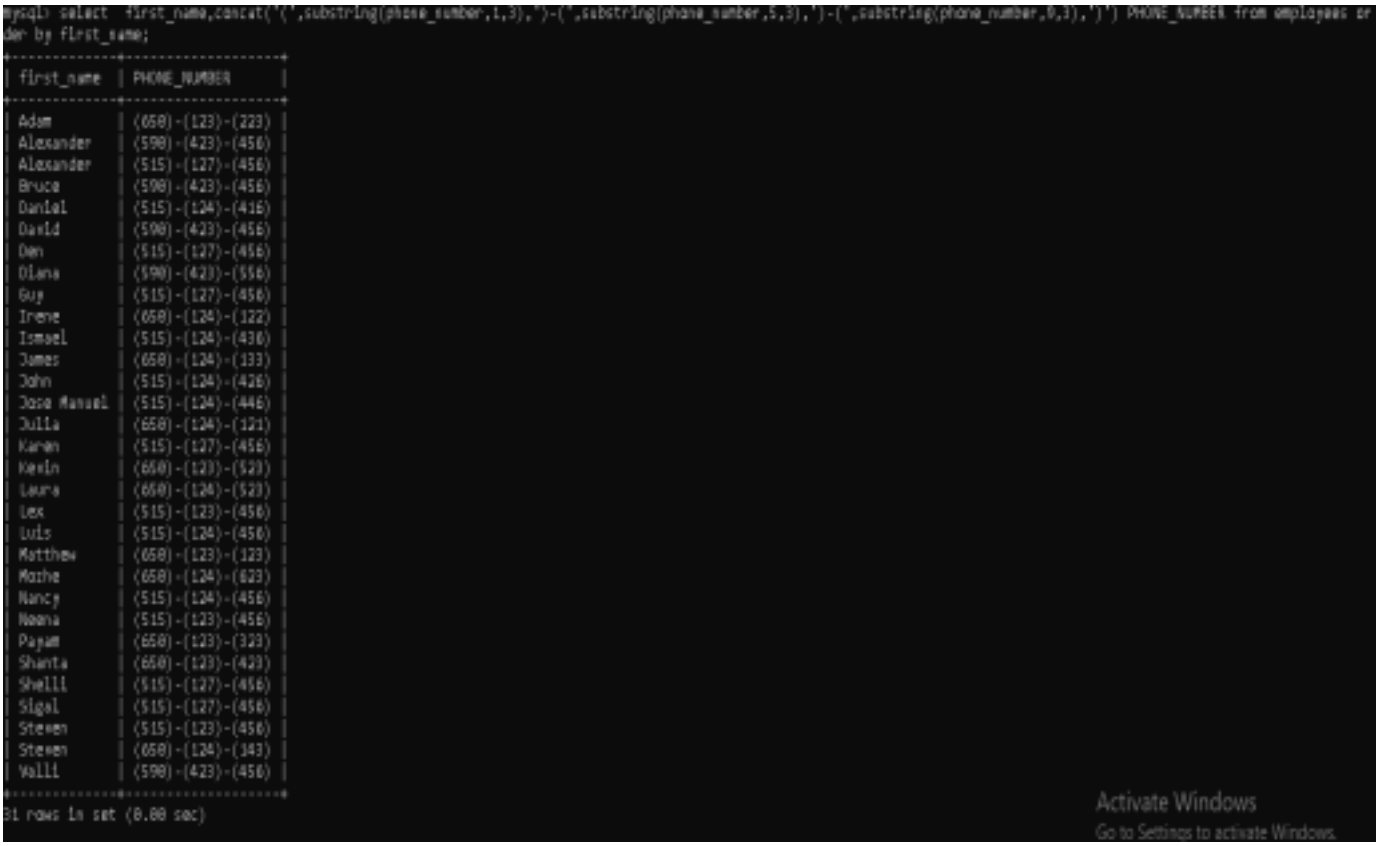
10. create a stored procedure to get the " Get the count of employees hired in the input year"(IN year , OUT count)

```
mysql> DELIMITER //
mysql> CREATE PROCEDURE GetEmployeeCountByYear(IN Year INT,OUT count INT )
    -> BEGIN
    -> SELECT COUNT(Employee_id) COUNT FROM Employees  WHERE YEAR(hire_date) = Year;
    -> END //
Query OK, 0 rows affected (0.03 sec)

mysql>  CALL GetEmployeeCountByYear(1996,@COUNT);
    -> //
+--------+
| COUNT |
+--------+
|     1 |
+--------+
1 row in set (0.03 sec)

Query OK, 0 rows affected (0.04 sec)

mysql> DELIMITER ;
mysql>  CALL GetEmployeeCountByYear(1997,@COUNT);
+--------+
| COUNT |
+--------+
|    10 |
+--------+
1 row in set (0.00 sec)

Query OK, 0 rows affected (0.01 sec)
```

11.Select the employees whose first_name contains "an"

```
mysql> SELECT first_name,last_name from employees where first_name like '%an%' order by first_name;
+-------------+-----------+
| first_name  | last_name |
+-------------+-----------+
| Alexander   | Hunold    |
| Alexander   | Khoo      |
| Daniel      | Faviet    |
| Diana       | Lorentz   |
| Jose Manuel | Urman     |
| Nancy       | Greenberg |
| Shanta      | Vollman   |
+-------------+-----------+
7 rows in set (0.04 sec)
```

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



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

```
mysql> select * from employees where  hire_date between '1994-08-01'and'1994-08-31';
+-------------+------------+-----------+-----------------+--------------+------------+------------+---------+----------------+------------+---------------+
| Employee_id | first_name | last_name | email           | phone_number | hire_date  | job_id     | salary  | commission_pct | manager_id | department_id |
+-------------+------------+-----------+-----------------+--------------+------------+------------+---------+----------------+------------+---------------+
|         108 | Nancy      | Greenberg | NGREENBE@gmail.com | 515.124.4569 | 1994-08-17 | FI_MGR     |  12000  |           NULL |        101 |           108 |
|         109 | Daniel     | Faviet    | DFAVIET@gmail.com  | 515.124.4169 | 1994-08-12 | FI_ACCOUNT |   9000  |           NULL |        108 |           170 |
+-------------+------------+-----------+-----------------+--------------+------------+------------+---------+----------------+------------+---------------+
2 rows in set (0.00 sec)
```

14. Find the maximum salary from each department.

```
mysql> select  d.Department_name,max(e.salary) each_salary from employees e inner join departments d using(Department_id) group by d.Department_name ;
+--------------------+-------------+
| Department_name    | each_salary |
+--------------------+-------------+
| Marketing          |       24000 |
| Purchasing         |       17000 |
| IT                 |        9000 |
| Human Resources    |        7900 |
| Finance            |       12000 |
| Payroll            |        9000 |
| Benefits           |        7700 |
| Shareholder Services |        7000 |
| Control And Credit |        6900 |
| Sales              |        5000 |
| Public Relations   |        2900 |
| Corporate Tax      |        2500 |
| Shipping           |        8200 |
| Executive          |        2400 |
| Accounting         |        2000 |
+--------------------+-------------+
15 rows in set (0.04 sec)
```


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

```
mysql> select * from  Employees e where 5>(select count(*) from employees where e.salary>salary);
+-------------+------------+-----------+--------------------+--------------+------------+----------+----------------+------------+---------------+
| Employee_Id | First_name | Last_name | email              | phone_number | hire_date  | Job_id   | salary | commission_pct | manager_id | department_id |
+-------------+------------+-----------+--------------------+--------------+------------+----------+----------------+------------+---------------+
|         118 | Guy        | Himuro    | GHIMURO@gmail.com  | 515.127.4565 | 1998-01-02 | PU_CLERK |   2600 |           NULL |        114 |            60 |
|         119 | Karen      | Colmenares | KCOLMENA@gmail.com | 515.127.4566 | 1999-04-08 | PU_CLERK |   2500 |           NULL |        114 |           130 |
|         126 | Irene      | Mikkilinen | IMIKKILI@gmail.com | 650.124.1224 | 1998-11-12 | ST_CLERK |   2700 |           NULL |        120 |            50 |
|         127 | James      | Landry    | JLANDRY@gmail.com  | 650.124.1334 | 1999-01-02 | ST_CLERK |   2400 |           NULL |        120 |            90 |
|         128 | Steven     | Markle    | SMARKLE@gmail.com  | 650.124.1434 | 2000-03-04 | ST_CLERK |   2200 |           NULL |        120 |            50 |
+-------------+------------+-----------+--------------------+--------------+------------+----------+----------------+------------+---------------+
5 rows in set (0.04 sec)
```

16. Find the employees hired in the 80s

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