Implementation of different types of functions with suitable examples

Lab-1

Ishita Sinha
202000506
8/2/22

Create a table EMPLOYEE with following schema: (Emp_no, E_name, E_address, E_ph_no, Dept_no, Dept_name, Job_id, Designation, Salary, DOJ)

```
mysql> create table EMPLOYEE(emp_no int, e_name varchar(20), e_address varchar(20), e_ph_no long,
dept_no int, dept_name varchar(10), job_id int, designation varchar(10), salary float, doj date);
Query OK, 0 rows affected (0.01 sec)

mysql> describe employee;
+-------------+-------------+------+-----+---------+-------+
| Field       | Type        | Null | Key | Default | Extra |
+-------------+-------------+------+-----+---------+-------+
| emp_no      | int         | YES  |     | NULL    |       |
| e_name      | varchar(20) | YES  |     | NULL    |       |
| e_address   | varchar(20) | YES  |     | NULL    |       |
| e_ph_no     | mediumtext  | YES  |     | NULL    |       |
| dept_no     | int         | YES  |     | NULL    |       |
| dept_name   | varchar(10) | YES  |     | NULL    |       |
| job_id      | int         | YES  |     | NULL    |       |
| designation | varchar(10) | YES  |     | NULL    |       |
| salary      | float       | YES  |     | NULL    |       |
| doj         | date        | YES  |     | NULL    |       |
+-------------+-------------+------+-----+---------+-------+
10 rows in set (0.01 sec)
```

Displaying the details of data entered (using query: **insert into employee values(…))**

```
mysql> select * from employee;
+--------+----------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
| emp_no | e_name   | e_address | e_ph_no    | dept_no | dept_name | job_id | designation | salary | doj        |
+--------+----------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
|      1 | Ram      | Bangalore | 9999999999 |      10 | finance   |     24 | clerk       |  20000 | 1994-10-20 |
|      2 | Shyam    | Patna     | 8888888888 |      20 | accounts  |    123 | accountant  |  40000 | 1988-08-22 |
|      3 | Hari     | Mumbai    | 7777777777 |      15 | hr        |     87 | analyst     |  55000 | 1981-05-01 |
|      4 | Hema     | Delhi     | 6666666666 |      10 | engineer  |     67 | clerk       |  77500 | 1981-12-03 |
|      5 | Sudha    | Chennai   | 5555555555 |      20 | travel    |     76 | analyst     | 100000 | 1980-01-19 |
|      6 | Roma     | Bangalore | 4444444444 |      10 | managing  |     99 | director    | 250000 | 1981-12-17 |
|      7 | Sita     | Kolkata   | 3333333333 |      15 | engineer  |    456 | manager     |  80000 | 1993-03-03 |
|      8 | Harpreet | Patiala   | 3333333333 |      15 | travel    |     77 | accountant  |  30000 | 1979-09-09 |
+--------+----------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
8 rows in set (0.00 sec)
```

Write SQL statements for the following queries:

1. List the Emp_no, E_name, and Salary of all employees working as MANAGER.

```
mysql> select emp_no, e_name, salary from employee where designation = 'manager';
+--------+--------+--------+
| emp_no | e_name | salary |
+--------+--------+--------+
|      7 | Sita   |  80000 |
+--------+--------+--------+
1 row in set (0.00 sec)
```

2. Display all the details of the employee whose salary is more than the Salary of any manager

```
mysql> select * from employee where salary>(select max(salary) from employee where designation = 'manager');
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
| emp_no | e_name | e_address | e_ph_no    | dept_no | dept_name | job_id | designation | salary | doj        |
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
|      5 | Sudha  | Chennai   | 5555555555 |      20 | travel    |     76 | analyst     | 100000 | 1980-01-19 |
|      6 | Roma   | Bangalore | 4444444444 |      10 | managing  |     99 | director    | 250000 | 1981-12-17 |
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
2 rows in set (0.01 sec)
```

3. List the employees in the ascending order of Designations of those joined after 1981.

```
mysql> select * from employee where doj>'1981-01-01' order by designation;
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
| emp_no | e_name | e_address | e_ph_no    | dept_no | dept_name | job_id | designation | salary | doj        |
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
|      2 | Shyam  | Patna     | 8888888888 |      20 | accounts  |    123 | accountant  |  40000 | 1988-08-22 |
|      3 | Hari   | Mumbai    | 7777777777 |      15 | hr        |     87 | analyst     |  55000 | 1981-05-01 |
|      1 | Ram    | Bangalore | 9999999999 |      10 | finance   |     24 | clerk       |  20000 | 1994-10-20 |
|      4 | Hema   | Delhi     | 6666666666 |      10 | engineer  |     67 | clerk       |  77500 | 1981-12-03 |
|      6 | Roma   | Bangalore | 4444444444 |      10 | managing  |     99 | director    | 250000 | 1981-12-17 |
|      7 | Sita   | Kolkata   | 3333333333 |      15 | engineer  |    456 | manager     |  80000 | 1993-03-03 |
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
6 rows in set (0.00 sec)
```

4. Display the sum and average of salary of all Employees

```
mysql> select sum(salary), avg(salary) from employee;
+-------------+-------------+
| sum(salary) | avg(salary) |
+-------------+-------------+
|      652500 |     81562.5 |
+-------------+-------------+
1 row in set (0.00 sec)
```

5. List the employees who are either "CLERK' or "ANALYST'.

```
mysql> select * from employee where designation in ('clerk', 'analyst');
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
| emp_no | e_name | e_address | e_ph_no    | dept_no | dept_name | job_id | designation | salary | doj        |
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
|      1 | Ram    | Bangalore | 9999999999 |      10 | finance   |     24 | clerk       |  20000 | 1994-10-20 |
|      3 | Hari   | Mumbai    | 7777777777 |      15 | hr        |     87 | analyst     |  55000 | 1981-05-01 |
|      4 | Hema   | Delhi     | 6666666666 |      10 | engineer  |     67 | clerk       |  77500 | 1981-12-03 |
|      5 | Sudha  | Chennai   | 5555555555 |      20 | travel    |     76 | analyst     | 100000 | 1980-01-19 |
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
4 rows in set (0.00 sec)
```

6. List the employees who joined on 1-MAY-81, 3-DEC-81, 17-DEC-81,19-JAN-80

```
mysql> select * from employee where doj in ('1981-05-01', '1981-12-03', '1981-12-17', '1980-01-19');
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
| emp_no | e_name | e_address | e_ph_no    | dept_no | dept_name | job_id | designation | salary | doj        |
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
|      3 | Hari   | Mumbai    | 7777777777 |      15 | hr        |     87 | analyst     |  55000 | 1981-05-01 |
|      4 | Hema   | Delhi     | 6666666666 |      10 | engineer  |     67 | clerk       |  77500 | 1981-12-03 |
|      5 | Sudha  | Chennai   | 5555555555 |      20 | travel    |     76 | analyst     | 100000 | 1980-01-19 |
|      6 | Roma   | Bangalore | 4444444444 |      10 | managing  |     99 | director    | 250000 | 1981-12-17 |
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
4 rows in set (0.00 sec)
```

7. List the employees who are working for the Dept no 10 or 20.

```
mysql> select * from employee where dept_no in (10,20);
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
| emp_no | e_name | e_address | e_ph_no    | dept_no | dept_name | job_id | designation | salary | doj        |
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
|      1 | Ram    | Bangalore | 9999999999 |      10 | finance   |     24 | clerk       |  20000 | 1994-10-20 |
|      2 | Shyam  | Patna     | 8888888888 |      20 | accounts  |    123 | accountant  |  40000 | 1988-08-22 |
|      4 | Hema   | Delhi     | 6666666666 |      10 | engineer  |     67 | clerk       |  77500 | 1981-12-03 |
|      5 | Sudha  | Chennai   | 5555555555 |      20 | travel    |     76 | analyst     | 100000 | 1980-01-19 |
|      6 | Roma   | Bangalore | 4444444444 |      10 | managing  |     99 | director    | 250000 | 1981-12-17 |
+--------+--------+-----------+------------+---------+-----------+--------+-------------+--------+------------+
5 rows in set (0.00 sec)
```

8. List the Employee names those starting with 'S'.

```
mysql> select e_name from employee where e_name like 'S%';
+--------+
| e_name |
+--------+
| Shyam  |
| Sudha  |
| Sita   |
+--------+
3 rows in set (0.00 sec)
```

9. Display the name as well as the first five characters of name(s) starting with 'H'

```
mysql> select e_name, substring(e_name,1,5) from employee where e_name like 'H%';
+---------+----------------------+
| e_name  | substring(e_name,1,5) |
+---------+----------------------+
| Hari    | Hari                 |
| Hema    | Hema                 |
| Harpreet | Harpr               |
+---------+----------------------+
3 rows in set (0.00 sec)
```

10. List the Employee names ending with 'a'.

```
mysql> select e_name from employee where e_name like '%a';
+--------+
| e_name |
+--------+
| Hema   |
| Sudha  |
| Roma   |
| Sita   |
+--------+
4 rows in set (0.00 sec)
```

11. Display the maximum and minimum salary of employees

```
mysql> select max(salary), min(salary) from employee;
+-------------+-------------+
| max(salary) | min(salary) |
+-------------+-------------+
|      250000 |       20000 |
+-------------+-------------+
1 row in set (0.01 sec)
```

12. Display the count of employees in each designation

```
mysql> select designation,count(*) from employee group by designation;
+-------------+----------+
| designation | count(*) |
+-------------+----------+
| clerk       |        2 |
| accountant  |        2 |
| analyst     |        2 |
| director    |        1 |
| manager     |        1 |
+-------------+----------+
5 rows in set (0.00 sec)
```