ASSIGNMENT - 6

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Roll No. - 231CS232

Question1

```
mysql> CREATE DATABASE CS232_A6;
Query OK, 1 row affected (0.04 sec)

mysql> USE CS232_A6
Database changed
mysql> CREATE TABLE Employee (
    ->     empid INT PRIMARY KEY,
    ->     empname VARCHAR(50),
    ->     empemail VARCHAR(50),
    ->     phone_no VARCHAR(15),
    ->     salary INT,
    ->     city VARCHAR(50)
    -> );
Query OK, 0 rows affected (0.06 sec)

mysql>
mysql> INSERT INTO Employee (empid, empname, empemail, phone_no, salary, city) VALUES
    -> (1, 'Amit Sharma', 'amit@gmail.com', '9876543210', 45000, 'Delhi'),
    -> (2, 'Raj Verma', 'raj@yahoo.com', '9898989898', 30000, 'Mumbai'),
    -> (3, 'Pooja Singh', 'pooja@gmail.com', '9765432109', 28000, 'Delhi'),
    -> (4, 'Vikram Patel', 'vikram@outlook.com', '9900112233', 60000, 'Bangalore'),
    -> (5, 'Neha Gupta', 'neha@yahoo.com', '9871234567', 32000, 'Chennai'),
    -> (6, 'Ravi Kumar', 'ravi@gmail.com', '9988776655', 22000, 'Mumbai'),
    -> (7, 'Sonia Das', 'sonia@hotmail.com', '9786543210', 55000, 'Delhi'),
    -> (8, 'Manoj Tiwari', 'manoj@gmail.com', '9678123456', 42000, 'Kolkata'),
    -> (9, 'Priya Mehta', 'priya@yahoo.com', '9785641230', 25000, 'Chennai'),
    -> (10, 'Ankit Yadav', 'ankit@gmail.com', '9876123450', 47000, 'Bangalore');
Query OK, 10 rows affected (0.00 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> SELECT city, COUNT(*) AS num_employees
    -> FROM Employee
    -> GROUP BY city;
+-----------+---------------+
| city      | num_employees |
+-----------+---------------+
| Delhi     |             3 |
| Mumbai    |             2 |
| Bangalore |             2 |
| Chennai   |             2 |
| Kolkata   |             1 |
+-----------+---------------+
5 rows in set (0.00 sec)

mysql> SELECT city, salary, COUNT(*) AS num_employees
    -> FROM Employee
    -> GROUP BY city, salary;
+-----------+--------+---------------+
| city      | salary | num_employees |
+-----------+--------+---------------+
| Delhi     |  45000 |             1 |
| Mumbai    |  30000 |             1 |
| Delhi     |  28000 |             1 |
| Bangalore |  60000 |             1 |
| Chennai   |  32000 |             1 |
| Mumbai    |  22000 |             1 |
| Delhi     |  55000 |             1 |
| Kolkata   |  42000 |             1 |
| Chennai   |  25000 |             1 |
| Bangalore |  47000 |             1 |
+-----------+--------+---------------+
10 rows in set (0.00 sec)
```

```
mysql> SELECT city, COUNT(*) AS num_employees
    -> FROM Employee
    -> GROUP BY city
    -> ORDER BY num_employees DESC;
+-----------+---------------+
| city      | num_employees |
+-----------+---------------+
| Delhi     |             3 |
| Mumbai    |             2 |
| Bangalore |             2 |
| Chennai   |             2 |
| Kolkata   |             1 |
+-----------+---------------+
5 rows in set (0.00 sec)

mysql> SELECT empname, salary
    -> FROM Employee
    -> ORDER BY salary ASC;
+--------------+--------+
| empname      | salary |
+--------------+--------+
| Ravi Kumar   |  22000 |
| Priya Mehta  |  25000 |
| Pooja Singh  |  28000 |
| Raj Verma    |  30000 |
| Neha Gupta   |  32000 |
| Manoj Tiwari |  42000 |
| Amit Sharma  |  45000 |
| Ankit Yadav  |  47000 |
| Sonia Das    |  55000 |
| Vikram Patel |  60000 |
+--------------+--------+
10 rows in set (0.00 sec)

mysql> SELECT city, COUNT(*) AS num_employees
    -> FROM Employee
    -> WHERE salary > 30000
    -> GROUP BY city;
+-----------+---------------+
| city      | num_employees |
+-----------+---------------+
| Delhi     |             2 |
| Bangalore |             2 |
| Chennai   |             1 |
| Kolkata   |             1 |
+-----------+---------------+
4 rows in set (0.01 sec)

mysql> SELECT * FROM Employee
    -> WHERE empemail LIKE '%@gmail.com'
    ->    OR empemail LIKE '%@yahoo.com';
+-------+--------------+------------------+------------+--------+-----------+
| empid | empname      | empemail         | phone_no   | salary | city      |
+-------+--------------+------------------+------------+--------+-----------+
|     1 | Amit Sharma  | amit@gmail.com   | 9876543210 |  45000 | Delhi     |
|     2 | Raj Verma    | raj@yahoo.com    | 9898989898 |  30000 | Mumbai    |
|     3 | Pooja Singh  | pooja@gmail.com  | 9765432109 |  28000 | Delhi     |
|     5 | Neha Gupta   | neha@yahoo.com   | 9871234567 |  32000 | Chennai   |
|     6 | Ravi Kumar   | ravi@gmail.com   | 9988776655 |  22000 | Mumbai    |
|     8 | Manoj Tiwari | manoj@gmail.com  | 9678123456 |  42000 | Kolkata   |
|     9 | Priya Mehta  | priya@yahoo.com  | 9785641230 |  25000 | Chennai   |
|    10 | Ankit Yadav  | ankit@gmail.com  | 9876123450 |  47000 | Bangalore |
+-------+--------------+------------------+------------+--------+-----------+
8 rows in set (0.03 sec)

mysql> SELECT empname, salary
    -> FROM Employee
    -> WHERE salary > (SELECT AVG(salary) FROM Employee)
    -> ORDER BY empname ASC;
+--------------+--------+
| empname      | salary |
+--------------+--------+
| Amit Sharma  |  45000 |
| Ankit Yadav  |  47000 |
| Manoj Tiwari |  42000 |
| Sonia Das    |  55000 |
| Vikram Patel |  60000 |
+--------------+--------+
5 rows in set (0.01 sec)
```

QUESTION 2

```
mysql> CREATE TABLE Employee (
    ->      EmpID INT PRIMARY KEY,
    ->      EmpNAME VARCHAR(50),
    ->      EmpDEPT VARCHAR(50),
    ->      EmpSALARY INT,
    ->      EmpCITY VARCHAR(50)
    -> );
Query OK, 0 rows affected (0.07 sec)

mysql>
mysql> INSERT INTO Employee (EmpID, EmpNAME, EmpDEPT, EmpSALARY, EmpCITY) VALUES
    -> (2001, 'Sunil', 'Finance', 9000, 'delhi'),
    -> (2002, 'Aadil', 'HR', 8000, 'goa'),
    -> (2003, 'Vinay', 'Coding', 7000, 'bangalore'),
    -> (2004, 'Felix', 'Coding', 7500, 'mumbai'),
    -> (2005, 'Kiran', 'HR', 8500, 'mumbai'),
    -> (2006, 'Mohan', 'Marketing', 6500, 'bangalore'),
    -> (2007, 'Anaya', 'Coding', 7000, 'chennai'),
    -> (2008, 'Parul', 'Finance', 8500, 'bangalore');
Query OK, 8 rows affected (0.00 sec)
Records: 8  Duplicates: 0  Warnings: 0

mysql> SELECT city, SUM(salary) AS total_salary
    -> FROM Employee
    -> GROUP BY city;
ERROR 1054 (42S22): Unknown column 'city' in 'field list'
mysql> SELECT EmpCITY, SUM(EmpSALARY) AS TotalSalary FROM Employee GROUP BY EmpCITY;
+-----------+-------------+
| EmpCITY   | TotalSalary |
+-----------+-------------+
| delhi     |        9000 |
| goa       |        8000 |
| bangalore |       22000 |
| mumbai    |       16000 |
| chennai   |        7000 |
+-----------+-------------+
5 rows in set (0.03 sec)

mysql> SELECT EmpCITY, SUM(EmpSALARY) AS TotalSalary FROM Employee GROUP BY EmpCITY HAVING TotalSalary >= 8000;
+-----------+-------------+
| EmpCITY   | TotalSalary |
+-----------+-------------+
| delhi     |        9000 |
| goa       |        8000 |
| bangalore |       22000 |
| mumbai    |       16000 |
+-----------+-------------+
4 rows in set (0.07 sec)

mysql> SELECT EmpDEPT, MIN(EmpSALARY) AS MinSalary FROM Employee GROUP BY EmpDEPT;
+-----------+-----------+
| EmpDEPT   | MinSalary |
+-----------+-----------+
| Finance   |      8500 |
| HR        |      8000 |
| Coding    |      7000 |
| Marketing |      6500 |
+-----------+-----------+
4 rows in set (0.00 sec)

mysql> SELECT EmpDEPT, MIN(EmpSALARY) AS MinSalary FROM Employee GROUP BY EmpDEPT HAVING MinSalary > 7500;
+---------+-----------+
| EmpDEPT | MinSalary |
+---------+-----------+
| Finance |      8500 |
| HR      |      8000 |
+---------+-----------+
2 rows in set (0.00 sec)

mysql> SELECT EmpDEPT, MAX(EmpSALARY) AS MaxSalary FROM Employee GROUP BY EmpDEPT;
+-----------+-----------+
| EmpDEPT   | MaxSalary |
+-----------+-----------+
| Finance   |      9000 |
| HR        |      8500 |
| Coding    |      7500 |
| Marketing |      6500 |
+-----------+-----------+
4 rows in set (0.01 sec)
```

```
mysql> SELECT EmpDEPT, MAX(EmpSALARY) AS MaxSalary FROM Employee GROUP BY EmpDEPT HAVING MaxSalary <= 7000;
+-----------+-----------+
| EmpDEPT   | MaxSalary |
+-----------+-----------+
| Marketing |      6500 |
+-----------+-----------+
1 row in set (0.00 sec)

mysql> SELECT EmpDEPT, AVG(EmpSALARY) AS AvgSalary FROM Employee GROUP BY EmpDEPT;
+-----------+-----------+
| EmpDEPT   | AvgSalary |
+-----------+-----------+
| Finance   | 8750.0000 |
| HR        | 8250.0000 |
| Coding    | 7166.6667 |
| Marketing | 6500.0000 |
+-----------+-----------+
4 rows in set (0.00 sec)
```