DA _ SQL TASK PRACTICE - 3

```
mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| employees          |
| information_schema |
| mysql              |
| performance_schema |
| sakila             |
| samp               |
| stu_mark           |
| sys                |
| world              |
+--------------------+
9 rows in set (0.06 sec)

mysql> create database stud1;
Query OK, 1 row affected (0.04 sec)

mysql> use stud1;
Database changed
mysql> CREATE TABLE employe (employee_id INTEGER,first_name TEXT,last_name
TEXT,department TEXT,salary DECIMAL,hire_date DATE);
Query OK, 0 rows affected (0.06 sec)

mysql> INSERT INTO employe VALUES (1, 'Alice', 'Brown', 'HR', 62000, '2020-01-15');
Query OK, 1 row affected (0.01 sec)
```

```
mysql> INSERT INTO employe VALUES (2, 'Bob', 'Smith', 'Engineering', 75000, '2019-03-20');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employe VALUES (3, 'Charlie', 'Davis', 'HR', 58000, '2018-07-01');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employe VALUES (4, 'David', 'Evans', 'Sales', 49000, '2021-11-30');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employe VALUES (5, 'Eve', 'Foster', 'Engineering', 81000, '2017-05-14');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employe VALUES (6, 'Frank', 'Green', 'Engineering', 66000, '2022-02-10');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employe VALUES (7, 'Grace', 'Hill', 'Sales', 52000, '2020-10-07');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employe VALUES (8, 'Hank', 'Ivory', 'HR', 55000, '2019-04-25');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employe VALUES (9, 'Ivy', 'Johnson', 'Marketing', 47000, '2021-03-18');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO employe VALUES (10, 'Jack', 'Knight', 'Marketing', 51000, '2023-06-29');
Query OK, 1 row affected (0.01 sec)
```

```
mysql> SELECT department FROM employe GROUP BY department HAVING
AVG(salary) > 60000;
+-------------+
| department  |
+-------------+
| Engineering |
+-------------+
1 row in set (0.00 sec)

mysql> SELECT department FROM employe GROUP BY department HAVING COUNT(*)
> 2 AND AVG(salary) > 55000;
+-------------+
| department  |
+-------------+
| HR          |
| Engineering |
+-------------+
2 rows in set (0.00 sec)

mysql> SELECT department FROM employe GROUP BY department HAVING
SUM(salary) > 50000;
+-------------+
| department  |
+-------------+
| HR          |
| Engineering |
| Sales       |
| Marketing   |
+-------------+
4 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM employe WHERE department IN (SELECT department FROM
employe GROUP BY department HAVING MIN(salary) > 45000);
+-------------+------------+-----------+-------------+--------+------------+
| employee_id | first_name | last_name | department  | salary | hire_date  |
+-------------+------------+-----------+-------------+--------+------------+
|           1 | Alice      | Brown     | HR          |  62000 | 2020-01-15 |
|           2 | Bob        | Smith     | Engineering |  75000 | 2019-03-20 |
|           3 | Charlie    | Davis     | HR          |  58000 | 2018-07-01 |
|           4 | David      | Evans     | Sales       |  49000 | 2021-11-30 |
|           5 | Eve        | Foster    | Engineering |  81000 | 2017-05-14 |
|           6 | Frank      | Green     | Engineering |  66000 | 2022-02-10 |
|           7 | Grace      | Hill      | Sales       |  52000 | 2020-10-07 |
|           8 | Hank       | Ivory     | HR          |  55000 | 2019-04-25 |
|           9 | Ivy        | Johnson   | Marketing   |  47000 | 2021-03-18 |
|          10 | Jack       | Knight    | Marketing   |  51000 | 2023-06-29 |
+-------------+------------+-----------+-------------+--------+------------+
10 rows in set (0.00 sec)

mysql> SELECT department FROM employe GROUP BY department HAVING COUNT(*)
>= 3 AND AVG(salary) < 65000;
+------------+
| department |
+------------+
| HR         |
+------------+
1 row in set (0.00 sec)

mysql> SELECT * FROM employe ORDER BY first_name ASC;
+-------------+------------+-----------+-------------+--------+------------+
| employee_id | first_name | last_name | department  | salary | hire_date  |
+-------------+------------+-----------+-------------+--------+------------+
```

```
|           1 | Alice      | Brown     | HR          |  62000 | 2020-01-15 |
|           2 | Bob        | Smith     | Engineering |  75000 | 2019-03-20 |
|           3 | Charlie    | Davis     | HR          |  58000 | 2018-07-01 |
|           4 | David      | Evans     | Sales       |  49000 | 2021-11-30 |
|           5 | Eve        | Foster    | Engineering |  81000 | 2017-05-14 |
|           6 | Frank      | Green     | Engineering |  66000 | 2022-02-10 |
|           7 | Grace      | Hill      | Sales       |  52000 | 2020-10-07 |
|           8 | Hank       | Ivory     | HR          |  55000 | 2019-04-25 |
|           9 | Ivy        | Johnson   | Marketing   |  47000 | 2021-03-18 |
|          10 | Jack       | Knight    | Marketing   |  51000 | 2023-06-29 |
+-------------+------------+-----------+-------------+--------+------------+
10 rows in set (0.00 sec)

mysql> SELECT * FROM employe ORDER BY hire_date DESC;
+-------------+------------+-----------+-------------+--------+------------+
| employee_id | first_name | last_name | department  | salary | hire_date  |
+-------------+------------+-----------+-------------+--------+------------+
|          10 | Jack       | Knight    | Marketing   |  51000 | 2023-06-29 |
|           6 | Frank      | Green     | Engineering |  66000 | 2022-02-10 |
|           4 | David      | Evans     | Sales       |  49000 | 2021-11-30 |
|           9 | Ivy        | Johnson   | Marketing   |  47000 | 2021-03-18 |
|           7 | Grace      | Hill      | Sales       |  52000 | 2020-10-07 |
|           1 | Alice      | Brown     | HR          |  62000 | 2020-01-15 |
|           8 | Hank       | Ivory     | HR          |  55000 | 2019-04-25 |
|           2 | Bob        | Smith     | Engineering |  75000 | 2019-03-20 |
|           3 | Charlie    | Davis     | HR          |  58000 | 2018-07-01 |
|           5 | Eve        | Foster    | Engineering |  81000 | 2017-05-14 |
+-------------+------------+-----------+-------------+--------+------------+
10 rows in set (0.00 sec)
```

```
mysql> SELECT first_name, salary FROM employe ORDER BY salary ASC;
+------------+--------+
| first_name | salary |
+------------+--------+
| Ivy        |  47000 |
| David      |  49000 |
| Jack       |  51000 |
| Grace      |  52000 |
| Hank       |  55000 |
| Charlie    |  58000 |
| Alice      |  62000 |
| Frank      |  66000 |
| Bob        |  75000 |
| Eve        |  81000 |
+------------+--------+
10 rows in set (0.00 sec)

mysql> SELECT department, SUM(salary) AS total_salary FROM employe GROUP BY
department;
+-------------+--------------+
| department  | total_salary |
+-------------+--------------+
| HR          |       175000 |
| Engineering |       222000 |
| Sales       |       101000 |
| Marketing   |        98000 |
+-------------+--------------+
4 rows in set (0.00 sec)

mysql> SELECT department, AVG(salary) AS avg_salary FROM employe GROUP BY
department;
```

```
+-------------+------------+
| department  | avg_salary |
+-------------+------------+
| HR          | 58333.3333 |
| Engineering | 74000.0000 |
| Sales       | 50500.0000 |
| Marketing   | 49000.0000 |
+-------------+------------+
4 rows in set (0.00 sec)
```

```
mysql> SELECT department, COUNT(*) AS total_employees FROM employe GROUP BY
department;
+-------------+-----------------+
| department  | total_employees |
+-------------+-----------------+
| HR          |               3 |
| Engineering |               3 |
| Sales       |               2 |
| Marketing   |               2 |
+-------------+-----------------+
4 rows in set (0.00 sec)
```

```
mysql> SELECT department, MAX(salary) AS highest_salary FROM employe GROUP BY
department;
+-------------+----------------+
| department  | highest_salary |
+-------------+----------------+
| HR          |          62000 |
| Engineering |          81000 |
| Sales       |          52000 |
| Marketing   |          51000 |
```

+-------------+----------------+

4 rows in set (0.00 sec)