Employee Table

Step 1: Create the Employee Table

```
CREATE TABLE Employee (
    EmpID INT PRIMARY KEY,
    Name VARCHAR(50),
    Department VARCHAR(50),
    Gender VARCHAR(10),
    Salary DECIMAL(10, 2),
    Age INT,
    Experience INT
);
```

Inserting the table

```
INSERT INTO Employee (EmpID, Name, Department, Gender, Salary, Age, Experience) VALUES
(1, 'Alice', 'HR', 'Female', 50000, 28, 3),
(2, 'Bob', 'Finance', 'Male', 60000, 32, 5),
(3, 'Charlie', 'IT', 'Male', 70000, 30, 6),
(4, 'David', 'HR', 'Male', 48000, 45, 20),
(5, 'Eva', 'IT', 'Female', 72000, 29, 4),
(6, 'Frank', 'Finance', 'Male', 58000, 35, 8),
(7, 'Grace', 'Marketing', 'Female', 50000, 27, 2),
(8, 'Hannah', 'IT', 'Female', 75000, 31, 7),
(9, 'Ivy', 'Finance', 'Female', 62000, 26, 3),
(10, 'Jack', 'Marketing', 'Male', 52000, 38, 10),
(11, 'Kiran', 'IT', 'Male', 68000, 33, 9),
(12, 'Lily', 'HR', 'Female', 55000, 40, 15),
(13, 'Mohan', 'Finance', 'Male', 61000, 29, 4),
(14, 'Nina', 'Marketing', 'Female', 53000, 36, 11),
(15, 'Oscar', 'IT', 'Male', 71000, 34, 10);
```

Question:-

A. Find total salary per department.
   - select sum(salary) from Employee;

```
+-------------+
| sum(salary) |
+-------------+
|  905000.00 |
+-------------+
1 row in set (0.01 sec)
```

B. List departments where total salary exceeds 200000.
   - select department , sum(salary) from Employee group by department having sum(salary)>200000;

```
+------------+-------------+
| department | sum(salary) |
+------------+-------------+
| Finance    |   241000.00 |
| IT         |   356000.00 |
+------------+-------------+
2 rows in set (0.01 sec)
```

C. Count number of employees in each department.
   - select count(Name) from Employee group by department;

```
+-------------+
| count(Name) |
+-------------+
|           3 |
|           4 |
|           5 |
|           3 |
+-------------+
4 rows in set (0.01 sec)
```

D. List departments with more than 3 employees.
   - select department from Employee group by department having count(Name)>3;

```
+------------+
| department |
+------------+
| Finance    |
| IT         |
+------------+
2 rows in set (0.00 sec)
```

E. Find average salary by gender.
   - select gender,avg(salary) from Employee group by gender;

```
+--------+--------------+
| gender | avg(salary)  |
+--------+--------------+
| Female | 59571.428571 |
| Male   | 61000.000000 |
+--------+--------------+
```

- 2 rows in set (0.01 sec)

F. Show gender-wise employee count, only if count is more than 5.
- select gender, count(Name) from Employee group by gender having count(Name)>5;
- +--------+-------------+
- | gender | count(Name) |
- +--------+-------------+
- | Female | 7 |
- | Male | 8 |
- +--------+-------------+
- 2 rows in set (0.00 sec)

G. List departments with average salary above 60000.
- select department, avg(salary) from Employee group by department having avg(salary)>60000;
- +------------+--------------+
- | department | avg(salary) |
- +------------+--------------+
- | Finance | 60250.000000 |
- | IT | 71200.000000 |
- +------------+--------------+
- 2 rows in set (0.00 sec)

H. List number of male and female employees per department.
- select department,gender,count(gender) from employee group by department,gender order by department;
- +------------+--------+---------------+
- | department | gender | count(gender) |
- +------------+--------+---------------+
- | Finance | Female | 1 |
- | Finance | Male | 3 |
- | HR | Female | 2 |
- | HR | Male | 1 |
- | IT | Female | 2 |
- | IT | Male | 3 |
- | Marketing | Female | 2 |
- | Marketing | Male | 1 |
- +------------+--------+---------------+
- 8 rows in set (0.01 sec)

I. Find departments where the average experience is more than 7 years.
- select department, avg(Experience) from Employee group by department having avg(Experience)>7;
- +------------+-----------------+
- | department | avg(Experience) |
- +------------+-----------------+
- | HR | 12.6667 |
- | IT | 7.2000 |
- | Marketing | 7.6667 |
- +------------+-----------------+
- 3 rows in set (0.00 sec)

J. List departments where the max salary is above 70000.

- select department , max(salary) from Employee group by department having max(salary)>70000;
- +------------+-------------+
- | department | max(salary) |
- +------------+-------------+
- | IT | 75000.00 |
- +------------+-------------+
- 1 row in set (0.00 sec)

K. Find average age by department.
- select department,avg(age) from Employee group by department ;
- +------------+----------+
- | department | avg(age) |
- +------------+----------+
- | HR | 37.6667 |
- | Finance | 30.5000 |
- | IT | 31.4000 |
- | Marketing | 33.6667 |
- +------------+----------+
- 4 rows in set (0.00 sec)

L. List all departments where female employees earn more than 60000 on average.
- select department,avg(salary) from employee where gender='female' group by department having avg(salary)>=60000;
- +------------+--------------+
- | department | avg(salary) |
- +------------+--------------+
- | IT | 73500.000000 |
- | Finance | 62000.000000 |
- +------------+--------------+
- 2 rows in set (0.00 sec)

M. Find departments with total experience greater than 20 years.
- select department, sum(experience) from Employee group by department having sum(experience)>20;
- +------------+-----------------+
- | department | sum(experience) |
- +------------+-----------------+
- | HR | 38 |
- | IT | 36 |
- | Marketing | 23 |
- +------------+-----------------+
- 3 rows in set (0.00 sec)

N. Find gender-wise average experience per department.
- select department,gender, avg(experience) from employee group by department,gender order by department;
- +------------+--------+-----------------+
- | department | gender | avg(experience) |
- +------------+--------+-----------------+
- | Finance | Female | 3.0000 |
- | Finance | Male | 5.6667 |

- | HR | Female | 9.0000 |
- | HR | Male | 20.0000 |
- | IT | Female | 5.5000 |
- | IT | Male | 8.3333 |
- | Marketing | Female | 6.5000 |
- | Marketing | Male | 10.0000 |
- +------------+--------+-----------------+
- 8 rows in set (0.00 sec)

O. List departments where average age is under 30.
- select department , avg(age) from employee group by department having avg(age)<30;
- Empty set (0.00 sec)

P. Find departments where more than one female is working.
- select department, count(*) from employee where gender='female' group by department having count(*) > 1;
- +------------+----------+
- | department | count(*) |
- +------------+----------+
- | HR | 2 |
- | IT | 2 |
- | Marketing | 2 |
- +------------+----------+
- 3 rows in set (0.00 sec)

Q. Find departments where both male and female employees exist.
- select department from employee group by department having count(distinct(gender));
- +------------+
- | department |
- +------------+
- | Finance |
- | HR |
- | IT |
- | Marketing |
- +------------+
- 4 rows in set (0.00 sec)

R. List departments with highest average experience.
- select department , avg(experience) from employee group by department order by avg(experience) desc;
- +------------+-----------------+
- | department | avg(experience) |
- +------------+-----------------+
- | HR | 12.6667 |
- | Marketing | 7.6667 |
- | IT | 7.2000 |
- | Finance | 5.0000 |
- +------------+-----------------+
- 4 rows in set (0.00 sec)

S. Find gender and department combinations where total salary is above 100000.

- select department,gender , sum(salary) from employee group by department,gender having sum(salary)>100000 order by gender;
- +------------+--------+-------------+
- | department | gender | sum(salary) |
- +------------+--------+-------------+
- | HR | Female | 105000.00 |
- | IT | Female | 147000.00 |
- | Marketing | Female | 103000.00 |
- | Finance | Male | 179000.00 |
- | IT | Male | 209000.00 |
- +------------+--------+-------------+
- 5 rows in set (0.00 sec)

T. Show department-wise count of employees under age 35.
- select department, count(Nmae) from employee where age<35 group by department;
- +------------+------------+
- | department | count(Age) |
- +------------+------------+
- | HR | 1 |
- | Finance | 3|
- | IT | 5 |
- | Marketing | 1|
- +------------+------------+
- 4 rows in set (0.00 sec)

U. List top 3 departments with highest total salary.
- select department , sum(salary) from Employee group by department order by sum(salary) desc limit 3;
- +------------+-------------+
- | department | sum(salary) |
- +------------+-------------+
- | IT | 356000.00 |
- | Finance | 241000.00 |
- | Marketing | 155000.00 |
- +------------+-------------+
- 3 rows in set (0.00 sec)

V. List departments where all employees have more than 5 years of experience.
- select distinct department from employee where experience > 5;
- +------------+
- | department |
- +------------+
- | IT |
- | HR |
- | Finance |
- | Marketing |
- +------------+
- 4 rows in set (0.00 sec)

W. Find departments where at least one employee earns less than 55000.

- select distinct department from employee where salary<55000;
- +------------+
- | department |
- +------------+
- | HR |
- | Marketing |
- +------------+
- 2 rows in set (0.00 sec)