

MySQL Employees Database

Topic: Queries Using MySQL Employees Database

Instructions:

•Use the MySQL Employees Database (schema: employees, salaries, departments, dept_emp, dept_manager, titles).

•Write the SQL queries for each question and include the results as part of your submission.

•Ensure your queries include proper formatting, comments, and structure.

Part 1: Advanced Joins (1-5)

1. Retrieve the **first name**, **last name**, and **department name** of employees who started working **after their department manager's hire date**.
2. List the **department names** and the total **number of employees** in each department who have the title of "Senior Engineer".
3. Find the **first name**, **last name**, and **salary** of employees who have worked in **multiple departments**.
4. Retrieve the **employee numbers** of employees who currently do not have any active title assignments.
5. List all departments and the **number of employees** in each department who earn more than **100,000**.

Part 2: Nested Queries (6-10)

6. Find the **first name** and **last name** of employees who earn more than the **highest salary** in department "d003".
7. Retrieve the **employee numbers** of employees whose salaries are greater than the **average salary** of all employees in the same department.
8. Find the **departments** where at least one employee earns more than **80,000** and works as a "Staff".
9. Retrieve the **employee numbers** of employees who have never earned more than **50,000** during their entire career.
10. Find the **department names** where all employees earn less than **90,000**.

Part 3: Aggregations (11-15)

11. Find the **average salary** of employees for each title.
12. List the **top 3 departments** with the **highest average salaries** across all employees.
13. Retrieve the **employee numbers** and the **total number of titles** they have held over their career.
14. Find the **department name** and the **total compensation** of employees for each department.
15. Retrieve the **first name**, **last name**, and **maximum salary** of employees who have been "Managers"

Part 4: Set Operations (16-20)

16. Retrieve the **names** of employees who have worked in both “Development” and “Sales” departments.
17. List the **employee numbers** of employees who have had the title “Assistant Engineer” but have **never worked** in the “Production” department.
18. Retrieve the **department names** where no employees currently hold the title “Technician”.
19. Find the **names** of employees who have worked as both “Senior Engineer” and “Senior Staff”.
20. List all **departments** and indicate whether each has at least one employee earning more than **150,000** (“Yes” or “No”).