

SQL Homework: 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.
- Submission Deadline: 22nd December 2024 17:00

Part 1: Basic Queries

1. Retrieve the first name, last name, and hire date of employees hired after January 1, 2000.
2. List the department names from the departments table where the department name starts with the letter 'S'.
3. Find all employees whose salary is greater than 80,000. Include their emp_no, salary, and from_date in the result.
4. Retrieve the titles and the count of employees for each title in the titles table. Sort the results by the count of employees in descending order.
5. List the department numbers and average salary of employees for each department. Sort the results by department number.

Part 2: Joins and Set Operations

6. Retrieve the first name, last name, and department name of all employees working in the "Sales" department. (Use a join between employees, dept_emp, and departments.)
7. List the first name, last name, and manager's first name for all employees who report to managers. (Use a join between employees and dept_manager.)
8. Find the employee number and salary of employees whose salary is greater than the average salary of all employees.
9. Retrieve the employee numbers of employees who work in the "Sales" or "Marketing" departments. (Use UNION to combine results.)
10. List the first name and last name of employees who have never worked in any department.

Part 3: Nested Queries

11. Retrieve the employee number, salary, and department name of employees who earn more than the average salary of their department.
12. Find the first name and last name of employees who hold the title of "Manager" and earn the highest salary in their department.
13. List the department names where the average salary of employees exceeds 70,000.
14. Retrieve the employee number and title of employees whose salary is greater than the maximum salary in department "d005".

15. Find the employee numbers of employees who have worked in more than one department.

Part 4: Views and Aggregations

16. Create a view named high_salary_employees that lists the emp_no, first_name, last_name, and salary of employees earning more than 100,000.

17. Use the high_salary_employees view to retrieve all employees working in the "Development" department.

18. Create a view named dept_avg_salary that shows the department number, department name, and average salary for each department.

19. Retrieve departments where the average salary (from the dept_avg_salary view) is greater than 90,000.

20. Find the top 5 highest-paid employees, including their first name, last name, and salary.

Submission Instructions:

1. Write all 20 queries in a .sql file with proper comments indicating the question number.

2. Run each query on the MySQL Employees Database and include the query output (screenshots or exported results).

3. Ensure your queries are formatted for readability and correctness.