

Assignment 6

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Task 1: Using Comparison and Logical Operators

Question:

Write a SQL query to retrieve the emp_id, last_name, and salary of employees whose salary is between 2,000 and 5,000 and do not have a manager ID of 101 or 200.

Instructions:

1. Use the SELECT statement to specify the columns: emp_id, last_name, and salary.
2. Filter the results using the WHERE clause with the BETWEEN operator to set the salary range.
3. Use the NOT IN clause to exclude certain manager IDs.
4. Combine conditions using the AND logical operator.

```
SELECT emp_id, last_name, salary
FROM employees
WHERE salary BETWEEN 2000 AND 5000
AND manager_id NOT IN (101, 200);
```

Task 2: Using JOINS and Aliases

Question:

Write a SQL query to display the employee names along with their respective department names. Use aliases for table names for better readability.

Instructions:

1. Use the SELECT statement to specify the columns: employee.name and department.name.
2. Use the FROM clause to include the tables employees and departments.
3. Use an INNER JOIN to connect the employees and departments tables based on the department IDs.
4. Use table aliases (e.g., e for employees, d for departments) to shorten the table names in the query.
5. Order the results by department name in ascending order.

```
SELECT e.name AS employee_name, d.name AS department_name
FROM employees e INNER JOIN departments d ON e.department_id = d.id
ORDER BY d.name ASC;
```

Task 3: Aggregate Functions and GROUP BY

Question:

Write a SQL query to find the number of employees and the average salary for each department. Ensure that the results are grouped by department ID.

Instructions:

1. Use the SELECT statement to specify the department ID, the count of employees, and the average salary.
2. Use the GROUP BY clause to group the results by department ID.
3. Use the COUNT() function to find the number of employees in each department.
4. Use the AVG() function to calculate the average salary in each department.

```
SELECT department_id AS d.id , COUNT(emp_id) AS num_employees, AVG(salary) AS average_salary  
FROM employees  
GROUP BY department_id;
```