

SQL JOIN Practice Questions

Assume you have the following two tables:

Employees

emp_id	name	department_id	salary
1	Alice	101	5000
2	Bob	102	6000
3	Charlie	NULL	5500
4	Dave	101	7000

Departments

department_id	department_name
101	HR
102	IT
103	Marketing

Basic JOINS

1. Write a query to get all employees along with their department names.
2. List the names of employees who **do not belong** to any department.
3. List all departments and the names of employees in them (if any).

INNER, LEFT, RIGHT, FULL JOINS

4. Use an **INNER JOIN** to find employees who are assigned to a department.

5. Use a **LEFT JOIN** to list all employees and their department names (even if department is NULL).
6. Use a **RIGHT JOIN** to list all departments and employees (if any).
7. Use a **FULL OUTER JOIN** to show all employees and all departments, matching where possible.

JOIN with Conditions

8. Write a query to list employees who earn more than any other employee in their department.
9. List all departments where **no employees** are assigned.
10. For each department, show the number of employees and the average salary.

SQL Trigger Practice Questions

Assume you have a table:

Orders

order_id	customer_name	amount	status
1	John Doe	200	pending
2	Alice Smith	350	shipped

And a log table:

Order_Log

log_id	order_id	operation	changed_at

Trigger Practice

1. Create a trigger that inserts a row into `Order_Log` **after an order is inserted** into `Orders`.
2. Create a trigger that logs an update to the `Orders` table whenever the `status` changes.
3. Write a trigger that prevents inserting an order with a negative `amount`.
4. Write a trigger that automatically sets the `status` to "pending" if no status is provided during insert.
5. Create a trigger that updates another table `Customer_Balance` whenever an order is placed.