

Non - Equi join

1. Uses in Equality operator like  $>$ ,  $<$ ,  $<=$ ,  $>=$ , BETWEEN
2. Returns row based on Range or non-Equal Comparison

39, What is sub-query? What are the types of sub queries in SQL?

A subquery is a query nested inside another SQL query to return data used by the main query

There are scalar, row and table sub queries based on what they return.

Sub queries can be used in WHERE, FROM OR SELECT

40, How is correlated sub-query different from a non-correlated sub-query?



### correlated sub query

- refers to columns from the outer query
- executes once for each row in outer query
- cannot run independently

### non-correlated sub query

- does not depend on outer query
- executes only once and the result is used by outer query
- can run independently

4), Give example of sub query in SELECT clause

(eg)

SELECT  
name,

(SELECT COUNT(\*))

FROM tasks

WHERE task-employee-id = employee-id)

AS task-count

FROM employees;

42, Write query to find employees who earn more than the average salary using sub query

(Eg)

```
SELECT name, salary
FROM employees
WHERE salary > (
    SELECT AVG (salary)
    FROM employees
);
```

43, What is difference between UNION and UNION ALL?

1, Duplicate Handling

- Union removes duplicate rows from result
- UNION ALL includes all rows, including duplicates

2, Performance

- UNION is slower due to overhead of checking and removing duplicates
- UNION ALL is faster because it skips duplicate elimination



44, What is the INTERSECT operator used for? Is it available in MySQL?

The Intersect operator is used to return only the common rows between two SELECT queries.

(eg) SELECT city FROM customers.  
INTERSECT

SELECT city FROM suppliers;

45, How can you combine JOIN GROUP BY and HAVING in single query?

You can join, GROUP BY and HAVING in single query.

(eg) SELECT d.department\_name, COUNT(e.id) AS  
emp-count, AVG(e.salary) AS avg-salary

FROM employee e

JOIN departments d ON e.department\_id = d.id

GROUP BY dept - department - name

HAVING COUNT (c-id > 5);

46, What is a CASE WHEN statement in SQL?  
Provide sample?

The CASE WHEN statement is used in SQL to perform conditional logic - like an if-else structure. It returns a value based on different conditions within a query.

Syntax :-

CASE

WHEN CONDITION THEN result 1

WHEN CONDITION THEN result 2

- - - - -

ELSE default - result

END



47, How would you retrieve all employees who joined in the last 6 months using date functions?

To retrieve all employees who joined in the last 6 months, you can use SQL date function

(Eg)   
SELECT name, join date  
FROM employees  
WHERE join\_date >= CURRENT\_DATE() - INTERVAL  
6 MONTH;

48, Explain the purpose and syntax of INSERT, UPDATE and DELETE commands

INSERT:- Add new records row in a table

SYNTAX:-

INSERT INTO table-name (column 1, column 2  
.....)

VALUES (value 1, value 2, ...);



UPDATE:- Modifies existing records in table

Syntax:- UPDATE table\_name

SET Column 1 = value 1, Column 2 = value 2, ...

WHERE condition ;

DELETE:- Removes one or more records from a table

Syntax:- DELETE FROM table\_name

WHERE condition ;

50, what are transactions in SQL ? Explain COMMIT, ROLL BACK, SAVEPOINT and the ACID properties?

- A transaction is a set of SQL operations executed as a single unit to maintain data integrity

COMMIT saves all changes made in transaction permanently

ROLL BACK undoes changes if an error occurs or transaction fails

SAVEPOINT:- Creates a Check point within transaction to roll back to if needed