Top SQL Questions asked in interviews(Part-2)

How to think on what SQL clause/operator/function to choose?

1.Data retrival

• **SELECT**: Use for retrieving data from one or more tables.

2. Data Filtering

- WHERE: Filter records based on specific conditions
- AND, OR, NOT: Combine multiple conditions.
- BETWEEN: Range search
- IN: Checks whether a specified value matches any value in a subquery or a list
- LIKE: Pattern matching(%, _)

Top SQL Questions asked in interviews(Part-2)

How to think on what SQL clause/operator/function to choose?

3. Aggregation on data

- AVG(): Returns the average value of a numeric column.
- MIN(): Returns the minimum value in a column.
- MAX(): Returns the maximum value in a column.
- **SUM()**: Returns the total sum of a numeric column.
- COUNT(): Counts the number of non-NULL values in a specified column
- COUNT(*): Counts the total number of rows in a table, including rows with NULL values.

4. Grouping and Filtering Groups

- GROUP BY: Groups rows that have the same values in specified columns
- HAVING: Filters groups based on specified conditions (used with GROUP BY).

<u>Top SQL Questions asked in interviews(Part-2)</u>

How to think on what SQL clause/operator/function to choose?

5. Sorting data

• ORDER BY: Sorts the result set by one or more columns.

6. Data retrival from combination of 2 or more tables

• INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL JOIN: Combine rows from two or more tables based on related columns.

7. Conditional logic

- CASE: Perform conditional logic within a query using WHEN, THEN and ELSE
- IF: Return values depending on whether a condition is true or false.

Top SQL Questions asked in interviews(Part-2)

How to solve SQL questions

Step 1: Understand what the question says?

Retrieving data, aggregating results, joining tables, or performing updates/deletes.

Step 2: Check data types, constraints ,primary key, foreign keys, and relationships between tables

Step 3: Use the Appropriate SQL Clauses and Functions

Step 4: Ensure appropriate indexes on columns used in WHERE, JOIN, and ORDER BY clauses.

Top SQL Questions asked in interviews(Part-2)

Leetcode Questions

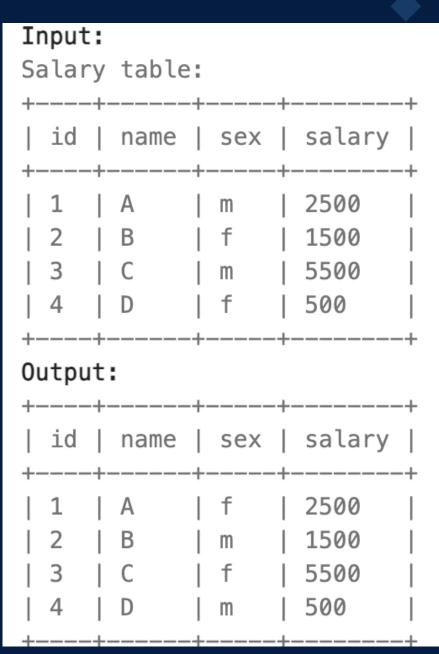
- 1. Swap Salary / leetcode.com/problems/swap-salary/description/
- 2. Duplicate Emails: https://leetcode.com/problems/duplicate-emails/description/
- 3. <u>Employees Earning More Than Their Managers</u>: https://leetcode.com/problems/employees-earning-more-than-their-managers/description/
- 4. Not Boring Movies: https://leetcode.com/problems/not-boring-movies/description/
- 5. Classes More Than 5 Students: https://leetcode.com/problems/classes-more-than-5-students/description/

Top SQL Questions asked in interviews(Part-2)

Leetcode Questions

Swap Salary

Q. Write a solution to swap all 'f' and 'm' values (i.e., change all 'f' values to 'm' and vice versa) with a single update statement and no intermediate temporary tables.



Top SQL Questions asked in interviews(Part-2)

Leetcode Questions

Duplicate Emails

Q.Write a solution to report all the duplicate emails. Note that it's guaranteed that the

email field is not NULL.

Return the result table in any order.

```
Input:
Person table:
+----+
| id | email |
+----+
| 1 | a@b.com |
| 2 | c@d.com |
| 3 | a@b.com |
+----+
Output:
+----+
| Email |
+----+
| a@b.com |
+-----+
| a@b.com |
+-----+
```

Top SQL Questions asked in interviews(Part-2)

Leetcode Questions

Employees Earning More Than Their Managers

Q. Write a solution to find the employees who earn more than their managers.

Employee table:						
id	name	salary	managerId			
1	Joe	70000	3			
2	Henry	80000	4			
3	Sam	60000	Null			
4	Max	90000	Null			
+		+	++			
Output:						
++						
Employee						
++						
Joe						
+						

Top SQL Questions asked in interviews(Part-2)

Leetcode Questions

Not Boring Movies

Q. Write a solution to report the movies with an odd-numbered ID and a description that is not "boring".

Return the result table ordered by rating in descending order.

Input: Cinema	table:	<u> </u>	
id		description	rating
1 2 3 4 5 ++		great 3D fiction boring Fantacy Interesting	8.9 8.5 6.2 8.6 9.1
id	movie	description	rating
5 1	House card War	Interesting great 3D	9.1

Top SQL Questions asked in interviews(Part-2)

Leetcode Questions

Classes More Than 5 Students

Write a solution to find all the classes that have at least five students.

