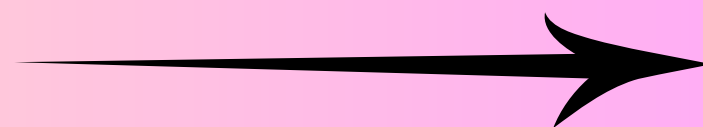


Understanding SQL Clauses

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What is a Clause in SQL?

- In SQL, a clause is a fundamental component that defines the action or condition within a query.
- They help in structuring and refining data operations.



- Here are some key SQL clauses:

1. Select : Specifies the columns to retrieve.

```
SELECT name, age FROM employees;
```

2.From :

- Indicates the table(s) to query data from

```
SELECT * FROM orders;
```



3. Where :

- It is used to extract only those records that fulfill a specified condition.

```
SELECT * FROM sales WHERE amount > 500;
```



4. Group by :

- The GROUP BY statement groups rows that have the same values into summary rows
- The GROUP BY statement is often used with aggregate functions (COUNT(), MAX(), MIN(), SUM(), AVG()) to group the result-set by one or more columns.

```
SELECT department, COUNT(*) FROM employees GROUP BY department;
```



5. Order by :

- ORDER is used to sort the result-set in ascending or descending order.

```
SELECT name, salary FROM employees ORDER BY salary DESC;
```



6. Having :

- Filters groups after aggregation.
- The HAVING clause was added to SQL because the WHERE keyword cannot be used with aggregate functions.

```
SELECT session, AVG(salary)
FROM employees
GROUP BY session
HAVING AVG(salary) > 7000;
```





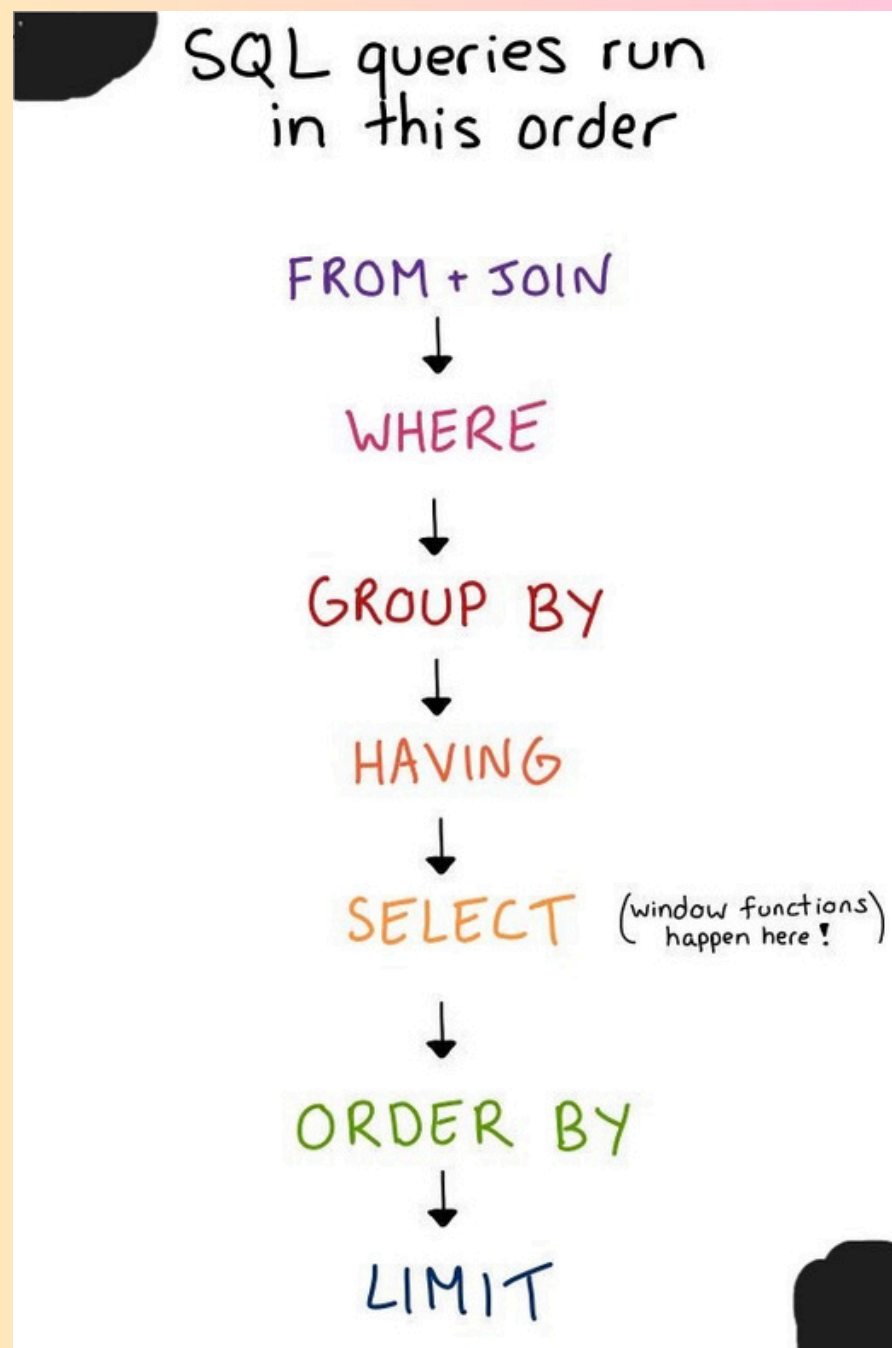
6. Limit :

In SQL, the LIMIT clause is a powerful tool that allows you to control the number of rows returned by a query

```
SELECT *  
FROM products  
LIMIT 10;
```



Order of Execution



Interview Questions

- What is the purpose of the SELECT clause in SQL?
- How would you use SELECT to retrieve distinct values from a column?
- What is a subquery in the FROM clause, and how is it used?
- Explain the role of the FROM clause in an SQL query.
- What is the purpose of the WHERE clause in SQL?
- How would you use the WHERE clause with multiple conditions?



- Explain the function of the GROUP BY clause in SQL.
- Can you give an example of using GROUP BY with an aggregate function?
- How would you sort results in ascending and descending order using ORDER BY?
- Can you order by multiple columns in SQL? How?
- What is the purpose of the HAVING clause in SQL?
- How is the HAVING clause different from the WHERE clause?



- Provide an example of using the HAVING clause with a GROUP BY query.
- What does the LIMIT clause do in a SQL query?
- Provide an example of a query using the LIMIT clause to fetch the top N records.
- What is the use of the SELECT DISTINCT clause, and how does it differ from a regular SELECT?



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Thank You

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