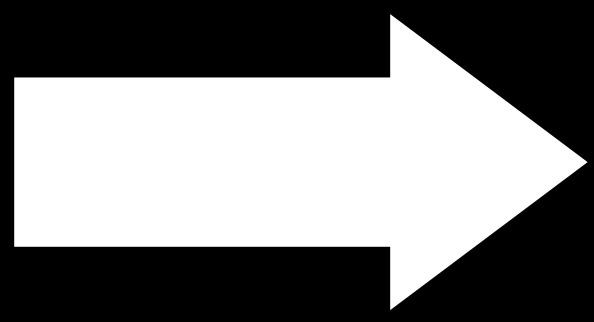
# SQL ORDER OF EXECUTION



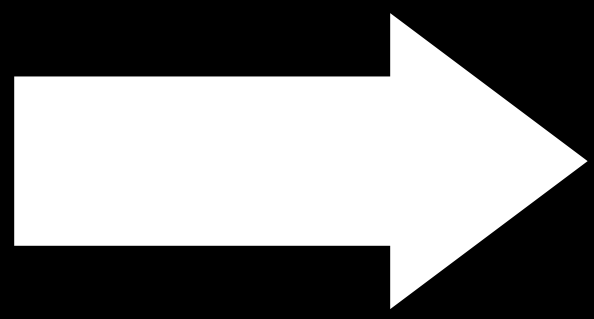
Understand the order in which the SQL engine processes the various components of a query.



# WHAT IS THE ORDER OF EXECUTION?

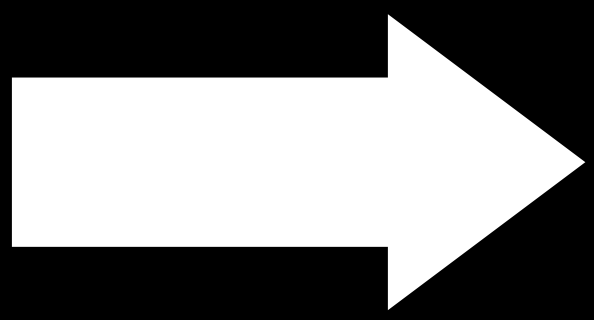


The order of execution refers to the sequence in which different components of a query are processed by the SQL engine to produce the final output.



# BENEFITS OF UNDERSTANDING THE ORDER OF EXECUTION:

- Write accurate and efficient queries
- Faster query execution times
- Avoid errors or unexpected results

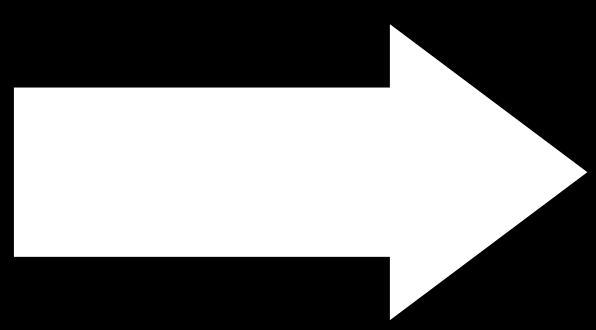


# EACH FOLLOWING SLIDE WILL BE IN THE ORDER OF EXECUTION ->

# FROM clause

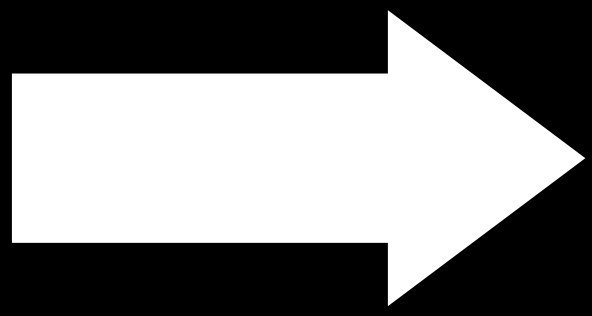
The FROM clause is the first to execute in the sequence and it's purpose is to identify the table or tables that the query will retrieve data from.

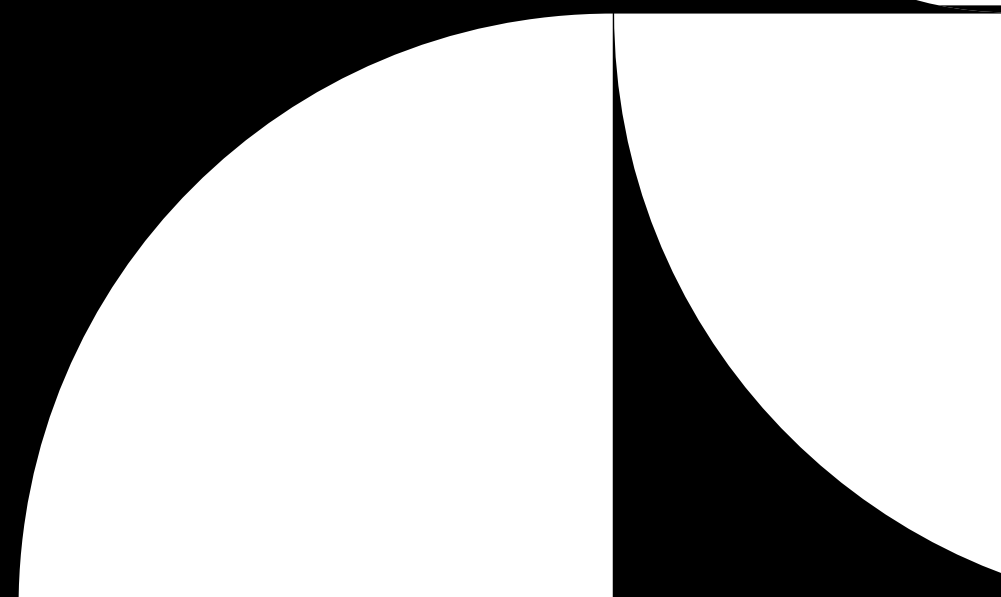




# JOIN clause

If there are any joins in the query, they will be processed after the FROM clause. A JOIN clause is used to combine rows from two or more tables, based on a related column between them.

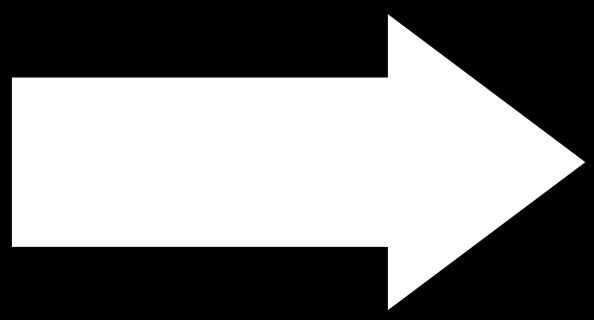




# WHERE clause

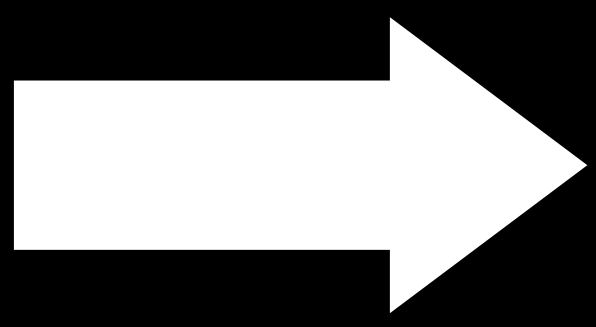
The WHERE clause is executed after the FROM and JOIN claiuse. This clause filters the rows returned by the FROM and JOIN clauses.





# GROUP BY clause

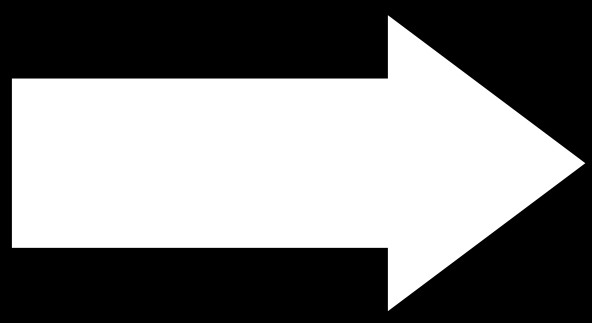
The GROUP BY clause groups rows that have the same values into summary rows. If the query has a WHERE clause, the GROUP BY will execute after the data has been filtered in the WHERE clause.



# HAVING clause

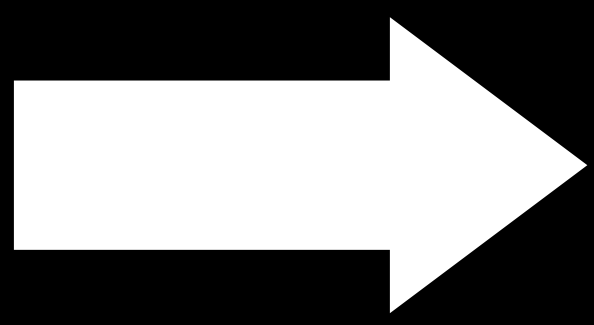
The HAVING clause filters the grouped rows produced by the GROUP BY clause. Therefore to use this clause, your query must have the GROUP BY clause. The HAVING clause by nature must execute after the GROUP BY clause.





# SELECT clause

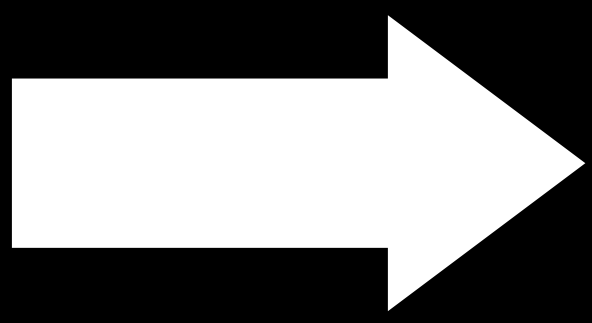
When writing a query you start with the SELECT clause. But in the order of execution the SELECT clause only precedes the clauses that work off of the result set. This is because this clause specifies which columns will be included in the result set.



# ORDER BY clause

The ORDER BY clause sorts the rows in the result set based on one or more columns. This clause sorts the records in ascending order by default. To sort the records in descending order, use the DESC keyword.

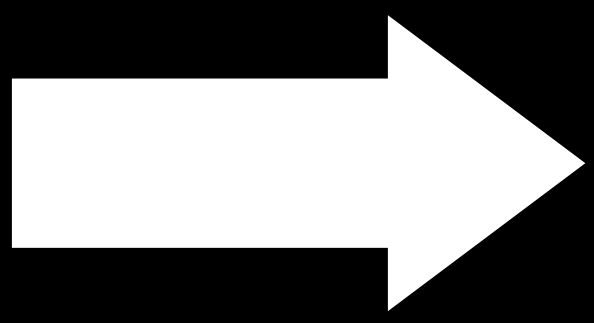




# LIMIT/OFFSET clause

The LIMIT clause is used to specify the number of records to return. The OFFSET clause specifies the number of rows to skip in the result table before any rows are retrieved. The LIMIT/OFFSET clauses will always be the last to execute in the order of execution.

Note: These keywords do not exist in all flavors of SQL.



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