

# • 50 SQL Interview Questions

Q.1) What is difference between DELETE and TRUNCATE in SQL?

- The DELETE statement is used to remove specific rows from a table based on a condition.
- It can be rolled back and generates individual delete operations for each row.
- TRUNCATE, on the other hand, is used to remove all rows from a table.
- It cannot be rolled back, and is faster than DELETE as it deallocates the data pages instead of logging individual row deletions.

Q.2) What is the difference between UNION and UNION ALL?

- UNION and UNION ALL are used to combine the result sets of two or more SELECT statements.
- UNION removes duplicate rows from the combined result set.
- Whereas UNION ALL includes all rows, including duplicates.

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Q.3) What is difference between CHAR and VARCHAR data types?

- CHAR is a fixed length string data type, while VARCHAR is a variable-length string data type.

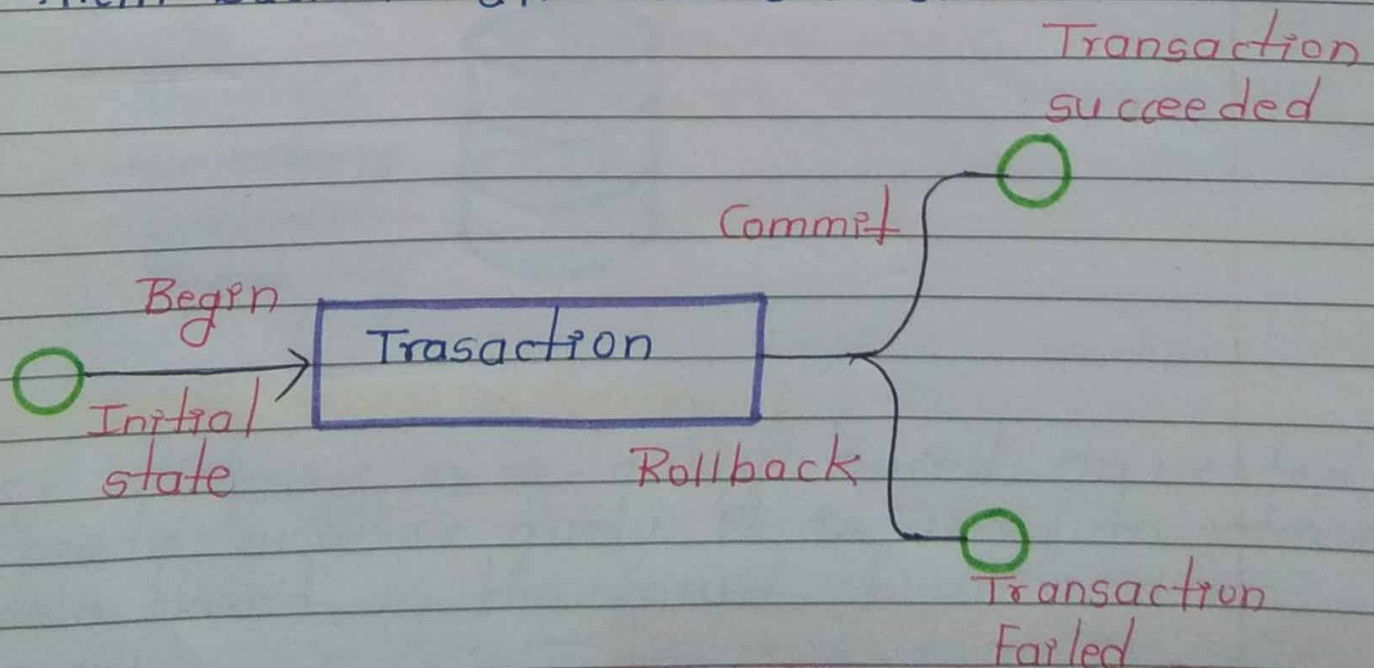


Q.4) What is the difference between the HAVING clause and the WHERE clause?

- The WHERE clause is used to filter rows based on a condition before the data is grouped or aggregated.
- It operates on individual rows
- The HAVING clause, on the other hand, is used to filter grouped rows based on a condition after the data is grouped or aggregated using the GROUP BY clause.

Q.5) What is transaction in SQL?

- A transaction is a sequence of SQL statements that are executed as a single logical unit of work.
- It ensures data consistency and integrity by either committing all changes or rolling them back if an error occurs.



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Q.6) What is ACID in the context of database transactions?

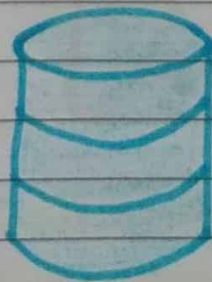
- ACID stands for Atomicity, Consistency, Isolation and Durability
- It is a set of properties that guarantee reliable processing of database transactions.
- Atomicity ensures that a transaction is treated as a single unit of work, either all or none of the changes are applied.
- Consistency ensures that a transaction brings the database from one valid state to another.
- Isolation ensures that concurrent transactions do not interfere with each other
- Durability ensures that once a transaction is committed, its changes are permanent and survive system failures

A - Atomicity

C - Consistency

I - Isolation

D - Durability



Q.7) What is a subquery?

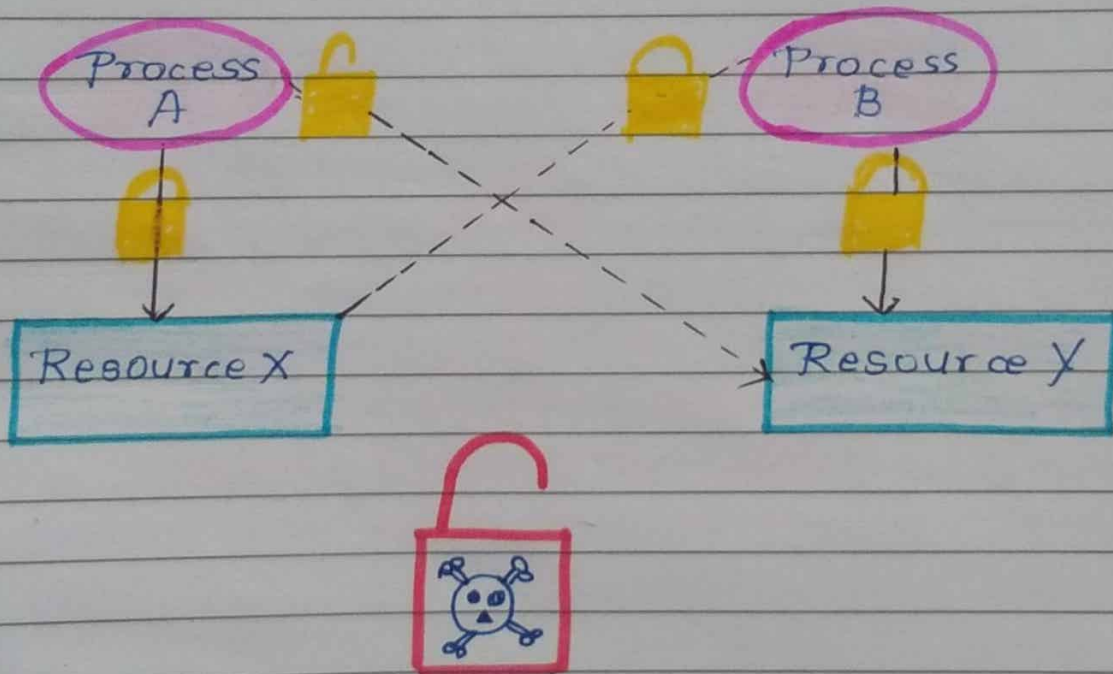
- A subquery is a query based on nested inside another query. It is used to retrieve data based on the result of an inner query

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### Q.8) What is a deadlock?

- A deadlock occurs when two or more transactions are waiting for each other to release resources, resulting in a circular dependency.
- As a result, none of the transactions can proceed and the system may become unresponsive.



### Q.9) What is the difference between a cross join and an inner join?

- A cross join (Cartesian product) returns the combination of all rows from two or more tables.
- An inner join returns only the matching rows based on a join condition.

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