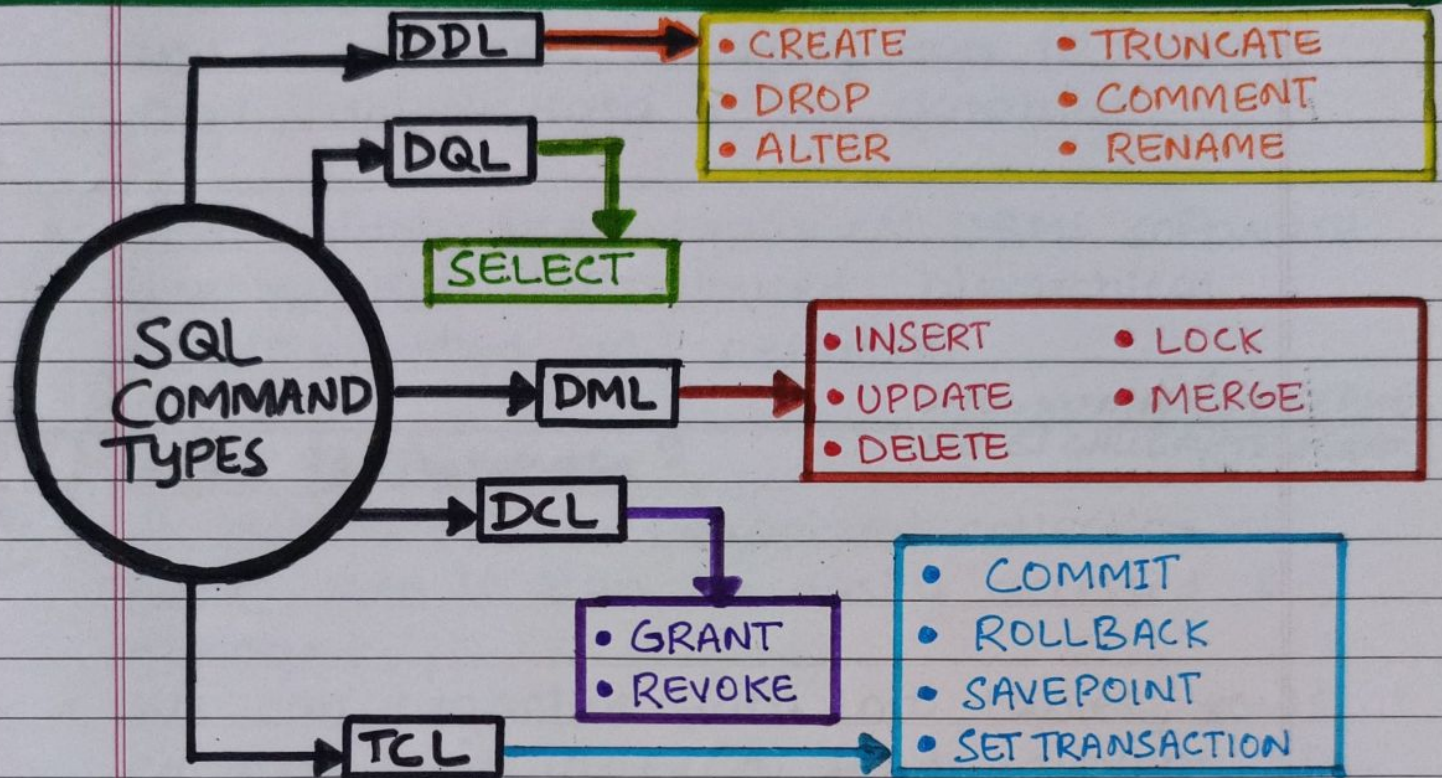


# SQL Interview Q/A



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## [?] What is SQL?


- ✓ SQL stands for Structured Query Language.
- SQL is a standard language for relational database management systems.
- SQL is specially useful in handling organized data comprised of entities and relations between different entities of data.

## [?] What is DBMS?

- ✓ DBMS Database Management system is a software that is used to manage the database.








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- A DBMS serves as an interface between end-user and database, allowing users to and a database, allowing user to create, read, delete data in the database.
  - Most widely used types of DBMS software are relation, distributed, hierarchical, object-oriented and network.

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## [?] What is Database?

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- A database is an organized collection of data, and it can be easily accessed & managed.
  - We can organize data into tables, rows, columns and index to find relevant info.
  - The main purpose of the database is to operate large amount of information by storing, retrieving and managing data.
  - There are many databases available like MySQL, Oracle, MongoDB, SQL server.


## [?] What is RDBMS?

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- RDBMS stands for Relational Database Management System.
  - Relational Database management system is collection of programs & compatibilities that enables IT teams.
  - RDBMS store data in the form of tables.
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- RDBMS provides a dependable method of storing and retrieving large amount of data.
  - RDBMS uses SQL queries to access the data in database.

## [?] What is a Database Table?

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- A table is a collection of related data entries and consist of column & rows.
  - A row is each individual entry that exist in a table.
  - A Column holds specific information about every record in a table.
  - Columns can be arranged in verticle and rows as horizontal.
  - The column in table also called fields and rows called records.

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## [?] What is Primary Key?

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- A Primary Key is a minimal set of attributes in a table that uniquely identify rows in that table i.e. tuples.
  - When multiple columns are used as a Primary Key, it is known as composite primary key.
  - While using composite primary key you should use few column as possible.
  - When more columns you use for primary key the more storage space you required.
  - Primary key has unique data.
  - Primary key cannot have null value.







- We cannot use duplicate value for primary key.
- Maximum length of primary key 900 bytes.

## [?] What is Foreign Key?

- ✓ A Foreign Key is a key used to link two tables together. It is also called referencing key.
- A Foreign Key is a combination of column whose value match primary key in different table.
- Use of Foreign Key is to link attributes of two tables with the help of primary key attributes.
- Hence, it is used for creating & maintaining the relationship between two relations.

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## [?] What is a Join?

- ✓ The SQL Join clause is used to combine rows from two or more tables in a SQL database based on related column between the two.

There are four different types of JOIN's :-

1.	JOIN
2.	LEFT JOIN
3.	RIGHT JOIN
4.	FULL JOIN





## What is the SELECT statement?



**SELECT** statement in SQL is used to recover data from a database.

The data returned is stored in result table called **result-set**.

The **SELECT** to determine what to include in final result set.

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## What is cursor in SQL?

Cursor is a temporary work station.

It created in system memory when SQL statement is executed.

A SQL cursor is a set of rows together with points that identify rows.

Types of cursor :

- |     |                  |
|-----|------------------|
| 1). | Implicit cursor  |
| 2). | Explicit cursor. |

Cursor are used to store Database table.

## What is relationships in SQL?

Relationship is a link between entities that have something to do with each other.

It includes one to one, many to many, many to one relations.

Relation in database allow for clear table & help cut redundant database is important.



## [?] What are Entities?

- ✓ • An entity can be real world object.
- An entity can be a single thing, person, place or object.
- Data can be stored about such entities.

## [?] What is an index in SQL?

- ✓ • SQL index is a table used to speed up the searching of the data.
- It also recover large amount of data from tables.
- INDEX requires its own space in storage device.
- INDEX is a pointer to data in a table.
- An INDEX is same to an index in the back of book.
- INDEX is also unique constraint.

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## [?] What is a Self-Join?

- ✓ • It is a join in which table is joined with itself.
- The self-join can be viewed as a join of two copies of same table.
- Self-Join statement is important when two sets of data in same table are compared.

## [?] What is a Cross-Join?

- ✓ • Cross-Join is a Cartesian product of rows from tables in join.





- • Cross Join is combination of each row of first table with each row of second table.
- It is also called cartesian join.

### [?] What is Alias in SQL?

- ✓ • Aliases are temporary name given to table or column for SQL query.
- It is used when name of table is used other than original name.
  - Aliases used to make column names more readable.
  - Aliases are useful when there are more than one table complicated in a query.

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### [?] What is Normalization?

- ✓ • Normalization is a process to restructure the data in database. There is no redundancy of data, all data stored in one place.
- It eliminates characteristics like Insertion, Update and Deletion Anomalies. It converts large table into small tables and links them by relationships.

### [?] What is Denormalization?

- ✓ • It is the inverse process of Normalization.
- When converted all small tables want to make single table then we have to use denormalization.
  - Denormalization is a technique used by database to optimize the efficiency of database.
  - This method allows to add mixed data into normal database.