

# SQL

## Interview Questions

By : @curious\_.programmer.

1] 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.

2] What is DBMS ?

- Database management system is a software that is used to manage the database.
- 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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### 3] What is Database?

- 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.

### 4] What is RDBMS?

- 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.



- .. RDBMS provides a dependable method of storing and retrieving large amount of data.
- RDBMS uses SQL queries to access the data in database.

### 5] What is a Database Table?

- 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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### 6] What is Primary key?

- 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 is 900 bytes.

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### 7] What is Foreign key?

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- A foreign key is a key used to link two tables together. it 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 attribute.
  - Hence, it used for creating & maintaining the relationship bet<sup>n</sup> two relations.

### 8] What is a Join?

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- 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.

9] 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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10] 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 tables.

## 11] 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.

## 12] What are 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.

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## 13] 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.



#### 14] 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.

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#### 15] 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 ~~column~~ table with each row of second table.
- It is also called cartesian join.

#### 16] What is Aliase in SQL?

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

### 17] What is Normalization?

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

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### 18] What is Denormalization?

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- It is the inverse process of Normalization.
  - When converted all small tables want to make a 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 a normal database.



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