***12 Common SQL Interview questions and Answers:***

**Common Questions (12):**

1. What do you mean by a query?

A query is a request for data or information from a database table or combination of tables.

1. What do you mean by subquery? What are its types?

A subquery is best defined as a query within a query. ... A subquery can also be nested inside INSERT, UPDATE, and DELETE statements. Subqueries must be enclosed within parentheses. A subquery can be used any place where an expression is allowed providing it returns a single value.

There are five broad divisions of subquery:

**1. Single Row Subquery**

Returns zero or one row in results.

**2. Multiple Row Subquery**

Returns one or more rows in results.

**3. Multiple Column Subqueries**

Returns one or more columns

**4. Correlated Subqueries**

Returns one or more columns according to the main or the outer query, thus called a correlated subquery.

**5. Nested Subqueries**

We have queries within a query (inner and outer query).

1. What is self-join? What is the requirement of Self-join?

A self-join, also known as an inner join, is a structured query language (SQL) statement where a queried table is joined to itself. The self-join statement is necessary when two sets of data, within the same table, are compared.

SELECT

    employee.Id,

    employee.FullName,

    employee.ManagerId,

    manager.FullName as ManagerName

FROM Employees employee

JOIN Employees manager

ON employee.ManagerId = manager.Id

1. What is the difference between now() and current\_date()?

Select Now() will give date and time (YYYY-MM-DD HH:MM:SS) whereas current\_date will provide date (YYYY-MM-DD)

Select CURRENT\_DATE();

Select NOW();

1. What function is used to return remainder in a division operator in SQL?

SQL MOD() function is used to get the remainder from a division.

SELECT MOD( 36, 6) AS Remainder;

SELECT 27 % 4 AS Remainder;

1. What is the main disadvantage of deleting data from an existing table using the drop table command?

The DROP TABLE is another DDL (Data Definition Language) operation. But it is not used for simply removing data from a table; it deletes the table structure from the database, along with any data stored in the table.

DROP TABLE table\_name;

How does DROP TABLE work?

The DROP TABLE operation removes the table definition and data as well as the indexes, constraints, and triggers related to the table.

This command frees the memory space.98088MNCV

No triggers are fired when executing DROP TABLE.

This operation cannot be rolled back in MySQL, but it can in Oracle, SQL Server, and PostgreSQL.

In SQL Server, DROP TABLE requires ALTER permission in the schema to which the table belongs; MySQL requires the DROP privilege; Oracle the requires the DROP ANY TABLE privilege. In PostgreSQL, users can drop their own tables.

1. What is the difference between CHAR and VARCHAR2 Data types in SQL?

|  |  |  |
| --- | --- | --- |
| SR.NO. | CHAR | VARCHAR |
| 1 | CHAR datatype is used to store character string of fixed length | VARCHAR datatype is used to store character string of variable length |
| 2 | In CHAR, If the length of string is less than set or fixed length then it is padded with extra memory space. | In VARCHAR, If the length of string is less than set or fixed length then it will store as it is without padded with extra memory spaces. |
| 3 | CHAR stands for “Character” | VARCHAR stands for “Variable Character” |
| 4 | Storage size of CHAR datatypes is equal to n bytes i.e. set length | Storage size of VARCHAR datatype is equal to the actual length of the entered string in bytes. |
| 5 | We should use CHAR datatype when we expect the data values in a column are of same length. | We should use VARCHAR datatype when we expect the data values in a column are of variable length. |
| 6 | CHAR take 1 byte for each character | VARCHAR take 1 byte for each character and some extra bytes for holding length information |
| 9 | Better performance than VARCHAR | Performance is not good as compared to CHAR |

1. What are scaler functions? Which are the scaler function used in SQL?

Scalar SQL Functions

The Scalar Functions in SQL are used to return a single value from the given input value.  Following are a few of the most commonly used Aggregate Functions:

 Let us look into each one of the above functions in depth.

|  |  |
| --- | --- |
| **Function** | **Description** |
| LCASE() | Used to convert string column values to lowercase |
| UCASE() | This function is used to convert a string column values to Uppercase. |
| LEN() | Returns the length of the text values in the column. |
| MID() | Extracts substrings in SQL from column values having String data type. |
| ROUND() | Rounds off a numeric value to the nearest integer. |
| NOW() | This function is used to return the current system date and time. |
| FORMAT() | Used to format how a field must be displayed. |

1. What is a DATABASE?

A database is an organized collection of structured information, or data, typically stored electronically in a computer system. A database is usually controlled by a database management system (DBMS). ... The data can then be easily accessed, managed, modified, updated, controlled, and organized.

1. What is SQL? What is the difference between NOSQL and SQL?

SQL is the programming language used to interface with relational databases. (Relational databases model data as records in rows and tables with logical links between them). NoSQL is a class of DBMs that are non-relational and generally do not use SQL.

1. What is the difference between SQL and MYSQL?

SQL is used in the accessing, updating, and manipulation of data in a database while MySQL is an RDBMS that allows keeping the data that exists in a database organized. SQL is a Structured Query Language and MySQL is a RDBMS to store, retrieve, modify and administrate a database

1. What do you mean by DBMS? What are its different types?

There are three main types of DBMS data models: relational, network, and hierarchical. Relational data model: Data is organized as logically independent tables. Network data model: All entities are organized in graphical representations. Hierarchical data model: Data is organized into a tree-like structure.