



Daily SQL Interview Questions





21. What is a Data Warehouse?







Data warehouses are a central repository of data from multiple sources of information.

This data is consolidated, transformed and made available for the mining and online processing. Warehouse data have subsets of data called Data Marts





22. What are aggregate and scalar functions?





- **Functions are methods used to perform data operations. SQL has many in-built functions used to perform string concatenations, mathematical calculations etc.**
- **SQL functions are categorized into the following two categories:**
 - **Aggregate Functions**
 - **Scalar Functions**



- **The Aggregate Functions in SQL perform calculations on a group of values and then return a single value. Following are a few of the most commonly used Aggregate Functions:**

Function	Description
SUM()	Used to return the sum of a group of values.
COUNT()	Returns the number of rows either based on a condition, or without a condition.
AVG()	Used to calculate the average value of a numeric column.
MIN()	This function returns the minimum value of a column.
MAX()	Returns a maximum value of a column.
FIRST()	Used to return the first value of the column.
LAST()	This function returns the last value of the column.



- **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 Scalar Functions:**

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.



23. What is alias in SQL?





SQL aliases are used to give a table, or a column in a table, a temporary name. Aliases are often used to make column names more readable.

An alias only exists for the duration of that query. An alias is created with the AS keyword





**24. What is the
difference between
OLTP and OLAP?**





- **OLAP**

Online Analytical Processing, a category of software tools which provide analysis of data for business decisions. OLAP systems allow users to analyze database information from multiple database systems at one time. The primary objective is data analysis and not data processing.



- **OLTP**

Online transaction processing shortly known as OLTP supports transaction-oriented applications in a 3- tier architecture. OLTP administers day to day transaction of an organization. The primary objective is data processing and not data analysis. Unlike OLAP systems, the goal of OLTP systems is serving real-time transactions



25. What is ETL in SQL?





ETL stands for Extract, Transform and Load. It is a three step process, where we would have to start off by extracting the data from sources.

Once we collate the data from different sources, we have our raw data. This raw data has to be transformed into a tidy format, which will come in the second phase.

Finally, we would have to load this tidy data into tools which would help us to find insights.



Thank You

