Technical SQL Interview Questions 1.

**1. What is SQL?**

**It stands for**[**Structured Query Language,**](https://www.datacamp.com/blog/all-about-sql-the-essential-language-for-database-management)**and it's a programming language used for interaction with relational database management systems (RDBMS). This includes fetching, updating, inserting, and removing data from tables.**

**2. What are SQL dialects? Give some examples.**

**The various versions of SQL, both free and paid, are also called SQL dialects. All the flavors of SQL have a very similar syntax and vary insignificantly only in additional functionality. Some examples are Microsoft SQL Server, PostgreSQL, MySQL, SQLite, T-SQL, Oracle, and MongoDB.**

**3. What are the main applications of SQL?**

Using SQL, we can:

* create, delete, and update tables in a database
* access, manipulate, and modify data in a table
* retrieve and summarize the necessary information from a table or several tables
* add or remove certain rows or columns from a table

All in all, SQL allows querying a database in multiple ways. In addition, SQL easily integrates with other programming languages, such as Python or R, so we can use their combined power.

**4. What is an SQL statement? Give some examples.**

Also known as an SQL command. It's a string of characters interpreted by the SQL engine as a legal command and executed accordingly. Some examples of SQL statements are SELECT, CREATE, DELETE, DROP, REVOKE, and so on.

**5. What types of SQL commands (or SQL subsets) do you know?**

* **Data Definition Language (DDL)** – to define and modify the structure of a database.
* **Data Manipulation Language (DML)** – to access, manipulate, and modify data in a database.
* **Data Control Language (DCL)** – to control user access to the data in the database and give or revoke privileges to a specific user or a group of users.
* **Transaction Control Language (TCL)** – to control transactions in a database.
* **Data Query Language (DQL)** – to perform queries on the data in a database to retrieve the necessary information from it.

**6. Give some examples of common SQL commands of each type.**

* **DDL:** CREATE, ALTER TABLE, DROP, TRUNCATE, and ADD COLUMN
* **DML:** UPDATE, DELETE, and INSERT
* **DCL:** GRANT and REVOKE
* **TCL:** COMMIT, SET TRANSACTION, ROLLBACK, and SAVEPOINT
* **DQL:** – SELECT

**7. What is a database?**

A structured storage space where the data is kept in many tables and organized so that the necessary information can be easily fetched, manipulated, and summarized.

**8. What is DBMS, and what types of DBMS do you know?**

It stands for Database Management System, a software package used to perform various operations on the data stored in a database, such as accessing, updating, wrangling, inserting, and removing data. There are various types of DBMS, such as relational, hierarchical, network, graph, or object-oriented. These types are based on the way the data is organized, structured, and stored in the system.

**9. What is RDBMS? Give some examples of RDBMS.**

It stands for Relational Database Management System. It's the most common type of DBMS used for working with data stored in multiple tables related to each other by means of shared keys. The SQL programming language is designed to interact with RDBMS. Some examples of RDBMS are MySQL, PostgreSQL, Oracle, MariaDB, etc.

**10. What are tables and fields in SQL?**

A table is an organized set of related data stored in a tabular form, i.e., in rows and columns. A field is another term for a column of a table.