SQL Commands

SQL commands are like instructions to a table. It is used to interact with the database with some operations. It is also used to perform specific tasks, functions, and queries of data. SQL can perform various tasks like creating a table, adding data to tables, dropping the table, modifying the table, and setting permission for users.

These SQL commands are mainly categorized into four categories:

1. **DDL** – Data Definition Language
2. **DML** – Data Manipulation Language
3. **DQL** – Data Query Language
4. **DCL** – Data Control Language

DDL (Data Definition Language)

DDL or Data Definition Language actually consists of the SQL commands that can be used to define the database schema. It simply deals with descriptions of the database schema and is used to create and modify the structure of database objects llyin the database. DDL is a set of SQL commands used to create, modify, and delete database structures but not data. These commands are normally not used by a general user, who should be accessing the database via an application.

List of DDL commands:

- **CREATE:** This command is used to create the database or its objects (like table, index, function, views, store procedure, and triggers).
- **DROP:** This command is used to delete objects from the database.
- **ALTER:** This is used to alter the structure of the database.
- **TRUNCATE:** This is used to remove all records from a table, including all spaces allocated for the records are removed.
- **COMMENT:** This is used to add comments to the data dictionary.
- **RENAME:** This is used to rename an object existing in the database.

DML(Data Manipulation Language)

DML commands are used to modify the database. It is responsible for all forms of changes in the database.
The command of DML is not auto-committed, which means it can't permanently save all the changes in the database. They can be rolled back.

List of DML commands:

- **INSERT:** It is used to insert data into a table.
- **UPDATE:** It is used to update existing data within a table.
- **DELETE:** It is used to delete records from a database table.

DQL (Data Query Language)

We can define DQL as follows, it is a component of SQL statement that allows getting data from the database and imposing order upon it. It includes the DQL commands that enable you to obtain valuable insights from the stored data. SELECT statement.

List of DQL:

- **SELECT:** It is used to retrieve data from the database.

DCL (Data Control Language)

DCL includes commands such as GRANT and REVOKE which mainly deal with the rights, permissions, and other controls of the database system.

List of DCL commands:

- **GRANT:** This command gives users access privileges to the database.
- **REVOKE:** This command withdraws the user's access privileges given by using the GRANT command.

TCL (Transaction Control Language)

Transactions group a set of tasks into a single execution unit. Each transaction begins with a specific task and ends when all the tasks in the group are successfully completed. If any of the tasks fail, the transaction fails. Therefore, a transaction has only two results: success or failure.
Hence, the following TCL commands are used to control the execution of a transaction:

List of TCL commands:

- **BEGIN:** Opens a Transaction.
- **COMMIT:** Commits a Transaction.
- **ROLLBACK:** Rollbacks a transaction in case of any error occurs.
- **SAVEPOINT:** Sets a save point within a transaction.