

# SQL Commands Quick Guide

## **1- Data Manipulation Language (DML)**

DML enables you to work with the data that goes into the database. DML is used to insert, select, update, and delete records in the database. Many of your SQL statements will begin with one of the following commands:

- **SELECT**- Retrieves data from the database
- **INSERT**- Inserts new data into the database
- **UPDATE**- Updates existing data in the database
- **DELETE**- Deletes existing data from the database

## **2- Data Definition Language (DDL)**

You may also occasionally need to create or drop a table or other database object. SQL enables you to do this programmatically using DDL.

Examples of DDL commands:

- **CREATE DATABASE**- Creates a new database
- **ALTER DATABASE**- Modifies the database
- **DROP DATABASE**- Drops (deletes) a database
- **CREATE TABLE**- Creates a new table
- **ALTER TABLE**- Modifies the table
- **DROP TABLE**- Drops (deletes) a table

## **3- Data Control Language:**

DCL is short name of Data Control Language which includes commands such as GRANT, and mostly concerned with rights, permissions and other controls of the database system.

- **GRANT** – allow users access privileges to database.
- **REVOKE** – withdraw users access privileges given by using the GRANT command.

## **4- Transaction Control Language:**

TCL is short name of Transaction Control Language which deals with transaction within a database.

- **COMMIT** – commits a transaction.
- **ROLLBACK** – rollback a transaction in case of any error occurs.

# SQL Functions

## **1- SQL Aggregate Functions:**

SQL aggregate functions return a single value, calculated from values in a column.

Useful aggregate functions:

- AVG() - Returns the average value
- COUNT() - Returns the number of rows
- FIRST() - Returns the first value
- LAST() - Returns the last value
- MAX() - Returns the largest value
- MIN() - Returns the smallest value
- SUM() - Returns the sum

## **2- SQL Scalar functions:**

SQL scalar functions return a single value, based on the input value.

Useful scalar functions:

- UCASE() - Converts a field to upper case
- LCASE() - Converts a field to lower case
- MID() - Extract characters from a text field
- LEN() - Returns the length of a text field
- ROUND() - Rounds a numeric field to the number of decimals specified
- NOW() - Returns the current system date and time
- FORMAT() - Formats how a field is to be displayed