

# Types of SQL commands

DDL

## Data Definition Language

It's used for create and modify the DB structure and its objects.  
Commands are CREATE, DROP, ALTER, TRUNCATE and RENAME

DML

## Data Manipulation Language

It's used inserting, updating and deleting data in a DB, so we have INSERT, UPDATE and DELETE

DCL

## Data Control Language

It's used for access the stored data.  
Commands are GRANT and REVOKE

TCL

## Transaction Control Language

It's used for handling the transaction, its commands are COMMIT and ROLLBACK

## Data Manipulation Language

Before digging into DML commands, let's introduce the most used statement :

**SELECT \* FROM** <tableName>;

This instruction is used for showing data from a table and could be manipulated as well adding other commands, like :

**SELECT \* FROM** <tableName> **WHERE** 1=1;

**SELECT \* FROM** <tableName> **WHERE** 1=1 **ORDER BY** <columnName>;

## Data Manipulation Language

**SELECT** \* **FROM** <tableName> **WHERE** 1=1 **ORDER BY** <columnName>;

**SELECT** - clause to extract data from table(s)

\* - (star) indicates all columns from table(s), otherwise we must specify column(s) we want to extract

**FROM** - clause to retrieve row(s) from the referenced table(s)

**WHERE** - clause to filter record(s), it's optional and could have boolean operators like AND, OR, IN, LIKE, NOT, etc

**ORDER BY** - clause to order column(s), it's optional

## Data Manipulation Language

### INSERT

It's used for inserting data in a table.

**INSERT INTO** <tableName> (col1,..., colN) VALUES (val1,...,valN);  
you can define only values of chosen columns

**INSERT INTO** <tableName> VALUES (val1,...,valN);  
you must define all columns' values

**INSERT INTO** <tableName> (<columns>) SELECT <columns>  
FROM <anotherTableName>;  
bulk insert from a table to another one, selecting or not the columns

## Data Manipulation Language

### INSERT EXAMPLE

```
INSERT INTO employee (ID, FIRST_NAME, LAST_NAME)  
VALUES (1,'Manuel','Gentile');
```

```
INSERT INTO employee VALUES (2,'John','Doe');
```

Now, let's assume we have a table called people on the DB having different column names, we can perform a query like that

```
INSERT INTO employee SELECT IDPEOPLE, FNAME, LNAME  
FROM PEOPLE;
```

## Data Manipulation Language

### UPDATE

It's used for modifying data in a table

```
UPDATE <tableName> SET <col1> = <val1>, ..., <colN> = <valN>  
WHERE 1=1;
```

## Data Manipulation Language

### UPDATE EXAMPLE

**UPDATE** employee **SET** LAST\_NAME = 'Doe' WHERE ID = 2;

## Data Manipulation Language

### DELETE

It's used for removing data from a table

delete  
all rows

**DELETE FROM** <tableName>;

**DELETE FROM** <tableName> WHERE <col1> = <val1>  
...<operatorN> <colN> = <valN>;

deletes  
multiple rows



## Data Manipulation Language

### DELETE EXAMPLE

```
DELETE FROM employee  
WHERE 1 = 1  
AND (LAST_NAME = 'Doe'  
OR FIRST_NAME = 'Manuel')  
;
```

This instruction deletes both rows with ID 1 and 2

Let's connect

If you want to learn more about the topic, connect or send me a DM.

