

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 create and modify the DB structure and its objects.
Commands are CREATE, DROP, ALTER, TRUNCATE and RENAME

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 extracting 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 a row from a table

delete
all rows

DELETE FROM <tableName>;

DELETE FROM <tableName> WHERE <col1> = <val1>
,<operator..>...,<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.

