# LU04a - Syntax of DML

As we know, **SQL** stands for **S**tructured **Q**uery **L**anguage. Consequently, It should come as no surprise that SQL is indeed consistently structured.

#### **NOTES**

- The content of this chapter is based on the W3School-SQL-tutorial
- Please note that the use og CAPITAL LETTERS for SQL commands and tabs can make it easier for you to maintain your program code.

### The Syntax of DML commands

Every SQL query is composed by three main commands:

- **SELECT** myColumn1, myColumn2, ... [or \* for all columns]
- FROM myTable
- WHERE myCondition.
- ORDER BY myColumn2 ASC|DESC;

With **SELECT** we specify which columns we want to retrieve, with **FROM** we specify the TABLE from which the columns originate, with **WHERE** we determine the condition under which the data records are selected, and finally, with **ORDER BY** + **[ASC | DESC]** we define the order in which the result set is to be displayed on the screen.

## **Basic example**

Let's take a table **Customers** as shown in the figure below.

| CustomerID | CustomerName                             | ContactName    | Address                             | City        | PostalCode | Country |
|------------|--|----------------|-------------------------------------|-------------|------------|---------|
| 1          | Alfreds<br>Futterkiste                   | Maria Anders   | Obere Str. 57                       | Berlin      | 12209      | Germany |
| 2          | Ana Trujillo<br>Emparedados y<br>helados | Ana Trujillo   | Avda. de la<br>Constitución<br>2222 | México D.F. | 05021      | Mexico  |
| 3          | Antonio Moreno<br>Taquería               | Antonio Moreno | Mataderos 2312                      | México D.F. | 05023      | Mexico  |
| 4          | Around the Horn                          | Thomas Hardy   | 120 Hanover<br>Sq.                  | London      | WA1 1DP    | UK      |

To retrieve all the information, which are stored in this table, our SQL command would be like follows.

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SELECT \* FROM Customers;

or as a more detailed notation

SELECT CustomerID, CustomerName, ContactName, Address, City, PostalCode, Country FROM Customers;

The result set would include the entire contents of the table, since we we have not defined any preconditions or filters.

# **Vocabulary**

| English        | German         |  |  |
|----------------|----------------|--|--|
| precondition   | Vorbedingung   |  |  |
| clause         | Abschnitt      |  |  |
| to determine   | bestimmen      |  |  |
| to fetch       | abrufen, holen |  |  |
| be composed by | besteht aus    |  |  |
| notation       | Schreibweise   |  |  |



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