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. The figure below shows the structure of a exhaustive SQL statement.

Order	Keywords	Expression	Purpose		
5	SELECT	<select list=""></select>	Specifies which columns to return.		
1	FROM		Defines the table(s) to query		
2	WHERE	<search condition=""></search>	Filters out the records to return		
3	GROUP BY	<group by="" list=""></group>	Arranges records into groups		
4	HAVING	<search condition=""> Filters down the groups</search>			
6	ORDER BY	<order by="" list=""></order>	Sorts the returned records		

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. * Make sure, that every complete sql statement is finished by a semicolon (;). ===== 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 Futterkiste	Maria Anders	Obere Str. 57	Berlin	12209	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Avda. de la Constitución 2222	México D.F.	05021	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico
4	Around the Horn	Thomas Hardy	120 Hanover Sq.	London	WA1 1DP	UK

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

SELECT *

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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		
exhaustive	erschöpfend, vollständig		
clause	Abschnitt		
to determine	bestimmen		
to fetch	abrufen, holen		
be composed by	besteht aus		
notation	Schreibweise		



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