DELETE - SQL DELETE - SQL

# **DELETE - SQL**

This chapter covers the following topics:

- Function
- Syntax 1 Searched DELETE
- Syntax 2 Positioned DELETE

Belongs to Function Group: Database Access and Update

See also the following sections in the *Database Management System Interfaces* documentation:

- DELETE SQL in the Natural for DB2 part.
- DELETE SQL in the Natural for SQL/DS part.
- DELETE SQL in the Natural SQL Gateway part.

### **Function**

The SQL DELETE statement is used to delete either rows in a table without using a cursor ("searched" DELETE) or rows in a table to which a cursor is positioned ("positioned" DELETE).

Two different structures are possible.

## **Syntax 1 - Searched DELETE**

The "searched" DELETE statement is a stand-alone statement not related to any SELECT statement. With a single statement you can delete zero, one, multiple or all rows of a table. The rows to be deleted are determined by a <code>search-condition</code> that is applied to the table. Optionally, the table name can be assigned a <code>correlation-name</code>.

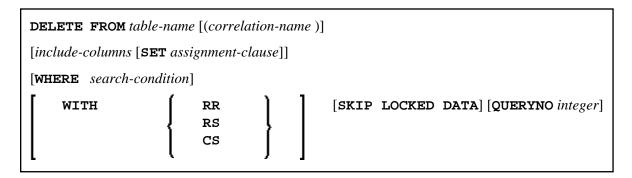
#### **Note:**

The number of rows that have actually been deleted with a "searched" DELETE can be ascertained by using the system variable \*ROWCOUNT; see *System Variables* documentation.

Common Set Syntax:

**DELETE FROM** table-name [(correlation-name)] [WHERE search-condition]

Extended Set Syntax:



For an explanation of the symbols used in the syntax diagram, see *Syntax Symbols*.

### Syntax Element Description:

Syntax Element	Description	
FROM table-name	FROM Clause:	
	This clause specifies the table from which the rows are to be deleted.	
correlation-name	Correlation 1	Name:
	Optionally, th	ne table name can be assigned a correlation-name.
include-columns	Include Colu	mns Clause:
	the columns of statement, wh	pecifies a set of columns that are included, along with of table-name, in the result table of the DELETE ten it is nested in the FROM clause of a SELECT or further details, see include-columns.
SET assingment-clause	SET Assignment Clause:	
	Introduces the assignment of values to the included columns of the <code>include-columns</code> clause. See assignment clause of SQL UPDATE statement.	
WHERE search-condition	WHERE Clause:	
	This clause is used to specify the selection criteria for the rows to be deleted.	
	If no WHERE clause is specified, the entire table is deleted.	
WITH	WITH Isolation Level Clause:	
	This clause belongs to the SQL Extended Set.	
	This clause enables the explicit specification of the isolation level used when locating the row to be deleted.	
	CS	Cursor Stability
	RR	Repeatable Read
	RS	Read Stability

Syntax Element	Description	
SKIP LOCKED DATA	SKIP LOCKED DATA Clause:	
	This clause specifies that rows are skipped when incompatible locks are held on the row by other transactions.	
QUERYNO integer	QUERYNO Clause:	
	This clause belongs to the SQL Extended Set.	
	This clause explicitly specifies the number to be used in EXPLAIN output and trace records for this statement. The number is used as QUERYNO column in the PLAN_TABLE for the rows that contain information on this statement.	

# **Syntax 2 - Positioned DELETE**

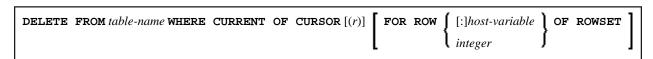
The "positioned" DELETE statement always refers to a cursor within a database loop. Therefore the table referenced by a positioned DELETE statement must be the same as the one referenced by the corresponding SELECT statement, otherwise an error message is returned. A positioned DELETE cannot be used with a non-cursor selection.

The functionality of the positioned DELETE statement corresponds to that of the "normal" Natural DELETE statement.

Common Set Syntax:

DELETE FROM table-name where current of cursor [(r)]

Extended Set Syntax:



For an explanation of the symbols used in the syntax diagram, see *Syntax Symbols*.

Syntax Element Description:

Syntax Element	Description
FROM  table-name  WHERE CURRENT  OF CURSOR	FROM Clause:  This clause specifies the table from which the rows are to be deleted.
(r)	Statement Reference:  The (r) notation is used to reference the statement which was used to select the row to be deleted. If no statement reference is specified, the DELETE statement is related to the innermost active processing loop in which a database record was selected.
FOR ROW OF ROWSET	FOR ROW OF ROWSET Clause:  This clause belongs to the SQL Extended Set.  The optional FOR ROW OF ROWSET clause for positioned SQL DELETE statements specifies which row of the current rowset has to be deleted. It should only be specified if the DELETE statement is related to a SELECT statement which uses rowset positioning and which has column arrays in its INTO clause, see INTO Clause. If this clause is omitted, all rows of the current rowset are deleted.