

DELETE - SQL

This chapter covers the following topics:

- Function
- Syntax Description

Belongs to Function Group: *Database Access and Update*

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

- *NDB - DELETE - SQL* in the *Natural for DB2* part.
 - *DELETE* in the *Natural for SQL/DS* part.
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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).

Syntax Description

Two different structures are possible:

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

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 *search-condition* that is applied to the table. Optionally, the table name can be assigned a *correlation-name*.

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:

DELETE FROM <i>table-name</i> [(<i>correlation-name</i>)] [WHERE <i>search-condition</i>] [WITH { RR } { RS } { CS }] [QUERYNO <i>integer</i>]

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

Syntax Element Description:

FROM <i>table-name</i>	FROM Clause: This clause specifies the table from which the rows are to be deleted.
<i>correlation-name</i>	Optionally, the table name can be assigned a <i>correlation-name</i> .
WHERE <i>search-condition</i>	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 allows the explicit specification of the isolation level used when locating the row to be deleted. For detailed information, see <i>WITH - Isolation Level</i> in the corresponding section <i>NDB - SELECT - Cursor-Oriented</i> (in the <i>Natural for DB2</i> part of the <i>Database Management System Interfaces</i> documentation).
QUERYNO <i>integer</i>	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:

```
DELETE FROM table-name WHERE CURRENT OF CURSOR [(r)] [ FOR ROW { [:]host-variable } OF ROWSET ]
                                     { integer }
```

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

Syntax Element Description:

FROM <i>table-name</i> WHERE CURRENT OF CURSOR	FROM Clause: This clause specifies the table from which the rows are to be deleted.
(<i>r</i>)	Statement Reference: The (<i>r</i>) 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 <i>INTO Clause</i> . If this clause is omitted, all rows of the current rowset are deleted.