

What is a foreign key with Cascade DELETE in SQL Server?

A foreign key with cascade delete means that if a record in the parent table is deleted, then the corresponding records in the child table will automatically be deleted. This is called a cascade delete in SQL Server.

A foreign key with cascade delete can be created using either a CREATE TABLE statement or an ALTER TABLE statement.

Create Foreign key with cascade delete - Using CREATE TABLE statement

Syntax

The syntax for creating a foreign key with cascade delete using a CREATE TABLE statement in SQL Server (Transact-SQL) is:

```
CREATE TABLE child_table
(
    column1 datatype [ NULL | NOT NULL ],
    column2 datatype [ NULL | NOT NULL ],
    ...

    CONSTRAINT fk_name
        FOREIGN KEY (child_col1, child_col2, ... child_col_n)
        REFERENCES parent_table (parent_col1, parent_col2, ... parent_col_n)
        ON DELETE CASCADE
        [ ON UPDATE { NO ACTION | CASCADE | SET NULL | SET DEFAULT } ]
);
```

child_table

The name of the child table that you wish to create.

column1, column2

The columns that you wish to create in the table. Each column must have a datatype. The column should either be defined as NULL or NOT NULL and if this value is left blank, the database assumes NULL as the default.

fk_name

The name of the foreign key constraint that you wish to create.

child_col1, child_col2, ... child_col_n

The columns in *child_table* that will reference a primary key in the *parent_table*.

parent_table

The name of the parent table whose primary key will be used in the *child_table*.

parent_col1, parent_col2, ... parent_col3

The columns that make up the primary key in the *parent_table*. The foreign key will enforce a link between this data and the *child_col1, child_col2, ... child_col_n* columns in the *child_table*.

ON DELETE CASCADE

It specifies that the child data is deleted when the parent data is deleted.

ON UPDATE

Optional. It specifies what to do with the child data when the parent data is updated. You have the options of NO ACTION, CASCADE, SET NULL, or SET DEFAULT.

NO ACTION

It is used in conjunction with ON DELETE or ON UPDATE. It means that no action is performed with the child data when the parent data is deleted or updated.

CASCADE

It is used in conjunction with ON DELETE or ON UPDATE. It means that the child data is either deleted or updated when the parent data is deleted or updated.

SET NULL

It is used in conjunction with ON DELETE or ON UPDATE. It means that the child data is set to NULL when the parent data is deleted or updated.

SET DEFAULT

It is used in conjunction with ON DELETE or ON UPDATE. It means that the child data is set to their default values when the parent data is deleted or updated.

```
ALTER TABLE child_table
ADD CONSTRAINT fk_name
    FOREIGN KEY (child_col1, child_col2, ... child_col_n)
    REFERENCES parent_table (parent_col1, parent_col2, ... parent_col_n)
    ON DELETE CASCADE;
```

Designer in Visual Studio



