

14. RTRIM, LTRIM & TRIM Functions

In this article we are going to learn how to use RTRIM(), LTRIM() and TRIM() functions in SQL Server to remove ending spaces, outer spaces or characters of a column in SQL. Examples are also included in this article.

Refer to the below table for the following examples. Imagine the employee table having data in the following format.

Employees Table:

Id	Code	Number
1	" N227 "	" 6758 "
2	"#643 "	" 3245 "
3	"No456 "	" 6789 "
4	" 125 "	"2322 "
5	"N-142 "	"4354 "
6	"No632 "	" 6687 "
7	"No.234"	"1223 "
8	"N.336 "	" 6654 "
9	" N551"	"2343 "
10	"#122 "	"4245 "

Table 1. Employee Data

Use SQL Server to run the following query to create sample data for given examples.

SQL Script:

```
CREATE TABLE Employees(  
    Id INT NOT NULL,  
    Code CHAR (6) NULL,  
    Number CHAR (10) NULL,  
    PRIMARY KEY (Id)  
);  
  
INSERT Employees(Id, Code, Number) VALUES(1, ' N227 ', ' 6758 ')
```

```
, (2, '#643 ', ' 3245 '), (3, 'No456 ', ' 6789 ')
, (4, ' 125 ', '2322 '), (5, 'N-142 ', '4354 ')
, (6, 'No632 ', ' 6687 '), (7, 'No.234', '1223 ')
, (8, 'N.336 ', ' 6654 '), (9, ' N551', '2343 ')
, (10, '#122 ', '4245 ');
```

```
ALTER TABLE Employees ALTER COLUMN Code VARCHAR(6) NULL;
ALTER TABLE Employees ALTER COLUMN Number VARCHAR(10) NULL;
```

Script 1. Sample Data

RTRIM() Function in SQL

RTRIM() function is given in the following format.

Syntax
<code>SELECT RTRIM(Column)</code>

Table 2. RTRIM Function

Where *Column* is the text, consider removing spaces. It is a required parameter.

RTRIM() function allows us to remove the right spaces from a column or a string.

Example 1. RTRIM() Function in SQL

Using the below query we can remove the right spaces from “Code” and “Number” columns.

SQL Script:

```
UPDATE Employees SET Code = RTRIM(Code), Number= RTRIM(Number);

SELECT * FROM Employees;
```

Script 2. To Remove Right Spaces

Above query updates employee data in the following format.

Result:

Id	Code	Number
1	" N227"	" 6758"
2	"#643"	" 3245"
3	"No456"	" 6789"
4	" 125"	"2322"
5	"N-142"	"4354"
6	"No632"	" 6687"
7	"No.234"	"1223"
8	"N.336"	" 6654"
9	" N551"	"2343"
10	"#122"	"4245"

Table 3. Employee Data after Removing Right Spaces

LTRIM() Function in SQL

LTRIM() function is given in the following format.

Syntax
<code>SELECT LTRIM(<i>Column</i>)</code>

Table 4. LTRIM Function

Where *Column* is the text, consider removing spaces. It is a required parameter.

LTRIM() function allows us to remove the left spaces from a column or a string.

Example 2. LTRIM() Function in SQL

Using this example we can remove the left spaces from "Code" and "Number" columns.

SQL Script:

```
UPDATE Employees SET Code = LTRIM(Code), Number = LTRIM(Number);  
SELECT * FROM Employees;
```

Script 3. To Remove Left Spaces

Above query updates employee data in the following format.

Result:

Id	Code	Number
1	"N227"	"6758"
2	"#643"	"3245"
3	"No456"	"6789"
4	"125"	"2322"
5	"N-142"	"4354"
6	"No632"	"6687"
7	"No.234"	"1223"
8	"N.336"	"6654"
9	"N551"	"2343"
10	"#122"	"4245"

Table 5. Result after Removing Left Spaces

TRIM() Function in SQL Server

TRIM() function is given by one of the following formats.

Syntax(s)

```
SELECT TRIM(Column)

SELECT TRIM(Characters FROM Column)
```

Table 6. TRIM Function

Where *Column* is the text considered to remove spaces or characters. It is a required parameter. *Characters* are the string of removable characters. It is an optional parameter.

TRIM() function allows us to remove outer spaces or characters from a column or a string.

Example 2. TRIM() Function in SQL

Using the below query we can remove unwanted characters from the “Code” column.

SQL Script:

```
UPDATE Employees SET Code = TRIM('#No-.' FROM Code);

SELECT * FROM Employees;
```

Script 4. To Remove Unwanted Characters

Above query updates employee data in the following format.

Result:

Id	Code	Number
1	"227"	"6758"
2	"643"	"3245"
3	"456"	"6789"
4	"125"	"2322"
5	"142"	"4354"
6	"632"	"6687"
7	"234"	"1223"
8	"336"	"6654"
9	"551"	"2343"
10	"122"	"4245"

Table 7. Result after Removing Unwanted Characters

Summary of Examples

In the above examples, we got the result in three steps. First, we removed the right spaces. Second, we removed the left spaces. Finally, we remove unwanted characters. By using the below query we can get the same result in a single step.

SQL Script:

```
UPDATE Employees SET Code = TRIM(' #No- .' FROM Code)
, Number = TRIM(Number);

SELECT * FROM Employees;
```

Script 5. To Remove both Outer Spaces and Characters