

28. String Functions(LOWER, UPPER, LEFT & RIGHT) in SQL

In this article we are going to learn how to use LOWER(), UPPER(), LEFT() and RIGHT() functions in SQL Server to format a string. 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	FirstName	LastName
1	"JAmes"	"WilliamS"
2	"michael"	"Clark"
3	"ROBERT"	"WILSON"
4	"MARIA"	"GARCIA"
5	"DAVID"	"Smith"
6	"Elizabeth"	"Rodriguez"
7	"MARY"	"SMITH"
8	"nancy"	"HErnandez"
9	"Maria"	"Martinez"
10	"JAMES"	"JOHNSON"

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,  
    FirstName VARCHAR (50) NULL,  
    LastName VARCHAR (50) NULL,
```

```

PRIMARY KEY (Id)
);

INSERT Employees(Id, FirstName, LastName) VALUES(1, 'JAmes', 'WilliamS');
INSERT Employees(Id, FirstName, LastName) VALUES(2, 'michael', 'Clark');
INSERT Employees(Id, FirstName, LastName) VALUES(3, 'ROBERT', 'WILSON');
INSERT Employees(Id, FirstName, LastName) VALUES(4, 'MARIA', 'GARCIA');
INSERT Employees(Id, FirstName, LastName) VALUES(5, 'DAVID', 'Smith');
INSERT Employees(Id, FirstName, LastName) VALUES(6, 'Elizabeth',
'Rodriguez');
INSERT Employees(Id, FirstName, LastName) VALUES(7, 'MARY', 'SMITH');
INSERT Employees(Id, FirstName, LastName) VALUES(8, 'nancy', 'HErnandez');
INSERT Employees(Id, FirstName, LastName) VALUES(9, 'Maria', 'Martinez');
INSERT Employees(Id, FirstName, LastName) VALUES(10, 'JAMES', 'JOHNSON');

```

Script 1. Sample Data

LOWER() Function

LOWER() function is given by the following format.

Syntax
SELECT LOWER(<i>Column</i>)

Table 2. LOWER Function

Where *Column* is the text consider for formatting into lower case. It is a required parameter.

LOWER() function returns text into lower case.

Example 1. Convert to Lowercase

Using the below query we can format FirstName and LastName into lower case.

SQL Script:

```

UPDATE Employees SET FirstName = LOWER(FirstName), LastName =
UPPER(LastName);

SELECT * FROM Employees;

```

Script 2. Convert to Lowercase

Above query updates employee data in the following format.

Result:

Id	FirstName	LastName
1	"james"	"williams"
2	"michael"	"clark"
3	"robert"	"wilson"
4	"maria"	"garcia"
5	"david"	"smith"
6	"elizabeth"	"rodriguez"
7	"mary"	"smith"
8	"nancy"	"hernandez"
9	"maria"	"martinez"
10	"james"	"johnson"

Table 3. Converted Data to Lowercase

UPPER(), LEFT() AND RIGHT() Functions in SQL

UPPER() function is given by the following format.

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

Table 4. UPPER Function

Where *Column* is the text consider for formatting into upper case. It is a required parameter. LOWER() function returns text into upper case.

LEFT() function is given by the following format.

Syntax
<code>SELECT LEFT(Column, Length)</code>

Table 5. LEFT Function

Where *Column* is the text consider for. It is a required parameter.

Length is the number of characters from left.

LEFT function returns a string of *Length* number of characters from *Column* string.

RIGHT() function is given by the following format.

Syntax
<code>SELECT RIGHT(Column, Value)</code>

Table 6. RIGHT Function

Where *Column* is the text consider for. It is a required parameter.

Length is the number of characters from left.

RIGHT function returns a string of *Length* number of characters from *Column* string.

Example 2. Convert First Characters to Uppercase.

Using this example we can convert the first letter to uppercase.

SQL Script:

```
UPDATE Employees SET FirstName = UPPER(LEFT(FirstName,1)) +
LOWER(RIGHT(FirstName,LEN(FirstName)-1))

,SET LastName = UPPER(LEFT(LastName,1)) + LOWER(RIGHT(LastName,LEN(LastName)-1));

SELECT * FROM Employees;
```

Script 3. To Remove Left Spaces

Above query updates employee data in the following format.

Result:

Id	FirstName	LastName
1	"James"	"Williams"

2	"Michael"	"Clark"
3	"Robert"	"Wilson"
4	"Maria"	"Garcia"
5	"David"	"Smith"
6	"Elizabeth"	"Rodriguez"
7	"Mary"	"Smith"
8	"Nancy"	"Hernandez"
9	"Maria"	"Martinez"
10	"James"	"Johnson"

Table 7. Converted Data in First Letter Capital

Summary of Examples

In the above examples, we got the result in two steps. First, we converted the text into lowercase. Second, we converted the first letter in uppercase. By using the below query we can get the same result in a single step.

SQL Script:

```
UPDATE Employees SET FirstName = UPPER(LEFT(LOWER(FirstName),1)) +
LOWER(RIGHT(LOWER(FirstName),LEN(LOWER(FirstName))-1))
, LastName = UPPER(LEFT(LOWER(LastName),1)) +
LOWER(RIGHT(LOWER(LastName),LEN(LOWER(LastName))-1));

SELECT * FROM Employees;
```

Script 4. Convert to Lowercase with First letter Capital