



# SQL | Conversion Function



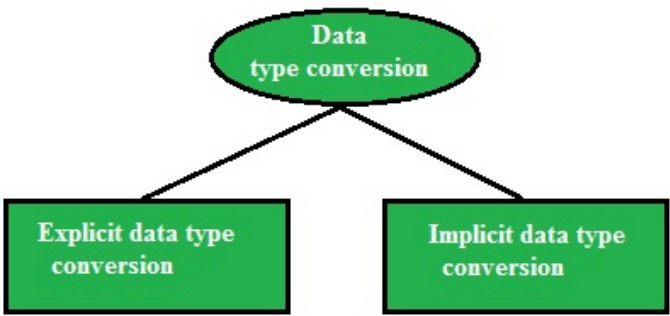
MrinalVerma

Read

Discuss

Courses

Practice



In some cases, the Server uses data of one type where it expects data of a different data type. This can happen when the Server can automatically convert the data to the expected data type. This data type conversion can be done implicitly by the Server, or explicitly by the user.

## Implicit Data-Type Conversion :

In this type of conversion the data is converted from one type to another implicitly (by itself/automatically).

From	To
VARCHAR2 or CHAR	NUMBER
VARCHAR2 or CHAR	DATE
DATE	VARCHAR2
NUMBER	VARCHAR2

### 1. QUERY:

```
SELECT employee_id,first_name,salary  
FROM employees  
WHERE salary > 15000;
```

### 1. OUTPUT :

Employee_ID	FIRST_NAME	SALARY
100	Steven	24000
101	Neena	17000
102	lex	17000

### 1. QUERY:

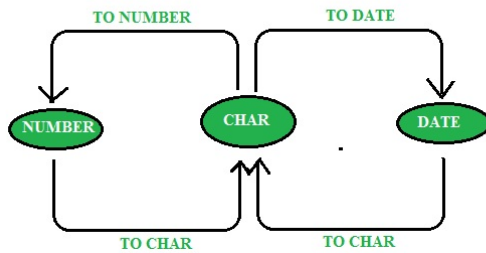
```
SELECT employee_id,first_name,salary  
FROM employees  
WHERE salary > '15000';
```

### 1. OUTPUT :

Employee_ID	FIRST_NAME	SALARY
100	Steven	24000
101	Neena	17000
102	lex	17000

1. Here we see the output of both queries came out to be same,inspite of 2nd query using **'15000'** as text, it is automatically converted into **int** data type.

## Explicit Data-Type Conversion :



**Explicit Data Type Conversion**

AD

### **TO\_CHAR Function :**

TO\_CHAR function is used to typecast a numeric or date input to character type with a format model (optional).

### **SYNTAX :**

```
TO_CHAR(number1, [format], [nls_parameter])
```

### **Using the TO\_CHAR Function with Dates :**

### **SYNTAX :**

```
TO_CHAR(date, 'format_model')
```

The format model:

- Must be enclosed in single quotation marks and is case sensitive
- Can include any valid date format element
- Has an fm element to remove padded blanks or suppress leading zeros
- Is separated from the date value by a comma

**EXAMPLE :**

```
SELECT employee_id, TO_CHAR(hire_date, 'MM/YY') Month_Hired
FROM employees
WHERE last_name = 'Higgins';
```

**OUTPUT :**

EMPLOYEE_ID	MONTH_HIRED
205	06/94

**Elements of the Date Format Model :**

YYYY	Full year in Numbers
YEAR	Year spelled out
MM	Two digit value for month
MONTH	Full name of the month
MON	Three Letter abbreviation of the month
DY	Three letter abbreviation of the day of the week
DAY	Full Name of the Day
DD	Numeric day of the month

**Elements of the Date Format Model :****Date Format Elements – Time Formats :**

Use the formats listed in the following tables to display time information and literals and to change numerals to spelled numbers.

ELEMENT	DESCRIPTION
AM or PM	Meridian indicator
A.M. or P.M.	Meridian indicator with periods
HH or HH12 or HH24	Hour of day,or hour (1-12),or hour (0-23)
MI	Minute 0-59
SS	Second 0-59
SSSSS	Second past Mid Night 0-86399

### Other Formats :

ELEMENT	DESCRIPTION
/ . ,	Punctuation is reproduced in the result
“of the”	Quoted string is reproduced in the result

### Specifying Suffixes to Influence Number Display :

ELEMENT	DESCRIPTION
TH	Ordinal Number (for example DDTH for 4TH
SP	Spelled out number (for example DDSP for FOUR
SPTH or THSP	spelled out ordinal numbers (for example DDSPTH for FOURTH

### EXAMPLE :

```
SELECT last_name,  
       TO_CHAR(hire_date, 'fmDD Month YYYY')  
       AS HIREDATE  
FROM employees;
```

**OUTPUT :**

LASTNAME	HIREDATE
Austin	25 January 2005
Shubham	20 June 2004
Nishant	15 January 1999
Ankit	15 July 1995
Vanshika	5 August 2004
Kusum	10 June 1994
Faviet	11 March 2005
King	9 April 1996

**Using the TO\_CHAR Function with Numbers :****SYNTAX :**

```
TO_CHAR(number, 'format_model')
```

These are some of the format elements you can use with the TO\_CHAR function to display a number value as a character :

9	Represent a number
0	Forces a zero to be displayed

\$	places a floating dollar sign
L	Uses the floating local currency symbol
.	Print a decimal point
,	Prints a Thousand indicator

**EXAMPLE :**

```
SELECT TO_CHAR(salary, '$99,999.00') SALARY
FROM employees
WHERE last_name = 'Ernst';
```

**OUTPUT :**

SALARY
\$5000

**Using the TO\_NUMBER and TO\_DATE Functions :**

Convert a character string to a number format using the **TO\_NUMBER** function :

```
TO_NUMBER(char[, 'format_model'])
```

Convert a character string to a date format using the **TO\_DATE** function:

```
TO_DATE(char[, 'format_model'])
```

These functions have an **fx** modifier. This modifier specifies the exact matching for the character argument and date format model of a **TO\_DATE** function.

**EXAMPLE :**

```
SELECT last_name, hire_date
FROM employees
WHERE hire_date = TO_DATE('May 24, 1999', 'fxMonth DD, YYYY');
```

**OUTPUT :**

LASTNAME	HIREDATE
Kumar	24-MAY-99

Last Updated : 28 Mar, 2023

16

## Similar Reads

1. Difference between Structured Query Language (SQL) and Transact-SQL (T-SQL)
2. Configure SQL Jobs in SQL Server using T-SQL
3. MS SQL Server - Type Conversion
4. SQL | Procedures in PL/SQL
5. SQL | Difference between functions and stored procedures in PL/SQL
6. SQL SERVER – Input and Output Parameter For Dynamic SQL
7. Difference between SQL and T-SQL
8. SQL Server | Convert tables in T-SQL into XML
9. SQL SERVER | Bulk insert data from csv file using T-SQL command
10. SQL - SELECT from Multiple Tables with MS SQL Server

[Previous](#)[Next](#)**Article Contributed By :**

**MrinalVerma**  
MrinalVerma

**Vote for difficulty**Current difficulty : [Easy](#)