

There are quite a number of built in functions recognized by the SQL database manager. These functions can be used in expressions to produce a desired output result or format. The functions can be nested e.g. Trim(UCase([Lastname])) as ten levels deep. They can also be concatenated such as Trim([First]) & “ “ & Trim([Lastname]).

LCASE(*string*) Returns a string of lower case *string*, e.g. LCASE(“Hello World”) returns “hello world”.
 UCASE(*string*) Returns a string of upper case *string*, e.g. UCASE(“Hello World”) returns “HELLO WORLD”.
 PROPER(*string*) Returns a string of proper case *string*, e.g. PROPER(“THIS IS A TEST”) returns “This Is A Test”

LTRIM(*string*) Returns a string consisting of *string* with any leading spaces on the left side removed.
 RTRIM(*string*) Returns a string consisting of *string* with any trailing spaces on the right side removed.
 TRIM(*string*) Returns a string consisting of *string* with any leading or trailing spaces removed.

LEFT(*string* , *n*) Returns a string of *n* characters from the left side of *string*, e.g. LEFT(“Hello World”, 5) returns ‘Hello’.
 RIGHT(*string* , *n*) Returns a string of *n* characters from the right side of *string*, e.g. RIGHT(“Hello World”, 5) returns ‘World’.
 MID(*string* , *m* , *n*) Returns a string of *n* characters beginning at the *m*th character of *string*.

IIF(<*expression*> , <*true*> , <*false*>) The *expression* is evaluated and if True returns the *true* string expression else *false* string expression.

When referring to a date or time field, the following functions return the indicated part of the date or time as a string.

YEAR(*string*)
 MONTH(*string*)
 DAY(*string*)
 HOUR(*string*)
 MINUTE(*string*)
 SECOND(*string*)

Now is a Date/Time field that refers to the present date and time

FORMAT(*string* , *formatpicture*). Format returns a string containing *string* formatted according to *formatpicture*.

A FormatPicture is a string enclosed within double quotation marks (“...”) used to describe the desired formatting. FormatPictures contain combinations of the following characters:

Character	Description
(:)	Time separator. In some locales, other characters may be used to represent the time separator. The time separator separates hours, minutes, and seconds when time values are formatted. The actual character used as the time separator in formatted output is determined by your system settings.
(/)	Date Separator. In some locales, other characters may be used to represent the date separator. The date separator separates the day, month, and year when date values are formatted. The actual character used as the date separator in formatted output is determined by your system settings.
c	Display the date as dddd and display the time as tttt, in that order. Display only date information if there is no fractional part to the date serial number; display only time information if there is no integer portion.
d	Display the day as a number without a leading zero (1 – 31).
dd	Display the day as a number with a leading zero (01 – 31).

ddd	Display the day as an abbreviation (Sun – Sat).
dddd	Display the day as a full name (Sunday – Saturday).
dddddd	Display the date as a complete date (including day, month, and year), formatted according to your system's short date format setting. The default short date format is <code>m/d/yy</code> .
dddddd	Display a date serial number as a complete date (including day, month, and year) formatted according to the long date setting recognized by your system. The default long date format is <code>mmmm dd, yyyy</code> .
aaaa	The same as dddd, only it's the localized version of the string.
w	Display the day of the week as a number (1 for Sunday through 7 for Saturday).
ww	Display the week of the year as a number (1 – 54).
m	Display the month as a number without a leading zero (1 – 12). If <code>m</code> immediately follows <code>h</code> or <code>hh</code> , the minute rather than the month is displayed.
mm	Display the month as a number with a leading zero (01 – 12). If <code>m</code> immediately follows <code>h</code> or <code>hh</code> , the minute rather than the month is displayed.
mmm	Display the month as an abbreviation (Jan – Dec).
mmmm	Display the month as a full month name (January – December).
oooo	The same as mmmm, only it's the localized version of the string.
q	Display the quarter of the year as a number (1 – 4).
y	Display the day of the year as a number (1 – 366).
yy	Display the year as a 2-digit number (00 – 99).
yyyy	Display the year as a 4-digit number (100 – 9999).
h	Display the hour as a number without leading zeros (0 – 23).
Hh	Display the hour as a number with leading zeros (00 – 23).
N	Display the minute as a number without leading zeros (0 – 59).
Nn	Display the minute as a number with leading zeros (00 – 59).
S	Display the second as a number without leading zeros (0 – 59).
Ss	Display the second as a number with leading zeros (00 – 59).
t t t t t	Display a time as a complete time (including hour, minute, and second), formatted using the time separator defined by the time format recognized by your system. A leading zero is displayed if the leading zero option is selected and the time is before 10:00 A.M. or P.M. The default time format is <code>h:mm:ss</code> .
AM/PM	Use the 12-hour clock and display an uppercase AM with any hour before noon; display an uppercase PM with any hour between noon and 11:59 P.M.
am/pm	Use the 12-hour clock and display a lowercase AM with any hour before noon; display a lowercase PM with any hour between noon and 11:59 P.M.
A/P	Use the 12-hour clock and display an uppercase A with any hour before noon; display an uppercase P with any hour between noon and 11:59 P.M.
a/p	Use the 12-hour clock and display a lowercase A with any hour before noon; display a lowercase P with any hour between noon and 11:59 P.M.
AMPM	Use the 12-hour clock and display the AM string literal as defined by your system with any hour before noon; display the PM string literal as defined by your system with any hour between noon and 11:59 P.M. AMPM can be either uppercase or lowercase, but the case of the string displayed matches the string as defined by your system settings. The default format is AM/PM.

The following are examples of FormatPictures and resulting strings when used on a date string of 09/13/2002.

FormatPicture	Result String
"m/d/YY"	9/13/02
"d-mmm"	13-Sep
"d-mmmm-YY"	13-September-02
"d mmmm"	13 September
"mmmm YYYY"	September 02
"hh:mm AM/PM"	08:50 PM
"h:mm:ss a/p"	8:50:35 p
"h:mm"	20:50
"h:mm:ss"	20:50:35
"mm/d/YY h:mm"	09/13/02 20:50