SQL Server Functions

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SQL Server has many built-in functions.

This reference contains string, numeric, date, conversion, and some advanced functions in SQL Server.

SQL Server String Functions

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| **Function** | **Description** |
| [ASCII](https://www.w3schools.com/sql/func_sqlserver_ascii.asp) | Returns the ASCII value for the specific character |
| [CHAR](https://www.w3schools.com/sql/func_sqlserver_char.asp) | Returns the character based on the ASCII code |
| [CHARINDEX](https://www.w3schools.com/sql/func_sqlserver_charindex.asp) | Returns the position of a substring in a string |
| [CONCAT](https://www.w3schools.com/sql/func_sqlserver_concat.asp) | Adds two or more strings together |
| [Concat with +](https://www.w3schools.com/sql/func_sqlserver_concat_with_plus.asp) | Adds two or more strings together |
| [CONCAT\_WS](https://www.w3schools.com/sql/func_sqlserver_concat_ws.asp) | Adds two or more strings together with a separator |
| [DATALENGTH](https://www.w3schools.com/sql/func_sqlserver_datalength.asp) | Returns the number of bytes used to represent an expression |
| [DIFFERENCE](https://www.w3schools.com/sql/func_sqlserver_difference.asp) | Compares two SOUNDEX values, and returns an integer value |
| [FORMAT](https://www.w3schools.com/sql/func_sqlserver_format.asp) | Formats a value with the specified format |
| [LEFT](https://www.w3schools.com/sql/func_sqlserver_left.asp) | Extracts a number of characters from a string (starting from left) |
| [LEN](https://www.w3schools.com/sql/func_sqlserver_len.asp) | Returns the length of a string |
| [LOWER](https://www.w3schools.com/sql/func_sqlserver_lower.asp) | Converts a string to lower-case |
| [LTRIM](https://www.w3schools.com/sql/func_sqlserver_ltrim.asp) | Removes leading spaces from a string |
| [NCHAR](https://www.w3schools.com/sql/func_sqlserver_nchar.asp) | Returns the Unicode character based on the number code |
| [PATINDEX](https://www.w3schools.com/sql/func_sqlserver_patindex.asp) | Returns the position of a pattern in a string |
| [QUOTENAME](https://www.w3schools.com/sql/func_sqlserver_quotename.asp) | Returns a Unicode string with delimiters added to make the string a valid SQL Server delimited identifier |
| [REPLACE](https://www.w3schools.com/sql/func_sqlserver_replace.asp) | Replaces all occurrences of a substring within a string, with a new substring |
| [REPLICATE](https://www.w3schools.com/sql/func_sqlserver_replicate.asp) | Repeats a string a specified number of times |
| [REVERSE](https://www.w3schools.com/sql/func_sqlserver_reverse.asp) | Reverses a string and returns the result |
| [RIGHT](https://www.w3schools.com/sql/func_sqlserver_right.asp) | Extracts a number of characters from a string (starting from right) |
| [RTRIM](https://www.w3schools.com/sql/func_sqlserver_rtrim.asp) | Removes trailing spaces from a string |
| [SOUNDEX](https://www.w3schools.com/sql/func_sqlserver_soundex.asp) | Returns a four-character code to evaluate the similarity of two strings |
| [SPACE](https://www.w3schools.com/sql/func_sqlserver_space.asp) | Returns a string of the specified number of space characters |
| [STR](https://www.w3schools.com/sql/func_sqlserver_str.asp) | Returns a number as string |
| [STUFF](https://www.w3schools.com/sql/func_sqlserver_stuff.asp) | Deletes a part of a string and then inserts another part into the string, starting at a specified position |
| [SUBSTRING](https://www.w3schools.com/sql/func_sqlserver_substring.asp) | Extracts some characters from a string |
| [TRANSLATE](https://www.w3schools.com/sql/func_sqlserver_translate.asp) | Returns the string from the first argument after the characters specified in the second argument are translated into the characters specified in the third argument. |
| [TRIM](https://www.w3schools.com/sql/func_sqlserver_trim.asp) | Removes leading and trailing spaces (or other specified characters) from a string |
| [UNICODE](https://www.w3schools.com/sql/func_sqlserver_unicode.asp) | Returns the Unicode value for the first character of the input expression |
| [UPPER](https://www.w3schools.com/sql/func_sqlserver_upper.asp) | Converts a string to upper-case |

SQL Server Math/Numeric Functions

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| **Function** | **Description** |
| [ABS](https://www.w3schools.com/sql/func_sqlserver_abs.asp) | Returns the absolute value of a number |
| [ACOS](https://www.w3schools.com/sql/func_sqlserver_acos.asp) | Returns the arc cosine of a number |
| [ASIN](https://www.w3schools.com/sql/func_sqlserver_asin.asp) | Returns the arc sine of a number |
| [ATAN](https://www.w3schools.com/sql/func_sqlserver_atan.asp) | Returns the arc tangent of a number |
| [ATN2](https://www.w3schools.com/sql/func_sqlserver_atn2.asp) | Returns the arc tangent of two numbers |
| [AVG](https://www.w3schools.com/sql/func_sqlserver_avg.asp) | Returns the average value of an expression |
| [CEILING](https://www.w3schools.com/sql/func_sqlserver_ceiling.asp) | Returns the smallest integer value that is >= a number |
| [COUNT](https://www.w3schools.com/sql/func_sqlserver_count.asp) | Returns the number of records returned by a select query |
| [COS](https://www.w3schools.com/sql/func_sqlserver_cos.asp) | Returns the cosine of a number |
| [COT](https://www.w3schools.com/sql/func_sqlserver_cot.asp) | Returns the cotangent of a number |
| [DEGREES](https://www.w3schools.com/sql/func_sqlserver_degrees.asp) | Converts a value in radians to degrees |
| [EXP](https://www.w3schools.com/sql/func_sqlserver_exp.asp) | Returns e raised to the power of a specified number |
| [FLOOR](https://www.w3schools.com/sql/func_sqlserver_floor.asp) | Returns the largest integer value that is <= to a number |
| [LOG](https://www.w3schools.com/sql/func_sqlserver_log.asp) | Returns the natural logarithm of a number, or the logarithm of a number to a specified base |
| [LOG10](https://www.w3schools.com/sql/func_sqlserver_log10.asp) | Returns the natural logarithm of a number to base 10 |
| [MAX](https://www.w3schools.com/sql/func_sqlserver_max.asp) | Returns the maximum value in a set of values |
| [MIN](https://www.w3schools.com/sql/func_sqlserver_min.asp) | Returns the minimum value in a set of values |
| [PI](https://www.w3schools.com/sql/func_sqlserver_pi.asp) | Returns the value of PI |
| [POWER](https://www.w3schools.com/sql/func_sqlserver_power.asp) | Returns the value of a number raised to the power of another number |
| [RADIANS](https://www.w3schools.com/sql/func_sqlserver_radians.asp) | Converts a degree value into radians |
| [RAND](https://www.w3schools.com/sql/func_sqlserver_rand.asp) | Returns a random number |
| [ROUND](https://www.w3schools.com/sql/func_sqlserver_round.asp) | Rounds a number to a specified number of decimal places |
| [SIGN](https://www.w3schools.com/sql/func_sqlserver_sign.asp) | Returns the sign of a number |
| [SIN](https://www.w3schools.com/sql/func_sqlserver_sin.asp) | Returns the sine of a number |
| [SQRT](https://www.w3schools.com/sql/func_sqlserver_sqrt.asp) | Returns the square root of a number |
| [SQUARE](https://www.w3schools.com/sql/func_sqlserver_square.asp) | Returns the square of a number |
| [SUM](https://www.w3schools.com/sql/func_sqlserver_sum.asp) | Calculates the sum of a set of values |
| [TAN](https://www.w3schools.com/sql/func_sqlserver_tan.asp) | Returns the tangent of a number |

SQL Server Date Functions

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| **Function** | **Description** |
| [CURRENT\_TIMESTAMP](https://www.w3schools.com/sql/func_sqlserver_current_timestamp.asp) | Returns the current date and time |
| [DATEADD](https://www.w3schools.com/sql/func_sqlserver_dateadd.asp) | Adds a time/date interval to a date and then returns the date |
| [DATEDIFF](https://www.w3schools.com/sql/func_sqlserver_datediff.asp) | Returns the difference between two dates |
| [DATEFROMPARTS](https://www.w3schools.com/sql/func_sqlserver_datefromparts.asp) | Returns a date from the specified parts (year, month, and day values) |
| [DATENAME](https://www.w3schools.com/sql/func_sqlserver_datename.asp) | Returns a specified part of a date (as string) |
| [DATEPART](https://www.w3schools.com/sql/func_sqlserver_datepart.asp) | Returns a specified part of a date (as integer) |
| [DAY](https://www.w3schools.com/sql/func_sqlserver_day.asp) | Returns the day of the month for a specified date |
| [GETDATE](https://www.w3schools.com/sql/func_sqlserver_getdate.asp) | Returns the current database system date and time |
| [GETUTCDATE](https://www.w3schools.com/sql/func_sqlserver_getutcdate.asp) | Returns the current database system UTC date and time |
| [ISDATE](https://www.w3schools.com/sql/func_sqlserver_isdate.asp) | Checks an expression and returns 1 if it is a valid date, otherwise 0 |
| [MONTH](https://www.w3schools.com/sql/func_sqlserver_month.asp) | Returns the month part for a specified date (a number from 1 to 12) |
| [SYSDATETIME](https://www.w3schools.com/sql/func_sqlserver_sysdatetime.asp) | Returns the date and time of the SQL Server |
| [YEAR](https://www.w3schools.com/sql/func_sqlserver_year.asp) | Returns the year part for a specified date |

SQL Server Advanced Functions

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| **Function** | **Description** |
| [CAST](https://www.w3schools.com/sql/func_sqlserver_cast.asp) | Converts a value (of any type) into a specified datatype |
| [COALESCE](https://www.w3schools.com/sql/func_sqlserver_coalesce.asp) | Returns the first non-null value in a list |
| [CONVERT](https://www.w3schools.com/sql/func_sqlserver_convert.asp) | Converts a value (of any type) into a specified datatype |
| [CURRENT\_USER](https://www.w3schools.com/sql/func_sqlserver_current_user.asp) | Returns the name of the current user in the SQL Server database |
| [IIF](https://www.w3schools.com/sql/func_sqlserver_iif.asp) | Returns a value if a condition is TRUE, or another value if a condition is FALSE |
| [ISNULL](https://www.w3schools.com/sql/func_sqlserver_isnull.asp) | Return a specified value if the expression is NULL, otherwise return the expression |
| [ISNUMERIC](https://www.w3schools.com/sql/func_sqlserver_isnumeric.asp) | Tests whether an expression is numeric |
| [NULLIF](https://www.w3schools.com/sql/func_sqlserver_nullif.asp) | Returns NULL if two expressions are equal |
| [SESSION\_USER](https://www.w3schools.com/sql/func_sqlserver_session_user.asp) | Returns the name of the current user in the SQL Server database |
| [SESSIONPROPERTY](https://www.w3schools.com/sql/func_sqlserver_sessionproperty.asp) | Returns the session settings for a specified option |
| [SYSTEM\_USER](https://www.w3schools.com/sql/func_sqlserver_system_user.asp) | Returns the login name for the current user |
| [USER\_NAME](https://www.w3schools.com/sql/func_sqlserver_user_name.asp) | Returns the database user name based on the specified id |