





# SQL Beginner to Guru

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MySQL Edition

MySQL Functions



## MySQL String Functions

- **ASCII** - Returns the number code that represents the specific character.
- **CHAR\_LENGTH** - Returns the length of the specified string
- **CHARACTER\_LENGTH** - Same as CHAR\_LENGTH
- **CONCAT** - Concatenates two or more expressions together
- **CONCAT\_WS** - Same as CONCAT, but adds a separator between values
- **FIELD** - Returns the position of a value in a list of values
- **FIND\_IN\_SET** - Returns the position of a string from a list of strings
- **FORMAT** - Formats a number as '#,###.##' and rounds decimal places







## MySQL String Functions

- **INSERT** - Inserts a string into a string at the specified position
- **INSTR** - Returns the position of the first occurrence of a string in another string.
- **LCASE** - Converts a string to lower case.
- **LEFT** - Extracts a substring from a string (starting left)
- **LENGTH** - Returns the length of the specified string in bytes
- **LOCATE** - Returns the position of the first occurrence of a substring in a string
- **LOWER** - Converts a string to lower case
- **LPAD** - Left pads a string to a certain length
- **LTRIM** - Trims spaces from the left side of a string





## MySQL String Functions

- **MID** - Extracts a substring from a string
- **POSITION** - Returns the position of the first occurrence of a substring in a string
- **REPEAT** - Repeats a string for a specified number of times
- **REPLACE** - Replaces all occurrences of a specified string
- **REVERSE** - Reverses the order of a string
- **RIGHT** - Extracts a substring from a string starting from the right
- **RPAD** - Returns a string that is right padded with a specified string to the given length
- **RTRIM** - Removes spaces from the right side of a string





## MySQL String Functions

- **SPACE** - Returns the specified string in the given number of spaces
- **STRCMP** - Tests if two strings are the same
- **SUBSTR** - Extracts a substring from a given string
- **SUBSTRING** - Same as SUBSTR
- **SUBSTRING\_INDEX** - Returns the substring of a string before the given number of occurrences
- **TRIM** - Removes spaces from the left and right sides of a string
- **UCASE** - Converts the given string to upper case
- **UPPER** - Same as UCASE





## MySQL Numeric Functions

- **ABS** - Returns the absolute value of a number
- **ACOS** - Returns the arc cosine of a number
- **ASIN** - Returns the arc sine of a number
- **ATAN** - Returns the arc tangent of a number
- **ATAN2** - Returns the arc tangent of n and m
- **AVG** - Returns the average of an expression
- **CEIL** - Returns the smallest integer value equal or greater than given number
- **CEILING** - Same as CEIL
- **COS** - Returns the cosine of a number
- **COT** - Returns the cotangent of a number
- **COUNT** - Returns the number of records in a query





## MySQL Numeric Functions

- **DEGREES** - Converts a radian value into degrees
- **DIV** - Integer division
- **EXP** - Returns e raised to the power of a number
- **FLOOR** - Returns the largest integer less than or equal to given number
- **GREATEST** - Returns the greatest value in a list of expressions
- **LEAST** - Returns the smallest value in a list of expressions
- **LN** - Returns the natural logarithm of a number







## MySQL Numeric Functions

- **LOG** - Returns the natural logarithm of a number or the logarithm of a number to the specified base
- **LOG10** - Returns the base-10 logarithm of a number
- **LOG2** - Returns the base-2 logarithm of a number
- **MAX** - Returns the maximum value of an expression
- **MIN** - Returns the minimum value of an expression
- **MOD** - Returns the remainder of n divided by m
- **PI** - Returns PI for 6 decimal places





## MySQL Numeric Functions

- **POW** - Returns m raised to the nth power
- **POWER** - Same as POW
- **RADIANS** - Converts a value in degrees to radians
- **RAND** - Produces a random number
- **ROUND** - Rounds a given number to the specified number of decimal places
- **SIGN** - Returns the sign of a number
- **SIN** - Returns the sine of a number
- **SQRT** - Returns the square root of a number
- **SUM** - Returns the summed value of an expression
- **TAN** - Returns the tangent of a number
- **TRUNCATE** - Returns a number truncated to a given number of decimal places





## MySQL Date Functions

- **ADDDATE** - Adds an interval to a date
- **ADDTIME** - Adds a time interval to a date
- **CURDATE** - Returns the current date
- **CURRENT\_DATE** - Same as CUR\_DATE
- **CUR\_TIME** - Returns the current time
- **CURRENT\_TIME** - Same a CUR\_TIME
- **CURRENT\_TIMESTAMP** - Returns current date and time
- **DATE** - Extracts the date value from a date or date time expression
- **DATEDIFF** - Returns the difference in days of two date values
- **DATE\_ADD** - Same as ADDDATE
- **DATE\_FORMAT** - Applies a format mask to a date





## MySQL Date Functions

- **DATE\_SUB** - Subtracts an interval from a date
- **DAY** - Returns the day portion of a date
- **DAYNAME** - Returns the weekday name for a date
- **DAYOFMONTH** - Same as DAY
- **DAYOFWEEK** - Returns the weekday index (number) for a date value
- **DAYOFYEAR** - Returns the day of year for the given date value
- **EXTRACT** - Extract parts of a date
- **FROM\_DAYS** - Returns date value from a numeric date
- **HOUR** - Returns the hour value from a date time value







## MySQL Date Functions

- **LAST\_DAY** - Returns the last day of the month for the given date
- **LOCALTIME** - Returns current date and time
- **LOCALTIMESTAMP** - Same as LOCALTIME
- **MAKEDATE** - Returns a date for the given year and day of year value
- **MAKETIME** - Returns time for the given hour, minute and second
- **MICROSECOND** - Returns the microsecond portion of a date value
- **MINUTE** - Returns the minute portion of a date value
- **MONTH** - Returns the month portion of a date value
- **MONTHNAME** - Returns the month name for a date value





## MySQL Date Functions

- **NOW** - Returns current date and time
- **PERIOD\_ADD** - Adds months to a period (year/month)
- **PERIOD\_DIFF** - Returns the difference in months between two periods
- **QUARTER** - Returns the quarter of the year for the given date
- **SECOND** - Returns the second portion of a date value
- **SEC\_TO\_TIME** - Converts seconds to a time value
- **STR\_TO\_DATE** - Converts a string to a date using a format mask
- **SUBDATE** - Subtracts an interval from a date





## MySQL Date Functions

- **SUBTIME** - Subtracts a time interval from the given date
- **SYSDATE** - Returns current date time
- **TIME** - Returns the time value from a given time or date time value
- **TIME\_FORMAT** - Formats a time value using the given format mask
- **TIME\_TO\_SEC** - Converts a time value into seconds
- **TIMEDIFF** - Returns the difference of two time or date time values
- **TIMESTAMP** - Converts given expression to date time value
- **TO\_DAYS** - Converts date into numeric days





## MySQL Date Functions

- **WEEK** - Returns the week portion of a date value
- **WEEKDAY** - Returns the weekday index of a date value
- **WEEKOFYEAR** - Returns the week of year for the given date value
- **YEAR** - Returns the year portion of the given date value
- **YEARWEEK** - Returns the year and week for a date value







## Other MySQL Functions

- **BIN** - Converts a decimal number to a binary number
- **BINARY** - Converts a value to a binary string
- **CASE** - Evaluate multiple conditions, return first match
- **CAST** - Converts from one datatype to another
- **COALESCE** - Returns first non-null value from list
- **CONNECTION\_ID** - Returns the unique connection id for the current connection to the database
- **CONV** - Convert from one number base to another





## Other MySQL Functions

- **CURRENT\_USER** - returns the user name and host name of the MySQL account being used
- **DATABASE** - Returns the name of the default database
- **IF** - Evaluates a condition and returns one value if true, different value if false
- **IFNULL** - provide a default value for null when value is null
- **ISNULL** - Tests if expression is null
- **LAST\_INSERT\_ID** - Returns the first AUTO\_INCREMENT value set by the most recent INSERT or UPDATE statement
- **NULLIF** - compares two expressions
- **SESSION\_USER, SYSTEM\_USER, USER** - same as CURRENT\_USER
- **VERSION** - Returns version of MySQL Database



