**The Strings Functions:**

| **Name** | **Description** |
| --- | --- |
| [ASCII()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_ascii) | Return numeric value of left-most character |
| [BIN()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_bin) | Return a string containing binary representation of a number |
| [BIT\_LENGTH()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_bit-length) | Return length of argument in bits |
| [CHAR()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_char) | Return the character for each integer passed |
| [CHAR\_LENGTH()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_char-length) | Return number of characters in argument |
| [CHARACTER\_LENGTH()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_character-length) | Synonym for CHAR\_LENGTH() |
| [CONCAT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_concat) | Return concatenated string |
| [CONCAT\_WS()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_concat-ws) | Return concatenate with separator |
| [ELT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_elt) | Return string at index number |
| [EXPORT\_SET()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_export-set) | Return a string such that for every bit set in the value bits, you get an on string and for every unset bit, you get an off string |
| [FIELD()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_field) | Return the index (position) of the first argument in the subsequent arguments |
| [FIND\_IN\_SET()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_find-in-set) | Return the index position of the first argument within the second argument |
| [FORMAT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_format) | Return a number formatted to specified number of decimal places |
| [FROM\_BASE64()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_from-base64) | Decode to a base-64 string and return result |
| [HEX()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_hex) | Return a hexadecimal representation of a decimal or string value |
| [INSERT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_insert) | Insert a substring at the specified position up to the specified number of characters |
| [INSTR()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_instr) | Return the index of the first occurrence of substring |
| [LCASE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_lcase) | Synonym for LOWER() |
| [LEFT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_left) | Return the leftmost number of characters as specified |
| [LENGTH()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_length) | Return the length of a string in bytes |
| [LIKE](https://dev.mysql.com/doc/refman/5.7/en/string-comparison-functions.html" \l "operator_like) | Simple pattern matching |
| [LOAD\_FILE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_load-file) | Load the named file |
| [LOCATE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_locate) | Return the position of the first occurrence of substring |
| [LOWER()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_lower) | Return the argument in lowercase |
| [LPAD()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_lpad) | Return the string argument, left-padded with the specified string |
| [LTRIM()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_ltrim) | Remove leading spaces |
| [MAKE\_SET()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_make-set) | Return a set of comma-separated strings that have the corresponding bit in bits set |
| [MATCH](https://dev.mysql.com/doc/refman/5.7/en/fulltext-search.html" \l "function_match) | Perform full-text search |
| [MID()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_mid) | Return a substring starting from the specified position |
| [NOT LIKE](https://dev.mysql.com/doc/refman/5.7/en/string-comparison-functions.html" \l "operator_not-like) | Negation of simple pattern matching |
| [NOT REGEXP](https://dev.mysql.com/doc/refman/5.7/en/regexp.html" \l "operator_not-regexp) | Negation of REGEXP |
| [OCT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_oct) | Return a string containing octal representation of a number |
| [OCTET\_LENGTH()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_octet-length) | Synonym for LENGTH() |
| [ORD()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_ord) | Return character code for leftmost character of the argument |
| [POSITION()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_position) | Synonym for LOCATE() |
| [QUOTE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_quote) | Escape the argument for use in an SQL statement |
| [REGEXP](https://dev.mysql.com/doc/refman/5.7/en/regexp.html" \l "operator_regexp) | Pattern matching using regular expressions |
| [REPEAT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_repeat) | Repeat a string the specified number of times |
| [REPLACE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_replace) | Replace occurrences of a specified string |
| [REVERSE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_reverse) | Reverse the characters in a string |
| [RIGHT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_right) | Return the specified rightmost number of characters |
| [RLIKE](https://dev.mysql.com/doc/refman/5.7/en/regexp.html" \l "operator_regexp) | Synonym for REGEXP |
| [RPAD()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_rpad) | Append string the specified number of times |
| [RTRIM()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_rtrim) | Remove trailing spaces |
| [SOUNDEX()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_soundex) | Return a soundex string |
| [SOUNDS LIKE](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "operator_sounds-like) | Compare sounds |
| [SPACE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_space) | Return a string of the specified number of spaces |
| [STRCMP()](https://dev.mysql.com/doc/refman/5.7/en/string-comparison-functions.html" \l "function_strcmp) | Compare two strings |
| [SUBSTR()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_substr) | Return the substring as specified |
| [SUBSTRING()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_substring) | Return the substring as specified |
| [SUBSTRING\_INDEX()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_substring-index) | Return a substring from a string before the  specified number of occurrences of the delimiter |
| [TO\_BASE64()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_to-base64) | Return the argument converted to a base-64 string |
| [TRIM()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_trim) | Remove leading and trailing spaces |
| [UCASE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_ucase) | Synonym for UPPER() |
| [UNHEX()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_unhex) | Return a string containing hex representation of a number |
| [UPPER()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_upper) | Convert to uppercase |
| [WEIGHT\_STRING()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_weight-string) | Return the weight string for a string |

**Numeric Functions:**

Arithmatic Operators:

| **Name** | **Description** |
| --- | --- |
| [DIV](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_div) | Integer division |
| [/](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_divide) | Division operator |
| [-](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_minus) | Minus operator |
| [%, MOD](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_mod) | Modulo operator |
| [+](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_plus) | Addition operator |
| [\*](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_times) | Multiplication operator |
| [-](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_unary-minus) | Change the sign of the argument |

**Mathematical Functions:**

| **Name** | **Description** |
| --- | --- |
| [ABS()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_abs) | Return the absolute value |
| [ACOS()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_acos) | Return the arc cosine |
| [ASIN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_asin) | Return the arc sine |
| [ATAN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_atan) | Return the arc tangent |
| [ATAN2(), ATAN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_atan2) | Return the arc tangent of the two arguments |
| [CEIL()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_ceil) | Return the smallest integer value not less than the argument |
| [CEILING()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_ceiling) | Return the smallest integer value not less than the argument |
| [CONV()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_conv) | Convert numbers between different number bases |
| [COS()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_cos) | Return the cosine |
| [COT()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_cot) | Return the cotangent |
| [CRC32()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_crc32) | Compute a cyclic redundancy check value |
| [DEGREES()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_degrees) | Convert radians to degrees |
| [EXP()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_exp) | Raise to the power of |
| [FLOOR()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_floor) | Return the largest integer value not greater than the argument |
| [LN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_ln) | Return the natural logarithm of the argument |
| [LOG()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_log) | Return the natural logarithm of the first argument |
| [LOG10()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_log10) | Return the base-10 logarithm of the argument |
| [LOG2()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_log2) | Return the base-2 logarithm of the argument |
| [MOD()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_mod) | Return the remainder |
| [PI()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_pi) | Return the value of pi |
| [POW()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_pow) | Return the argument raised to the specified power |
| [POWER()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_power) | Return the argument raised to the specified power |
| [RADIANS()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_radians) | Return argument converted to radians |
| [RAND()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_rand) | Return a random floating-point value |
| [ROUND()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_round) | Round the argument |
| [SIGN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_sign) | Return the sign of the argument |
| [SIN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_sin) | Return the sine of the argument |
| [SQRT()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_sqrt) | Return the square root of the argument |
| [TAN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_tan) | Return the tangent of the argument |
| [TRUNCATE()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_truncate) | Truncate to specified number of decimal places |

**Date And Time Functions:**

| **Name** | **Description** |
| --- | --- |
| [ADDDATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_adddate) | Add time values (intervals) to a date value |
| [ADDTIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_addtime) | Add time |
| [CONVERT\_TZ()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_convert-tz) | Convert from one time zone to another |
| [CURDATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_curdate) | Return the current date |
| [CURRENT\_DATE(), CURRENT\_DATE](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_current-date) | Synonyms for CURDATE() |
| [CURRENT\_TIME(), CURRENT\_TIME](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_current-time) | Synonyms for CURTIME() |
| [CURRENT\_TIMESTAMP(), CURRENT\_TIMESTAMP](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_current-timestamp) | Synonyms for NOW() |
| [CURTIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_curtime) | Return the current time |
| [DATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_date) | Extract the date part of a date or datetime expression |
| [DATE\_ADD()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_date-add) | Add time values (intervals) to a date value |
| [DATE\_FORMAT()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_date-format) | Format date as specified |
| [DATE\_SUB()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_date-sub) | Subtract a time value (interval) from a date |
| [DATEDIFF()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_datediff) | Subtract two dates |
| [DAY()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_day) | Synonym for DAYOFMONTH() |
| [DAYNAME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_dayname) | Return the name of the weekday |
| [DAYOFMONTH()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_dayofmonth) | Return the day of the month (0-31) |
| [DAYOFWEEK()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_dayofweek) | Return the weekday index of the argument |
| [DAYOFYEAR()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_dayofyear) | Return the day of the year (1-366) |
| [EXTRACT()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_extract) | Extract part of a date |
| [FROM\_DAYS()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_from-days) | Convert a day number to a date |
| [FROM\_UNIXTIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_from-unixtime) | Format Unix timestamp as a date |
| [GET\_FORMAT()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_get-format) | Return a date format string |
| [HOUR()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_hour) | Extract the hour |
| [LAST\_DAY](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_last-day) | Return the last day of the month for the argument |
| [LOCALTIME(), LOCALTIME](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_localtime) | Synonym for NOW() |
| [LOCALTIMESTAMP, LOCALTIMESTAMP()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_localtimestamp) | Synonym for NOW() |
| [MAKEDATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_makedate) | Create a date from the year and day of year |
| [MAKETIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_maketime) | Create time from hour, minute, second |
| [MICROSECOND()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_microsecond) | Return the microseconds from argument |
| [MINUTE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_minute) | Return the minute from the argument |
| [MONTH()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_month) | Return the month from the date passed |
| [MONTHNAME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_monthname) | Return the name of the month |
| [NOW()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_now) | Return the current date and time |
| [PERIOD\_ADD()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_period-add) | Add a period to a year-month |
| [PERIOD\_DIFF()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_period-diff) | Return the number of months between periods |
| [QUARTER()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_quarter) | Return the quarter from a date argument |
| [SEC\_TO\_TIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_sec-to-time) | Converts seconds to 'HH:MM:SS' format |
| [SECOND()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_second) | Return the second (0-59) |
| [STR\_TO\_DATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_str-to-date) | Convert a string to a date |
| [SUBDATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_subdate) | Synonym for DATE\_SUB() when invoked with three arguments |
| [SUBTIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_subtime) | Subtract times |
| [SYSDATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_sysdate) | Return the time at which the function executes |
| [TIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_time) | Extract the time portion of the expression passed |
| [TIME\_FORMAT()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_time-format) | Format as time |
| [TIME\_TO\_SEC()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_time-to-sec) | Return the argument converted to seconds |
| [TIMEDIFF()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_timediff) | Subtract time |
| [TIMESTAMP()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_timestamp) | With a single argument, this function returns the date or datetime expression; with two arguments, the sum of the arguments |
| [TIMESTAMPADD()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_timestampadd) | Add an interval to a datetime expression |
| [TIMESTAMPDIFF()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_timestampdiff) | Subtract an interval from a datetime expression |
| [TO\_DAYS()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_to-days) | Return the date argument converted to days |
| [TO\_SECONDS()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_to-seconds) | Return the date or datetime argument converted to seconds since Year 0 |
| [UNIX\_TIMESTAMP()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_unix-timestamp) | Return a Unix timestamp |
| [UTC\_DATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_utc-date) | Return the current UTC date |
| [UTC\_TIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_utc-time) | Return the current UTC time |
| [UTC\_TIMESTAMP()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_utc-timestamp) | Return the current UTC date and time |
| [WEEK()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_week) | Return the week number |
| [WEEKDAY()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_weekday) | Return the weekday index |
| [WEEKOFYEAR()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_weekofyear) | Return the calendar week of the date (1-53) |
| [YEAR()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_year) | Return the year |
| [YEARWEEK()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_yearweek) | Return the year and week |

**Conversion Function:**

|  |  |
| --- | --- |
| **Name** | **Description** |
| BINARY | Cast a string to a binary string |
| CAST() | Cast a value as a certain type |
| Convert() | Cast a value as a certain type |

It produces a string with the [BINARY](https://dev.mysql.com/doc/refman/5.7/en/binary-varbinary.html" \o "11.4.2 The BINARY and VARBINARY Types) data type. . If the optional length N is given, BINARY(N) causes the cast to use no more than N bytes of the argument. Values shorter than N bytes are padded with 0x00 bytes to a length of N.

**CAST(expr AS type)**

The CAST() function takes an expression of any type and produces a result value of the specified type, similar to CONVERT(). For more information, see the description of CONVERT().

CAST() is standard SQL syntax.

**Convert Function:**

Now, There are 2 syntaxes for the CONVERT function - one syntax to convert datatypes and one syntax to convert character sets.

The first syntax for the CONVERT function is used to convert one datatype to another datatype in MySQL:

**CONVERT( value, type )**

OR

The second syntax for the CONVERT function is used to convert one character set to another character set:

**CONVERT( value USING character\_set )**

Now, consider the parameter of the first variant of CONVERT function:

### Parameters or Arguments

**Value:**

The value to convert.

**Type:**The datatype that you wish to convert value to. type can be one of the following:

|  |  |
| --- | --- |
| **Value** | **Description** |
| DATE | Converts value to DATE type, which has a date portion only. Format is 'YYYY-MM-DD'. Supported range is '1000-01-01' to '9999-12-31'. |
| DATETIME | Converts value to DATETIME type, which has both date and time portions. Format is 'YYYY-MM-DD HH:MM:SS'. Supported range is '1000-01-01 00:00:00' to '9999-12-31 23:59:59'. |
| TIME | Converts value to TIME type, which has a time portion only.  Format is 'HH:MM:SS'.  Supported range is '-838:59:59' to '838:59:59'. |
| CHAR | Converts value to a CHAR type, which is a fixed length string |
| SIGNED | Converts value to SIGNED type, which is 64 bit integer |
| UNSIGNED | Converts value to UNSIGNED type, which is 64 bit unsigned integer |
| BINARY | Converts value to a binary string. |

Now, second variant of the convert function.

**CONVERT(value using CHARACTER\_SET);**

Here, the CHARACTER\_SET meaning the character\_set to convert to.

**Note:**

**Example**

Let's look at some MySQL CONVERT function examples and explore how to use the CONVERT function in MySQL.

**Convert to Date:**

The first syntax for the MySQL CONVERT function allows you to convert a value from one datatype to another datatype. Let's look at how to use the CONVERT function to convert a value to a DATE type.

For example:

**mysql> SELECT CONVERT('2014-02-28', DATE);**

**Result: '2014-02-28'**

This CONVERT example takes the value '2014-02-28' and converts it to a DATE datatype.

**Convert to DATETIME:**

This CONVERT function example shows how to convert a value to a DATETIME type. For example:

**mysql> SELECT CONVERT('2014-02-28 08:14:57', DATETIME);**

**Result: '2014-02-28 08:14:57'**

This CONVERT example takes the value '2014-02-28 08:14:57' and converts it to a DATETIME datatype.

**Convert to TIME:**

This CONVERT function example shows how to convert a value to a TIME type. For example:

**mysql> SELECT CONVERT('08:14:57', TIME);**

**Result: '08:14:57'**

This CONVERT example takes the value '08:14:57' and converts it to a TIME datatype.

**Convert to CHAR:**

This CONVERT function example shows how to convert a value to a CHAR type. For example:

**mysql> SELECT CONVERT(125, CHAR);**

**Result: '125'**

This CONVERT example takes the value 125 and converts it as a CHAR datatype with the value of '125'.

**Convert to SIGNED:**

This CONVERT function example shows how to convert a value to a SIGNED type. For example:

**mysql> SELECT CONVERT(4-6, SIGNED);**

**Result: -2**

This CONVERT example takes the value 4-5 and converts it as a SIGNED datatype with the value of -2.

**Convert to UNSIGNED:**

This CONVERT function example shows how to convert a value to an UNSIGNED type. For example:

**mysql> SELECT CONVERT(4-6, UNSIGNED);**

**Result: 18446744073709551614**

This CONVERT example takes the value 4-5 and converts it as an UNSIGNED datatype with the value of 18446744073709551614.

**Convert to BINARY:**

This CONVERT function example shows how to convert a value to a BINARY type. For example:

**mysql> SELECT CONVERT('4', BINARY);**

**Result: '4'**

This CONVERT example takes the value '4' and converts it as a BINARY datatype with the binary string value of '4'.

**Convert Character Sets:**

The second syntax for the MySQL CONVERT function allows you to convert a value from one character set to another. Let's look at how to use the CONVERT function to convert between character sets. For example:

**mysql> SELECT CONVERT('techonthenet.com' USING utf8);**

**Result: 'techonthenet.com'**

This CONVERT example takes the value 'techonthenet.com' and converts it from the current character set to the utf8 character set.

We could change our example above to convert the value 'techonthenet.com' to the latin1 character set as follows:

**mysql> SELECT CONVERT('techonthenet.com' USING latin1);**

**Result: 'techonthenet.com'.**