表达式可以在SQL语句例如：order by 或having子句,select,delete,update中使用..

可以使用文字值、列值、NULL、内置函数、用户定义的函数和运算符来编写表达式

本文介绍允许在MySQL中编写表达式的函数和操作符。

1. 表达式中的类型转化

当运算符与不同类型的操作数一起使用时，会发生类型转换以使得操作数兼容.

如果一个或两个参数都是null,比较的结果是null.

如果比较操作中的两个参数都是字符串，则将他们作为字符串进行比较.

如果两个参数都是整数，则将他们作为整数进行比较.

如果不与数字进行比较，则将十六进制值视为二进制字符串.

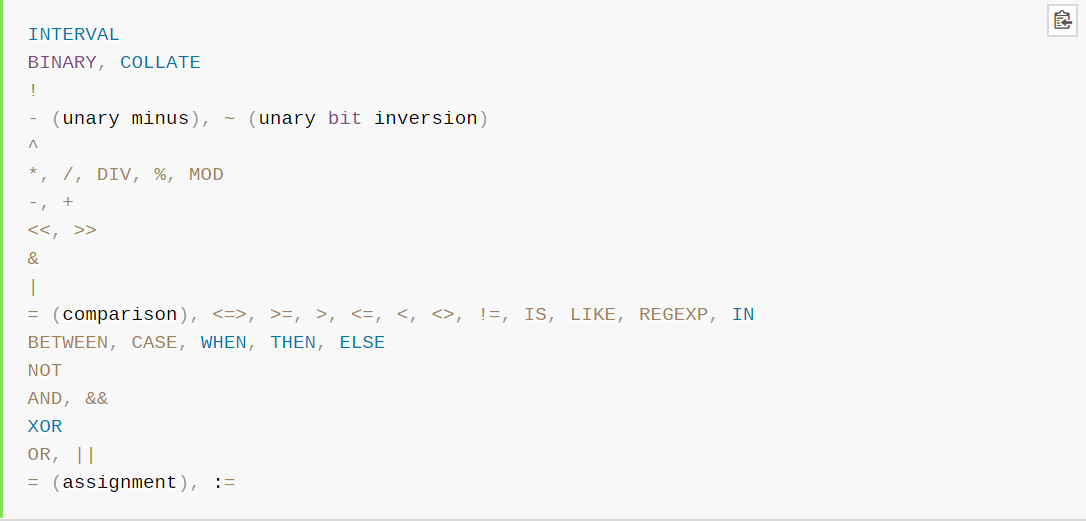
如果其中一个参数是一个timestamp或者datetime列，而另一个参数是一个常量，则常量在执行比较之前转化为时间戳.

一个或多个表中的单行子查询不被视为常量.例如，如果子查询返回的整数要跟某个datetime值进行比较，则比较将以两个整数来。整数不会转化为时间值

如果其中一个参数是十进制值，则比较取决于另一个参数。

在所有其他的情况下，将参数作为浮点数（实数）进行比较。

1. 运算符的优先级



1. 比较函数和优先级

| **名称** | **描述** |
| --- | --- |
| [BETWEEN ... AND ...](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_between) | 检查一个值是否在一个范围内 |
| [COALESCE()](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "function_coalesce) | 返回第一个非NULL参数 |
| [=](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_equal) | 平等的运营商 |
| [<=>](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_equal-to) | 与运算符相同的NULL安全 |
| [>](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_greater-than) | 大于运营商 |
| [>=](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_greater-than-or-equal) | 大于或等于运营商 |
| [GREATEST()](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "function_greatest) | 返回最大的参数 |
| [IN()](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "function_in) | 检查一个值是否在一组值中 |
| [INTERVAL()](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "function_interval) | 返回小于第一个参数的参数的索引 |
| [IS](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_is) | 根据布尔值测试一个值 |
| [IS NOT](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_is-not) | 根据布尔值测试一个值 |
| [IS NOT NULL](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_is-not-null) | NOT NULL值测试 |
| [IS NULL](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_is-null) | NULL值测试 |
| [ISNULL()](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "function_isnull) | 测试参数是否为NULL |
| [LEAST()](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "function_least) | 返回最小的参数 |
| [<](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_less-than) | 少于运营商 |
| [<=](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_less-than-or-equal) | 少于或等于运营商 |
| [LIKE](https://dev.mysql.com/doc/refman/5.7/en/string-comparison-functions.html" \l "operator_like) | 简单的模式匹配 |
| [NOT BETWEEN ... AND ...](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_not-between) | 检查一个值是否不在一个值范围内 |
| [!=， <>](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "operator_not-equal) | 不等于运营商 |
| [NOT IN()](https://dev.mysql.com/doc/refman/5.7/en/comparison-operators.html" \l "function_not-in) | 检查一个值是否不在一组值中 |
| [NOT LIKE](https://dev.mysql.com/doc/refman/5.7/en/string-comparison-functions.html" \l "operator_not-like) | 否定简单模式匹配 |
| [STRCMP()](https://dev.mysql.com/doc/refman/5.7/en/string-comparison-functions.html" \l "function_strcmp) | 比较两个字符串 |

比较操作的结果是1 true 0 false 或者null,这些操作适用于数字和字符串，必要的时候，字符串会自动转化为数字。

1. 逻辑操作符

| **名称** | **描述** |
| --- | --- |
| [AND， &&](https://dev.mysql.com/doc/refman/5.7/en/logical-operators.html" \l "operator_and) | 逻辑AND |
| [NOT， !](https://dev.mysql.com/doc/refman/5.7/en/logical-operators.html" \l "operator_not) | 否定价值 |
| [||， OR](https://dev.mysql.com/doc/refman/5.7/en/logical-operators.html" \l "operator_or) | 逻辑或 |
| [XOR](https://dev.mysql.com/doc/refman/5.7/en/logical-operators.html" \l "operator_xor) | 逻辑XOR |

1. 赋值操作符

| **名称** | **描述** |
| --- | --- |
| [=](https://dev.mysql.com/doc/refman/5.7/en/assignment-operators.html" \l "operator_assign-equal) | 赋值（作为[SET](https://dev.mysql.com/doc/refman/5.7/en/set-variable.html" \o "13.7.4.1变量赋值的SET语法) 语句的一部分 ，或作为语句中的SET子句的 一部分[UPDATE](https://dev.mysql.com/doc/refman/5.7/en/update.html" \o "13.2.11更新语法)） |
| [:=](https://dev.mysql.com/doc/refman/5.7/en/assignment-operators.html" \l "operator_assign-value) | 分配一个值 |

1. 控制流程

| **名称** | **描述** |
| --- | --- |
| [CASE](https://dev.mysql.com/doc/refman/5.7/en/control-flow-functions.html" \l "operator_case) | 案例操作员 |
| [IF()](https://dev.mysql.com/doc/refman/5.7/en/control-flow-functions.html" \l "function_if) | 如果/ else构造 |
| [IFNULL()](https://dev.mysql.com/doc/refman/5.7/en/control-flow-functions.html" \l "function_ifnull) | 空if / else构造 |
| [NULLIF()](https://dev.mysql.com/doc/refman/5.7/en/control-flow-functions.html" \l "function_nullif) | 如果expr1 = expr2，则返回NULL |

1. 字符串函数

| **名称** | **描述** |
| --- | --- |
| [ASCII()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_ascii) | 返回最左边字符的数值 |
| [BIN()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_bin) | 返回一个包含数字二进制表示的字符串 |
| [BIT\_LENGTH()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_bit-length) | 以位为单位返回参数的长度 |
| [CHAR()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_char) | 为每个传递的整数返回字符 |
| [CHAR\_LENGTH()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_char-length) | 返回参数中的字符数 |
| [CHARACTER\_LENGTH()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_character-length) | CHAR\_LENGTH（）的同义词 |
| [CONCAT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_concat) | 返回串联的字符串 |
| [CONCAT\_WS()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_concat-ws) | 返回与分隔符连接 |
| [ELT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_elt) | 返回索引号处的字符串 |
| [EXPORT\_SET()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_export-set) | 返回一个字符串，使得对于值位中设置的每一位，您都会得到一个字符串，并且对于每个未设置的位，都会得到一个字符串 |
| [FIELD()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_field) | 返回后续参数中第一个参数的索引（位置） |
| [FIND\_IN\_SET()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_find-in-set) | 返回第二个参数中第一个参数的索引位置 |
| [FORMAT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_format) | 返回格式化为指定小数位数的数字 |
| [FROM\_BASE64()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_from-base64) | 解码为base-64字符串并返回结果 |
| [HEX()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_hex) | 返回十进制或字符串值的十六进制表示形式 |
| [INSERT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_insert) | 在指定的位置插入一个子字符串，直到指定的字符数 |
| [INSTR()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_instr) | 返回第一次出现的子串的索引 |
| [LCASE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_lcase) | LOWER（）的同义词 |
| [LEFT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_left) | 返回指定的最左边的字符数 |
| [LENGTH()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_length) | 以字节为单位返回字符串的长度 |
| [LIKE](https://dev.mysql.com/doc/refman/5.7/en/string-comparison-functions.html" \l "operator_like) | 简单的模式匹配 |
| [LOAD\_FILE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_load-file) | 加载指定的文件 |
| [LOCATE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_locate) | 返回第一次出现的子串的位置 |
| [LOWER()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_lower) | 以小写形式返回参数 |
| [LPAD()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_lpad) | 返回字符串参数，用指定的字符串左填充 |
| [LTRIM()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_ltrim) | 删除前导空格 |
| [MAKE\_SET()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_make-set) | 返回一组逗号分隔的字符串，这些字符串具有相应的位集 |
| [MATCH](https://dev.mysql.com/doc/refman/5.7/en/fulltext-search.html" \l "function_match) | 执行全文搜索 |
| [MID()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_mid) | 从指定的位置开始返回一个子串 |
| [NOT LIKE](https://dev.mysql.com/doc/refman/5.7/en/string-comparison-functions.html" \l "operator_not-like) | 否定简单模式匹配 |
| [NOT REGEXP](https://dev.mysql.com/doc/refman/5.7/en/regexp.html" \l "operator_not-regexp) | 否定REGEXP |
| [OCT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_oct) | 返回一个包含数字八进制表示的字符串 |
| [OCTET\_LENGTH()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_octet-length) | LENGTH（）的同义词 |
| [ORD()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_ord) | 返回参数最左边字符的字符代码 |
| [POSITION()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_position) | LOCATE（）的同义词 |
| [QUOTE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_quote) | 退出在SQL语句中使用的参数 |
| [REGEXP](https://dev.mysql.com/doc/refman/5.7/en/regexp.html" \l "operator_regexp) | 字符串是否匹配正则表达式 |
| [REPEAT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_repeat) | 重复指定次数的字符串 |
| [REPLACE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_replace) | 替换指定字符串的出现 |
| [REVERSE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_reverse) | 反转字符串中的字符 |
| [RIGHT()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_right) | 返回指定的最右边的字符数 |
| [RLIKE](https://dev.mysql.com/doc/refman/5.7/en/regexp.html" \l "operator_regexp) | 字符串是否匹配正则表达式 |
| [RPAD()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_rpad) | 追加字符串指定的次数 |
| [RTRIM()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_rtrim) | 删除尾随空格 |
| [SOUNDEX()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_soundex) | 返回一个soundex字符串 |
| [SOUNDS LIKE](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "operator_sounds-like) | 比较声音 |
| [SPACE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_space) | 返回指定数量的空格字符串 |
| [STRCMP()](https://dev.mysql.com/doc/refman/5.7/en/string-comparison-functions.html" \l "function_strcmp) | 比较两个字符串 |
| [SUBSTR()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_substr) | 按照指定返回子字符串 |
| [SUBSTRING()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_substring) | 按照指定返回子字符串 |
| [SUBSTRING\_INDEX()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_substring-index) | 在指定的分隔符出现次数之前，从字符串中返回一个子字符串 |
| [TO\_BASE64()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_to-base64) | 返回转换为base-64字符串的参数 |
| [TRIM()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_trim) | 删除前导和尾随空格 |
| [UCASE()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_ucase) | UPPER（）的同义词 |
| [UNHEX()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_unhex) | 返回一个包含数字的十六进制表示的字符串 |
| [UPPER()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_upper) | 转换为大写 |
| [WEIGHT\_STRING()](https://dev.mysql.com/doc/refman/5.7/en/string-functions.html" \l "function_weight-string) | 返回字符串的权重字符串 |

1. 字符串比较函数

| **名称** | **描述** |
| --- | --- |
| [LIKE](https://dev.mysql.com/doc/refman/5.7/en/string-comparison-functions.html" \l "operator_like) | 简单的模式匹配 |
| [NOT LIKE](https://dev.mysql.com/doc/refman/5.7/en/string-comparison-functions.html" \l "operator_not-like) | 否定简单模式匹配 |
| [STRCMP()](https://dev.mysql.com/doc/refman/5.7/en/string-comparison-functions.html" \l "function_strcmp) | 比较两个字符串 |

1. 正则表达式

| **名称** | **描述** |
| --- | --- |
| [NOT REGEXP](https://dev.mysql.com/doc/refman/5.7/en/regexp.html" \l "operator_not-regexp) | 否定REGEXP |
| [REGEXP](https://dev.mysql.com/doc/refman/5.7/en/regexp.html" \l "operator_regexp) | 字符串是否匹配正则表达式 |
| [RLIKE](https://dev.mysql.com/doc/refman/5.7/en/regexp.html" \l "operator_regexp) | 字符串是否匹配正则表达式 |

1. 数字函数和操作符

| **名称** | **描述** |
| --- | --- |
| [ABS()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_abs) | 返回绝对值 |
| [ACOS()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_acos) | 返回反余弦 |
| [ASIN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_asin) | 返回反正弦 |
| [ATAN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_atan) | 返回反正切 |
| [ATAN2()， ATAN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_atan2) | 返回两个参数的反正切值 |
| [CEIL()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_ceil) | 返回不小于参数的最小整数值 |
| [CEILING()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_ceiling) | 返回不小于参数的最小整数值 |
| [CONV()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_conv) | 在不同的数字库之间转换数字 |
| [COS()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_cos) | 返回余弦 |
| [COT()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_cot) | 返回余切 |
| [CRC32()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_crc32) | 计算循环冗余校验值 |
| [DEGREES()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_degrees) | 将弧度转换为度数 |
| [DIV](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_div) | 整数划分 |
| [/](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_divide) | 司运营商 |
| [EXP()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_exp) | 提高权力 |
| [FLOOR()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_floor) | 返回不大于参数的最大整数值 |
| [LN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_ln) | 返回参数的自然对数 |
| [LOG()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_log) | 返回第一个参数的自然对数 |
| [LOG10()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_log10) | 返回参数的基数为10的对数 |
| [LOG2()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_log2) | 返回参数的基数为2的对数 |
| [-](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_minus) | 减号操作员 |
| [MOD()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_mod) | 返回余数 |
| [%， MOD](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_mod) | 模运算符 |
| [PI()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_pi) | 返回pi的值 |
| [+](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_plus) | 加法运算符 |
| [POW()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_pow) | 将所提出的论点归还给指定的权力 |
| [POWER()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_power) | 将所提出的论点归还给指定的权力 |
| [RADIANS()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_radians) | 将参数转换为弧度 |
| [RAND()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_rand) | 返回一个随机的浮点值 |
| [ROUND()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_round) | 围绕论点 |
| [SIGN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_sign) | 返回参数的符号 |
| [SIN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_sin) | 返回参数的正弦值 |
| [SQRT()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_sqrt) | 返回参数的平方根 |
| [TAN()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_tan) | 返回参数的正切值 |
| [\*](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_times) | 乘法运算符 |
| [TRUNCATE()](https://dev.mysql.com/doc/refman/5.7/en/mathematical-functions.html" \l "function_truncate) | 截断到指定的小数位数 |
| [-](https://dev.mysql.com/doc/refman/5.7/en/arithmetic-functions.html" \l "operator_unary-minus) | 改变参数的符号 |

1. 日期和时间函数

| **名称** | **描述** |
| --- | --- |
| [ADDDATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_adddate) | 将时间值（间隔）添加到日期值 |
| [ADDTIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_addtime) | 添加时间 |
| [CONVERT\_TZ()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_convert-tz) | 从一个时区转换到另一个时区 |
| [CURDATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_curdate) | 返回当前日期 |
| [CURRENT\_DATE()， CURRENT\_DATE](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_current-date) | 同义词CURDATE（） |
| [CURRENT\_TIME()， CURRENT\_TIME](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_current-time) | CURTIME（）的同义词 |
| [CURRENT\_TIMESTAMP()， CURRENT\_TIMESTAMP](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_current-timestamp) | NOW（）的同义词 |
| [CURTIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_curtime) | 返回当前时间 |
| [DATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_date) | 提取日期或日期时间表达式的日期部分 |
| [DATE\_ADD()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_date-add) | 将时间值（间隔）添加到日期值 |
| [DATE\_FORMAT()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_date-format) | 按指定格式化日期 |
| [DATE\_SUB()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_date-sub) | 从日期中减去时间值（时间间隔） |
| [DATEDIFF()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_datediff) | 减去两个日期 |
| [DAY()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_day) | DAYOFMONTH（）的同义词 |
| [DAYNAME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_dayname) | 返回工作日的名称 |
| [DAYOFMONTH()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_dayofmonth) | 返回月份的日期（0-31） |
| [DAYOFWEEK()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_dayofweek) | 返回参数的周日指数 |
| [DAYOFYEAR()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_dayofyear) | 返回一年中的某一天（1-366） |
| [EXTRACT()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_extract) | 提取日期的一部分 |
| [FROM\_DAYS()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_from-days) | 将日期编号转换为日期 |
| [FROM\_UNIXTIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_from-unixtime) | 将Unix时间戳格式化为日期 |
| [GET\_FORMAT()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_get-format) | 返回日期格式字符串 |
| [HOUR()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_hour) | 提取小时 |
| [LAST\_DAY](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_last-day) | 返回参数的月份的最后一天 |
| [LOCALTIME()， LOCALTIME](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_localtime) | NOW（）的同义词 |
| [LOCALTIMESTAMP， LOCALTIMESTAMP()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_localtimestamp) | NOW（）的同义词 |
| [MAKEDATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_makedate) | 从年份和年份创建日期 |
| [MAKETIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_maketime) | 创建时间从小时，分钟，秒 |
| [MICROSECOND()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_microsecond) | 从参数中返回微秒 |
| [MINUTE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_minute) | 从参数中返回分钟 |
| [MONTH()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_month) | 从过去的日期中返回月份 |
| [MONTHNAME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_monthname) | 返回月份的名称 |
| [NOW()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_now) | 返回当前日期和时间 |
| [PERIOD\_ADD()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_period-add) | 为一个年份添加句点 |
| [PERIOD\_DIFF()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_period-diff) | 返回期间之间的月数 |
| [QUARTER()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_quarter) | 从日期参数中返回季度 |
| [SEC\_TO\_TIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_sec-to-time) | 将秒转换为'HH：MM：SS'格式 |
| [SECOND()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_second) | 返回第二个（0-59） |
| [STR\_TO\_DATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_str-to-date) | 将字符串转换为日期 |
| [SUBDATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_subdate) | 用三个参数调用DATE\_SUB（）的同义词 |
| [SUBTIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_subtime) | 减去时间 |
| [SYSDATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_sysdate) | 返回函数执行的时间 |
| [TIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_time) | 提取传递的表达式的时间部分 |
| [TIME\_FORMAT()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_time-format) | 格式为时间 |
| [TIME\_TO\_SEC()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_time-to-sec) | 返回转换为秒的参数 |
| [TIMEDIFF()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_timediff) | 减去时间 |
| [TIMESTAMP()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_timestamp) | 使用单个参数，该函数返回日期或日期时间表达式; 有两个参数，即参数的总和 |
| [TIMESTAMPADD()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_timestampadd) | 将时间间隔添加到日期时间表达式中 |
| [TIMESTAMPDIFF()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_timestampdiff) | 从日期时间表达式中减去一个时间间隔 |
| [TO\_DAYS()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_to-days) | 返回转换为天的日期参数 |
| [TO\_SECONDS()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_to-seconds) | 从Year 0开始，将返回的日期或日期时间参数转换为秒数 |
| [UNIX\_TIMESTAMP()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_unix-timestamp) | 返回一个Unix时间戳 |
| [UTC\_DATE()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_utc-date) | 返回当前的UTC日期 |
| [UTC\_TIME()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_utc-time) | 返回当前的UTC时间 |
| [UTC\_TIMESTAMP()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_utc-timestamp) | 返回当前的UTC日期和时间 |
| [WEEK()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_week) | 返回周数 |
| [WEEKDAY()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_weekday) | 返回周日指数 |
| [WEEKOFYEAR()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_weekofyear) | 返回日期的日历周（1-53） |
| [YEAR()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_year) | 返回年份 |
| [YEARWEEK()](https://dev.mysql.com/doc/refman/5.7/en/date-and-time-functions.html" \l "function_yearweek) | 返回一年和一周 |

1. cast函数

| **名称** | **描述** |
| --- | --- |
| [BINARY](https://dev.mysql.com/doc/refman/5.7/en/cast-functions.html" \l "operator_binary) | 将字符串转换为二进制字符串 |
| [CAST()](https://dev.mysql.com/doc/refman/5.7/en/cast-functions.html" \l "function_cast) | 将某个值作为特定类型进行投射 |
| [CONVERT()](https://dev.mysql.com/doc/refman/5.7/en/cast-functions.html" \l "function_convert) | 将某个值作为特定类型进行投射 |

1. 加密压缩函数

| **名称** | **描述** |
| --- | --- |
| [AES\_DECRYPT()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_aes-decrypt) | 使用AES解密 |
| [AES\_ENCRYPT()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_aes-encrypt) | 使用AES加密 |
| [ASYMMETRIC\_DECRYPT()](https://dev.mysql.com/doc/refman/5.7/en/enterprise-encryption-functions.html" \l "function_asymmetric-decrypt) | 使用私钥或公钥解密密文 |
| [ASYMMETRIC\_DERIVE()](https://dev.mysql.com/doc/refman/5.7/en/enterprise-encryption-functions.html" \l "function_asymmetric-derive) | 从非对称密钥导出对称密钥 |
| [ASYMMETRIC\_ENCRYPT()](https://dev.mysql.com/doc/refman/5.7/en/enterprise-encryption-functions.html" \l "function_asymmetric-encrypt) | 使用私钥或公钥加密明文 |
| [ASYMMETRIC\_SIGN()](https://dev.mysql.com/doc/refman/5.7/en/enterprise-encryption-functions.html" \l "function_asymmetric-sign) | 从摘要生成签名 |
| [ASYMMETRIC\_VERIFY()](https://dev.mysql.com/doc/refman/5.7/en/enterprise-encryption-functions.html" \l "function_asymmetric-verify) | 验证签名是否与摘要匹配 |
| [COMPRESS()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_compress) | 将结果作为二进制字符串返回 |
| [CREATE\_ASYMMETRIC\_PRIV\_KEY()](https://dev.mysql.com/doc/refman/5.7/en/enterprise-encryption-functions.html" \l "function_create-asymmetric-priv-key) | 创建私钥 |
| [CREATE\_ASYMMETRIC\_PUB\_KEY()](https://dev.mysql.com/doc/refman/5.7/en/enterprise-encryption-functions.html" \l "function_create-asymmetric-pub-key) | 创建公钥 |
| [CREATE\_DH\_PARAMETERS()](https://dev.mysql.com/doc/refman/5.7/en/enterprise-encryption-functions.html" \l "function_create-dh-parameters) | 生成共享的DH秘密 |
| [CREATE\_DIGEST()](https://dev.mysql.com/doc/refman/5.7/en/enterprise-encryption-functions.html" \l "function_create-digest) | 从字符串生成摘要 |
| [DECODE()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_decode) （不赞成5.7.2） | 解码使用ENCODE（）加密的字符串 |
| [DES\_DECRYPT()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_des-decrypt) （不赞成5.7.6） | 解密一个字符串 |
| [DES\_ENCRYPT()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_des-encrypt) （不赞成5.7.6） | 加密一个字符串 |
| [ENCODE()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_encode) （不赞成5.7.2） | 编码一个字符串 |
| [ENCRYPT()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_encrypt) （不赞成5.7.6） | 加密一个字符串 |
| [MD5()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_md5) | 计算MD5校验和 |
| [OLD\_PASSWORD()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_old-password) | 返回PASSWORD的4.1之前版本的值 |
| [PASSWORD()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_password) （不赞成5.7.6） | 计算并返回一个密码字符串 |
| [RANDOM\_BYTES()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_random-bytes) | 返回一个随机字节向量 |
| [SHA1()， SHA()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_sha1) | 计算SHA-1 160位校验和 |
| [SHA2()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_sha2) | 计算SHA-2校验和 |
| [UNCOMPRESS()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_uncompress) | 解压缩压缩的字符串 |
| [UNCOMPRESSED\_LENGTH()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_uncompressed-length) | 压缩前返回字符串的长度 |
| [VALIDATE\_PASSWORD\_STRENGTH()](https://dev.mysql.com/doc/refman/5.7/en/encryption-functions.html" \l "function_validate-password-strength) | 确定密码的强度 |

1. 信息函数

| **名称** | **描述** |
| --- | --- |
| [BENCHMARK()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_benchmark) | 重复执行一个表达式 |
| [CHARSET()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_charset) | 返回参数的字符集 |
| [COERCIBILITY()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_coercibility) | 返回字符串参数的排序规则值 |
| [COLLATION()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_collation) | 返回字符串参数的排序规则 |
| [CONNECTION\_ID()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_connection-id) | 返回连接的连接ID（线程ID） |
| [CURRENT\_USER()， CURRENT\_USER](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_current-user) | 经过验证的用户名和主机名 |
| [DATABASE()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_database) | 返回默认（当前）数据库名称 |
| [FOUND\_ROWS()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_found-rows) | 对于带有LIMIT子句的SELECT，将返回的行数不存在LIMIT子句 |
| [LAST\_INSERT\_ID()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_last-insert-id) | 最后一个INSERT的AUTOINCREMENT列的值 |
| [ROW\_COUNT()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_row-count) | 更新的行数 |
| [SCHEMA()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_schema) | DATABASE（）的同义词 |
| [SESSION\_USER()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_session-user) | USER（）的同义词 |
| [SYSTEM\_USER()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_system-user) | USER（）的同义词 |
| [USER()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_user) | 客户端提供的用户名和主机名 |
| [VERSION()](https://dev.mysql.com/doc/refman/5.7/en/information-functions.html" \l "function_version) | 返回一个表示MySQL服务器版本的字符串 |