Expressions can be used at several points in SQL statements, such as in the `ORDER BY` or `HAVING` clauses of `SELECT` statements, in the `WHERE` clause of a `SELECT`, `DELETE`, or `UPDATE` statement, or in `SET` statements. Expressions can be written using values from several sources, such as literal values, column values, `NULL`, variables, built-in functions and operators, loadable functions, and stored functions (a type of stored object).

This chapter describes the built-in functions and operators that are permitted for writing expressions in MySQL. For information about loadable functions and stored functions, see Section 5.7, “MySQL Server Loadable Functions”, and Section 25.2, “Using Stored Routines”. For the rules describing how the server interprets references to different kinds of functions, see Section 9.2.5, “Function Name Parsing and Resolution”.

An expression that contains `NULL` always produces a `NULL` value unless otherwise indicated in the documentation for a particular function or operator.

Note

By default, there must be no whitespace between a function name and the parenthesis following it. This helps the MySQL parser distinguish between function calls and references to tables or columns that happen to have the same name as a function. However, spaces around function arguments are permitted.

To tell the MySQL server to accept spaces after function names by starting it with the `--sql-mode=IGNORE_SPACE` option. (See Section 5.1.11, “Server