**MySQL Functions**

MySQL has many built-in functions.

This reference contains string, numeric, date, and some advanced functions in MySQL.

**MySQL String Functions**

**Definition and Usage**

The CONCAT() function adds two or more expressions together.

**Example**

Add several strings together:

SELECT CONCAT("SQL ", "Tutorial ", "is ", "fun!")

**Example**

Add three columns into one "Address" column:

SELECT CONCAT(Address, " ", PostalCode, " ", City) AS Address FROM Customers;

**Definition and Usage**

The CONCAT\_WS() function adds two or more expressions together with a separator.

**Note:** Also look at the CONCAT() function.

**Syntax**

CONCAT\_WS(*separator*, *expression1*, *expression2*, *expression3*,...)

**Example**

Add several expressions together, and add a "-" separator between them:

SELECT CONCAT\_WS("-", "SQL", "Tutorial", "is", "fun!")

The FORMAT() function formats a number to a format like

"#,###,###.##", rounded to a specified number of decimal places, then it returns the result as a string.

**Syntax**

FORMAT(*number*, *decimal\_places*)

SELECT FORMAT(250500.5634, 2);

**Definition and Usage**

The INSERT() function inserts a string within a string at the specified position and for a certain number of characters.

**Syntax**

INSERT(*string*, *position*, *number*, *string2*)

**Example**

Insert the string "Example" into the string "duacindia.com ". Replace the first nine characters:

SELECT INSERT("duacindia.com", 1, 9, "Example");

**Definition and Usage**

The INSTR() function returns the position of the first occurrence of a string in another string.

This function performs a case-insensitive search.

**Syntax**

INSTR(*string1*, *string2*)

Search for "3" in string " du3ac.in.com ", and return position:

SELECT INSTR("du3ac.in.com", "3") ;

The LCASE() function converts a string to lower-case.

**Note:** The LOWER() function is a synonym for the LCASE() function.

**Syntax**

LCASE(*text*)

**Example**

Convert the text to lower-case:

SELECT LCASE("SQL Tutorial is FUN!");

**Definition and Usage**

The LEFT() function extracts a number of characters from a string (starting from left).

**Syntax**

LEFT(*string*, *number\_of\_chars*)

Extract 3 characters from a string (starting from left):

SELECT LEFT("SQL Tutorial", 3)

**Definition and Usage**

The LENGTH() function returns the length of a string (in bytes).

**Syntax**

LENGTH(*string*)

SELECT LENGTH("SQL Tutorial")

**Definition and Usage**

The LOWER() function converts a string to lower-case.

SELECT LOWER("SQL Tutorial is FUN!");

The LPAD() function left-pads a string with another string, to a certain length.

Left-pad the string with "ABC", to a total length of 20:

SELECT LPAD("SQL Tutorial", 20, "ABC");

The LTRIM() function removes leading spaces from a string.

**Syntax**

LTRIM(*string*)

**Example**

Remove leading spaces from a string:

SELECT LTRIM(" SQL Tutorial")

**Definition and Usage**

The MID() function extracts a substring from a string (starting at any position).

**Note:** The MID() and SUBSTR() functions equals the SUBSTRING() function.

**Example**

Extract a substring from a string (start at position 5, extract 3 characters):

SELECT MID("SQL Tutorial", 5, 3)

**Definition and Usage**

The POSITION() function returns the position of the first occurrence of a substring in a string.

SELECT POSITION("3" IN "Abc3india.com")

The REPEAT() function repeats a string as many times as specified.

**Syntax**

REPEAT(*string*, *number*)

Repeat a string 3 times:

SELECT REPEAT("SQL Tutorial", 3);

**Definition and Usage**

The REPLACE() function replaces all occurrences of a substring within a string, with a new substring.

**Note:** This function performs a case-sensitive replacement.

**Syntax**

REPLACE(*string*, *substring*, *new\_string*)

**Example**

Replace "SQL" with "HTML":

SELECT REPLACE("SQL Tutorial", "SQL", "HTML");

**Definition and Usage**

The REVERSE() function reverses a string and returns the result.

**Syntax**

REVERSE(*string*)

**Example**

Reverse a string:

SELECT REVERSE("SQL Tutorial");

The RIGHT() function extracts a number of characters from a string (starting from right).

**Example**

Extract 4 characters from a string (starting from right):

SELECT RIGHT("SQL Tutorial is cool", 4)

**Definition and Usage**

The RPAD() function right-pads a string with another string, to a certain length.

**Syntax**

RPAD(*string*, *length*, *rpad\_string*)

**Example**

Right-pad the string with "ABC", to a total length of 20:

SELECT RPAD("SQL Tutorial", 20, "ABC");

**Definition and Usage**

The RTRIM() function removes trailing spaces from a string.

**Syntax**

RTRIM(*string*)

Remove trailing spaces from a string:

SELECT RTRIM("SQL Tutorial ")

**Definition and Usage**

The STRCMP() function compares two strings.

**Syntax**

STRCMP(*string1*, *string2*)

**Example**

Compare two strings:

SELECT STRCMP("SQL Tutorial", "SQL Tutorial");

**Definition and Usage**

The SUBSTR() function extracts a substring from a string (starting at any position).

**Example**

Extract a substring from a string (start at position 5, extract 3 characters):

SELECT SUBSTR("SQL Tutorial", 5, 3)

**Definition and Usage**

The SUBSTRING() function extracts a substring from a string (starting at any position).

**Example**

Extract a substring from a string (start at position 5, extract 3 characters):

SELECT SUBSTRING("SQL Tutorial", 5, 3)

**Definition and Usage**

The TRIM() function removes leading and trailing spaces from a string.

**Syntax**

TRIM(*string*)

**Example**

Remove leading and trailing spaces from a string:

SELECT TRIM(' SQL Tutorial ')

**Definition and Usage**

The UCASE() function converts a string to upper-case.

**Syntax**

UCASE(*text*)

**Example**

Convert the text to upper-case:

SELECT UCASE("SQL Tutorial is FUN!");

**Definition and Usage**

The UPPER() function converts a string to upper-case.

**Example**

Convert the text to upper-case:

SELECT UPPER("SQL Tutorial is FUN!");