

Functions in SQL

Programming Practices for Research in Economics

SQL Aggregate Functions

SQL aggregate functions return a single value, calculated from values in a column.

Aggregate Function	What it does
AVG()	Returns the average value
COUNT()	Returns the number of rows
COUNT(*)	Returns the number of rows in a table
FIRST()	Returns the first value
LAST()	Returns the last value
MAX()	Returns the largest value
MIN()	Returns the smallest value
SUM()	Returns the sum

SQL Scalar functions

SQL scalar functions return a single value, based on the input value.

Scalar Function	What it does
UCASE()	Converts a field to upper case
LCASE()	Converts a field to lower case
MID()	Extract characters from a text field
LEN()	Returns the length of a text field
ROUND()	Rounds a numeric field to the number of decimals specified
NOW()	Returns the current system date and time
FORMAT()	Formats how a field is to be displayed

Mathematical Functions

Scalar Function	What it does
+	addition
-	subtraction
*	multiplication
/	division
%	modulo
ABS(x)	returns the absolute value of x
SIGN(x)	returns the sign of input x as -1, 0, or 1 (negative, zero, or positive respectively)
MOD(x,y)	modulo - returns the integer remainder of x divided by y (same as $x\%y$)
FLOOR(x)	returns the largest integer value that is less than or equal to x
CEILING(x)	or CEIL(x) returns the smallest integer value that is greater than or equal to x
POWER(x,y)	returns the value of x raised to the power of y
ROUND(x)	returns the value of x rounded to the nearest whole integer
ROUND(x,d)	returns the value of x rounded to the number of decimal places specified by the value d
SQRT(x)	returns the square-root value of x

Reference

Borrowed from Paarsch, HJ and K Golyaev (2016), “A Gentle Introduction to Effective Computing in Quantitative Research: What Every Research Assistant Should Know”, MIT Press.