

# MySQL Fundamentals Part 2

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## MYSQL FUNCTIONS



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# Outline



## Functions

- String Functions
- Numeric Functions
- Date/Time Functions
- Control Flow Functions
- Cast Functions
- Information Functions
- Miscellaneous Functions

## Aggregate Functions / Column Functions

## Stored Functions / User Defined Functions\*

\* Discussed in Stored Procedure and Stored Function Module



# Scalar Functions



**A scalar function operates on a single value and returns a single value.**

- String Functions
- Numeric Functions
- Date/Time Functions



# String Functions

ASCII()	LENGTH()	REPLACE()
BIN()	LIKE	REVERSE()
BIT_LENGTH()	LOAD_FILE()	RIGHT()
CHAR_LENGTH()	LOCATE()	RLIKE
CHAR()	LOWER()	RPAD()
CONCAT()	LPAD()	RTRIM()
ELT()	MATCH	SOUNDEX()
EXPORT_SET()	MID()	STRCMP()
FIELD()	NOT LIKE	SUBSTR()
FIND_IN_SET()	NOT REGEXP	SUBSTRING_INDEX()
FORMAT()	OCT()	SUBSTRING()
FROM_BASE64()	OCTET_LENGTH()	TO_BASE64()
HEX()	ORD()	TRIM()
INSERT()	POSITION()	UCASE()
INSTR()	QUOTE()	UNHEX()
LCASE()	REGEXP	UPPER()
LEFT()	REPEAT()	WEIGHT_STRING()



# Numeric Functions

ABS()	/	POW()
ACOS()	EXP()	POWER()
ASIN()	FLOOR()	RADIANS()
ATAN2(), ATAN()	LN()	RAND()
ATAN()	LOG10()	ROUND()
CEIL()	LOG2()	SIGN()
CEILING()	LOG()	SIN()
CONV()	-	SQRT()
COS()	MOD()	TAN()
COT()	% or MOD	*
CRC32()	PI()	TRUNCATE()
DEGREES()	+	-
DIV		



# Date/Time Functions

ADDDATE()	FROM_UNIXTIME()	SUBTIME()
ADDTIME()	GET_FORMAT()	SYSDATE()
CONVERT_TZ()	HOUR()	TIME_FORMAT()
CURDATE()	LAST_DAY	TIME_TO_SEC()
CURRENT_DATE(),CURRENT_DATE	LOCALTIME(), LOCALTIME	TIME()
CURRENT_TIME(),CURRENT_TIME	LOCALTIMESTAMP,LOCALTIMESTAMP()	TIMEDIFF()
CURRENT_TIMESTAMP(),CURRENT_TIMESTAMP	MAKEDATE()	TIMESTAMP()
CURTIME()	MAKETIME	TIMESTAMPADD()
DATE_ADD()	MICROSECOND()	TIMESTAMPDIFF()
DATE_FORMAT()	MINUTE()	TO_DAYS()
DATE_SUB()	MONTH()	TO_SECONDS()
DATE()	MONTHNAME()	UNIX_TIMESTAMP()
DATEDIFF()	NOW()	UTC_DATE()
DAY()	PERIOD_ADD()	UTC_TIME()
DAYNAME()	PERIOD_DIFF()	UTC_TIMESTAMP()
DAYOFMONTH()	QUARTER()	WEEK()
DAYOFWEEK()	SEC_TO_TIME()	WEEKDAY()
DAYOFYEAR()	SECOND()	WEEKOFYEAR()
EXTRACT()	STR_TO_DATE()	YEAR()
FROM_DAYS()	SUBDATE()	YEARWEEK()



# Control Flow Functions

CASE	Case operator
IF()	If/else construct
IFNULL()	Null if/else construct
NULLIF()	Return NULL if $\text{expr1} = \text{expr2}$



# Cast Functions

CAST()	Cast a value as a certain type
CONVERT()	Cast a value as a certain type





# Information Functions

BENCHMARK()	LAST_INSERT_ID()
CHARSET()	ROW_COUNT()
COERCIBILITY()	SCHEMA()
COLLATION()	SESSION_USER()
CONNECTION_ID()	SYSTEM_USER()
CURRENT_USER(),CURRENT_USER	USER()
DATABASE()	VERSION()
FOUND_ROWS()	

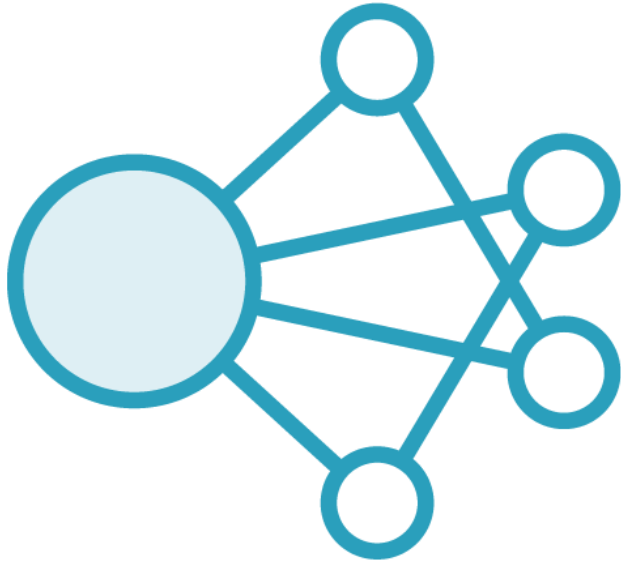


# Miscellaneous Functions

DEFAULT()	IS_IPV6()
GET_LOCK()	IS_USED_LOCK()
INET_ATON()	MASTER_POS_WAIT()
INET_NTOA()	NAME_CONST()
INET6_ATON()	RAND()
INET6_NTOA()	RELEASE_LOCK()
IS_FREE_LOCK()	SLEEP()
IS_IPV4_COMPAT()	UUID_SHORT()
IS_IPV4_MAPPED()	UUID()
IS_IPV4()	VALUES()



# Aggregate Functions



An aggregate function operates on a series of values and returns a single value.

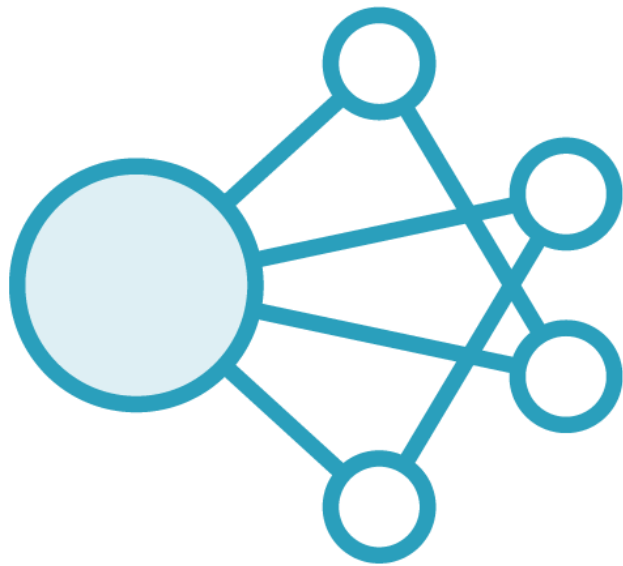
Known as a Column Function, as it typically operates on a value in column

AVG and SUM functions return numeric value

MIN, MAX, COUNT functions return numeric, date or string value



# Aggregate Functions



Ignores the NULL value in Column  
(except COUNT function)

Summary Query is a query with multiple  
aggregation functions

Requires Group By in query if SELECT  
clause includes non-aggregate columns  
along with aggregation function

# Summary



A function is a special type of command word in the SQL command set that returns a single value

Scalar functions operate on a single value and return a single value

An aggregate function operates on a series of values and returns a single value

Summary Query is a query with multiple aggregation functions

