

numeric

TINYINT [(digits)] [unsigned zerofill]	256
BIT,BOOL,BOOLEAN	synonyms for tinyint(1)
SMALLINT [(digits)] [unsigned zerofill]	65,536
MEDIUMINT [(digits)] [unsigned zerofill]	16,777,216
INT,INTEGER [(digits)] [unsigned zerofill]	4,294,967,296
BIGINT [(digits)] [unsigned zerofill]	18,446,744,073,709,551,616
FLOAT [(digits, digits after decimal)] [unsigned zerofill]	23 digits
DOUBLE [(digits, digits after decimal)] [unsigned zerofill]	24...53 digits
DECIMAL [(digits, digits after decimal)] [unsigned zerofill]	a type of DOUBLE stored as a string

strings

CHAR [(length)]	0...255 – fixed length, right-padded with spaces
VARCHAR [(length)]	0...255 – variable length (trailing spaces removed)
BINARY,VARBINARY [(length)]	0...255 – stores bytes instead of character strings
TINYTEXT TINYBLOB	0...255 – text stores strings, blob stores bytes
TEXT BLOB	0...65,535 – text stores strings, blob stores bytes
MEDIUMTEXT MEDIUMBLOB	0...16,777,215 – text stores strings, blob stores bytes
LONGTEXT LONGBLOB	0...4,294,967,295 – text stores strings, blob stores bytes
ENUM ('value1', 'value2',...)	list of up to 65,535 members, can have only one value
SET ('value1', 'value2',...)	list of up to 64 members, can have zero or more values

REGEXP 'expression'

date & time

DATE	'YYYY-MM-DD'
DATETIME	'YYYY-MM-DD HH:MM:SS'
TIMESTAMP [(display width)]	'YYYY-MM-DD HH:MM:SS' – display widths: 6, 8, 12 or 14
TIME	'HH:MM:SS'
YEAR [(2 4)]	'YYYY' – a year in 2-digit or 4-digit format

commands

connecting to a database

mysql [-h hostname] [-u username] [-p password] [dbname]

importing data

mysql dbname < dbdumpfile.sql

backup a database

mysqldump [-options] dbname [> dumpfile.sql]

functions

ABS (X)	SIGN (X)
FLOOR (X)	CEILING (X)
ROUND (X[,D])	EXP (X)
DIV (X)	MOD (N,M)
POW (X,Y)	POWER (X,Y)
SQRT (X)	RAND [(seed)]
PI ()	DEGREES (X)
RADIANS (X)	COT (X)
COS (X)	ACOS (X)
SIN (X)	ASIN (X)
TAN (X) ATAN (X)	ATAN2 (X)
LOG (X), LOG2 (X), LOG10 (X)	LN (X)
TRUNCATE (X, D)	



functions

ASCII ('str')	CONV (number,from_base,to_base)	BIN (num), OCT (num), HEX (num)
ORD ('str')	CHAR (number[USING charset],...)	CONCAT ('str1', 'str1',...)
LENGTH ('str')	CHAR_LENGTH ('str')	CONCAT_WS ('separator', 'str1', 'str2')
BIT_LENGTH ('str')	REVERSE ('str')	SOUNDEX ('str')
LCASE ('str')	UCASE ('str')	QUOTE ('str')
LPAD ('str', len, 'padstr')	RPAD ('str', len, 'padstr')	ELT (number, 'str1', 'str2', 'str3',...)
LEFT ('str', length)	RIGHT ('str', length)	FIELD ('str', 'str1', 'str2', 'str3',...)
LTRIM ('str')	RTRIM ('str') TRIM ('str')	LOAD_FILE ('filename')
SPACE (count)	REPEAT ('str', count)	SUBSTRING ('str', pos[, length])
REPLACE ('str', 'from', 'to')	INSERT ('str', pos, length, 'newstr')	SUBSTRING_INDEX ('str', 'del', count)
INSTR ('str', 'substr')	LOCATE ('substr', 'str'[, pos])	STRCMP ('str1', 'str2')

functions

WEEK ('date'[, mode])	WEEKDAY ('date')	DAYOFWEEK ('date')
DAYOFYEAR ('date')	MONTH ('date')	MONTHNAME ('date')
QUARTER ('date')	YEAR ('date')	YEARWEEK ('date'[, mode])
hour ('date')	MINUTE ('date')	SECOND ('date')
TO_DAYS ('date')	FROM_DAYS (number)	LAST_DAY ('date')
SEC_TO_TIME (seconds)	TIME_TO_SEC ('time')	SYSDATE ()
CURTIME (), CURRENT_TIME (), CURRENT_TIME	TIME_FORMAT ('date', 'format')	
CURDATE (), CURRENT_DATE (), CURRENT_DATE	DATE_FORMAT ('date', 'format')	
NOW (), CURRENT_TIMESTAMP (), CURRENT_TIMESTAMP , LOCALTIME (), LOCALTIME		
UNIX_TIMESTAMP (['date'])	FROM_UNIXTIME ('unix_timestamp'[, 'format'])	
PERIOD_ADD ('period', num)	PERIOD_DIFF ('period', num)	EXTRACT (unit FROM 'date')
ADDDATE ('date', days) ADDDATE ('date', INTERVAL expr unit), DATE_ADD ('date', INTERVAL expr unit)		
SUBDATE ('date', days) SUBDATE ('date', INTERVAL expr unit), DATE_SUB ('date', INTERVAL expr unit)		

syntax & examples

Create a database

```
mysql> CREATE DATABASE dbname;
```

Select a database

```
mysql> USE dbname;
```

Delete a database

```
mysql> DROP DATABASE dbname;
```

Add a user to a database

```
mysql> GRANT ALL [PRIVILEGES] ON database.* TO [username]@[hostname] [IDENTIFIED BY 'password'];
```

List tables in a database

```
mysql> SHOW TABLES;
```

Show table format

```
mysql> DESCRIBE table;
```

Delete records in a table

```
mysql> DELETE FROM TABLE table [WHERE conditions];
```

Create a table

```
mysql> CREATE TABLE table (column definition,...) [options...];
```

Change a column definition in a table

```
mysql> ALTER TABLE table CHANGE column definition;
```

Change auto_increment value

```
mysql> ALTER TABLE table AUTO_INCREMENT=value;
```

Add a new record

```
mysql> INSERT table (column1, column2,...) VALUES (expr1, expr2...);
```

Update a record in a single table

```
mysql> UPDATE table SET column=expr[, column=expr...] [WHERE conditions] [ORDER BY ...] [LIMIT count]
```

Retrieve information from a table

```
mysql> SELECT {*[expr]column,...} [FROM table,...] [WHERE conditions] [GROUP BY ...] [HAVING conditions] [ORDER BY ...] [LIMIT count]
```

Show create table syntax

```
mysql> SHOW CREATE TABLE table;
```

Add a column to a table

```
mysql> ALTER TABLE table ADD column definition [AFTER col];
```

Alter table syntax

```
mysql> ALTER TABLE table change specs[, change specs...];
```

or Add a new record

```
mysql> INSERT table SET column=expr[, column=expr...];
```

operators

AND, &&	Logical AND
 , OR	Logical OR
XOR	Logical XOR
BINARY	Cast a string to binary string
&	Bitwise AND
 	Bitwise OR
^	Bitwise XOR
<<	Left shift
>>	Right shift
-	Invert bits
-	Change sign of value
-	Minus
+	Addition
*	Multiplication
%	Modulo
DIV, /	Integer division, division
<=>	NULL-safe equal to
=	Equal operator
>=	Greater than or equal to
>	Greater than
<=	Less than or equal to
<	Less than
IS	Boolean test
LIKE	Simple pattern matching
!=, <>	Not equal to
NOT LIKE	Negative simple match
NOT REGEXP	Negative regular expression
NOT, !	Negates value
REGEXP	Match on regular expression
RLIKE	Synonym for REGEXP
SOUNDS LIKE	Compare sounds

miscellaneous functions

DATABASE()	VERSION()	CONNECTION_ID()
USER()	CURRENT_USER()	PASSWORD('string')
FOUND_ROWS()	ROW_COUNT()	LAST_INSERT_ID([expr])
BIT_COUNT(number)	FORMAT(number,digits)	BENCHMARK(count, expr)
CAST(expr AS type)	CONVERT(expr, type)	CHARSET('str')
INET_NTOA(expr)	INET_ATON(expr)	LEAST(val1,val2,...)
GET_LOCK('lock',timeout)	RELEASE_LOCK('lock')	GREATEST(val1,val2,...)
ENCRYPT('str','salt')	DECODE('crypt','pass')	ENCODE('str','password')
MD5('string')	SHA1('string')	AES_ENCRYPT('str','key')
COMPRESS('string')	UNCOMPRESS('string')	AES_DECRYPT('str','key')
DES_ENCRYPT('str',[keynum]{keystr})		DES_DECRYPT('string','key')

grouping functions

AVG(expr)	SUM(expr)
MIN(expr)	MAX(expr)
VARIANCE(expr)	STD(expr)
BIT_AND(expr)	BIT_OR(expr)
COUNT(expr)	
COUNT(DISTINCT expr[, expr...])	
GROUP_CONCAT(expr)	
GROUP_CONCAT([DISTINCT] expr[, expr...]	
[ORDER BY {int column}expr	
[ASC DESC] [, column ...]	
[SEPARATOR 'string'])	

control flow

IF(expression,true_result,false_result)
IFNULL(expression,result)
NULLIF(expression1,expression2)
CASE [value] WHEN [comparison] THEN [result]
[WHEN [comparison] THEN result...]
[ELSE result] END