

MySQL cheat sheet

Laatste wijziging: 20 sep 2024

MySQL *Shell* commands (dit zijn dus *géén* SQL-statements)

```
\sql (switcht indien nodig naar SQL-modus ipv JS-modus)
\c[onnect] <user>@<host> (bvb: \connect root@localhost)
\source <pad-naar-sql-file> (bvb: \source "C:\Users\els\Downloads\bib-import.sql")
\help [<keyword>|<function>]
```

SHOW, USE en DESCRIBE (vanaf hier *wél* SQL-statements)

```
SHOW DATABASES;
USE <database_name>;
SHOW TABLES [FROM <database_name>];
DESC[RIBE] <table_name>; (toont overzicht van kolom-namen en datatypes)
SHOW COLUMNS FROM <table_name>; (idem)
SHOW CREATE TABLE <table_name>; (idem, maar toont óók de constraints)
```

SELECT-statement

```
SELECT ... [FROM ... [WHERE ...] [GROUP BY ... [HAVING ...]] [ORDER BY ...]];
```

```
SELECT * FROM <table> [...];
SELECT <column>[,<other_column>,...] FROM <table> [...];
SELECT <column> [[AS] <alias>][,...] FROM <table> [...];
SELECT [*,]<expression> [[AS] <alias>][,...] FROM <table> [...];
SELECT DISTINCT ... FROM <table> [...];
```

String functions: length, concat, upper, lower, ltrim, trim, substr, substring_index, position, replace, soundex, ...

Time functions: now, year, month, day, hour, minute, second, maketime, str_to_date, datediff, ...

Numeric functions: round, abs, mod, div, power, exp, log, sqrt, pi, ...

Aggregate functions: count, sum, avg, min, max

WHERE-condition

```
WHERE column > 5 ( =, <, <=, >, >=, != (of <>) )
WHERE column [NOT] BETWEEN 3 AND 8 (grenzen inbegrepen)
WHERE column [NOT] IN ('jan','piet',...) (opsomming)
WHERE column [NOT] LIKE '<pattern>' (pattern met % en _)
WHERE column IS [NOT] NULL (het veld is [niet] leeg of onbekend)
```

Volgorde van de operatoren is: (), * / %, + -, = < <= > >= !=, LIKE/IN/BETWEEN/IS [NOT] NULL, NOT, AND, OR

GROUP BY-clause + aggregate function (+ evt. HAVING)

```
SELECT COUNT(id),country[,city] FROM customers GROUP BY country[,city];
SELECT COUNT(id),country FROM customers GROUP BY country HAVING COUNT(id) >= 5;
SELECT regio,SUM(schulden) FROM klanten GROUP BY regio;
```

ORDER BY-clause

```
ORDER BY <column1> [ASC|DESC][, <column2> [ASC|DESC], ...]
ORDER BY <column_alias> ...
ORDER BY <n> ... (sorteren op de nde kolom)
ORDER BY ... LIMIT [<offset>,<count>]
ORDER BY ... LIMIT <count> [OFFSET <offset>]
```

INSERT – UPDATE – DELETE

```
INSERT INTO <table> [(<column> [, <col2>...])] VALUES (<value> [, <val2>...]);
INSERT INTO <table> [(...)] VALUES (<value>, ...), (...), (...), ...;
INSERT INTO <table> SELECT ... FROM ...;
UPDATE <table> SET <column>=<value> [, <col2>=<val2>, ...] [WHERE <condition>];
DELETE FROM <table> [WHERE <condition>];
TRUNCATE TABLE <table>;
```

JOINS

```
SELECT * FROM table1 [INNER] JOIN table2 ON table1.colX = table2.colY;
SELECT * FROM table1 LEFT [OUTER] JOIN table2 ON table1.colX = table2.colY;
SELECT * FROM table1 RIGHT [OUTER] JOIN table2 ON table1.colX = table2.colY;
SELECT * FROM table1 [CROSS] JOIN table2;
```

```
SELECT * FROM mytable m JOIN yourtable y ON m.colX = y.colY;
```

CREATE

```
CREATE DATABASE database_name;
CREATE TABLE table_name (
    column_name datatype [DEFAULT expression] [NOT NULL], ... ,
    [CONSTRAINT name] PRIMARY KEY [AUTO_INCREMENT] (column1[,column2]),
    [CONSTRAINT name] UNIQUE (column1[,column2]),           (PK kan evt. over meedere velden)
    [CONSTRAINT name] CHECK (condition)
    [CONSTRAINT name] FOREIGN KEY (column1) REFERENCES tableX(columnY)
                                                [ON DELETE {CASCADE|SET NULL}],
);
CREATE TABLE table2 AS (SELECT * FROM table1); (kopie, mét inhoud, maar zonder constraints)
```

ALTER – RENAME – DROP

```
ALTER TABLE table ADD (
    column_name datatype ...,                               (zelfde syntax als bij CREATE TABLE)
    [CONSTRAINT name] ...                                   (zelfde syntax als bij CREATE TABLE)
);
ALTER TABLE table MODIFY column_name datatype [DEFAULT expression] [NOT NULL];
ALTER TABLE table DROP column_name;
ALTER TABLE table DROP PRIMARY KEY;
ALTER TABLE table DROP CONSTRAINT constr_name;
RENAME TABLE old_table_name TO new_table_name;
DROP TABLE table_name;
DROP DATABASE database_name;
```