MySQL Cheat Sheet

Create / Delete Database

```
CREATE DATABASE mabase
CREATE DATABASE mabase CHARACTER SET utf8
DROP DATABASE mabase
ALTER DATABASE mabase CHARACTER SET utf8
```

Browsing

```
SHOW DATABASES
SHOW TABLES
SHOW FIELDS FROM table / DESCRIBE table
SHOW CREATE TABLE table
SHOW PROCESSLIST
KILL process_number
```

Select – Join

```
SELECT ... FROM t1 JOIN t2 ON t1.id1 = t2.id2 WHERE condition
SELECT ... FROM t1 LEFT JOIN t2 ON t1.id1 = t2.id2 WHERE condition
SELECT ... FROM t1 JOIN (t2 JOIN t3 ON ...) ON ...
```

Insert

```
INSERT INTO table1 (field1, field2, ...) VALUES (value1, value2, ...)
```

Delete

```
DELETE FROM table1 / TRUNCATE table1

DELETE FROM table1 WHERE condition

DELETE FROM table1, table2 FROM table1, table2 WHERE table1.id1 =
table2.id2 AND condition
```

Update

```
UPDATE table1 SET field1=new_value1 WHERE condition
UPDATE table1, table2 SET field1=new_value1, field2=new_value2, ... WHERE
table1.id1 = table2.id2 AND condition
```

Keys

```
CREATE TABLE table (..., PRIMARY KEY (field1, field2))

CREATE TABLE table (..., FOREIGN KEY (field1, field2) REFERENCES table2
(t2_field1, t2_field2))
```

Create / Delete / Modify Table

```
CREATE TABLE table (field1 type1, field2 type2, ...)
CREATE TABLE table (field1 type1, field2 type2, ..., INDEX (field))
CREATE TABLE table (field1 type1, field2 type2, ..., PRIMARY KEY (field1))
CREATE TABLE table (field1 type1, field2 type2, ..., PRIMARY KEY (field1,
field2))

CREATE TABLE table1 (fk_field1 type1, field2 type2, ...,
   FOREIGN KEY (fk_field1) REFERENCES table2 (t2_fieldA))
      [ON UPDATE|ON DELETE] [CASCADE|SET NULL]

CREATE TABLE table1 (fk_field1 type1, fk_field2 type2, ...,
   FOREIGN KEY (fk_field1, fk_field2) REFERENCES table2 (t2_fieldA,
t2_fieldB))

CREATE TABLE table IF NOT EXISTS (...)

CREATE TEMPORARY TABLE table (...)

DROP TABLE table
DROP TABLE IF EXISTS table
DROP TABLE table1, table2, ...

ALTER TABLE table MODIFY field1 type1
ALTER TABLE table MODIFY field1 type1 NOT NULL ...
ALTER TABLE table CHANGE old_name_field1 new_name_field1 type1
ALTER TABLE table CHANGE old_name_field1 new_name_field1 type1 NOT NULL ...
ALTER TABLE table ALTER field1 SET DEFAULT ...
ALTER TABLE table ALTER field1 DROP DEFAULT
ALTER TABLE table ADD new_name_field1 type1
ALTER TABLE table ADD new_name_field1 type1 FIRST
ALTER TABLE table ADD new_name_field1 type1 AFTER another_field
ALTER TABLE table DROP field1
ALTER TABLE table ADD INDEX (field);
```

Change field order

```
ALTER TABLE table MODIFY field1 type1 FIRST
ALTER TABLE table MODIFY field1 type1 AFTER another_field
ALTER TABLE table CHANGE old_name_field1 new_name_field1 type1 FIRST
ALTER TABLE table CHANGE old_name_field1 new_name_field1 type1 AFTER
another_field
```

Select

```
SELECT * FROM table
SELECT * FROM table1, table2, ...
SELECT field1, field2, ... FROM table1, table2, ...
SELECT ... FROM ... WHERE condition
SELECT ... FROM ... WHERE condition GROUPBY field
SELECT ... FROM ... WHERE condition GROUPBY field HAVING condition2
SELECT ... FROM ... WHERE condition ORDER BY field1, field2
SELECT ... FROM ... WHERE condition ORDER BY field1, field2 DESC
SELECT ... FROM ... WHERE condition LIMIT 10
SELECT DISTINCT field1 FROM ...
SELECT DISTINCT field1, field2 FROM ...
```

Conditions

```
field1 = value1
field1 <> value1
field1 LIKE 'value _ %'
field1 IS NULL
field1 IS NOT NULL
field1 IS IN (value1, value2)
field1 IS NOT IN (value1, value2)
condition1 AND condition2
condition1 OR condition2
```

Users and Privileges

```
GRANT ALL PRIVILEGES ON base.* TO 'user'@'localhost' IDENTIFIED BY 'password';
GRANT SELECT, INSERT, DELETE ON base.* TO 'user'@'localhost' IDENTIFIED BY 'password';
REVOKE ALL PRIVILEGES ON base.* FROM 'user'@'host'; -- one permission only
REVOKE ALL PRIVILEGES, GRANT OPTION FROM 'user'@'host'; -- all permissions

SET PASSWORD = PASSWORD('new_pass')
SET PASSWORD FOR 'user'@'host' = PASSWORD('new_pass')
SET PASSWORD = OLD_PASSWORD('new_pass')

DROP USER 'user'@'host'

host '%' indicates any host.
```

Main Data Types

```
TINYINT (1o: -217+128) SMALLINT (2o: +-65 000)
   MEDIUMINT (3o: +-16 000 000) INT (4o: +- 2 000 000 000)
   BIGINT (8o: +-9.10^18)
   Precise interval: -(2^(8*N-1)) -> (2^8*N)-1
   /!\ INT(2) = "2 digits displayed" -- NOT "number with 2 digits max"

FLOAT(M,D) DOUBLE(M,D) FLOAT(D=0->53)
   /!\ 8,3 -> 12345,678 -- NOT 12345678,123!

TIME (HH:MM) YEAR (AAAA) DATE (AAAA-MM-JJ) DATETIME (AAAA-MM-JJ HH:MM; années 1000->9999)
   TIMESTAMP (like DATETIME, but 1970->2038, compatible with Unix)

VARCHAR (single-line; explicit size)  TEXT (multi-lines; max size=65535)  BLOB (binary; max
size=65535)
   Variants for TEXT&BLOB: TINY (max=255) MEDIUM (max=~16000) LONG (max=4Go)
   Ex: VARCHAR(32), TINYTEXT, LONGBLOB, MEDIUMTEXT

ENUM ('value1', 'value2', ...) -- (default NULL, or '' if NOT NULL)
```

Backup Database to SQL File

```
mysqldump -u Username -p DatabaseName > databasename_backup.sql
```

Restore from backup SQL File

```
mysql - u Username -p DatabaseName < databasename_backup.sql
```

Reset Root Password

```
$ /etc/init.d/mysql stop
$ mysqld_safe --skip-grant-tables

$ mysql # on another terminal
mysql> UPDATE mysql.user SET password=PASSWORD('new_pass') WHERE user='root';

## Switch back to the mysqld_safe terminal and kill the process using Control + \

$ /etc/init.d/mysql start
```

Repair Tables After Unclean Shutdown

```
mysqlcheck --all-databases
mysqlcheck --all-databases --fast
```

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