# MySQL client MySQL shell and dump

## CONCEPTS

A statement runs only at its terminator: ; or \G. Backslash commands like \q and \s take effect at once and need no semicolon.

**Server** host:3306
**Database** USE <db>
**Table** rows, columns, indexes

Passing -p<password> leaks it to ps and shell history. Use bare -p to be prompted, or a login path from mysql_config_editor.

## CONNECT

**mysql -u** *<user>* **-p**
Connect to localhost, prompt for password

**mysql -u** *<user>* **-p -h** *<host>* **-P** *<port>* *<db>*
Connect to a remote server and database

**mysql -e "***<sql>***"** *<db>*
Run a statement and exit

**mysql -S** *<socket>*
Connect through a Unix socket

**mysql --protocol=TCP -h 127.0.0.1**
Force TCP instead of the socket

**mysql_config_editor set --login-path=***<name>* **-u** *<user>* **-h** *<host>* **-p**
Store credentials in ~/.mylogin.cnf

**mysql --login-path=***<name>*
Connect with a stored login path

**mysql --safe-updates**
Refuse UPDATE/DELETE without key or LIMIT

## SHELL COMMANDS

**\s**
Show connection and server status

**\u** *<db>*
Switch database

**\G**
Run and print vertically

## SHELL COMMANDS (cont.)

**\c**
Cancel the statement being typed

**\q**
Quit

**\.** *<file.sql>*
Run SQL from a file

**\e**
Edit the statement in $EDITOR

**\P** *<pager>*
Pipe output through a pager

**DELIMITER //**
Change the statement terminator

## INSPECT

**SHOW DATABASES;**
List databases

**SHOW TABLES;**
List tables in the current database

**DESCRIBE** *<table>***;**
Show columns, types and keys

**SHOW CREATE TABLE** *<table>***\G**
Show the full DDL

**SHOW INDEX FROM** *<table>***;**
List indexes

**SHOW FULL PROCESSLIST;**
See running queries

**SHOW VARIABLES LIKE '***<pattern>***';**
Look up server variables

**SELECT VERSION(), DATABASE(), CURRENT_USER();**
Server version, schema, account

## QUERY

**SELECT * FROM** *<table>* **LIMIT 10;**
Peek at rows

**SELECT COUNT(*) FROM** *<table>***;**
Count rows

**EXPLAIN SELECT ...;**
Show the query plan

**EXPLAIN ANALYZE SELECT ...;**
Run and time each plan step

**START TRANSACTION;**
Begin a transaction

## QUERY (cont.)

**ROLLBACK;**
Undo the open transaction

**COMMIT;**
Make the transaction permanent

**CREATE INDEX** *<idx>* **ON** *<table>* **(***<col>***);**
Add an index

## USERS & GRANTS

**CREATE USER '***<user>***'@'***<host>***' IDENTIFIED BY '***<pw>***';**
Create an account

**GRANT ALL ON** *<db>***.* TO '***<user>***'@'***<host>***';**
Grant on one database

**GRANT SELECT, INSERT ON** *<db>***.***<table>* **TO '***<user>***'@'***<host>***';**
Grant specific privileges

**SHOW GRANTS FOR '***<user>***'@'***<host>***';**
List an account's privileges

## OUTPUT

**mysql -B -N -e "***<sql>***"**
Tab-separated rows, no header

## DUMP & RESTORE

**mysqldump** *<db>* **>** *<file.sql>*
Dump one database

**mysqldump --single-transaction** *<db>* **>** *<file.sql>*
Consistent InnoDB dump without locks

**mysqldump --no-data** *<db>*
Schema only

**mysqldump --routines --triggers --events** *<db>*
Include stored code

**mysql** *<db>* **<** *<file.sql>*
Restore a dump

**mysqldump** *<db>* **| gzip >** *<file.sql.gz>*
Compressed dump

**gunzip -c** *<file.sql.gz>* **| mysql** *<db>*
Restore a compressed dump