mongosh MongoDB shell

CONCEPTS

mongosh is a JavaScript shell: db is the current database, db.<name> a collection, and any JS works.

Deployment server or cluster
- **Database** db / use <db>
  - **Collection** db.users
    - **Document** BSON object

CONNECT

mongosh
Connect to localhost:27017

mongosh "mongodb://*<host>*:27017/*<db>*"
Connect with a URI

mongosh --host *<host>* --port *<port>* -u *<user>* -p
Connect with options, prompt for password

--eval "*<js>*" *<uri>*
Run JavaScript and exit

mongosh *<uri>* *<file.js>*
Run a script file then exit

exit / quit()
Leave the shell

INSPECT

show dbs
List databases

INSPECT (cont.)

use *<db>*
Switch database

db
Print the current database name

show collections
List collections

db.*<coll>*.countDocuments({})
Count matching documents

db.*<coll>*.getIndexes()
List indexes

READ

db.*<coll>*.find()
All documents (first batch)

db.*<coll>*.find({ *<field>*: *<value>* })
Match on equality

db.*<coll>*.findOne({ *<filter>* })
First match as one document

db.*<coll>*.find({}, { *<f>*: 1 })
Projection: pick fields

db.*<coll>*.find().sort({ *<f>*: -1 })
Sort, 1 ascending, -1 descending

db.*<coll>*.find().limit(*<n>*)
Cap results; chain .skip(<n>) to page

READ (cont.)

db.*<coll>*.find(*<filter>*).explain("executionStats")
Show how the query ran

Query operators

Operator	Meaning
$eq $ne	equals, not equals
$gt $gte $lt $lte	comparison
$in $nin	value in / not in list
$and $or $nor	combine conditions
$not	negate an operator
$exists	field is present
$type	BSON type check
$regex	pattern match
$elemMatch	one array element matches all
$size	array length
$all	array holds every value
$expr	compare fields, use aggregation expressions

WRITE

db.*<coll>*.insertOne({ *<doc>* })
Insert one document

db.*<coll>*.insertMany([{ }, { }])
Insert several documents

WRITE (cont.)

db.*<coll>*.updateOne(*<filter>*, { $set: { *<f>*: *<v>* } })
Change first match

db.*<coll>*.updateMany(*<filter>*, { $set: { } })
Change all matches

db.*<coll>*.updateOne(*<filter>*, *<update>*, { upsert: true })
Insert if nothing matches

db.*<coll>*.deleteOne(*<filter>*)
Delete first match

db.*<coll>*.deleteMany(*<filter>*)
Delete all matches

An update without an operator like $set is rejected; use replaceOne to swap a document.

AGGREGATION

db.*<coll>*.aggregate([*<stage>*])
Run a pipeline of stages

{ $match: { *<filter>* } }
Filter documents early

{ $group: { _id: "$*<f>*", n: { $sum: 1 } } }
Group and count

{ $sort: { *<f>*: -1 } }
Order the stream

AGGREGATION (cont.)

{ $project: { *<f>*: 1, *<new>*: "$*<g>*" } }
Reshape documents

{ $lookup: { from, localField, foreignField, as } }
Left join another collection

INDEXES

db.*<coll>*.createIndex({ *<f>*: 1 })
Create an ascending index

db.*<coll>*.createIndex({ *<a>*: 1, *<b>*: -1 })
Compound index, order matters

db.*<coll>*.createIndex({ *<f>*: 1 }, { unique: true })
Enforce uniqueness

USERS & ADMIN

db.createUser({ user: "*<u>*", pwd: passwordPrompt(), roles: ["readWrite"] })
Create a user, ask for password

DUMP & RESTORE

mongodump --uri="*<uri>*" --out=*<dir>*
Dump databases to BSON files