

MongoDB Cheat Sheet

1. Connect via MongoDB Shell

```
# Local
mongosh

# Remote with Authentication
mongosh --host <host> --port <port> --authenticationDatabase admin -u
<user> -p <pwd>

# MongoDB Atlas
mongosh "mongodb+srv://cluster-name.abcde.mongodb.net/<dbname>" --
apiVersion 1 --username <username>
```

2. Helpers

```
// Database Operations
show dbs
use <database_name>
db // current database

// Collection Operations
show collections
db.coll.stats() // collection stats

// Script Execution
load("myScript.js")
```

3. CRUD Operations

```
// Create
db.coll.insertOne({name: "Alice"})
db.coll.insertMany([{name: "Bob"}, {name: "Charlie"}])

// Read
db.coll.findOne() // first document
db.coll.find({name: "Alice"})
db.coll.find().pretty() // formatted output

// Update
```

```

db.coll.updateOne({name: "Bob"}, {$set: {age: 25}})
db.coll.updateMany({}, {$inc: {age: 1}}) // increment age

// Delete
db.coll.deleteOne({name: "Charlie"})
db.coll.deleteMany({age: {$lt: 20}})

```

Aggregation

```

db.comments.aggregate([
  { $group: { _id: "$movie_id", totalComments: { $count: {} } } },
  { $sort: { totalComments: -1 } }, // Sort by the number of
comments
  { $limit: 10 } // Top 10 movies by comments
]);

```

```

db.movies.aggregate([
  { $match: { "imdb.rating": { $exists: true } } },
  { $group: {
    _id: "$year",
    averageRating: { $avg: "$imdb.rating" },
    totalMovies: { $count: {} }
  }},
  { $sort: { averageRating: -1 } }
]);

```

Lookup

```

db.movies.aggregate([
  { $lookup: {
    from: "comments",
    localField: "_id",
    foreignField: "movie_id",
    as: "movieComments"
  }},
  { $project: { title: 1, movieComments: 1 } } // Display title and
comments
]);

```

4. Databases & Collections

```
// Create
db.createCollection("products")

// Drop
db.coll.drop()
db.dropDatabase() // CAUTION! Irreversible

// Other
db.coll.renameCollection("new_coll")
```

5. Indexes

```
// Create
db.coll.createIndex({name: 1}) // ascending
db.coll.createIndex({age: -1}, {unique: true}) // descending & unique

// List & Drop
db.coll.getIndexes()
db.coll.dropIndex("name_1")
```

6. Handy Commands

```
db.coll.countDocuments()
db.currentOp() // view ongoing operations
db.killOp(<opid>) // terminate operation
db.serverStatus() // server health & metrics
```

7. Change Streams

```
watchCursor = db.coll.watch() // track changes
while (!watchCursor.isExhausted()) {
  if (watchCursor.hasNext()) {
    printjson(watchCursor.next())
  }
}
```

8. Replica Set

```
rs.status()
rs.initiate() // initiate replica set
```

```
rs.add("mongodb2.example.net:27017")
rs.stepDown() // force primary step down
```

9. Sharded Cluster

```
sh.status()
sh.addShard("rs1/mongodb1.example.net:27017")
sh.shardCollection("mydb.orders", {orderId: 1})
sh.moveChunk("mydb.orders", {orderId: 123}, "shard002")
```

Text Search

```
db.movies.createIndex({ title: "text", plot: "text" });
db.movies.find({ $text: { $search: "adventure thriller" } });
```

Wrap Up

This cheat sheet offers a quick reference for common MongoDB operations. Refer to the official documentation for in-depth knowledge and advanced features:

<https://www.mongodb.com/docs/>