

## MongoDB Interview Questions & Practice Syntax

### 1. What is MongoDB?

- MongoDB is a NoSQL, document-oriented database that stores data in flexible, JSON-like documents.

### 2. Difference between SQL & MongoDB?

- SQL uses tables, rows, columns.
- MongoDB uses collections, documents, and fields.

### 3. Basic MongoDB Commands (Practice Syntax):

- Show databases:

`show dbs`

- Create / Switch database:

`use myDatabase`

- Show collections:

`show collections`

- Create a collection:

`db.createCollection("users")`

- Insert document:

`db.users.insertOne({name: "Rohan", age: 23})`

`db.users.insertMany([{name: "Aman", age: 24}, {name: "Priya", age: 22}])`

- Find documents:

`db.users.find()`

`db.users.find({age: 23})`

`db.users.findOne({name: "Rohan"})`

- Update documents:

`db.users.updateOne({name: "Rohan"}, {$set: {age: 24}})`

`db.users.updateMany({age: {$gt: 20}}, {$set: {status: "active"}})`

- Delete documents:

`db.users.deleteOne({name: "Aman"})`

`db.users.deleteMany({status: "inactive"})`

- Comparison Operators:

`db.users.find({age: {$gt: 21}})`

`db.users.find({age: {$lt: 30}})`

`db.users.find({age: {$gte: 25}})`

`db.users.find({age: {$lte: 28}})`

`db.users.find({age: {$ne: 22}})`

- Logical Operators:

```
db.users.find({$and: [{age: {$gt: 20}}, {status: "active"}]})
```

```
db.users.find({$or: [{age: 22}, {status: "active"}]})
```

```
db.users.find({$not: {age: {$gt: 30}}})
```

- Sorting & Limiting:

```
db.users.find().sort({age: 1}) // Ascending
```

```
db.users.find().sort({age: -1}) // Descending
```

```
db.users.find().limit(5)
```

- Aggregation:

```
db.users.aggregate([{$group: {_id: "$status", total: {$sum: 1}}]})
```

- Indexing:

```
db.users.createIndex({name: 1})
```

```
db.users.getIndexes()
```

- Drop collection / database:

```
db.users.drop()
```

```
db.dropDatabase()
```

#### 4. What is a Replica Set?

- A set of MongoDB servers that maintain the same data set, providing redundancy and high availability.

#### 5. What is Sharding?

- A method for distributing data across multiple servers.

#### 6. What are Aggregation Pipelines?

- A framework for transforming and analyzing data, e.g. \$match, \$group, \$sort, \$project.

#### 7. What is the difference between find() and aggregate()?

- find() is used for simple queries.

- aggregate() is used for advanced data processing and analytics.