

24/05
Amulya

Anay Shah
60004210073
TE Comps C12

BDI - Exp-9

Aim:- To execute MongoDB queries/commands

Theory:-

- MongoDB is a document-oriented NoSQL database used for high volume data storage.
- Instead of using tables and rows as in the traditional relational databases, MongoDB makes use of collections and documents.
- Documents consist of key-value pairs which are the basic unit of data in MongoDB.
- Collections contain sets of documents and functions which is the equivalent of relational database tables.

Features of MongoDB:-

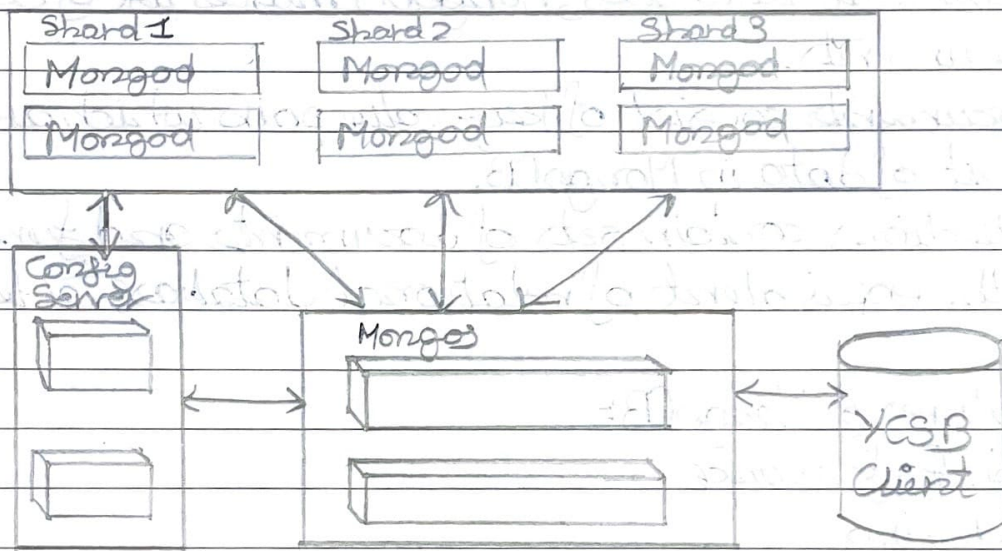
- High Performance
- Indexing
- Schema-less database
- Ad-hoc queries
- Aggregation
- Sharding
- Document Oriented
- Replication

MongoDB Architecture

- Mongod:- It is the datanode which is used for storing and retrieving the data.
- Mongos:- It is the one and only instance that is able to communicate outside of the cluster. It interfaces with clients and routes operations

to appropriate shards.

- Config Server - It acts as the container of the metadata about the object stored in the mongod.
- Shard - It is a group of one or more mongod nodes and is known as replica sets which contains a copy of the data.
- The YCSB (Yahoo! Cloud Service Broker) client in the MongoDB architecture provides an interface between the application code and the underlying database.



Commands :-

- create a collection - `db.createCollection("orders");`
- check all ~~collections~~ collections - `show collections;`
- insert one document - `db.orders.insertOne({ Name: "Anay", Address: "Mumbai", OrderID: 202 });`
- insert many document - `db.orders.insertMany([{ 3, { 3, { 3 } } }])`
- to find - `db.orders.find()`

- projection - `db.orders.find({}, {Name: "Array"})`
- \$eq operator - `db.orders.find({OrderID: {$eq: 2033}})`
- aggregate function - `db.orders.aggregate({$group: {_id: 'OrderID', total: {$sum: "OrderID"}}`
- to drop database - `db.dropDatabase()`
- to check version of the database - `db.version()`.

Conclusion - Hence we have implemented several MongoDB ~~com~~ commands and learnt the MongoDB and its features and architecture.

Amrith