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Lab Assignment - 1

Aim: Create a sample database using MongoDB and implement the CRUD operation

Objective: To learn NoSQL database MongoDB
To study and execute CRUD operation

Problem: To create a sample database using MongoDB and implement CRUD operation

Theory:

→ What is MongoDB
MongoDB is a document oriented NoSql database used for high volume data storage instead of using tables and rows as in the traditional relational database. It makes use of collection and documents. Documents consists of key value pairs, collections consists of documents. It is a document model that is simple for developer to learn & use

→ Characteristic of MongoDB
- High performance
- Rich Query language
- High availability
- Horizontal stability
- Support for multiple storage

→ MongoDB Command (CRUD)
1) CReate

Database	Collection
→ Use database_name	db.collection db.creatcollection('name')

2] Insert document :
db. collection_name. insert (<doc>)

3] Read : Reading doc from a collection
db. collection. find ()

4] Update : update the document of collection
db. collection. updateOne()
db. collection. updateMany()
db. collection. replaceOne()

5] Delete : Deleting the document of a collection
db. collection. deleteOne()
db. collection. deleteMany()

Input : Customer database

Output : Execution of all commands metional above

Platform : Windows.

Conclusion : Thus, we learn the syntax and the use of basic MongoDB commands.

FAQs

1 what are CRUD operations ? List some of them CRUD operation operators refer to the basic create. Read update & delete ?

→ 1] Create operation
→ Used to create database and collection
→ Insert operation to add new document into created

→ Creat collection(), insert(), insertOne(), insertMany()

2] Read Operation
→ Retrieves document from collection
find, findOne, findMany

3] Update Operation
→ Modify the existing document from a collection
deleteOne, deleteMany

2 Compare SQL and NoSQL

SQL	NoSql
→ Relational Database Mgmt System	→ Distributed database Mgmt System
→ Vertically scallable	→ Horizontally scallable
→ Not suitable hierarchical	→ Suitable for hierarchical
→ Can be used for complex queries	→ Not good for complex queries
→ Fixed schema	→ Dynamic schema

3 Compare and Explain Mongo, Mongod and Mongos

→ Mongo
- Interactive shell interface to MongoDB
- Provides powerful ~~ui~~ interface for system administrator as well as for development to test queries and operation directly with the database
- The Mongo shell is included as a part of MongoDB server installation.

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→ Mongod

- It is primary domain process for the MongoDB system
- It handles data request manages data occasion perform background management operation.
- Mongod is the mongodomain i.e the host process for the database when you start

→ Mongos

- For a shadow cluster the mongos instance provide the interface the client application and shared Cluster
- → The mongos instance route queries and write approaches to shardes