

Assignment - B1

Title :- Study of open source NoSQL database MongoDB (Installation, Basic CRUD operation execution).

Problem Statement :-

Implement database with suitable example using MongoDB & implement study of open source NoSQL database: MongoDB (Installation, Basic CRUD operation).

Objective :-

- Understand concept of NoSQL DB.
- Understand concept of MongoDB with CRUD operation.
- Understand the basic installation & administrative commands of MongoDB.

S/W & H/W :- MongoDB, Fedora OS.

Outcome :-

- Implement the commands.
- Implement the database in MongoDB.

Theory :-

MongoDB is an open-source document database that provides high availability, & automatic scaling.

Document database

A record in mongoDB is a document which is a data structure composed of field & value pairs. MongoDB documents are similar to JSON objects. The values of fields may include other documents, arrays & arrays of documents.

e.g. { name: "Sue",
age: 26,
status: "A",
groups: ["news", "sports"] } ← Field: value

Create operation

create or insert operations add new documents to a collection. If the collection does not currently exist, insert operations will create the collection.

MongoDB provides the following methods to insert documents into a collection.

- db.collection.insertOne()
- db.collection.insertMany()

In mongoDB, insert operations target a single collection. All write operations in mongoDB are atomic on the level of single document collection.

Date

Collection is a group of MongoDB document. It is equivalent of an RDBMS table. A collection exists within single database. Collection do not enforce a schema. Documents within a collection can have different fields in a collection are of single related purpose.

Document - A document is set of key value pair document have dynamic schema. Dynamic schema means that documents in the same collection do not need to have same set of fields.

Conclusion :-

Successfully implemented MongoDB to CRUD operations & installation of MongoDB on system.