DBMSL 31147

Assignment B1

Date of completion : 16/10/20. Date of submission : 12/11/20.

Problem statement:

To study the NoSQL database MongoDB and perform installation & CRUD operation.

Objectives:

1) To understand NoSQL databases.
2) To perform basic installation of MongoDB.
3) To implement CRUD operations.

Outcomes: Students will be able to

1) Understand & implement database concepts MongoDB
2) Perform CRUD operations

H/W & S/W:

Windows 10, i5 processor, MongoDB.

Theory:

MongoDB is an open source database that provides high performance, high availability and arithmetic scalability. Collection is a group of MongoDB docs.

Document is set of key value pair which is similar to JSON.

Installation on Window 10.

1) Download the appropriate package from community server on MongoDB website according to version.
2) Run the installer and check the appropriate boxes.
3) After finishig set environment variables / paths for mongodb.
4) Open mongodb command prompt and type mongodb and then mongo to create connection.
5) Open mongodb folder & write . \data\db which will make new folder.
6) Again set this path to system variables.
7) Open command prompt and write command mongo --config.

Page No.
Date

Create User & Assigning Roles.

1) MongoDB allows us to create user by db.createUser(user, write concern)
2) User contains following fields user, pwd, customData, Roles, Authentication restriction.
3) Independant role within MongoDB can be created by expressing permissions by all privileges.
   db.CreateRole(role, writeconcern)
4) Roles contains role, privileges, roles and authentication restriction.
5) To create a new user, you must have permissions to create it and to assign roles, you must have grant role permissions.

User Authentication:

1) MongoDB provides a method which requires 2 parameters, username & password.

2) If user is authenticated then returned value will be 1 otherwise 0.

3) Syntax :- db.auth(username, password).

4) Authentication can be done after creating user & assigning status.

Creating Database & collection.

1) Database creation.
   use db_name;
2) Creating collection.
   i) db.collection_name.insert({key: value...});
   ii) db.createCollection(name, options);

3) Inserting one document
   db.collection.insertOne({key: value...});

Inserting many.
db.collection.insertMany([{key: value}, {key1: value1}]);

Page No.
Date

Reading documents:

```
db.collection.find({});
```

Updating document

```
db.collection.update({condition}, {updated});
```

Conclusion:

Succeffully installed Mongodb and performed CRUD operations
Learnt concept of NOSQL database.