

Task-8:- CRUD operations in Document databases.

Aim:- To perform Manage using NPM design or MongoDB designing document database and performing CRUD operations like creating, inserting, querying, finding, removing, operations.

Steps:-

Step-1:- Install Mongo db using following link

<https://www.mongodb.com/tarball/community>

Step-2:- install mongosh using the below link

<https://www.mongodb.com/docs/mongodb-shell/#download-and-install-mongosh>

Step-3:- To add the MongoDB shell binary's location to your PATH environment variable.

Step-3.1:- Open the control panel.

Step-3.2:- In the system and security category, click System.

Step-3.3:- Click advanced system setting. The system properties modal displays.

Step-3.4:- Click Environmental Variables.

Step-3.5:- In the system variables section, select Path and click Edit. The edit environment variable modal displays.

Step-3.6:- Click New and add the filepath to your mongosh binary.

Step-3.7:- Click ok to confirm your changes. On each other modal,

click ok to confirm your changes.

Step-4:- To confirm that your PATH environment variable is correctly configured to find mongosh, open a command prompt and enter the mongosh --help command. If your PATH is configured correctly, a list of valid commands displays.

Step-5:- Open mongo shell up from C:\Program Files\mongodb\Server\bin\mongod.exe

Step-6:- Type the CRUD (Create Read update Delete) commands given in log file.

C RUD OPERATIONS:-

db. create Collection ("Cricket Board")

{ "ok": 1 }

> db. Cricket Board.insert one ({Board ID: "B1D01", Name: "Chennai Cricket Board", Address: "Chennai", Phone: 9988776699})

{
 "acknowledged": true,
 "inserted_id": Object ID ("651 of 1726 ebbfe 7993 adj 909")
}

db. mylab . find ([Board ID : B1D01])

{ "-_id": Object ID ("651 of 1726 ebbfe 7993 adj 909"), "BoardID": "B1D01", "Name": "Chennai Cricket Board", "Address": "Chennai", "Phone": 9988776699 }

db. Cricket Board . insert many ([{Board ID: "B1D02", Name: "Madurai Cricket Board", Address: "Madurai", Phone: 9977886699}, {Board ID: "B1D03", Name: "Viluppuram Cricket Board", Address: "Viluppuram", Phone: 9966886699}, {Board ID: "B1D04", Name: "Trichy Cricket Board", Address: "Trichy", Phone: 9955886699}, {Board ID: "B1D05", Name: "Madrasi Cricket Board", Address: "Madrasi", Phone: 9944486699}]);

{
 "acknowledged": true,
 "insert_ids": [
 Object ID ("651(eee)ebbfef 7993 adj 906"),
 Object ID ("651(eee)ebbfef 7993 adj 905"),
 Object ID ("651(eee)ebbfef 7993 adj 906"),
 Object ID ("651(eee)ebbfef 7993 adj 907")
]
}

db.CricketBoard.find()

{ "-id": object ID ("651ceee36ebbfef993adj904"), "BoardID": "B1D001", "Name": "Tirumallur Cricket Board", "Address": "Chennai", "Phone": "9977886699"}

{ "-id": object ID ("651ceee36ebbfef993adj905"), "BoardID": "B1D002", "Name": "Viluppuram Cricket Board", "Address": "Viluppuram", "Phone": "9966886699"}

{ "-id": object ID ("651ceee36ebbfef993adj906"), "BoardID": "B1D003", "Name": "Trichy Cricket Board", "Address": "Trichy", "Phone": "9955886699"}

{ "-id": object ID ("651ceee36ebbfef993adj907"), "BoardID": "B1D004", "Name": "Madurai Cricket Board", "Address": "Madurai", "Phone": "9944886699"}

{ "-id": object ID ("651ceee36ebbfef993adj908"), "BoardID": "B1D005", "Name": "Chennai Cricket Board", "Address": "Chennai", "Phone": "9988776699"}

db.CricketBoard.find().pretty()

{
 "-id": object ID ("651ceee36ebbfef993adj904"),
 "BoardID": "B1D001",
 "Name": "Tirumallur Cricket Board",
 "Address": "Chennai",
 "Phone": "Chennai",
 "Phone": "9977886699"

}

{
 "-id": object ID ("651ceee36ebbfef993adj905"),
 "BoardID": "B1D002",
 "Name": "Viluppuram Cricket Board",
 "Address": "Viluppuram",
 "Phone": "9966886699"

Date: 10/10/2023

Project Name: Database Project

Project Title: Database Project

Project Description: This project is about designing a database for a library management system. It includes tables for books, authors, and users, along with various queries for managing the library.

Project Objectives:

- To design a relational database for a library management system.
- To implement basic operations like insertion, deletion, and update.
- To perform complex queries involving multiple tables.

Project Components:

- Database Design (ER Diagram)
- Table Creation (SQL Scripts)
- Query Execution (SQL Scripts)
- Performance Analysis (Report)
- Viva Voce (Presentation)
- Record (Signature)

Project Status: Completed

Project Rating: Excellent

Project Grade: A+

Project Duration: 1 month

Project Author: [Signature]

Project Advisor: [Signature]

Project Date: 10/10/2023

VEL TECH - CSE	
EX NO.	111112
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
RECORD (5)	5
TOTAL (20)	15
SIGN WITH DATE	[Signature]

Result:-

Thus CROD using open design on mongoDB designing document database and performing CROD operation like creating, querying, finding, removing, operations, are performed.

Advantages of mongoDB:
 1. Scalability: mongoDB can handle large amounts of data and can scale horizontally by adding more servers.
 2. Flexibility: mongoDB's schemaless nature allows it to store different types of data in a single collection.
 3. Performance: mongoDB uses an efficient indexing system and supports real-time data processing.
 4. Document-oriented: mongoDB stores data in JSON-like documents, making it easy to query and manipulate data.

