Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology
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School of Computing
B.Tech. – Computer Science and Engineering

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Course Code : 10211CS207

Course Name : Database Management Systems

Slot No : S4-L5

DBMS TASK - 10 REPORT

Submitted by:

VTUNO	REGISTER NUMBER	STUDENT NAME
VTU30200	24UECS1453	GANESWARA REDDY UPPALAPALLI

ABSTRACT

The aim of this task is to perform **CRUD (Create, Read, Update, Delete)** operations on a document-oriented database using **MongoDB** and **Mongoose**.
MongoDB stores data as flexible, JSON-like documents, making it ideal for modern applications.

AIM:

To Perform Mongoose using NPM design on MongoDB designing document database and performing CRUD operations like creating, inserting, querying, finding and removing operations.

STEPS:

Step 1)install Mongo db using following link

https://www.mongodb.com/try/download/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:

Open the Control Panel.

In the System and Security category, click System.

Click Advanced system settings. The System Properties modal displays.

Click Environment Variables.

In the System variables section, select path and click Edit. The Edit environment variable modal displays.

Click New and add the filepath to your mongosh binary.

Click OK to confirm your changes. On each other modal, click OK to confirm your changes.

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 4)Open mongo shell 4.0 from c:\programfiles\mongoDB\server\bin\mongod.exe

Step 5)Type the CRUD(CREATE READ UPDATE DELETE) COMMANDS GIVEN IN TEXT FILE.

CRUD OPERATIONS

db.createCollection("mylab")

{ "ok" : 1 }

>
db.mylab.insertOne({item:"canvas",qty:100,tags:["cotton"],size:{h:28,w:35.5,uom:"cm"}})

{

"acknowledged" : true,

"insertedId" : ObjectId("627d13acc73990c074e6397c")

```
}

> db.mylab.find({item:"canvas"})

{ "_id" : ObjectId("627d13acc73990c074e6397c"), "item" : "canvas",
"qty" : 100, "tags" : [ "cotton" ], "size" : { "h" : 28, "w" : 35.5, "uom" :
"cm" } }

>
db.mylab.insertMany([{item:"journal",qty:25,tags:["blank","red"],size:{h:
14,w:21,uom:"cm"}},{item:"mat",qty:85,tags:["gray"],size:{h:27.9,w:35.5,
uom:"cm"}},{item:"mousepad",qty:25,tags:["gel","blue"],size:{h:19,w:22.
85,uom:"cm"}}])

{

"acknowledged" : true,

"insertedIds" : [

        ObjectId("627d1598c73990c074e6397d"),

        ObjectId("627d1598c73990c074e6397e"),

        ObjectId("627d1598c73990c074e6397f")

    ]

}

> db.mylab.find({},{item:1,qty:1})

{ "_id" : ObjectId("627d13acc73990c074e6397c"), "item" : "canvas",
"qty" : 100 }

{ "_id" : ObjectId("627d1598c73990c074e6397d"), "item" : "journal",
"qty" : 25 }

{ "_id" : ObjectId("627d1598c73990c074e6397e"), "item" : "mat", "qty" :
85 }
```

{ "_id" : ObjectId("627d1598c73990c074e6397f"), "item" : "mousepad", "qty" : 25 }

> db.mylab.find({},{item:1,qty:1}).pretty()

{

"_id" : ObjectId("627d13acc73990c074e6397c"),

"item" : "canvas",

"qty" : 100

}

{

"_id" : ObjectId("627d1598c73990c074e6397d"),

"item" : "journal",

"qty" : 25

}

{ "_id" : ObjectId("627d1598c73990c074e6397e"), "item" : "mat", "qty" : 85 }

{

"_id" : ObjectId("627d1598c73990c074e6397f"),

"item" : "mousepad",

"qty" : 25

}

> db.mylab.find({item:"canvas"}).pretty().sort({item:-1})

{

"_id" : ObjectId("627d13acc73990c074e6397c"),

```
"item" : "canvas",
"qty" : 100,
"tags" :
[ "cotton"
      ],
"size" : {
"h" : 28,
"w" : 35.5,
"uom" : "cm"
      }
}
> db.mylab.deleteOne({item:"journal"}
...
...
> db.mylab.find({},{item:1,qty:1}).pretty()
{
"_id" : ObjectId("627d13acc73990c074e6397c"),
"item" : "canvas",
"qty" : 100
}
{
"_id" : ObjectId("627d1598c73990c074e6397d"),
```

"item" : "journal",

"qty" : 25

}

{ "_id" : ObjectId("627d1598c73990c074e6397e"), "item" : "mat", "qty" : 85 }

{

"_id" : ObjectId("627d1598c73990c074e6397f"),"item" : "mousepad","qty" : 25}

Out put

After insertOne

{ "acknowledged" : true, "insertedId" : ObjectId("627d13acc73990c074e6397c") }

After insertMany

{

"acknowledged" : true,

"insertedIds" : [

ObjectId("627d1598c73990c074e6397d"),

```
    ObjectId("627d1598c73990c074e6397e"),
    ObjectId("627d1598c73990c074e6397f")
  ]
}
```

Find (item & qty only):

```
{ "item" : "canvas", "qty" : 100 }
{ "item" : "journal", "qty" : 25 }
{ "item" : "mat", "qty" : 85 }
{ "item" : "mousepad", "qty" : 25 }
```

After deleteOne({item:"journal"}):

```
{ "acknowledged" : true, "deletedCount" : 1 }
```

Final find()

```
{ "item" : "canvas", "qty" : 100 }
{ "item" : "mat", "qty" : 85 }
{ "item" : "mousepad", "qty" : 25 }
```

Result:

The implementation of CRUD operations like creating, inserting, finding and removing operations using MongoDB is successfully executed.