Vidyavardhini's College of Engineering & Technology

Department of Artificial Intelligence and Data Science

AY: 2025-26

Class:		**Semester:**	
Course Code:		**Course Name:**	

Name of Student:	BARI ANKIT VINOD
Roll No. :	61
Experiment No.:	**3**
Title of the Experiment:	To install and configure MongoDB/ Cassandra/ HBase/ Hypertable and to
Date of Performance:	
Date of Submission:	

Evaluation

Performance Indicator	Max. Marks	Marks Obtained
Performance	5	
Understanding	5	
Journal work and timely submission	10	
Total	20	

Performance Indicator	Exceed Expectations (EE)	Meet Expectations (ME)	Below Expectations(BE)
Performance	4-5	2-3	1
Understanding	4-5	2-3	1
Journal work and timely submission	8-10	5-8	1-4

Checked by

Name of Faculty :

Signature :

Date :

AIM: To install and configure MongoDB/ Cassandra/ HBase/ Hypertable and to execute NoSQL commands.

THEORY:

MongoDB can be downloaded from https://www.mongodb.com/try/download/community2

Now open command prompt and run the following command

```
C:\>move mongodb-win64-* mongodb
        1 dir(s) moved.
```

MongoDB requires a data folder to store its files. The default location for the MongoDB data directory is c:\data\db. So create the folder using the Command Prompt. Execute the following command sequence.

```
C:\>md data
C:\md data\db
```

In case mongodb is stored in some other location, navigate to that folder.

In command prompt navigate to the bin directory present into the mongodb installation folder. Suppose the installation folder is D:\set up\mongodb

```
C:\Users\XYZ>d:
D:\>cd "set up"
D:\set up>cd mongodb
D:\set up\mongodb>cd bin
D:\set up\mongodb\bin>mongod.exe --dbpath "d:\set up\mongodb\data"
```

Now to run the mongodb, open another command prompt and issue the following command:

```
D:\set up\mongodb\bin>mongo.exe
MongoDB shell version: 2.4.6
connecting to: test
>db.test.save( { a: 1 } )
>db.test.find()
{ "_id" : ObjectId(5879b0f65a56a454), "a" : 1 }
>
```

The use Command

MongoDB use DATABASE_NAME is used to create database. The command will create a new database, if it doesn't exist otherwise it will return the existing database

Syntax:

use DATABASE_NAME

The dropDatabase () Method

MongoDB db.dropDatabase () command is used to drop an existing database.

Syntax:

db.dropDatabase()

The createCollection() Method

MongoDB db.createCollection(name, options) is used to create collection.

Syntax:

db.createCollection(name, options)

Insert Document

To insert data into MongoDB collection, you need to use MongoDB's insert() or save()method

Syntax

>db.COLLECTION_NAME.insert(document)

Example:

```
>db.post.insert([
{
 title: 'MongoDB Overview',
 description: 'MongoDB is no sql database',
 tags: ['mongodb', 'database', 'NoSQL'],
 likes: 100
},
{
 title: 'NoSQL Database',
 description: 'NoSQL database doesn't have
 tables', tags: ['mongodb', 'database', 'NoSQL'],
 likes: 20,
 comments: [
 {
 user:'user1',
 message: 'My first comment',
 dateCreated: new Date(2022,11,10,2,35),
 like: 0
 }
 ]
}
])
```

Creating sample document:

Example

Suppose a client needs a database design for his blog website. Website has the following requirements.

 Every post has the unique title, description and

 url. Every post can have one or more tags.

 Every post has the name of its publisher and total number of likes.

 Every Post have comments given by users along with their name, message, data-time and likes.

 On each post there can be zero or more comments.

Document:

{

_id: POST_ID

title: TITLE_OF_POST,

description: POST_DESCRIPTION,

by: POST_BY,

url: URL_OF_POST,

tags: [TAG1, TAG2, TAG3],

likes: TOTAL_LIKES,

comments: [

{

user:'COMMENT_BY',

message: TEXT,

dateCreated: DATE_TIME,

like: LIKES

},

{

user:'COMMENT_BY',

message: TEXT,

dateCreated: DATE_TIME,

like: LIKES

```
}
]
}
```

OUTPUT / OBSERVATION:

MongoDB was installed and configured successfully.

Collections were created, and CRUD operations (insert, find, update, delete) were executed.

In HBase, tables and column families were created using shell commands.

Data retrieval using scan and get confirmed correct NoSQL operations.

CONCLUSION:

A NoSQL database system was successfully installed and used to perform basic operations. The experiment demonstrated how NoSQL systems efficiently store and manage unstructured and semi-structured data, which is essential for modern Big Data applications.