

Page No.   
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## BDT Lab Assignment 2

To install and configure MongoDB/cassandra/HBase Hypertable. Create a sample database using NoSQL and implement the CRUD operations.

### Objectives:

1. To learn concepts of structured and Unstructured data.
2. To learn how to use MongoDB.

### Theory:

Structured vs Unstructured Data:

- Structured data is highly specific and is stored in a predefined format, where unstructured data is a compilation of many varied types of data that are stored in their native formats.
- Structured data is commonly stored in data warehouses and unstructured data is stored in data lakes.
- Structured data can be used by average business users, but unstructured data requires data science expertise in order to gain accurate business intelligence.

Companies and development teams of all sizes use MongoDB for a wide variety of reasons:

- Document model.
- Fully Scalable.
- Deployment options
- Get started quickly.

Syntax of CRUD operation queries in MongoDB:

Insert: `db.database-name.insertOne(13)`

Update: `db.database-name.updateOne(13)`

Find: `db.database-name.find(13)`

Delete: `db.database-name.deleteOne(13)`

Platform: 64-bit Open Source Linux/Windows

Conclusion: Hence, I learned installations and configurations MongoDB/Cassandra/HBase/Hypertable also implemented CRUD operations.

FAQ's

Q1) Create an Emp table and perform the CRUD operations. Write queries for each operations.

Ans. Use employee db

→ `db.createCollection('emp')`

→ `db.employee.insertOne({name: "Any", age: 19, dept: "HR"})`

→ `db.employee.updateOne({name: "Any", 3, $set: {age: 2033}})`

→ `db.employee.find()`

→ `db.employee.deleteOne({name: "Any"}3)`

Q2) Explain the application of MongoDB also give examples of open source database softwares.

Ans. Applications:

1) IoT data

2) Mobile Apps

3) Gaming

4) Social Media

5) E-commerce

6) Analytics and reporting.

Teacher's Sign.:



### Ex of Open Source DB.

- 1) MySQL
- 2) PostgreSQL
- 3) Maria DB

93)

Ans. db.createCollection("Album");  
db.Album.insertOne({  
 Type: "Studio",  
 Artist: "ABC",  
 Title: "HNO",  
 Genre: "Rock",  
 Release Date: "2022-05-10"  
})  
Tracklist : []  
Track: 1, Title: "x42".  
cast : [ "Fonda", "Jave"  
3 ];

- ```

1) db.Album.find ( { ReleaseDate : { $gt : "2000-01-01" } } )
2) db.Album.find ( { ReleaseDate : { $gt : "1999-01-01" } } )
   $lit : "2000-01-01" } } ) ;
3) db.Album.deleteOne ( { Artist : "ABC" } ) ,
4) db.Album.updateOne (
   { Type : "Studio" } ,
   { $set : { title : "New Studio" } } )
   ) ;

```