# ASSIGNMENT 1

**PROBLEM STATEMENT**

Mongo DB: Installation and Creation of database and Collection CRUD Document: Insert, Query, Update and Delete Document

**OBJECTIVE**

1. Understand the installation process of MongoDB and its basic configuration settings.
2. Learn how to create databases and collections in MongoDB to organize data efficiently.
3. Master the CRUD operations (Create, Read, Update, Delete) for managing documents within MongoDB collections.

**THEORY**

MongoDB Overview: Introduction to MongoDB as a NoSQL document-oriented database, highlighting its advantages and use cases.

Installation Process: Explanation of the steps required to download, install, and configure MongoDB on various operating systems.

Database and Collection Creation: Description of how to create databases and collections in MongoDB using the MongoDB Shell or graphical user interfaces (GUIs) like MongoDB Compass.

CRUD Operations: Overview of the four fundamental CRUD operations in MongoDB:

- Insert: Adding new documents to a collection.

- Query: Retrieving documents from a collection based on specified criteria.

- Update: Modifying existing documents in a collection.

- Delete: Removing documents from a collection.

**Step 1: MongoDB Installation on Windows:** Download the MongoDB Community Server from the MongoDB Download Center. Run the installer and follow the setup wizard. Add MongoDB's bin folder to the PATH environment variable for easy commandline access.

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

**Step 2: Create a Database and Collection:**

Switch to Your New Database:

• use myNewDatabase Create a Collection by Inserting a Document:

• 48 db.myNewCollection.insertOne({name: "John Doe", age: 30}) MongoDB creates the database and collection upon inserting the first document.

**Step 3: CRUD Operations**

Create (Insert Document): Insert a single document:

• db.myNewCollection.insertOne({name: "Jane Doe", age: 25})

• Read (Query Document): Find one document: db.myNewCollection.findOne({name: "John Doe"})

• Update Document: Update a single document: db.myNewCollection.update One ({name: "John Doe"}, {$set: {age: 31}})

- Delete Document: Delete a single document:

db.myNewCollection.deleteOne({name: "Bob"})

**CONCLUSION**

The guide provides a step-by-step approach to installing MongoDB, creating databases and collections, and performing CRUD operations on documents. By mastering these fundamental operations, users can harness the power and flexibility of MongoDB for storing and managing data efficiently. This serves as a foundation for further exploration of MongoDB's advanced features and capabilities in application development and data management.

**ORAL QUESTION**

1. How do you create a new database in MongoDB?
2. What are the common data types supported in MongoDB documents?
3. What does CRUD stand for in the context of databases?