**PRACTICAL NO.5**

**A.Connecting Java with MongoDB and inserting, retrieving, updating and deleting.**

**Environment setup :-**

First you have to install the msi file JDK and et its bin path to the environment.

Then download neccesory jar files that are as follow:-

 **bson-5.5.1.jar**  
👉 Provides BSON (Binary JSON) support — MongoDB uses BSON internally to store and transfer data.

 **mongodb-driver-core-5.5.1.jar**  
👉 Contains the core networking and protocol code — the foundation that handles connections between Java and MongoDB.

 **mongodb-driver-sync-5.5.1.jar**  
👉 The synchronous MongoDB Java driver — lets you write simple blocking CRUD queries in Java.

Here I created folder called imp\_files to store all these files so I can easily access all by using /\*

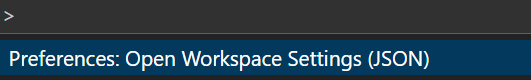
VSCODE:

To get **VS Code** to provide suggestions for your manually installed Java libraries, you need to add them to your project's classpath.

1)Open the Command Palette in VS Code (Ctrl+Shift+P on Windows/Linux or Cmd+Shift+P on macOS).

2)Type and select Preferences: Open Workspace Settings (JSON)

3)Add or modify the java.project.referencedLibraries setting to include the paths to your JAR files. Based on the file listing you provided, your settings.json should look like this:



And now create a json file as below:-

{

    "java.project.referencedLibraries": [

        "bson-5.5.1.jar",

        "mongodb-driver-core-5.5.1.jar",

        "mongodb-driver-sync-5.5.1.jar"

    ]

}

**All files should be at same location. And then provide the all files**

**Inserting**

**Inserting one record:-**

**CODE:-**

import com.mongodb.client.\*;

import org.bson.Document;

public class javacon {

    public static void main(String[] args) {

    MongoClient client=MongoClients.create("mongodb://localhost:27017/");

    MongoDatabase db=client.getDatabase("java\_db");

    MongoCollection<Document> col= db.getCollection("users");

    Document doc=new Document("Name","Karan").append("age", "20").append("email", "karan@gmail.conm");

    col.insertOne(doc);

    System.out.println("data inserted successfully");

}

}

**Output:**



**Inserting multiple records:-**

**CODE:-**

import com.mongodb.client.\*;

import org.bson.Document;

import java.lang.reflect.Array;

**import java.util.\*;**

public class javacon {

    public static void main(String[] args) {

    MongoClient client=MongoClients.create("mongodb://localhost:27017/");

    MongoDatabase db=client.getDatabase("java\_db");

    MongoCollection<Document> col= db.getCollection("users");

    List<Document> user=Arrays.asList(

                new Document("name", "Rohit").append("age", 38).append("email", "rohit45@gmail.com"),

                new Document("name", "Alex").append("age", 23).append("email", "alex5@gmail.com")

    );

        col.insertMany(user);

        System.out.println("Multiple documents inserted successfully!");

}

}

**Outpput:**



**Retrieving**

**Find query to find specific records**

**CODE:-**

import com.mongodb.client.\*;

import org.bson.Document;

public class javacon {

    public static void main(String[] args) {

    MongoClient client=MongoClients.create("mongodb://localhost:27017/");

    MongoDatabase db=client.getDatabase("java\_db");

    MongoCollection<Document> col= db.getCollection("users");

    FindIterable<Document> res=col.find(new Document("Name","Karan"));

    for (Document dc:res)

    {

         System.out.println("Matched: " + dc.toJson());

    }

}

}

**Output:**

Matched: {" id": {"$oid": "68c966bb9642570a9940aed7"}, "Name": "GG", "age": "20", "email": ["GG@gmail.com"}](mailto:%22GG@gmail.conm%22%7d)

**Deleting**

**DELETE RECORDS:-**

**CODE:-**

import com.mongodb.client.\*;

import org.bson.Document;

public class javacon {

    public static void main(String[] args) {

    MongoClient client=MongoClients.create("mongodb://localhost:27017/");

    MongoDatabase db=client.getDatabase("java\_db");

    MongoCollection<Document> col= db.getCollection("users");

var res=col.deleteMany(new Document("Name","karan"));

System.out.println("Delete count "+res.getDeletedCount());

}

}

**Output:**



**Updating**

**UPDATE RECORDS:-**

**CODE:-**

import com.mongodb.client.\*;

import org.bson.Document;

public class javacon {

    public static void main(String[] args) {

    MongoClient client=MongoClients.create("mongodb://localhost:27017/");

    MongoDatabase db=client.getDatabase("java\_db");

    MongoCollection<Document> col= db.getCollection("users");

    var result = col.updateMany(

                new Document("age", new Document("$lt", 30)),   // filter condition

                new Document("$set", new Document("status", "active")) // update operation

            );

            System.out.println("Modified count is"+result.getModifiedCount());

}

}

**Output:**

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