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| **Problem Statement:** Write a program to implement MongoDB database connectivity with any front-end language to implement database navigation operations (add, delete, edit, etc.). |

**Source Code:**

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| **package** DB;  **import** com.mongodb.MongoClient;  **import** com.mongodb.client.MongoCollection;  **import** com.mongodb.client.MongoDatabase;  **import** org.bson.Document;  **import** com.mongodb.client.FindIterable;  **public** **class** MongoDBConnection {  **public** **static** **void** main(String[] args) {  // 1️⃣ Connect to MongoDB (Default host: localhost, port: 27017)  MongoClient mongoClient = **new** MongoClient("localhost", 27017);  System.***out***.println("✅ Connected to MongoDB!");  // 2️⃣ Select Database (or create if not exists)  MongoDatabase database = mongoClient.getDatabase("testdb");  // 3️⃣ Select Collection (or create if not exists)  MongoCollection<Document> collection = database.getCollection("testCollection");  // 4️⃣ Insert a Sample Document  Document doc = **new** Document("name", "John Doe")  .append("age", 30)  .append("city", "New York");  collection.insertOne(doc);  System.***out***.println("✅ Document Inserted Successfully!");  // 5️⃣ Retrieve & Print Inserted Documents  System.***out***.println("\n📜 Retrieving All Documents:");  FindIterable<Document> documents = collection.find(); // Get all documents  **for** (Document document : documents) {  System.***out***.println(document.toJson()); // Print in JSON format  }  // 6️⃣ Close Connection  mongoClient.close();  System.***out***.println("\n🔴 Connection Closed!");  }  } |

**OutPut:**

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| Mar 23, 2025 6:39:14 PM com.mongodb.diagnostics.logging.JULLogger log  INFO: Cluster created with settings {hosts=[localhost:27017], mode=SINGLE, requiredClusterType=UNKNOWN, serverSelectionTimeout='30000 ms', maxWaitQueueSize=500}  ✅ Connected to MongoDB!  Mar 23, 2025 6:39:14 PM com.mongodb.diagnostics.logging.JULLogger log  INFO: Cluster description not yet available. Waiting for 30000 ms before timing out  Mar 23, 2025 6:39:14 PM com.mongodb.diagnostics.logging.JULLogger log  INFO: Opened connection [connectionId{localValue:1, serverValue:6}] to localhost:27017  Mar 23, 2025 6:39:14 PM com.mongodb.diagnostics.logging.JULLogger log  INFO: Monitor thread successfully connected to server with description ServerDescription{address=localhost:27017, type=STANDALONE, state=CONNECTED, ok=true, version=ServerVersion{versionList=[5, 0, 8]}, minWireVersion=0, maxWireVersion=13, maxDocumentSize=16777216, logicalSessionTimeoutMinutes=30, roundTripTimeNanos=3220400}  Mar 23, 2025 6:39:14 PM com.mongodb.diagnostics.logging.JULLogger log  INFO: Opened connection [connectionId{localValue:2, serverValue:7}] to localhost:27017  ✅ Document Inserted Successfully!  📜 Retrieving All Documents:  {"\_id": {"$oid": "67e007fa1a117964e01354fb"}, "name": "John Doe", "age": 30, "city": "New York"}  Mar 23, 2025 6:39:14 PM com.mongodb.diagnostics.logging.JULLogger log  INFO: Closed connection [connectionId{localValue:2, serverValue:7}] to localhost:27017 because the pool has been closed.  🔴 Connection Closed! |