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import com.mongodb.client.MongoClient;
import com.mongodb.client.MongoClients;
import com.mongodb.client.MongoDatabase;
import com.mongodb.client.MongoCollection;
import com.mongodb.client.result.DeleteResult;
import com.mongodb.client.result.UpdateResult;

import org.bson.Document;
import org.bson.conversions.Bson;

import java.util.Scanner;

import static com.mongodb.client.model.Filters.eq;
import static com.mongodb.client.model.Updates.set;

public class mongodb_connectivity {

    public static void main(String[] args) {
        String connectionString = "mongodb://te31141:te31141@10.10.8.119:27017/?
authSource=te31141_db";
        MongoClient mongoClient = MongoClients.create(connectionString);
        MongoDatabase database = mongoClient.getDatabase("te31141_db");
        MongoCollection<Document> collection = database.getCollection("student");

        System.out.println("Database Connected Successfully!!");

        Scanner scanner = new Scanner(System.in);

        boolean running = true;

        while (running) {
            System.out.println("\nChoose an option:");
            System.out.println("1. Insert student");
            System.out.println("2. Delete student by name");
            System.out.println("3. Update student marks by name");
            System.out.println("4. Exit");
            System.out.print("Enter choice (1-4): ");

            int choice = -1;
            if (scanner.hasNextInt()) {
                choice = scanner.nextInt();
                scanner.nextLine(); // consume newline
            } else {
                System.out.println("Invalid input. Please enter a number between 1
and 4.");
                scanner.nextLine(); // consume invalid input
                continue;
            }

            switch (choice) {
                case 1:
                    // Insert
                    System.out.print("Enter name: ");
                    String name = scanner.nextLine();
                    System.out.print("Enter age: ");
                    int age = scanner.nextInt();
                    System.out.print("Enter marks: ");
                    int marks = scanner.nextInt();

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scanner.nextLine(); // consume newline

Document doc = new Document("name", name)
    .append("age", age)
    .append("marks", marks);

collection.insertOne(doc);
System.out.println("Student inserted.");
break;

case 2:
    // Delete by name
    System.out.print("Enter name to delete: ");
    String delName = scanner.nextLine();

    DeleteResult deleteResult = collection.deleteOne(eq("name",
delName));

    if (deleteResult.getDeletedCount() > 0) {
        System.out.println("Student deleted successfully.");
    } else {
        System.out.println("No student found with that name.");
    }
    break;

case 3:
    // Update marks by name
    System.out.print("Enter name to update marks: ");
    String updateName = scanner.nextLine();
    System.out.print("Enter new marks: ");
    int newMarks = scanner.nextInt();
    scanner.nextLine(); // consume newline

    Bson filter = eq("name", updateName);
    Bson updateOperation = set("marks", newMarks);

    UpdateResult updateResult = collection.updateOne(filter,
updateOperation);

    if (updateResult.getMatchedCount() > 0) {
        System.out.println("Student marks updated.");
    } else {
        System.out.println("No student found with that name.");
    }
    break;

case 4:
    running = false;
    System.out.println("Exiting program.");
    break;

default:
    System.out.println("Invalid choice. Please select between 1
and 4.");
    break;
}

// Display all documents after each operation (except exit)
if (running) {
    System.out.println("\nAll students in collection:");

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        for (Document d : collection.find()) {
            System.out.println(d.toJson());
        }
    }

    scanner.close();
    mongoClient.close();
}
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