package connection;  
  
import com.mongodb.MongoClient;  
import com.mongodb.MongoCredential;  
import com.mongodb.client.MongoDatabase;  
  
public class Main {  
  
 public static void main(String[] args) {  
 try {  
 MongoClient db  
 = new MongoClient("localhost", 27017);  
  
 MongoCredential credential;  
 credential  
 = MongoCredential  
 .*createCredential*(  
 " ", "MongoDbConnection",  
 "password".toCharArray());  
 System.*out*.println(  
 "Successfully Connected"  
 + " to the database");  
  
 MongoDatabase database  
 = db.getDatabase("mongoDb");  
 System.*out*.println("Credentials are: "  
 + credential);  
 }  
 catch (Exception e) {  
 System.*out*.println(  
 "Connection establishment failed");  
 System.*out*.println(e);  
 }  
  
 }  
  
}

**Connection**

package connection;  
  
import com.mongodb.client.MongoClient;  
import com.mongodb.client.MongoClients;  
import com.mongodb.client.MongoIterable;  
  
public class Connection {  
 public static void main(String[] args) {  
  
 MongoClient mongoClient = MongoClients.*create*("mongodb://localhost:27017");  
  
 MongoIterable<String> loop1 = mongoClient.listDatabaseNames();  
 for (String name : loop1) {  
 System.*out*.println(name);  
 }  
  
 }  
}

**Collection**

import com.mongodb.client.\*;  
import org.bson.Document;  
  
public class Collection {  
 public static void main(String[] args) {  
   
 String uri = "mongodb://localhost:27017";  
  
  
 try (MongoClient mongoClient = MongoClients.*create*(uri)) {  
  
 MongoDatabase database = mongoClient.getDatabase("mydatabase");  
  
 String collectionName = "testCollection";  
  
 boolean exists = false;  
 for (String name : database.listCollectionNames()) {  
 if (name.equals(collectionName)) {  
 exists = true;  
 break;  
 }  
 }  
 if (!exists) {  
 database.createCollection(collectionName);  
 System.*out*.println("Created collection: " + collectionName);  
 }  
  
 MongoCollection<Document> collection = database.getCollection(collectionName);  
 Document sample = new Document("name", "Alice").append("age", 30);  
 collection.insertOne(sample);  
 System.*out*.println("Inserted sample document into " + collectionName);  
  
 System.*out*.println("Collections in the database:");  
 for (String name : database.listCollectionNames()) {  
 System.*out*.println("- " + name);  
 }  
  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 }  
}

**Drop**

import com.mongodb.client.\*;  
import org.bson.Document;  
  
public class drop {  
 public static void main(String[] args) {  
 String uri = "mongodb://localhost:27017";  
  
 try (MongoClient mongoClient = MongoClients.*create*(uri)) {  
  
  
 MongoDatabase database = mongoClient.getDatabase("mydatabase");  
  
  
 String collectionName = "testCollection";  
  
 boolean exists = false;  
 for (String name : database.listCollectionNames()) {  
 if (name.equals(collectionName)) {  
 exists = true;  
 break;  
 }  
 }  
  
 if (exists) {  
 database.getCollection(collectionName).drop();  
 System.*out*.println("Dropped collection: " + collectionName);  
 } else {  
 System.*out*.println("Collection does not exist: " + collectionName);  
 }  
  
 } catch (Exception e) {  
 e.printStackTrace();  
 }  
 }  
}

**input Scanner**

import com.mongodb.client.MongoClient;  
import com.mongodb.client.MongoClients;  
import com.mongodb.client.MongoCollection;  
import com.mongodb.client.MongoDatabase;  
import org.bson.Document;  
  
import java.util.Scanner;  
  
public class Input {  
 public static void main(String[] args) {  
  
 MongoClient mongoClient = MongoClients.*create*("mongodb://localhost:27017");  
 MongoDatabase database = mongoClient.getDatabase("mydatabase");  
 MongoCollection<Document> collection = database.getCollection("testCollection");  
  
   
 Scanner scanner = new Scanner(System.*in*);  
  
  
 System.*out*.print("Enter First Name: ");  
 String firstName = scanner.nextLine();  
  
 System.*out*.print("Enter Last Name: ");  
 String lastName = scanner.nextLine();  
  
 System.*out*.print("Enter Date of Birth (yyyy-mm-dd): ");  
 String dob = scanner.nextLine();  
  
 System.*out*.print("Enter Email: ");  
 String email = scanner.nextLine();  
  
 System.*out*.print("Enter Phone Number: ");  
 String phone = scanner.nextLine();  
 Document userDoc = new Document("First\_Name", firstName)  
 .append("Last\_Name", lastName)  
 .append("Date\_Of\_Birth", dob)  
 .append("e\_mail", email)  
 .append("phone", phone);  
  
  
 collection.insertOne(userDoc);  
  
 System.*out*.println("User data inserted into MongoDB!");  
  
 scanner.close();  
 mongoClient.close();  
 }  
}

**Inserting**

import java.util.ArrayList;  
import java.util.List;  
  
import org.bson.Document;  
  
import com.mongodb.client.MongoClient;  
import com.mongodb.client.MongoClients;  
import com.mongodb.client.MongoCollection;  
import com.mongodb.client.MongoDatabase;  
  
public class inserting {  
 public static void main(String[] args) {  
 MongoClient mongoClient = MongoClients.*create*("mongodb://localhost:27017");  
 MongoDatabase database = mongoClient.getDatabase("mydatabase");  
  
  
 MongoCollection<Document> collection = database.getCollection("testCollection");  
  
 Document document = new Document("First\_Name", "Mahesh")  
 .append("Last\_Name", "Parashar")  
 .append("Date\_Of\_Birth", "1990-08-21")  
 .append("e\_mail", "mahesh\_parashar.123@gmail.com")  
 .append("phone", "9034343345");  
  
 collection.insertOne(document);  
 List<Document> documents = new ArrayList<>();  
  
 documents.add(new Document("First\_Name", "Radhika")  
 .append("Last\_Name", "Sharma")  
 .append("Date\_Of\_Birth", "1995-09-26")  
 .append("e\_mail", "radhika\_sharma.123@gmail.com")  
 .append("phone", "9000012345"));  
  
 documents.add(new Document("First\_Name", "Rachel")  
 .append("Last\_Name", "Christopher")  
 .append("Date\_Of\_Birth", "1990-02-16")  
 .append("e\_mail", "Rachel\_Christopher.123@gmail.com")  
 .append("phone", "9000054321"));  
  
 documents.add(new Document("First\_Name", "Fathima")  
 .append("Last\_Name", "Sheik")  
 .append("Date\_Of\_Birth", "1990-02-16")  
 .append("e\_mail", "Fathima\_Sheik.123@gmail.com")  
 .append("phone", "9000054321"));  
  
 collection.insertMany(documents);  
  
 System.*out*.println("Documents inserted.");  
 }  
}

**Insert Many**  
import com.mongodb.client.MongoClient;  
import com.mongodb.client.MongoClients;  
import com.mongodb.client.MongoCollection;  
import com.mongodb.client.MongoDatabase;  
import org.bson.Document;  
  
import java.util.ArrayList;  
import java.util.List;  
import java.util.Scanner;  
  
public class InsertMany {  
 public static void main(String[] args) {  
 // Connect to MongoDB  
 MongoClient mongoClient = MongoClients.*create*("mongodb://localhost:27017");  
 MongoDatabase database = mongoClient.getDatabase("mydatabase");  
 MongoCollection<Document> collection = database.getCollection("testCollection");  
  
 Scanner scanner = new Scanner(System.*in*);  
 List<Document> documents = new ArrayList<>();  
  
 System.*out*.print("How many users do you want to insert? ");  
 int count = Integer.*parseInt*(scanner.nextLine());  
  
 for (int i = 1; i <= count; i++) {  
 System.*out*.println("\nEnter details for user #" + i + ":");  
  
 System.*out*.print("First Name: ");  
 String firstName = scanner.nextLine();  
  
 System.*out*.print("Last Name: ");  
 String lastName = scanner.nextLine();  
  
 System.*out*.print("Date of Birth (yyyy-mm-dd): ");  
 String dob = scanner.nextLine();  
  
 System.*out*.print("Email: ");  
 String email = scanner.nextLine();  
  
 System.*out*.print("Phone: ");  
 String phone = scanner.nextLine();  
  
 Document doc = new Document("First\_Name", firstName)  
 .append("Last\_Name", lastName)  
 .append("Date\_Of\_Birth", dob)  
 .append("e\_mail", email)  
 .append("phone", phone);  
  
 documents.add(doc);  
 }  
  
 collection.insertMany(documents);  
  
 System.*out*.println("\n" + count + " user(s) inserted successfully.");  
  
 // Clean up  
 scanner.close();  
 mongoClient.close();  
 }  
}

**Retrieve**import com.mongodb.client.FindIterable;  
import com.mongodb.client.MongoClient;  
import com.mongodb.client.MongoClients;  
import com.mongodb.client.MongoCollection;  
import com.mongodb.client.MongoDatabase;  
import org.bson.Document;  
  
public class Retrieve{  
 public static void main(String[] args) {  
   
 MongoClient mongoClient = MongoClients.*create*("mongodb://localhost:27017");  
  
 // Connect to the database  
 MongoDatabase database = mongoClient.getDatabase("mydatabase");  
  
   
 MongoCollection<Document> collection = database.getCollection("testCollection");  
  
 FindIterable<Document> documents = collection.find();  
  
 System.*out*.println("Documents in testCollection:");  
 for (Document doc : documents) {  
 System.*out*.println(doc.toJson());  
 }  
  
   
 mongoClient.close();  
 }  
}

**Update**

import com.mongodb.client.MongoClient;  
import com.mongodb.client.MongoClients;  
import com.mongodb.client.MongoCollection;  
import com.mongodb.client.MongoDatabase;  
import com.mongodb.client.result.UpdateResult;  
import org.bson.Document;  
  
public class Update {  
 public static void main(String[] args) {  
 // Connect to MongoDB  
 MongoClient mongoClient = MongoClients.*create*("mongodb://localhost:27017");  
 MongoDatabase database = mongoClient.getDatabase("mydatabase");  
 MongoCollection<Document> collection = database.getCollection("testCollection");  
  
 // Filter: find the document to update (e.g., First\_Name = "Rohan")  
 Document filter = new Document("First\_Name", "Harsh ");  
  
 // Update: set a new email and phone  
 Document update = new Document("$set", new Document("e\_mail", "rohan.newemail@example.com")  
 .append("phone", "1122334455"));  
  
 // Perform the update operation  
 UpdateResult result = collection.updateOne(filter, update);  
  
 // Output the result  
 if (result.getModifiedCount() > 0) {  
 System.*out*.println("Document updated successfully.");  
 } else {  
 System.*out*.println("No matching document found to update.");  
 }  
  
 // Close the client  
 mongoClient.close();  
 }  
}

**UpdateMany**

import com.mongodb.client.MongoClient;  
import com.mongodb.client.MongoClients;  
import com.mongodb.client.MongoCollection;  
import com.mongodb.client.MongoDatabase;  
import com.mongodb.client.result.UpdateResult;  
import org.bson.Document;  
  
import java.util.Scanner;  
  
public class UpdateMany {  
 public static void main(String[] args) {  
 // MongoDB connection  
 MongoClient mongoClient = MongoClients.*create*("mongodb://localhost:27017");  
 MongoDatabase database = mongoClient.getDatabase("mydatabase");  
 MongoCollection<Document> collection = database.getCollection("testCollection");  
  
 // Scanner for user input  
 Scanner scanner = new Scanner(System.*in*);  
  
 // Input: field to filter  
 System.*out*.print("Enter the field to match (e.g. Last\_Name): ");  
 String filterField = scanner.nextLine();  
  
 // Input: value to filter  
 System.*out*.print("Enter the value to match (e.g. Sharma): ");  
 String filterValue = scanner.nextLine();  
  
 // Input: field to update  
 System.*out*.print("Enter the field to update (e.g. phone): ");  
 String updateField = scanner.nextLine();  
  
 // Input: new value to set  
 System.*out*.print("Enter the new value for the field: ");  
 String updateValue = scanner.nextLine();  
  
 // Build the filter and update documents  
 Document filter = new Document(filterField, filterValue);  
 Document update = new Document("$set", new Document(updateField, updateValue));  
  
 // Perform the updateMany operation  
 UpdateResult result = collection.updateMany(filter, update);  
  
 // Output the result  
 System.*out*.println("\nMatched documents: " + result.getMatchedCount());  
 System.*out*.println("Modified documents: " + result.getModifiedCount());  
  
 // Cleanup  
 scanner.close();  
 mongoClient.close();  
 }  
}