BDA LAB ASSIGNMENT 3

PA17- KETAKI PATIL
BATCH A1

JAVA – MONGOBD CODE :

```
package bdalab3;

import java.util.*;
import com.mongodb.*;
import java.io.*;

public class menulab3{
	static int student_id;
	static int age;
	static int score;
	static String student_name;
	static String branch;
	static String panel;
	static String pincode;
	static String subject_name;
	static String area;
	static String city;
	static List<String> area_of_interest = new ArrayList<>();
	public static void main(String[] args) {
	// TODO Auto-generated method stub
		int ch, ans, options;
		char choice;
		BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
		Scanner sc = new Scanner(System.in);
		try {
		MongoClient mongo = new MongoClient("127.0.0.1",27017);
		DB db = mongo.getDB("new_institute");
		DBCollection col = db.getCollection("Student");
		DBObject subject_list = null;
		ArrayList<DBObject> Subjects_List = new ArrayList<>();
		do {
			System.out.println("\nWhat do you want to do?");
			System.out.println("1. Insert");
			System.out.println("2. Read");
			System.out.println("3. Update");
			System.out.println("4. Delete");
			System.out.println("5. Exit");
			System.out.print("Enter your choice : ");
			ch = sc.nextInt();
			switch(ch) {
			case 1: int count=1, count1=0, check;
			System.out.print("Enter Id : ");
			student_id = sc.nextInt();
			System.out.print("Enter Student Name : ");
			student_name = br.readLine();
```

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                    System.out.print("Enter Branch : ");
                    branch = br.readLine();
                    System.out.print("Enter Age : ");
                    age = sc.nextInt();
                    System.out.print("Enter Panel : ");
                    panel = br.readLine();
                    System.out.println("Address - ");
                    System.out.print("\t Enter Area : ");
                    area = br.readLine();
                    System.out.print("\t Enter City : ");
                    city = br.readLine();
                    System.out.print("\t Enter Pin Code : ");
                    pincode = sc.next();
                    System.out.println("Enter 'Name of Subject' and it's corresponding score of all 4
subjects : ");
                    while(count<=4) {
                    System.out.print("\t Enter Name of Subject "+count+" : ");
                    subject_name = br.readLine();
                    System.out.print("\t Enter Score : ");
                    score = sc.nextInt();
                    subject_list = new BasicDBObject("subject name",subject_name).append("score",
score);
                    Subjects_List.add(subject_list);
                    count++;
                }
                System.out.println("Enter Area of Interest : ");
                do {
                String interest;
                interest = br.readLine();
                area_of_interest.add(interest);
                count1++;
                System.out.print("\t Want to add more (Press 1 for Yes) : ");
                check = sc.nextInt();
                }while(check == 1);
                BasicDBObject address = new BasicDBObject("Area",area).append("City",
city).append("Pincode", pincode);
                BasicDBObject doc = new BasicDBObject("Student Id",student_id)
                .append("Student Name",student_name)
                .append("Branch",branch)
                .append("Age",age)
                .append("Panel", panel)
                .append("Address", address)
                .append("Subjects", Subjects_List)
                .append("Area of Interest", area_of_interest);
                col.insert(doc);
                System.out.println("Document inserted Successfully!!!");
                break;
                case 2: DBCursor iterDoc = col.find();
                Iterator<DBObject> it = iterDoc.iterator();
                System.out.println("The records are : ");
                while(it.hasNext()) {
                System.out.println(it.next());
                }
```

```
                break;
                case 3: System.out.print("Enter the Name of the student whose record you want to update :
");
                student_name = br.readLine();
                BasicDBObject searchQuery = new BasicDBObject().append("Student Name",
student_name);
                System.out.print("\t Want to update Branch ? ((Press y/Y for yes)/(Press any button in order
to not update it)) : ");
                choice = sc.next().charAt(0);
                if(choice=='y' || choice=='Y') {
                System.out.print("\n Enter new Branch : ");
                branch = br.readLine();
                BasicDBObject document = new BasicDBObject();
                document.append("$set", new BasicDBObject().append("Branch", branch));
                col.update(searchQuery, document);
                System.out.println(" Branch Updated");
                }
                System.out.print("\t Want to update Age ? (Press y/Y for yes) : ");
                choice = sc.next().charAt(0);
                if(choice=='y' || choice=='Y') {
                System.out.print("\n Enter new Age :: ");
                age = sc.nextInt();
                BasicDBObject document = new BasicDBObject();
                document.append("$set", new BasicDBObject().append("Age", age));
                col.update(searchQuery, document);
                System.out.println(" Age Updated");
                }
                System.out.print("\t Want to update Panel ? (Press y/Y for yes) : ");
                choice = sc.next().charAt(0);
                if(choice=='y' || choice=='Y') {
                System.out.print("\n Enter new Panel :: ");
                panel = br.readLine();
                BasicDBObject document = new BasicDBObject();
                document.append("$set", new BasicDBObject().append("Panel", panel));
                col.update(searchQuery, document);
                System.out.println("Panel Updated");
                }
                System.out.print("\t Want to update Address ? (Press y/Y for yes) : ");
                choice = sc.next().charAt(0);
                if(choice=='y' || choice=='Y') {
                System.out.print("\t\t Want to update Area ? (Press y/Y for yes) : ");
                choice = sc.next().charAt(0);
                if(choice=='y' || choice=='Y') {
                System.out.print("\t\t\t Enter the new Area : ");
                area = br.readLine();
                DBObject update = new BasicDBObject();
                update.put("$set", new BasicDBObject("Address.Area", area));
                col.update(searchQuery, update);
                System.out.println("\tArea Updated");
                }
                System.out.print("\t\t Want to update City ? (Press y/Y for yes) : ");
                choice = sc.next().charAt(0);
                if(choice=='y' || choice=='Y') {
```

```
System.out.print("\t\t\t Enter the new City : ");
city = br.readLine();
DBObject update = new BasicDBObject();
update.put("$set", new BasicDBObject("Address.City", city));
col.update(searchQuery, update);
System.out.println("\tCity Updated");
}
System.out.print("\tWant to update Pincode ? (Press y/Y for yes) : ");
choice = sc.next().charAt(0);
if(choice=='y' || choice=='Y') {
System.out.print("\t\t\t Enter the new Pincode : ");
pincode = sc.next();
DBObject update = new BasicDBObject();
update.put("$set", new BasicDBObject("Address.Pincode", pincode));
col.update(searchQuery, update);
System.out.println("\tPincode Updated");
}
}
System.out.print("\t Want to update Area of Interest ? (Press y/Y for yes) : ");
choice = sc.next().charAt(0);
if(choice=='y'|| choice=='Y') {
int count2=0;
do {
String interest;
System.out.print("\t Enter the Area of Interest : ");
interest = br.readLine();
area_of_interest.add(interest);
count2++;
System.out.print("\t Want to add more ? (Press 1 for Yes) : ");
check = sc.nextInt();
}while(check == 1);
BasicDBObject db1 = new BasicDBObject("Area of Interest",area_of_interest);
BasicDBObject db11= new BasicDBObject("$set",db1);
col.update(searchQuery, db11);
System.out.println("\tArea of Interest Updated");
}
break;
case 4: System.out.print("\t Enter Name of the student whose Record you want to delete :
");
student_name = br.readLine();
BasicDBObject deleteQuery = new BasicDBObject();
deleteQuery.put("Student Name", student_name);
DBCursor cursor = col.find(deleteQuery);
while (cursor.hasNext()) {
DBObject item = cursor.next();
col.remove(item);
}
System.out.println("\t Record Deleted Successfully");
break;
case 5: System.exit(0);
break;
default: System.out.println("Invalid Choice");
}
```

```
                System.out.print("Do you want to continue (Press 1 for Yes)? : ");
                ans = sc.nextInt();
                }while(ans == 1);
                }
                catch(Exception e){
                //System.out.println("Error");
                e.printStackTrace();
                }
                sc.close();
        }
}
```

OUTPUT :

```
May 01, 2021 1:42:29 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Cluster created with settings {hosts=[127.0.0.1:27017], mode=SINGLE,
requiredClusterType=UNKNOWN, serverSelectionTimeout='30000 ms', maxWaitQueueSize=500}

What do you want to do?
1. Insert
2. Read
3. Update
4. Delete
5. Exit
Enter your choice : May 01, 2021 1:42:29 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection [connectionId{localValue:1, serverValue:50}] to 127.0.0.1:27017
May 01, 2021 1:42:29 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Monitor thread successfully connected to server with description
ServerDescription{address=127.0.0.1:27017, type=STANDALONE, state=CONNECTED, ok=true,
version=ServerVersion{versionList=[4, 2, 13]}, minWireVersion=0, maxWireVersion=8,
maxDocumentSize=16777216, logicalSessionTimeoutMinutes=30, roundTripTimeNanos=5037401}
2
The records are :
May 01, 2021 1:42:32 PM com.mongodb.diagnostics.logging.JULLogger log
INFO: Opened connection [connectionId{localValue:2, serverValue:51}] to 127.0.0.1:27017
{"_id": {"$oid": "608b99e491ccf82102383ef3"}, "Student Id": 1, "Student Name": "Aditi",
"Branch": "CSE", "Age": 20, "Panel": "A", "Address": {"Area": "Vartak Nagar", "City": "Thane",
"Pincode": "400606"}, "Subjects": [{"subject name": "DBMS", "score": 45}, {"subject name":
"TOC", "score": 46}, {"subject name": "CN", "score": 38}, {"subject name": "DAA", "score": 35},
{"subject name": "DBMS", "score": 45}, {"subject name": "TOC", "score": 47}, {"subject name":
"CN", "score": 37}, {"subject name": "DAA", "score": 40}], "Area of Interest": ["Artificial
Intelligence", "Machine Learning", "Analytics", "Artificial Intelligence", "Analytics"]}
{"_id": {"$oid": "608d0c64e4080d7a0975da5c"}, "Student Id": 2, "Student Name": "Prachi",
"Branch": "CSE", "Age": 21, "Panel": "B", "Address": {"Area": "Karve", "City": "Kothrud",
"Pincode": "400315"}, "Subjects": [{"subject name": "TOC", "score": 45}, {"subject name":
"DBMS", "score": 48}, {"subject name": "CN", "score": 35}, {"subject name": "DAA", "score":
38}], "Area of Interest": ["Cloud Computing", "Big Data"]}
Do you want to continue (Press 1 for Yes)? : 1

What do you want to do?
1. Insert
2. Read
3. Update
4. Delete
5. Exit
Enter your choice : 1
Enter Id : 3
Enter Student Name : Danish
Enter Branch : Civil
Enter Age : 21
```

```
Enter Panel : A
Address -
        Enter Area : Samta
        Enter City : Mumbai
        Enter Pin Code : 400101
Enter 'Name of Subject' and it's corresponding score of all 4 subjects :
        Enter Name of Subject 1 : AMC
        Enter Score : 38
        Enter Name of Subject 2 : WPC
        Enter Score : 45
        Enter Name of Subject 3 : GEO
        Enter Score : 46
        Enter Name of Subject 4 : SA
        Enter Score : 39
Enter Area of Interest :
Dam
        Want to add more (Press 1 for Yes) : 1
Highway
        Want to add more (Press 1 for Yes) : 0
Document inserted Successfully!!!
Do you want to continue (Press 1 for Yes)? : 1

What do you want to do?
1. Insert
2. Read
3. Update
4. Delete
5. Exit
Enter your choice : 2
The records are :
{"_id": {"$oid": "608b99e491ccf82102383ef3"}, "Student Id": 1, "Student Name": "Aditi",
"Branch": "CSE", "Age": 20, "Panel": "A", "Address": {"Area": "Vartak Nagar", "City": "Thane",
"Pincode": "400606"}, "Subjects": [{"subject name": "DBMS", "score": 45}, {"subject name":
"TOC", "score": 46}, {"subject name": "CN", "score": 38}, {"subject name": "DAA", "score": 35},
{"subject name": "DBMS", "score": 45}, {"subject name": "TOC", "score": 47}, {"subject name":
"CN", "score": 37}, {"subject name": "DAA", "score": 40}], "Area of Interest": ["Artificial
Intelligence", "Machine Learning", "Analytics", "Artificial Intelligence", "Analytics"]}
{"_id": {"$oid": "608d0c64e4080d7a0975da5c"}, "Student Id": 2, "Student Name": "Prachi",
"Branch": "CSE", "Age": 21, "Panel": "B", "Address": {"Area": "Karve", "City": "Kothrud",
"Pincode": "400315"}, "Subjects": [{"subject name": "TOC", "score": 45}, {"subject name":
"DBMS", "score": 48}, {"subject name": "CN", "score": 35}, {"subject name": "DAA", "score":
38}], "Area of Interest": ["Cloud Computing", "Big Data"]}
{"_id": {"$oid": "608d0e08b9ca8872f3cde2ba"}, "Student Id": 3, "Student Name": "Danish",
"Branch": "Civil", "Age": 21, "Panel": "A", "Address": {"Area": "Samta", "City": "Mumbai",
"Pincode": "400101"}, "Subjects": [{"subject name": "AMC", "score": 38}, {"subject name":
"WPC", "score": 45}, {"subject name": "GEO", "score": 46}, {"subject name": "SA", "score":
39}], "Area of Interest": ["Dam", "Highway"]}
Do you want to continue (Press 1 for Yes)? : 1

What do you want to do?
1. Insert
2. Read
3. Update
4. Delete
5. Exit
Enter your choice : 3
Enter the Name of the student whose record you want to update : Danish
        Want to update Branch ? ((Press y/Y for yes)/(Press any button in order to not update
it)) : 0
        Want to update Age ? (Press y/Y for yes) : y

 Enter new Age :: 19
 Age Updated
        Want to update Panel ? (Press y/Y for yes) : y
```

```
 Enter new Panel :: B
Panel Updated
       Want to update Address ? (Press y/Y for yes) : y
              Want to update Area ? (Press y/Y for yes) : y
                     Enter the new Area : Hinjewadi
       Area Updated
              Want to update City ? (Press y/Y for yes) : y
                     Enter the new City : Pune
       City Updated
       Want to update Pincode ? (Press y/Y for yes) : y
                     Enter the new Pincode : 400520
       Pincode Updated
        Want to update Area of Interest ? (Press y/Y for yes) : n
Do you want to continue (Press 1 for Yes)? : 1

What do you want to do?
1. Insert
2. Read
3. Update
4. Delete
5. Exit
Enter your choice : 2
The records are :
{"_id": {"$oid": "608b99e491ccf82102383ef3"}, "Student Id": 1, "Student Name": "Aditi",
"Branch": "CSE", "Age": 20, "Panel": "A", "Address": {"Area": "Vartak Nagar", "City": "Thane",
"Pincode": "400606"}, "Subjects": [{"subject name": "DBMS", "score": 45}, {"subject name":
"TOC", "score": 46}, {"subject name": "CN", "score": 38}, {"subject name": "DAA", "score": 35},
{"subject name": "DBMS", "score": 45}, {"subject name": "TOC", "score": 47}, {"subject name":
"CN", "score": 37}, {"subject name": "DAA", "score": 40}], "Area of Interest": ["Artificial
Intelligence", "Machine Learning", "Analytics", "Artificial Intelligence", "Analytics"]}
{"_id": {"$oid": "608d0c64e4080d7a0975da5c"}, "Student Id": 2, "Student Name": "Prachi",
"Branch": "CSE", "Age": 21, "Panel": "B", "Address": {"Area": "Karve", "City": "Kothrud",
"Pincode": "400315"}, "Subjects": [{"subject name": "TOC", "score": 45}, {"subject name":
"DBMS", "score": 48}, {"subject name": "CN", "score": 35}, {"subject name": "DAA", "score":
38}], "Area of Interest": ["Cloud Computing", "Big Data"]}
{"_id": {"$oid": "608d0e08b9ca8872f3cde2ba"}, "Student Id": 3, "Student Name": "Danish",
"Branch": "Civil", "Age": 19, "Panel": "B", "Address": {"Area": "Hinjewadi", "City": "Pune",
"Pincode": "400520"}, "Subjects": [{"subject name": "AMC", "score": 38}, {"subject name":
"WPC", "score": 45}, {"subject name": "GEO", "score": 46}, {"subject name": "SA", "score":
39}], "Area of Interest": ["Dam", "Highway"]}
Do you want to continue (Press 1 for Yes)? : 1

What do you want to do?
1. Insert
2. Read
3. Update
4. Delete
5. Exit
Enter your choice : 4
       Enter Name of the student whose Record you want to delete : Aditi
       Record Deleted Successfully
Do you want to continue (Press 1 for Yes)? : 1

What do you want to do?
1. Insert
2. Read
3. Update
4. Delete
5. Exit
Enter your choice : 2
The records are :
{"_id": {"$oid": "608d0c64e4080d7a0975da5c"}, "Student Id": 2, "Student Name": "Prachi",
"Branch": "CSE", "Age": 21, "Panel": "B", "Address": {"Area": "Karve", "City": "Kothrud",
"Pincode": "400315"}, "Subjects": [{"subject name": "TOC", "score": 45}, {"subject name":
```

"DBMS", "score": 48}, {"subject name": "CN", "score": 35}, {"subject name": "DAA", "score": 38}], "Area of Interest": ["Cloud Computing", "Big Data"]}
{"_id": {"$oid": "608d0e08b9ca8872f3cde2ba"}, "Student Id": 3, "Student Name": "Danish", "Branch": "Civil", "Age": 19, "Panel": "B", "Address": {"Area": "Hinjewadi", "City": "Pune", "Pincode": "400520"}, "Subjects": [{"subject name": "AMC", "score": 38}, {"subject name": "WPC", "score": 45}, {"subject name": "GEO", "score": 46}, {"subject name": "SA", "score": 39}], "Area of Interest": ["Dam", "Highway"]}
Do you want to continue (Press 1 for Yes)? : 0