

## Database connectivity CRUD with MongoDB:

### 1) Python code:

```
from ast import main
def get_database():
    from pymongo import MongoClient
    import pymongo

    # MongoDB atlas url to connect python to mongodb using pymongo
    CONNECTION_STRING = "mongodb://localhost:27017"

    # Create a connection using MongoClient. You can import MongoClient or use
    pymongo.MongoClient
    from pymongo import MongoClient
    client = MongoClient(CONNECTION_STRING)

    # Create the database for our example (we will use the same database
    throughout the tutorial
    return client["Company"]

# This is added so that many files can reuse the function get_database()
if __name__ == "__main__":

    # Get the database
    dbname = get_database()

    collection_name = dbname["Employee"]#Creating the database employee
    def check(field):
        if field == "-":
            return False
        else :
            return True

    def checkint(field):
        if field == 0:
            return False
        else :
            return True
```

```

def accept():
    document={}
    fn = input("Enter first name: ")
    if check(fn):
        document["firstName"] = fn
    ln = input("Enter last name: ")
    if check(ln):
        document["lastName"] = ln
    age= int(input("Enter age: "))
    if checkint(age):
        document["age"] = age

    address={}
    street = input("Enter street name: ")
    if check(street):
        address["streetAddress"] = street
    city = input("Enter city: ")
    if check(city):
        address["city"] = city
    state = input("Enter state: ")
    if check(state):
        address["state"] = state
    postal_code = input("Enter postalcode: ")
    if check(postal_code):
        address["postalCode"] = postal_code
    if address:
        document["address"]=address

    phoneNumber=[]
    num = int(input("How many numbers? : "))
    if num != 0:
        for i in range(num):
            record={}
            Type=input(f"Enter type {i+1}: ")
            number=input(f"Enter number: ")
            record["type"]=Type
            record["number"]=number
            phoneNumber.append(record)
        document["phoneNumber"]=phoneNumber

    emailids=[]
    num1 = int(input("How many email ids? : "))
    if num1 != 0:
        for j in range(num1):
            email = input(f"Enter email id {j+1}: ")
            emailids.append(email)
        document["emailAddress"]=emailids

```

```

        return document

def create(n):
    if n == 1:
        print("*****Please enter details for your document*****")

        retrieved_doc = accept()
        x=collection_name.insert_one(retrieved_doc)
        last_inserted_id = x.inserted_id
        print("*****")
        print("Last inserted id: {}".format(last_inserted_id))

    elif n > 1:
        doc_list=[]
        for doc in range(n):
            print(f"\n*****Please enter the details for document
{doc+1}*****")
            retrieved_doc =accept()
            doc_list.append(retrieved_doc)
            y=collection_name.insert_many(doc_list)
            last_inserted_ids = y.inserted_ids
            print("*****")
            print("Last inserted ids: {}".format(last_inserted_ids))

def search(n):
    print("Please enter the fields by which you want to search the
document!")
    query = accept()
    if n == "all":
        result=collection_name.find(query)
        for i in result:
            print(i)
    else:
        k = int(n)
        result=collection_name.find(query).limit(k)
        for i in result:
            print(i)

def update():
    x =input("Update one or many?: ")
    print("*****Enter the details of the document that you wish to
update*****")
    present_data = accept()
    print("*****Enter the new details*****")
    new_data = accept()
    if x == "many":

```

```

        um = collection_name.update_many(present_data,{"$set":new_data})
        print("*****")
        print(um.modified_count,"documents updated")
    else:
        uo=collection_name.update_one(present_data,{"$set":new_data})
        print("*****")
        print(uo.modified_count,"document updated")

def delete():
    y =input("Delete one or many?: ")
    print("*****Enter the details of the document that you wish to
delete*****")
    query = accept()
    if y == "many":
        dm =collection_name.delete_many(query)
        print(dm.deleted_count,"documents deleted")
    else:
        do=collection_name.delete_one(query)
        print(do.deleted_count,"document deleted")

ans = "y"

while ans == "y":
    print("\n-----Menu-----")
    print("1. Create/Insert document(s)")
    print("2. Search for document(s)")
    print("3. Update document(s)")
    print("4. Delete document(s)")
    print("5. Display all the documents in the collection")
    print("6. Delete all the documents from the collection")
    choice = int(input("Enter a choice: "))
    if choice == 1:
        val = int(input("Enter the no of records to be inserted: "))
        create(val)
        print("Document(s) inserted successfully!")
        print("*****")
    elif choice == 2:
        val = input("Enter the no of records to be searched(type all if
you want to display all the docs),else type the number of docs you want to
search for: ")
        search(val)
    elif choice == 3:
        update()
    elif choice == 4:
        delete()
    elif choice == 5:
        result = collection_name.find()
        for i in result:

```

```

        print(i)
    elif choice == 6:
        x = collection_name.delete_many({})
        print(x.deleted_count, "documents deleted.")
    else:
        print("Invalid input")
    ans = input("Do you want to continue (y/n)? : ")
    print("Exited Successfully!")

```

## Output:

```

PROBLEMS  OUTPUT  TERMINAL  JUPYTER  DEBUG CONSOLE
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS D:\MIT_Academics\TY\Semester V\BDT\DBconnect> python -u "d:\MIT_Academics\TY\Semester V\BDT\DBconnect\main.py"

-----Menu-----
1. Create/Insert document(s)
2. Search for document(s)
3. Update document(s)
4. Delete document(s)
5. Display all the documents in the collection
6. Delete all the documents from the collection
Enter a choice: 1
Enter the no of records to be inserted: 1
*****Please enter details for your document*****
Enter first name: Aditya
Enter last name: Kelkar
Enter age: 20
Enter street name: ABC
Enter city: Pune
Enter state: MH
Enter postalcode: 411037
How many numbers? : 1
Enter type 1: Personal
Enter number: 728972942
How many email ids? : 1
Enter email id 1: kelkaradityan14@gmail.com
*****
Last inserted id: 637645f4cb2742183bbe0ea4
Document(s) inserted successfully!
*****
Do you want to continue (y/n)? : y

-----Menu-----
1. Create/Insert document(s)
2. Search for document(s)

```

```

PROBLEMS  OUTPUT  TERMINAL  JUPYTER  DEBUG CONSOLE
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS D:\MIT_Academics\TY\Semester V\BDT\DBconnect> python -u "d:\MIT_Academics\TY\Semester V\BDT\DBconnect\main.py"

-----Menu-----
1. Create/Insert document(s)
2. Search for document(s)
3. Update document(s)
4. Delete document(s)
5. Display all the documents in the collection
6. Delete all the documents from the collection
Enter a choice: 2
Enter the no of records to be searched(type all if you want to display all the docs),else type the number of docs you want to search for: 1
Please enter the fields by which you want to search the document!
Enter first name: Aditya
Enter last name: Kelkar
Enter age: 20
Enter street name: -
Enter city: -
Enter state: -
Enter postalcode: -
How many numbers? : 0
How many email ids? : 0
[{'id': 'ObjectID('634409505481ded408573c791b')', 'firstName': 'Aditya', 'lastName': 'Kelkar', 'age': 20, 'address': {'streetAddress': 'GA Kulkarni Path', 'city': 'Pune', 'state': 'Maharashtra', 'postalCode': '411038'}, 'phoneNumber': [{'type': 'Personal', 'number': '8380893051'}], 'emailAddress': ['kelkaradityan14@gmail.com']}]]
Do you want to continue (y/n)? : y

-----Menu-----
1. Create/Insert document(s)
2. Search for document(s)

```

```

Do you want to continue (y/n)? : y

-----Menu-----
1. Create/Insert document(s)
2. Search for document(s)
3. Update document(s)
4. Delete document(s)
5. Display all the documents in the collection
6. Delete all the documents from the collection
Enter a choice: 2
Enter the no of records to be searched(type all if you want to display all the docs),else type the number of docs you want to search for: all
Please enter the fields by which you want to search the document!
Enter first name: Aditya
Enter last name: -
Enter age: 0
Enter street name: -
Enter city: -
Enter state: -
Enter postalcode: -
How many numbers? : 0
How many email ids? : 0
{'_id': ObjectId('63440505481ded48573c791b'), 'firstName': 'Aditya', 'lastName': 'Kelkar', 'age': 20, 'address': {'streetAddress': 'GA Kulkarni Path', 'city': 'Pune', 'state': 'Maharashtra', 'postalCode': '411038'}, 'phoneNumber': [{'type': 'Personal', 'number': '8380893051'}], 'emailAddress': ['kelkaradityan14@gmail.com']}
{'_id': ObjectId('6344e7e73eb00a5157afcf190'), 'firstName': 'Aditya', 'lastName': 'Kelkar', 'age': 20, 'address': {'streetAddress': 'GA', 'city': 'Pune', 'state': 'MH', 'postalCode': '411038'}, 'phoneNumber': [{'type': 'Personal', 'number': '8380893051'}], 'emailAddress': ['kelkar@gmail.com']}
{'_id': ObjectId('637645f4cb2742183bbe0aa4'), 'firstName': 'Aditya', 'lastName': 'Kelkar', 'age': 20, 'address': {'streetAddress': 'ABC', 'city': 'Pune', 'state': 'MH', 'postalCode': '411037'}, 'phoneNumber': [{'type': 'Personal', 'number': '724972942'}], 'emailAddress': ['kelkaradityan14@gmail.com']}
Do you want to continue (y/n)? :

```

```

PROBLEMS  OUTPUT  TERMINAL  JUPYTER  DEBUG CONSOLE
0 document updated
Do you want to continue (y/n)? : y

-----Menu-----
1. Create/Insert document(s)
2. Search for document(s)
3. Update document(s)
4. Delete document(s)
5. Display all the documents in the collection
6. Delete all the documents from the collection
Enter a choice: 3
Update one or many?: many
*****Enter the details of the document that you wish to update*****
Enter first name: Aditya
Enter last name: Kelkar
Enter age: 20
Enter street name: -
Enter city: -
Enter state: -
Enter postalcode: -
How many numbers? : 0
How many email ids? : 0
*****Enter the new details*****
Enter first name: Eren
Enter last name: Yeager
Enter age: 20
Enter street name: ABC
Enter city: Shibuya
Enter state: Tokyo prefecture
Enter postalcode: 983193
How many numbers? : 1
Enter type 1: 3091
Enter number: 301311
How many email ids? : 0
*****
3 documents updated
Do you want to continue (y/n)? :

```

```

PROBLEMS OUTPUT TERMINAL JUPYTER DEBUG CONSOLE
Enter street name: -
Enter city: -
Enter state: -
Enter postalcode: -
How many numbers? : 0
How many email ids? : 0
*****Enter the new details*****
Enter first name: Eren
Enter last name: Yeager
Enter age: 20
Enter street name: ABC
Enter city: Shibuya
Enter state: Tokyo prefecture
Enter postalcode: 983193
How many numbers? : 1
Enter type 1: 3091
Enter number: 301311
How many email ids? : 0
*****
3 documents updated
Do you want to continue (y/n)? : y

-----Menu-----
1. Create/insert document(s)
2. Search for document(s)
3. Update document(s)
4. Delete document(s)
5. Display all the documents in the collection
6. Delete all the documents from the collection
Enter a choice: 5
{'_id': ObjectId('63440505481ded48573c791b'), 'firstName': 'Eren ', 'lastName': 'Yeager', 'age': 20, 'address': {'streetAddress': 'ABC', 'city': 'Shibuya', 'state': 'Tokyo prefe', 'postalCode': '983193'}, 'phoneNumber': [{'type': '3091', 'number': '301311'}], 'emailAddress': ['kelkaradityan14@gmail.com']}
{'_id': ObjectId('634e7e73eb08a5157afcf190'), 'firstName': 'Eren ', 'lastName': 'Yeager', 'age': 20, 'address': {'streetAddress': 'ABC', 'city': 'Shibuya', 'state': 'Tokyo prefe', 'postalCode': '983193'}, 'phoneNumber': [{'type': '3091', 'number': '301311'}], 'emailAddress': ['kelkar@gmail.com']}
{'_id': ObjectId('637645f4cb2742183bbe0ea4'), 'firstName': 'Eren ', 'lastName': 'Yeager', 'age': 20, 'address': {'streetAddress': 'ABC', 'city': 'Shibuya', 'state': 'Tokyo prefe', 'postalCode': '983193'}, 'phoneNumber': [{'type': '3091', 'number': '301311'}], 'emailAddress': ['kelkaradityan14@gmail.com']}
Do you want to continue (y/n)? : y

```

```

Enter city: Pune
Enter state: MH
Enter postalcode: 411038
How many numbers? : 0
How many email ids? : 0
*****
Last inserted id: 63764b7426be8da1280684a5
Document(s) inserted successfully!
*****
Do you want to continue (y/n)? : y

-----Menu-----
1. Create/insert document(s)
2. Search for document(s)
3. Update document(s)
4. Delete document(s)
5. Display all the documents in the collection
6. Delete all the documents from the collection
Enter a choice: 5
{'_id': ObjectId('63440505481ded48573c791b'), 'firstName': 'Eren ', 'lastName': 'Yeager', 'age': 20, 'address': {'streetAddress': 'ABC', 'city': 'Shibuya', 'state': 'Tokyo prefe', 'postalCode': '983193'}, 'phoneNumber': [{'type': '3091', 'number': '301311'}], 'emailAddress': ['kelkaradityan14@gmail.com']}
{'_id': ObjectId('634e7e73eb08a5157afcf190'), 'firstName': 'Eren ', 'lastName': 'Yeager', 'age': 20, 'address': {'streetAddress': 'ABC', 'city': 'Shibuya', 'state': 'Tokyo prefe', 'postalCode': '983193'}, 'phoneNumber': [{'type': '3091', 'number': '301311'}], 'emailAddress': ['kelkar@gmail.com']}
{'_id': ObjectId('637645f4cb2742183bbe0ea4'), 'firstName': 'Eren ', 'lastName': 'Yeager', 'age': 20, 'address': {'streetAddress': 'ABC', 'city': 'Shibuya', 'state': 'Tokyo prefe', 'postalCode': '983193'}, 'phoneNumber': [{'type': '3091', 'number': '301311'}], 'emailAddress': ['kelkaradityan14@gmail.com']}
{'_id': ObjectId('63764b7426be8da1280684a5'), 'firstName': 'Anagha', 'lastName': 'Kelkar', 'age': 12, 'address': {'streetAddress': 'GA Kulkarni Path', 'city': 'Pune', 'state': 'MH', 'postalCode': '411038'}}
Do you want to continue (y/n)? : y

```

```

{'_id': ObjectId('63440505481ded48573c791b'), 'firstName': 'Eren ', 'lastName': 'Yeager', 'age': 20, 'address': {'streetAddress': 'ABC', 'city': 'Shibuya', 'state': 'Tokyo prefe', 'postalCode': '983193'}, 'phoneNumber': [{'type': '3091', 'number': '301311'}], 'emailAddress': ['kelkaradityan14@gmail.com']}
{'_id': ObjectId('634e7e73eb08a5157afcf190'), 'firstName': 'Eren ', 'lastName': 'Yeager', 'age': 20, 'address': {'streetAddress': 'ABC', 'city': 'Shibuya', 'state': 'Tokyo prefe', 'postalCode': '983193'}, 'phoneNumber': [{'type': '3091', 'number': '301311'}], 'emailAddress': ['kelkar@gmail.com']}
{'_id': ObjectId('637645f4cb2742183bbe0ea4'), 'firstName': 'Eren ', 'lastName': 'Yeager', 'age': 20, 'address': {'streetAddress': 'ABC', 'city': 'Shibuya', 'state': 'Tokyo prefe', 'postalCode': '983193'}, 'phoneNumber': [{'type': '3091', 'number': '301311'}], 'emailAddress': ['kelkaradityan14@gmail.com']}
{'_id': ObjectId('63764b7426be8da1280684a5'), 'firstName': 'Anagha', 'lastName': 'Kelkar', 'age': 12, 'address': {'streetAddress': 'GA Kulkarni Path', 'city': 'Pune', 'state': 'MH', 'postalCode': '411038'}}
Do you want to continue (y/n)? : y

-----Menu-----
1. Create/insert document(s)
2. Search for document(s)
3. Update document(s)
4. Delete document(s)
5. Display all the documents in the collection
6. Delete all the documents from the collection
Enter a choice: 6
4 documents deleted.
Do you want to continue (y/n)? : y

```

## 2) Java code

```
import java.util.ArrayList;
import java.util.List;
import java.util.Scanner;
import org.bson.Document;
import com.mongodb.*;
import com.mongodb.client.MongoCollection;
import com.mongodb.client.MongoDatabase;

public class MongoClass
{

    public static BasicDBObject getInfo()
    {
        Scanner sc = new Scanner(System.in);
        int age, postalCode;
        String fname, lname, streetAddress, city, state;
        System.out.print("Enter first name:");
        fname = sc.next();
        System.out.print("Enter last name:");
        lname = sc.next();
        System.out.print("Enter age:");
        age = sc.nextInt();
        BasicDBObject d1 = new BasicDBObject("fname", fname).append("lname",
lname).append("age", age);

        System.out.print("Enter street address:");
        streetAddress = sc.next();
        System.out.print("Enter city:");
        city = sc.next();
        System.out.print("Enter state:");
        state = sc.next();
        System.out.print("Enter postalCode:");
        postalCode = sc.nextInt();
        BasicDBObject d2 = new BasicDBObject("streetAddress", streetAddress).append("city",
city).append("state", state).append("postalCode", postalCode);
        d1.put("address", d2);

        BasicDBList phoneNumber = new BasicDBList();
        int n1;
        System.out.print("How many phone numbers?: ");
        n1 = sc.nextInt();
        for(int i=0; i<n1; i++)
        {
            String type, number;
            System.out.print("-----Number " + (i+1) + "-----\n");
```



```

        System.out.print("Enter type:");
        type = sc.next();
        System.out.print("Enter number:");
        number = sc.next();
        BasicDBObject d3 = new BasicDBObject("type",type).append("number", number);
        phoneNumber.add(d3);
    }
    d1.put("phoneNumber", phoneNumber);

    BasicDBList emailAddress = new BasicDBList();
    int n2;
    System.out.print("How many emails?: ");
    n2 = sc.nextInt();
    for(int i=0;i<n2;i++)
    {
        System.out.print("-----Email " + (i+1) + "-----\n");
        String email;
        System.out.print("Enter email: ");
        email = sc.next();
        emailAddress.add(email);
    }
    d1.put("emailAddress", emailAddress);
    return d1;
    }

```

```

    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in);
        try
        {
            MongoClient mongo = new MongoClient( "localhost" , 27017 );
            DB db = mongo.getDB("Company1");
            DBCollection coll1 = db.getCollection("Employee1");
            MongoDBDatabase database = mongo.getDatabase("Company1");
            MongoCollection<Document> coll2 =
            database.getCollection("Employee1");

            while(true)
            {

                int choice;
                System.out.println("\n-----Menu-----\n");
                System.out.println("1. Create/Insert document(s)");
                System.out.println("2. Display all the documents");
                System.out.println("3. Update document(s)");

```

```

        System.out.println("4. Delete document(s)");
        System.out.println("5. Exit");
        System.out.println("Enter your choice: ");
        choice=sc.nextInt();
        switch(choice)
        {
case 1:
        int ch;
        System.out.println("Do you want to insert: \n1.One Document \n2.Many
documents \nEnter a choice: ");
        ch = sc.nextInt();
        if(ch == 1) { coll1.insert(getInfo());}
        else if(ch == 2)
        {
            List<Document> documentList = new ArrayList<Document>();
            int k1;
            System.out.print("How many documents to insert?: ");
            k1 = sc.nextInt();
            for(int k=0;k<k1;k++)
            {
                Document doc = new Document(getInfo());
                documentList.add(doc);
            }
            coll2.insertMany(documentList);
        }
        break;

case 2:
        DBCursor cursor = coll1.find();
        while (cursor.hasNext())
        {
            System.out.println(cursor.next());
        }
        break;

case 3:
        BasicDBObject ini = new BasicDBObject();
        System.out.print("\n-----Enter details of the doc to update-----
\n");

        ini = getInfo();
        BasicDBObject fin = new BasicDBObject();
        System.out.print("\n-----Enter details of the new doc-----\n");
        fin = getInfo();
        coll1.update(ini,fin);
        break;

```

```

        case 4:
            BasicDBObject rem = new BasicDBObject();
            System.out.print("\n-----Enter details of the doc to delete-----
\n");

            rem = getInfo();
            coll1.remove(rem);
            break;

        case 5:
            System.exit(0);

        default:
            System.out.println("Enter a valid choice!\\n\\n");
    }
}
}
}
catch(Exception e)
{
    e.printStackTrace();
}
}
}

```

**Output:**

**(P.T.O)**

```
MongoClass [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (17-Nov-2022, 8:32:24 pm) [pid: 8668]  
Nov 17, 2022 8:32:30 PM com.mongodb.diagnostics.logging.JULLogger log  
INFO: Cluster connected with settings {hosts=[localhost:27017], mode=SINGLE, requiredClusterType=UNKNOWN}  
  
-----Menu-----  
  
1. Create/Insert document(s)  
2. Display all the documents  
3. Update document(s)  
4. Delete document(s)  
5. Exit  
Enter your choice:  
Nov 17, 2022 8:32:30 PM com.mongodb.diagnostics.logging.JULLogger log  
INFO: Opened connection [connectionId{localValue:1, serverValue:109}] to localhost:27017  
Nov 17, 2022 8:32:30 PM com.mongodb.diagnostics.logging.JULLogger log  
INFO: Monitor thread successfully connected to server with description ServerDescription{address=localhost:27017, topologyName=null, type=SINGLE, minWireVersion=0, maxWireVersion=17, localVersion=5.0.12, logicalSessionTimeoutMinutes=30, roundTripTime=1.7, roundTripTimeMin=1.5, roundTripTimeMax=1.9, lastUpdateTime=1668710550000, lastUpdateDuration=0, messageSource=LOCAL, isSlave=false, isSecondary=false, isReplicaset=false, syncFromReplicaSet=null, writeConcernSettings={writeConcern:0}, hostInfo={hostAddress=localhost:27017, isArbiter=false, name=null, version=5.0.12}}  
2  
Nov 17, 2022 8:32:35 PM com.mongodb.diagnostics.logging.JULLogger log  
INFO: Opened connection [connectionId{localValue:2, serverValue:110}] to localhost:27017  
{ "_id": {"$oid": "634dabddc92fdd176e3031ce"}, "fname": "Anagha", "lname": "Kelkar", "age": 12, "address": {"streetAddress": "MH", "city": "Pune"} },  
{ "_id": {"$oid": "634db3e5855ac00782d09427"}, "lname": "-", "age": 0, "fname": "-", "address": {"streetAddress": "MH", "city": "Pune"} },  
{ "_id": {"$oid": "634adb42c0f8a84079223e8aa"}, "lname": "-", "age": 9, "fname": "9", "address": {"streetAddress": "MH", "city": "Pune"} },  
{ "_id": {"$oid": "634db4c8c234db1f1b6172dc"}, "fname": "-", "address": {"streetAddress": "khd", "city": "Pune"} },  
{ "_id": {"$oid": "634db536fe916f51d5a004db"}, "fname": "-", "address": {"streetAddress": "MH", "city": "Pune"} },  
{ "_id": {"$oid": "634db628cde1ec29ca19ab7f"}, "fname": "0", "address": {"streetAddress": "MH", "city": "Pune"} },  
{ "_id": {"$oid": "634db7d300ef711e4bad8b39"}, "fname": "-", "address": {"streetAddress": "saj", "city": "Pune"} },  
{ "_id": {"$oid": "634db86c97f7b5748da5dbe0"}, "fname": "-", "address": {"streetAddress": "jjge", "city": "Pune"} },  
{ "_id": {"$oid": "634db8dfb5b05d40b2b315d3"}, "fname": "Adi", "lname": "Kel", "age": 19, "address": {"streetAddress": "MH", "city": "Pune"} },  
{ "_id": {"$oid": "634db962b5554a35c8a1caca"}, "fname": "Aditya", "lname": "Ghotavadekar", "age": 20, "address": {"streetAddress": "A", "city": "Pune"} },  
{ "_id": {"$oid": "634db9c34cf68e4284d576c9"}, "fname": "A", "lname": "C", "age": 12, "address": {"streetAddress": "A", "city": "Pune"} },  
{ "_id": {"$oid": "634db9ff3a119e46773a5050"}, "fname": "dcchkc", "lname": "dcbj", "age": 21, "address": {"streetAddress": "MH", "city": "Pune"} },  
{ "_id": {"$oid": "634dbbbece54c40ff93e91a"}, "fname": "-", "lname": "-", "address": {"streetAddress": "MH", "city": "Pune"} }
```

```
C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (17-Nov-2022, 832:24 pm) [pid: 8668]
1. Create/Insert document(s)
2. Display all the documents
3. Update document(s)
4. Delete document(s)
5. Exit
Enter your choice:
1
Do you want to insert:
1.One Document
2.Many documents
Enter a choice:
1
Enter first name:Reiner
Enter last name:Braun
Enter age:22
Enter street address:ABC
Enter city:Osaka
Enter state:Kansai
Enter postalCode:327327
How many phone numbers?: 0
How many emails?: 0

-----Menu-----

1. Create/Insert document(s)
2. Display all the documents
3. Update document(s)
4. Delete document(s)
5. Exit
Enter your choice:
```

```

4. Delete document(s)
5. Exit
Enter your choice:
2
{"_id": {"$oid": "634dadbc92fdd176e3031ce"}, "fname": "Anagha", "lname": "Kelkar", "age": 12, "address": {"streetAddress": "CPK", "city": "Mumbai", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634db3c5855ca08792d409427"}, "fname": "Aad", "lname": "C", "age": 12, "address": {"streetAddress": "wlrn", "city": "P", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634db42cc9f8a84979223e8aa"}, "fname": "Adi", "lname": "Ghotavadekar", "age": 9, "address": {"streetAddress": "dsk", "city": "fmf", "state": "sd", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634db4ac8c234bd1fb1b6172dc"}, "fname": "Aditya", "lname": "Kelkar", "age": 20, "address": {"streetAddress": "khd", "city": "fsn", "state": "ssf", "postalCode": 73181}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634db536fe916f51da50a84b"}, "fname": "Ajay", "lname": "Reiner", "age": 22, "address": {"streetAddress": "WH", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634db628cded1ec429a19ab7f"}, "fname": "Arjun", "lname": "Braun", "age": 10, "address": {"streetAddress": "WH", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634db74300ef71ea1bd8bb39"}, "fname": "Ashish", "lname": "Smith", "age": 18, "address": {"streetAddress": "saj", "city": "sks", "state": "dkds", "postalCode": 1312}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634db86c9f7f5b748d54dbae"}, "fname": "Bhavik", "lname": "Ackermann", "age": 21, "address": {"streetAddress": "jjge", "city": "joe", "state": "hj", "postalCode": 212}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634db88cf9505d40b27b315d3"}, "fname": "Aditi", "lname": "Kel", "age": 19, "address": {"streetAddress": "dskh", "city": "sdncsd", "state": "t", "postalCode": 31782}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634db962b55543c58a1cace"}, "fname": "Aditya", "lname": "Ghotavadekar", "age": 20, "address": {"streetAddress": "hj", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634db93caf64e8428457c6c"}, "fname": "A", "lname": "C", "age": 12, "address": {"streetAddress": "Aed", "city": "wfrw", "state": "vr", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634db9bf3fa119e4773ba5050"}, "fname": "dchckic", "lname": "dcbj", "age": 21, "address": {"streetAddress": "sshj", "city": "kfsk", "state": "t", "postalCode": 31782}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634dbbdcec54cf40ff93a91a"}, "fname": "Aditya", "lname": "Kelkar", "age": 20, "address": {"streetAddress": "s", "city": "sv", "state": "sv", "postalCode": 31782}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634dbcb39cf9b8743a414f6ee2"}, "fname": "none", "lname": "none", "age": 18, "address": {"streetAddress": "t", "city": "t", "state": "t", "postalCode": 31782}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634dbd16fd14dc0261168943"}, "fname": "Aditya", "lname": "Kelkar", "age": 20, "address": {"streetAddress": "hadk", "city": "fls", "state": "sjld", "postalCode": 31782}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634de5c78fb61431a112e2bef"}, "fname": "jqe", "lname": "qeq", "age": 20, "streetAddress": "0", "city": "0", "state": "0", "postalCode": 31782}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634de5d5ff8f1f0c351262e9"}, "fname": "0", "lname": "0", "age": 20, "streetAddress": "kp", "city": "pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634de813ced9d60663591ef"}, "fname": "Erwin", "lname": "Smith", "age": 20, "address": {"streetAddress": "CPK", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634de82b97994bd4ac9b975bb"}, "fname": "Mikasa", "lname": "Ackermann", "age": 21, "address": {"streetAddress": "PN", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "634de8b6777f7e44315f724"}, "fname": "A", "lname": "K", "age": 10, "address": {"streetAddress": "hodge", "city": "equip", "state": "t", "postalCode": 31782}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "6373a6172309933661d7c6bd"}, "fname": "Aditya", "lname": "Kelkar", "age": 20, "address": {"streetAddress": "CD", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}, {"_id": {"$oid": "63764d9c8693f334e87ccfc"}, "fname": "Reiner", "lname": "Braun", "age": 22, "address": {"streetAddress": "ABC", "city": "Osaka", "state": "t", "postalCode": 31782}, "phoneNumbers": [{"type": "mobile", "number": "9820098765"}]}

```

```

Problems Javadoc Declaration Console x
MongoClass [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (17-Nov-2022, 8:38:16 pm) [pid: 19384]
-----Menu-----
1. Create/Insert document(s)
2. Display all the documents
3. Update document(s)
4. Delete document(s)
5. Exit
Enter your choice:
3

-----Enter details of the doc to update-----
Enter first name:Reiner
Enter last name:Braun
Enter age:22
Enter street address:ABC
Enter city:Osaka
Enter state:Kansai
Enter postalCode:327327
How many phone numbers?: 0
How many emails?: 0

-----Enter details of the new doc-----
Enter first name:Bertolt
Enter last name:Hoover
Enter age:24
Enter street address:PQR
Enter city:Kyoto
Enter state:Kansai
Enter postalCode:123123
How many phone numbers?: 0
How many emails?: 0

```

```

3. Update document(s)
4. Delete document(s)
5. Exit
Enter your choice:
2
[{"_id": "634dabddc92fdd176e30041c", "fname": "Anagha", "lname": "Kelkar", "age": 12, "address": {"streetAddress": "CPK", "city": "Mumbai", "state": "MH", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634db3c5855ca80782d09427", "fname": "A", "lname": "A", "age": 0, "address": {"streetAddress": "hll", "city": "P", "state": "MH", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634db42c0f8a840792223e8aa", "fname": "A", "lname": "A", "age": 9, "address": {"streetAddress": "dsk", "city": "fmf", "state": "sdfs", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634db4c8234db1f1b6172dc", "fname": "A", "lname": "A", "age": 0, "address": {"streetAddress": "khd", "city": "fsn", "state": "ssf", "postalCode": 73181}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634db536fe176f151d5a004db", "fname": "A", "lname": "A", "age": 0, "address": {"streetAddress": "MH", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634db628cde1e29ca19ab7f", "fname": "A", "lname": "A", "age": 0, "address": {"streetAddress": "MH", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634db7d30e0f711e4bad8b39", "fname": "A", "lname": "A", "age": 0, "address": {"streetAddress": "saj", "city": "sks", "state": "dkds", "postalCode": 1312}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634db86c97b75f784da5db0", "fname": "A", "lname": "A", "age": 0, "address": {"streetAddress": "jige", "city": "jae", "state": "hjea", "postalCode": 212}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634db8dfb5b95d40b2b315d", "fname": "Adi", "lname": "Kel", "age": 19, "address": {"streetAddress": "dskh", "city": "sdncsd", "state": "MH", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634db962b5554a35c8a1caca", "fname": "Aditya", "lname": "Ghotavadekar", "age": 20, "address": {"streetAddress": "hj", "city": "Pune", "state": "MH", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634db9c3acf684e284d576c9", "fname": "A", "lname": "C", "age": 12, "address": {"streetAddress": "Aed", "city": "wfwf", "state": "vr", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634db9bf3a119e46773a5091a", "fname": "dcchkc", "lname": "dcbj", "age": 21, "address": {"streetAddress": "ssjh", "city": "kfks", "state": "MH", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634dbbde5c4f40f93e905a", "fname": "A", "lname": "A", "age": 0, "address": {"streetAddress": "s", "city": "s", "state": "s", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634dbc39cf98743a414f6e2", "fname": "none", "lname": "none1", "age": 0, "address": {"streetAddress": "t", "city": "t", "state": "t", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634dbd16fd14dc026116894", "fname": "A", "lname": "A", "age": 0, "address": {"streetAddress": "hdk", "city": "fls", "state": "sjld", "postalCode": 31782}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634de5c78bcb1431a112edebf", "fname": "jqe", "lname": "qqq", "age": 20, "address": {"streetAddress": "0", "city": "0", "state": "0", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634de5df80f1bf3c351262e9", "fname": "0", "lname": "0", "age": 0, "address": {"streetAddress": "kp", "city": "pune", "state": "MH", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634de8213ce9d006b63591fe", "fname": "Erwin", "lname": "Smith", "age": 20, "address": {"streetAddress": "CPK", "city": "Pune", "state": "MH", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634de9b97994b4ca39b975b", "fname": "Mikasa", "lname": "Ackermann", "age": 21, "address": {"streetAddress": "PN", "city": "Pune", "state": "MH", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "634de86b70777e943151ff24a", "fname": "A", "lname": "K", "age": 10, "address": {"streetAddress": "hdaqge", "city": "eqipf", "state": "MH", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "6373a6172399533661d76cfd", "fname": "Aditya", "lname": "Kelkar", "age": 20, "address": {"streetAddress": "CD", "city": "Pune", "state": "MH", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}, {"_id": "63764d9c86993f34ed87cddf", "fname": "Bertola", "lname": "Hoover", "age": 24, "address": {"streetAddress": "POR", "city": "Kyoto", "state": "MH", "postalCode": 411008}, "phoneNumbers": [{"type": "mobile", "number": "9890098765"}]}]
```

```

{"_id": {"$oid": "63764d9c8693f334ee87dccf"}, "fname": "Bertolt", "lname": "Hoover", "age": 24, "address": {"streetAddress": "PQR", "city": "Kyoto",
-----Menu-----
1. Create/Insert document(s)
2. Display all the documents
3. Update document(s)
4. Delete document(s)
5. Exit
Enter your choice:
4

-----Enter details of the doc to delete-----
Enter first name:Bertolt
Enter last name:Hoover
Enter age:24
Enter street address:PQR
Enter city:Kyoto
Enter state:Kansai
Enter postalCode:123123
How many phone numbers?: 0
How many emails?: 0

```

```

3. Update document(s)
4. Delete document(s)
5. Exit
Enter your choice:
2
{"_id": {"$oid": "634dabddc92fdd176e3031ce"}, "fname": "Anagha", "lname": "Kelkar", "age": 12, "address": {"streetAddress": "CPK", "city": "Mumbai", "state": "MH", "postalCode": 400001}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634db3e5855ac00782d09427"}, "fname": "-", "age": 0, "lname": "-", "address": {"streetAddress": "h1l", "city": "P", "state": "M", "postalCode": 400001}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634db42c0f8a84079223e8aa"}, "lname": "-", "age": 9, "fname": 9, "address": {"streetAddress": "dsk", "city": "fmmf", "state": "sdsf", "postalCode": 400001}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634db4c8c234db1f1b6172dc"}, "fname": "-", "address": {"streetAddress": "khd", "city": "fsn", "state": "ssf", "postalCode": 73181}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634db536fe916f51d5a004db"}, "fname": "-", "address": {"streetAddress": "MH", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634db628cde1ec29ca19ab7f"}, "fname": 0, "address": {"streetAddress": "MH", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634db7d300ef711e4bad8b39"}, "fname": "-", "address": {"streetAddress": "saj", "city": "sks", "state": "dkds", "postalCode": 1312}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634db86c97f7b5748da5dbe0"}, "fname": "-", "address": {"streetAddress": "jjge", "city": "jae", "state": "hjea", "postalCode": 212}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634db8dfb5b05d40b2b315d3"}, "fname": "Adi", "lname": "Kel", "age": 19, "address": {"streetAddress": "dskh", "city": "sdncsd", "state": "MH", "postalCode": 400001}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634db962b5554a35c8a1caca"}, "fname": "Aditya", "lname": "Ghotavadekar", "age": 20, "address": {"streetAddress": "hj", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634db9c34cf68e4284d576c9"}, "fname": "A", "lname": "C", "age": 12, "address": {"streetAddress": "Aed", "city": "wfwvr", "state": "vr", "postalCode": 400001}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634db9ff3a119e46773a5050"}, "fname": "dcchkc", "lname": "dcbj", "age": 21, "address": {"streetAddress": "sshj", "city": "kfsk", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634dbbdece54cf40ff93e91a"}, "fname": "-", "lname": "-", "address": {"streetAddress": "s", "city": "s", "state": "s", "postalCode": 400001}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634dbcb39cfb98743a414f6e2"}, "fname": "none", "lname": "none", "address": {"streetAddress": "t", "city": "t", "state": "t", "postalCode": 400001}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634dbd16fd14dc0261168943"}, "address": {"streetAddress": "hadk", "city": "fls", "state": "sjld", "postalCode": 31782}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634de5c78bbc1431a112edebe"}, "fname": "jqe", "lname": "geq", "age": 20, "streetAddress": "0", "city": "0", "state": "0", "address": "0", "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634de5dff80f1f0c351262e9"}, "fname": "0", "lname": "0", "streetAddress": "kp", "city": "pune", "state": "MH", "postalCode": 411, "address": "0", "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634de8213ece9d00d663591ef"}, "fname": "Erwin", "lname": "Smith", "age": 20, "address": {"streetAddress": "CPK", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634de829b97994b4ac9b975bb"}, "fname": "Mikasa", "lname": "Ackermann", "age": 21, "address": {"streetAddress": "PN", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "634de86b70777e944315ff24a"}, "fname": "A", "lname": "K", "age": 10, "address": {"streetAddress": "hdadqe", "city": "eqipf", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}, {"_id": {"$oid": "6373a6172310953661d7c6bd"}, "fname": "Aditya", "lname": "Kelkar", "age": 20, "address": {"streetAddress": "CD", "city": "Pune", "state": "MH", "postalCode": 411038}, "phoneNumbers": [{"number": "9876543210"}], "emails": [{"email": "anagha.kelkar@example.com"}]}

-----Menu-----

```