

Group B

Assignment No. 4

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

//create

```
import pymongo
if __name__ == "__main__":
    print("Welcome to pyMongo")
    client = pymongo.MongoClient("mongodb://127.0.0.1:27017/")
    print(client)

    #Creating a database
    db = client['harry']
    collection = db['coder']
    dictionary = {'roll_no':1, 'name':'Pratik', 'hobby':'Coding'}
    collection.insert_one(dictionary)
```

//output

```
> python create.py
Welcome to pyMongo
```

//show databases

```
import pymongo
if __name__ == "__main__":
    print("Welcome to pyMongo")
    client = pymongo.MongoClient("mongodb://127.0.0.1:27017/")
    print(client)
    alldbs = client.list_database_names()
    print(alldbs)

    #show collections
    col = client['harry']
    print(col.list_collection_names())
```

//output

```
> python showdbs.py
Welcome to pyMongo
MongoClient(host=['127.0.0.1:27017'], document_class=dict,
tz_aware=False, connect=True)
['Pratik', 'admin', 'config', 'harry', 'local']
['coder']
```

//insert

```
import pymongo
if __name__ == "__main__":
    print("Welcome to pyMongo")
    client = pymongo.MongoClient("mongodb://127.0.0.1:27017/")
    print(client)
    db = client['harry']
    collection = db['coder']
    dictionary2 = {'roll_no':2, 'name':'Suraj', 'hobby':'Playing
cricket'}
    collection.insert_one(dictionary2)
    allthese = [{'roll_no':3, 'name':'Onkar',
'hobby':'Music'},{'roll_no':4, 'name':'Ashok', 'hobby':'Movies'}]
    collection.insert_many(allthese)
```

//output

```
> python insert.py
Welcome to pyMongo
MongoClient(host=['127.0.0.1:27017'], document_class=dict,
tz_aware=False, connect=True)
```

//output in mongodb shell

```
harry> db.coder.find();
[
  {
    _id: ObjectId('66f37026362e456bb9f94a01'),
    roll_no: 1,
    name: 'Pratik',
    hobby: 'Coding'
  },
  {
    _id: ObjectId('66f370af58a2ba0482dc7d63'),
    roll_no: 2,
    name: 'Suraj',
    hobby: 'Playing cricket'
  },
  {
    _id: ObjectId('66f370af58a2ba0482dc7d64'),
    roll_no: 3,
    name: 'Onkar',
    hobby: 'Music'
  },
  {
    _id: ObjectId('66f370af58a2ba0482dc7d65'),
    roll_no: 4,
    name: 'Ashok',
    hobby: 'Movies'
  }
]
```

//read

```
import pymongo
if __name__ == "__main__":
    print("Welcome to pyMongo")
    client = pymongo.MongoClient("mongodb://127.0.0.1:27017/")
    print(client)
    #use the database named harry
    db = client['harry']
    collection = db['coder']
    #for one document
    one = collection.find_one({'name':'Ashok'})
    print(one)
    #for many documents
    alldocs = collection.find()
    for item in alldocs:
        print(item)
```

//output

```
> python read.py
Welcome to pyMongo
MongoClient(host=['127.0.0.1:27017'], document_class=dict,
tz_aware=False, connect=True)
{'_id': ObjectId('66f370af58a2ba0482dc7d65'), 'roll_no': 4, 'name':
'Ashok', 'hobby': 'Movies'}
{'_id': ObjectId('66f37026362e456bb9f94a01'), 'roll_no': 1, 'name':
'Pratik', 'hobby': 'Coding'}
{'_id': ObjectId('66f370af58a2ba0482dc7d63'), 'roll_no': 2, 'name':
'Suraj', 'hobby': 'Playing cricket'}
{'_id': ObjectId('66f370af58a2ba0482dc7d64'), 'roll_no': 3, 'name':
'Onkar', 'hobby': 'Music'}
{'_id': ObjectId('66f370af58a2ba0482dc7d65'), 'roll_no': 4, 'name':
'Ashok', 'hobby': 'Movies'}
```

//update

```
import pymongo
if __name__ == "__main__":
    print("Welcome to pyMongo")
    client = pymongo.MongoClient("mongodb://127.0.0.1:27017/")
    print(client)
    db = client['harry']
    collection = db['coder']
    #update one
    refield = {'name':'Pratik'}
    setfield = {'$set':{'hobby':'Swimming'}}
    collection.update_one(refield, setfield)
    #if you want to update many use update_many in place of update_one
    refield = {'name':'Onkar'}
    setfield = {'$set':{'hobby':'car riding'}}
    collection.update_many(refield, setfield)
```

//output in mongodb shell

```
harry> db.coder.find();
[
  {
    _id: ObjectId('66f37026362e456bb9f94a01'),
    roll_no: 1,
    name: 'Pratik',
    hobby: 'Swimming'
  },
  {
    _id: ObjectId('66f370af58a2ba0482dc7d63'),
    roll_no: 2,
    name: 'Suraj',
    hobby: 'Playing cricket'
  },
  {
    _id: ObjectId('66f370af58a2ba0482dc7d64'),
    roll_no: 3,
    name: 'Onkar',
    hobby: 'car riding'
  },
  {
    _id: ObjectId('66f370af58a2ba0482dc7d65'),
    roll_no: 4,
    name: 'Ashok',
    hobby: 'Movies'
  }
]
```

//delete

```
import pymongo
if __name__ == "__main__":
    print("Welcome to pyMongo")
    client = pymongo.MongoClient("mongodb://127.0.0.1:27017/")
    print(client)
    db = client['harry']
    collection = db['coder']
    #delete one record
    rec = {'name':'Onkar'}
    collection.delete_one(rec)
    #delete many record
    rec2 = {'name':'Ashok'}
    collection.delete_many(rec2)
```

//output in mongodb shell

```
harry> db.coder.find();
```

```
[
  {
    _id: ObjectId('66f36eb9882885f681afde74'),
    roll_no: 1,
    name: 'aman',
    hobby: 'reading'
  },
  {
    _id: ObjectId('66f37026362e456bb9f94a01'),
    roll_no: 1,
    name: 'Pratik',
    hobby: 'Swimming'
  },
  {
    _id: ObjectId('66f370af58a2ba0482dc7d63'),
    roll_no: 2,
    name: 'Suraj',
    hobby: 'Playing cricket'
  }
]
```