Rupesh Dharme
31124

Assignment 12

Title: Database connectivity

problem:
Write a program to implement mongoDB connectivity with any frontend to implement add, update, delete etc.

objectives:
- Understand concept of connectivity in python and mongodb database.
- Understand how to implement CRUD operations.

Theory:

mongodb is document oriented, NoSQL database solution that provides great scalability and flexibility doing with powerful querying system.

with mongodb and python, you can develop many types of database applications quickly.

Pymongo pacage of python can by used to establish connection.

Teachers Signature

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pymongo module gives such applications:

- establish database connection
- work with database
- work with collections and documents
- manupulate the cursor
- work with data encryption.

steps to connect:

1. import pymongo module
2. create a client
3. create a db connection
4. create a collection
5. perform CRUD

conclusion:

Successfully implemented mongoDB database connectivity with python and performed CRUD operations.

Code:

```
# Rupesh Dharme

# TE 01
# 31124
# Assignment 12
# DBSL

from pymongo import MongoClient

class Connect:
    def __init__(self):
        self.client =
MongoClient("mongodb://localhost:27017/?readPreference=primary&appname=MongoDB%20Compass&directConnec
tion=true&ssl=false")
        self.db = self.client['assignment12']
        self.collection= self.db['states']

    def create(self):
        state = input("Enter State: ")
        capital = input("Enter capital: ")
        new_post = {
            "state": state,
            "capital": capital,
        }
        self.collection.insert_one(new_post)

    def read(self):
        response = self.collection.find()
        for record in response:
            print(record)

    def update(self):
        state = input("Enter State: ")
        capital = input("Enter capital: ")
        prev_record = {'state': state}
        new_record = {
            "state": state,
            "capital":capital,
        }
        response = self.collection.update_one(prev_record, {'$set': new_record})

    def delete(self):
        state = input("Enter State: ")
        record = {'state': state}
        response = self.collection.delete_one(record)

if __name__ == '__main__':
    connection = Connect()
    while True:
        option=int(input("What to perform?\n1. Create (Insert)\n2. Read   (Select)\n3. Update
(Update)\n4. Delete (Delete)\n5. Exit\n"))
        if option==1:
            connection.create()
            print("Document created")
        elif option==2:
            connection.read()
            print("Data read")
        elif option==3:
            connection.update()
            print("Document updated")
        elif option==4:
            connection.delete()
            print("Document deleted")
        else:
```

```
            print("Thank you")
            break
    connection.client.close()
```

Output:

PS C:\Users\HP\Rupesh\PICT\TE SEM 1\DBS Lab\Assignment 12> & "C:/Program Files/Python39/python.exe" "c:/Users/HP/Rupesh/PICT/TE SEM 1/DBS Lab/Assignment 12/31124_Rupesh_Dharme_DBSL_Assignment_12.py"

What to perform?

1. Create (Insert)

2. Read (Select)

3. Update (Update)

4. Delete (Delete)

5. Exit

2

{'_id': ObjectId('619f15db63836ed04049349f'), 'state': 'Maharashtra', 'capital': 'Mumbai'}

Data read

What to perform?

1. Create (Insert)

2. Read (Select)

3. Update (Update)

4. Delete (Delete)

5. Exit

1

Enter State: MP

Enter capital: Bhopal

Document created

What to perform?

1. Create (Insert)

2. Read (Select)

3. Update (Update)

4. Delete (Delete)

5. Exit

2

{'_id': ObjectId('619f15db63836ed04049349f'), 'state': 'Maharashtra', 'capital': 'Mumbai'}

{'_id': ObjectId('61a12483f0ab95be0728b7e6'), 'state': 'MP', 'capital': 'Bhopal'}

Data read

What to perform?

1. Create (Insert)

2. Read (Select)

3. Update (Update)

4. Delete (Delete)

5. Exit

3

Enter State: MP

Enter capital: Nagpur

Document updated

What to perform?

1. Create (Insert)

2. Read (Select)

3. Update (Update)

4. Delete (Delete)

5. Exit

2

{'_id': ObjectId('619f15db63836ed04049349f'), 'state': 'Maharashtra', 'capital': 'Mumbai'}

{'_id': ObjectId('61a12483f0ab95be0728b7e6'), 'state': 'MP', 'capital': 'Nagpur'}

Data read

What to perform?

1. Create (Insert)

2. Read (Select)

3. Update (Update)

4. Delete (Delete)

5. Exit

4

Enter State: MP

Document deleted

What to perform?

1. Create (Insert)

2. Read (Select)

3. Update (Update)

4. Delete (Delete)

5. Exit

2

{'_id': ObjectId('619f15db63836ed04049349f'), 'state': 'Maharashtra', 'capital': 'Mumbai'}

Data read

What to perform?

1. Create (Insert)

2. Read (Select)

3. Update (Update)

4. Delete (Delete)

5. Exit

5

Thank you