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Course : Advanced Application Programming (8000 level)
Quest No : Quest 6 (MongoDB)

Part A

File → ConnectToMongo.py

```python
import pymongo
import json
import pprint
from pymongo import MongoClient

# Connect to MongoDB Client
client = MongoClient('mongodb://dgogri:mypassword@smgo7db01.smu.edu:27017/dgogridb')
# Choose the database to use as 'db'
db = client.dgogridb

# Get collections from dgogridb database and print them
collections = db.collection_names(include_system_collections=False)
print("Printing Collections Below")
for col in collections:
    print(col)


# Get data from quest6 collection and print them
print("\nPrinting Database Data Below")
for dataInDB in db.quest6.find({}, {"_id": 0} ):
    print(dataInDB)
```

O/P

```
Quest6 — ssh -L 127.0.0.1:27017:smgo7db01.smu.edu:27017 dgogri@genuse5...
[dgogri@genuse50.engr.smu.edu$ python ConnectToMongo.py
 Printing Collections Below
 quest6
 zorro

 Printing Database Data Below
 {u'partA': u'ConnectToMongoDB'}
 {u'partB': u'Use Some MongoDB Features'}
 dgogri@genuse50.engr.smu.edu$ 
```

Part B

Category
→ Mongo Restore

Action
→ Tool to restore a dump

Example
- mongorestore is used to restore a collection using a bson file. BSON stands for Binary JSON.
- When we use a mongodump command, a bson file is generated for the collection.
- mongoresture is useful if you accidentally drop your collections, want to restore your collection to a previous time stamp collection.

mongodump Part

Basic syntax For mongodump

1. mongodump a Collection
mongodump -d <databaseName> -c <CollectionName>

2. mongodump a Database Excluding Specified Collection
mongodump -d <databaseName> --excludeCollection=<CollectionName> --excludeCollection=<Collectionname>

3. mongodb with access control
mongodump -h <HostAddress> - <Portnumber> - <UserName> - <Password> -c <CollectionName> --authenticationDatabase <DatabaseName> --out <Folder to dump the bson file>

O/P – My created bson file for quest6 and zorro

```
[dgogri@genuse50.engr.smu.edu$ dir
 quest6.bson   quest6.metadata.json   zorro.bson   zorro.metadata.json
 dgogri@genuse50.engr.smu.edu$
```

mongorestore part

Basic syntax For mongorestore

1. mongorestore a Collection

mongorestore - <CollectionName> - <Databasename> <BsonFile Name>

2. mongodb with access control

mongorestore -h <HostAddress> -p <Portnumber> -u <UserName> -p <Password> -c <CollectionName> --authenticationDatabase <DatabaseName> <BSON File Name>

In the restore part, I have first dropped my collection 'quest6' from the database.
Then I use the mongorestore command to resore my collection.
The output is given below.

O/P

```
dgogri@genuse50.engr.smu.edu$ mongo smgo7db01.smu.edu:27017/dgogridb -u dgogri -p [REDACTED]
MongoDB shell version v3.6.8
connecting to: mongodb://smgo7db01.smu.edu:27017/dgogridb
MongoDB server version: 3.6.5
Server has startup warnings:
2018-09-15T20:00:27.807-0500 I CONTROL  [initandlisten]
2018-09-15T20:00:27.807-0500 I CONTROL  [initandlisten] ** WARNING: Access control is not enabled for the database.
2018-09-15T20:00:27.807-0500 I CONTROL  [initandlisten] **          Read and write access to data and configuration is unrestricted.
2018-09-15T20:00:27.807-0500 I CONTROL  [initandlisten]
> use dgogridb
switched to db dgogridb
> show collections
quest6
zorro
> db.quest6.find()
{ "_id" : ObjectId("5bb2ade700c70c65a4274882"), "partA" : "ConnectToMongoDB" }
{ "_id" : ObjectId("5bb2adfc00c70c65a4274883"), "partB" : "Use Some MongoDB Features" }
> db.quest6.drop()
true
> show collections
zorro
> ^C
bye
dgogri@genuse50.engr.smu.edu$ mongorestore -h smgo7db01.smu.edu:27017 -u dgogri -p [REDACTED] -d dgogridb -c quest6  --authenticationDatabase dgogridb quest6.bson
2018-10-01T20:22:12.828-0500    checking for collection data in quest6.bson
2018-10-01T20:22:12.832-0500    reading metadata for dgogridb.quest6 from quest6.metadata.json
2018-10-01T20:22:12.844-0500    restoring dgogridb.quest6 from quest6.bson
2018-10-01T20:22:12.907-0500    no indexes to restore
2018-10-01T20:22:12.907-0500    finished restoring dgogridb.quest6 (2 documents)
2018-10-01T20:22:12.907-0500    done
dgogri@genuse50.engr.smu.edu$ mongo smgo7db01.smu.edu:27017/dgogridb -u dgogri -p [REDACTED]
MongoDB shell version v3.6.8
connecting to: mongodb://smgo7db01.smu.edu:27017/dgogridb
MongoDB server version: 3.6.5
Server has startup warnings:
2018-09-15T20:00:27.807-0500 I CONTROL  [initandlisten]
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> use dgogridb
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{ "_id" : ObjectId("5bb2adfc00c70c65a4274883"), "partB" : "Use Some MongoDB Features" }
>
```