27. PyMongo

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1 Introduction

- PyMongo is a Python distribution containing tools for working with MongoDB

PyMongo Documentation

2 Install PyMongo

```
pip install pymongo
```

[ ]:
```
import pymongo
```

3 Connect MongoDB Server

[ ]:
```
mongo_client = pymongo.MongoClient("mongodb://localhost:27017/")
```

4 List Databases

[ ]:
```
mongo_client.list_database_names()
```

5 Create DataBase

[ ]:
```
# this will connect to database "mflix"
# if "mflix" is not available new database of this name will be created
database = mongo_client["mflix"]
```

[ ]:
```
# List Databases
mongo_client.list_database_names()
```

6 List Collections

[ ]:
```
database.list_collection_names()
```

7 Creating a Collection

```
# Import data from JSON file to a mongoDB collection using command line
# !mongoimport --db mflix --collection movies --file movies.json
```

```
collection = database["movies"]
```

```
database.list_collection_names()
```

8 Find One Record from collection

```
document = collection.find_one()
```

```
type(document)
```

```
document
```

```
type(document)
```

```
document['title']
```

```
document['directors']
```

9 Find all records

- To select data from a table in MongoDB, we can also use the find() method.
- The find() method returns all occurrences in the selection.
- The first parameter of the find() method is a query object. In this example we use an empty query object, which selects all documents in the collection.

```
for d in collection.find():
    print(d)
```

10 Find all records with a Filter

```
collection.find({},{ "_id": 0, "title": 1, "year": 1 })
```

```
counter = 0
for x in collection.find({},{ "_id": 0, "title": 1, "year": 1 }):
    print(x)
    counter += 1
    if counter == 10:
        break
```

```
counter = 0
for x in collection.find({'year':2012},{ "_id": 0, "title": 1, "year": 1 }):
    print(x)
    counter += 1
    if counter == 10:
        break
```

```
counter = 0
for x in collection.find({'year':{ "$gt": 2014 } },{ "_id": 0, "title": 1,␣
 ↪"year": 1 }):
    print(x)
    counter += 1
    if counter == 10:
        break
```

11 Count

```
collection.count_documents({})
```

```
collection.count_documents({'year':2015})
```

```
collection.count_documents({'year':{ "$lt": 2014 } })
```

12 Write to MongoDB

```
database.list_collection_names()
```

```
collection_th.drop()
```

```
collection_th = database["theatres"]
```

```
collection_th.count_documents({})
```

```
collection_th.insert_one({
    "Name": "PVR",
    "Address": "PMC Whitefield"
})
```

```
for doc in collection_th.find():
    print(doc)
```

```
ths = [{
    "Name": "Inox",
    "Address": "Indiranagar"
},
```

```
    {
    "Name": "PVR",
    "Address": "Indiranagar"
},
{
    "Name": "Cinepolis",
    "Address": "Banaswadi"
}]
```

[ ]:
```
collection_th.insert_many(ths)
```

[ ]:
```
for doc in collection_th.find():
    print(doc)
```

[ ]:
```
# Delete collection
collection_th.drop()
```

[ ]:
```
database.list_collection_names()
```

13 Update Documents

[ ]:
```
collection_th.update_one({'Address':'Banaswadi'},{'$set':{'Address':
 ↪'Malleshwaram'}})
```

[ ]:
```
for doc in collection_th.find():
    print(doc)
```

[ ]:
```
collection_th.update_many({'Address':'Indiranagar'},{'$set':{'Address':
 ↪'Ecity'}})
```

[ ]:
```
for doc in collection_th.find():
    print(doc)
```