1. What is PyMongo?

- PyMongo is a Python library for connecting to and interacting with MongoDB databases.

2. Connecting to MongoDB with PyMongo

```
from pymongo import MongoClient
client = MongoClient('mongodb://user_name:pw@localhost:27017')
```

3. Getting a Database and Collection

```
from pymongo import MongoClient

client = MongoClient('mongodb://user_name:pw@localhost:27017')

# Access the database and collection
db = client['ds4300']              # or use client.ds4300
collection = db['myCollection']    # or use db.myCollection
```

4. Inserting a Single Document

```
db = client['ds4300']
collection = db['myCollection']

post = {
    "author": "Mark",
    "text": "MongoDB is Cool!",
    "tags": ["mongodb", "python"]
}

post_id = collection.insert_one(post).inserted_id
print(post_id)
```

5. Finding All Movies from the Year 2000

```
from bson.json_util import dumps

# Find all movies released in 2000
movies_2000 = db.movies.find({"year": 2000})

# Print the results in JSON format with indentation
print(dumps(movies_2000, indent=2))
```

6. Setting Up with Jupyter

Steps:

1. Activate your `ds4300` conda environment or virtual environment.
2. Install required packages:

   pip install pymongo

   pip install jupyterlab

3. Download and unzip the example notebooks: https://www.dropbox.com/scl/fi/nqlaaxjrgo5ksaw3avb51/25s-ds4300-mongo-ex.zip?rlkey=49rejsqlg9pvdteub2ekg31l6&dl=0
4. Navigate to the unzipped folder in your terminal.
5. Run:

   jupyter lab