MongoDB with Python

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Install Libraries

- pymongo
  - To work with MongoDB in Python, install library **pymongo**.
- dnspython
  - If you are using MongoDB Cloud to host your database, you need to install dnspython to connect to MongoDB Cloud.

```
pip install pymongo
pip install dnspython
```

Connect to MongoDB

- Connect to local server

```
from pymongo import MongoClient
client = MongoClient("localhost:27017")
```

- Connect to MongoDB Atlas (Cloud)
  - Copy connection string from MongoDB Cloud account

```
client =
pymongo.MongoClient("mongodb+srv://<USER
>:<PASSWORD>@cluster0.hlixs.mongodb.net/
demo?retryWrites=true&w=majority")
```

List Databases and Collections

```python
# List databases
client.list_database_names()

# Get a database
db = client["mydb"]

# List collections
collections = db.list_collection_names()

# Get a collection
collection = db["students"]
```

Insert Document(s)

```
# Prepare Documents in a Dictionary
docs = [
  {"name": "alan", "phone": 91234567},
  {"name": "ben", "phone": 87654321}
]

# Insert a document
result = collection.insert_one(docs[0])

# Insert a list of documents
result = collection.insert_many(docs)
```

Find Records

```python
# print all docs in a collection
for doc in collection.find():
    print(doc)


# Find doc(s) by attribute(s)
for doc in collection.find({"name": "alan"}):
    print(doc)
```

Replace / Update Records

```
# Replace record(s)
collection.replace_one({"name": "alan"},
    {"name": "alan", "age": 18}
)

# Update record(s)
collection.update_one({"name": "ben"},
    {"name": "ben", "contact": 12345678}
)
```

Delete Records

```
# Delete one doc
collection.delete_one({"name": "alan"})



# Delete many docs
collection.delete_many({"name": "alan"})
```

Reference

- Official MongoDB API document for Python (pymongo)
  - https://pymongo.readthedocs.io/en/stable/
  - https://pymongo.readthedocs.io/en/stable/genindex.html