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### Lab Assignment - 3

Aim: Perform database connectivity with MongoDB as backend and any frontend from PHP/Python/JAVA

#### Objective:

- To learn connectivity of MongoDB as backend and Python/PHP/JAVA as a front end
- To execute Create, Read, Update & Delete (CRUD) operations using Python/PHP/JAVA

Problem Statement: Perform database connectivity with MongoDB as backend and any frontend from PHP/Python/JAVA for a suitable application domain.

#### Theory:

##### → Introduction to PyMongo.

PyMongo is a python distribution which provides tools to work with MongoDB, it is most preferred way to connect with MongoDB database from Python.

##### → Establishing connection

we use MongoClient instance and specific database name. If database doesn't exist it will create it and connect it.

```
from pymongo import MongoClient
```

```
client = MongoClient("localhost", 27017)
```

The above code will connect to default host and port.



→ Accessing Database

```
db = client ['datamap']
```

in pymongo dictionaries are used to represent documents

→ Inserting documents

We use insert-one() method when document is inserted a special key-id is generated and is unique to this document.

→ Retrieving documents

find\_one returns a single document matching query as one if it doesn't exist, it returns first match for finding all the documents in collection using the find method

→ Uploading documents

Document can be updated using update-one() first parameter taken by this function is a query object define document to be updated. If there are more than one then only the first one is updated

→ Deleting Documents.

delete-one() is used to delete the document in MongoDB. The first parameter for this method is query object.

→ Dropping collection

```
article.drop()
```



Input: Python/program to create, read, update and delete the operation for suitable application

Output: Execution of CRUD operations from python as a front end and MongoDB as backend for suitable applications

Platform: windows

### FAQs

1 what is PyMongo

PyMongo is a python distribution containing tools for working with MongoDB and is recommended way to work with MongoDB

2 what is Mongoengine?

Mongoengine is a python library that acts as object document mapped with mongoDB, a NoSQL database. It uses simple declaration API similar to the Django ORM

3 what is the purpose of following statement?

```
from pymongo import MongoClient
```

To establish a connection to MongoDB with pymongo we use the MongoClient user. PyMongo is the inbuilt python package through which one can import mongo client