EE461L - HW4

The goal of this assignment is to familiarize yourself with MongoDB, a NoSQL approach.

I have discussed MongodB in class. You could listen to the class Zoom recording if you missed the lecture.

Setup:

Follow the MongoDB and PyMongo installation instructions at the following links. Use pip to install PyMongo. Make sure that you have python3 and pip installed first.

https://docs.mongodb.com/manual/administration/install-community/

https://www.mongodb.com/python

You can use this tutorial

https://pymongo.readthedocs.io/en/stable/tutorial.html#querying-by-objectid

or any other tutorial to familiarize yourself with the PyMongo API. You may also use MongoEngine to complete this assignment.

Task 1

We have created a Cluster on Mongodb Atlas. Use the following two Python commands in your code to connect to this cluster

```
from pymongo import MongoClient

Client=MongoClient("mongodb+srv://asamant:MApeZZu5VcMpD6t3@cluster0.oovet.mongodb.net/myFirstDatabase?retryWrites=true&w=majority")
```

Write a Python program that does the following:

1. Connect to the database `HW4Fall22`. This database has one collection called `as79495`.
2. Create a new collection in the cluster. Name of the collection is your `uteid`
3. Add a new document to the new collection that you have created. This document should have the following fields and datatypes
   Name/Object: YourFirstname, Yourlastname,
   Creation_Date/datetime: Current time stamp
   Programming_Languages/array (between one and three),
   Number_of_Projects/numeric (between 1 and 1000)

4. Close connection to the database

What to submit:

1. Your Python code

Rubrics

Deliverable	Points
R1-1 Python Program	1.5
R1-2 Comments	0.5
R1-3 TA will verify that your collection and database is properly visible in MongodB Atlas	1

Task 2

Create your account on mongodb.com. Make sure that you are signing up for the free account and use the credits that you get from your github students developer package.

Create a cluster (Cluster0) for your project. In some cases, this cluster may be automatically created for you.

Setup the database access credentials (password).

Write a Python program that creates two collections in your default database

```
Collection1: HWSet
Collection2: Projects
```

Inside Collection1, insert one document as follows

```
Document1:
Name: HWSet1
Capacity:200
Availability:100
```

Inside Collection2, insert one document as follows

```
Document1:
Name:Project1
ID:as1234
Description: This is the first project
```

Deliverable	Points
R2-1 Python Program	1.5
R2-2 Screenshot of your database which clearly shows the two databases that you have created	1.5