DATA8005 – Assignment 1 (Part 1) – **MongoDB / pyMongo**

Due: 8th Week (March 16th, 23:59)

Worth: 30%

Overview

You have completed labs (see also additional practice exercises) on Python/pymongo and a tutorial on key commands/expressions in MongoDB. Part 1 of your first assignment is to complete some exercises on these areas. You will need to do a little bit of research on things like adding to a list.

You will be using the Tate dataset (included as ZIP file) – Import Json it into you python Code.

Instructions

1. [20 marks]

Create a new python script called assign1_p1.py. / assign1_p2.py.

Write Python script 1(assign1_p1.py) to:

- Prompt the user for 3 search criteria (your choice) to find artworks.
    - List them (limiting the list to 5 as it would be sufficient) in a nicely formatted way with important details to include title, date, medium and a list of contributors and subjects.

Write Python script 2 (assign1_p2.py) to:

- prompt the user for a name in Surname, Firstname format, e.g. Abrahams, Ivor;
- neatly display the following:
    1. the artist's name in Firstname Surname format, e.g. Ivor Abrahams;
    2. gender;
    3. birth place;
    4. birth year;
    5. a list of movements, if any;
    6. a list of the artist's artwork titles.
- For 6 above, you **must** go to the artworks collection and make use of the *contributors* list. List the artwork if the name you entered is a contributing artist. Remember, it is possible that the name you entered might have contributed without being the artist (e.g. they were the subject of a portrait or restored the artwork). In other words, don't accidentally list any artworks the artist was not part of creating.

2. [10 marks]

Write MongoDB queries (in a text file) to run from the mongo client to answer the following questions:

- How many artists are active in a chosen city (you choose which city)?
- Which artworks have an arm or arms raised ("arm/arms raised" is in the subjects)?
- Choose 3 potential fields (or groups of fields) to index.
    - Explain why in one sentence for each and provide the mongoDB commands to create the indexes. What benefit you get creating index on the selected fields?

Submitting

Submit it via Canvas – you have all the way to the complete the assignment by the deadline. Include everything in a zip file: 2 python scripts and a text file with your MongoDB queries and other notes.