L09 - MongoDB

Due Apr 15 at 11:59pm **Points** 40 **Questions** 10 **Available** after Apr 14 at 9am
Time Limit None **Allowed Attempts** Unlimited

Instructions

This lab will orient you to MongoDB and ask you to perform some tasks within the interface. We will be making use of Robo 3T and MongoDB, you can also use MongoDB Community Compass, which comes with MongoDB's installation.

We are working in ***MongoDB Community Edition 4.4***, for screenshots please post from either Studio/Robo 3T, Mongo Compass, or the Mongo Shell.

To brush up on MongoDB after the lab lecture, you can play with the command line in tutorial form at:
https://docs.mongodb.com/manual/tutorial/getting-started/ (https://docs.mongodb.com/manual/tutorial/getting-started/)

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	2,034 minutes	32 out of 40

Correct answers are hidden.

Score for this attempt: **32** out of 40
Submitted Apr 15 at 8:10pm
This attempt took 2,034 minutes.

Question 1

5 / 5 pts

Use mongoimport command line tool or the import functionality in Studio / Robo 3T.

1. Create and run the query to add a new collection, cities, to your MongoDB database.
2. Create and run the query to import the json file: COMP_420_Spring_2021_Lab_09_cities.json, into your new database.

Please upload a screenshot of the results of the following command:

```
db.cities.find({})
```

Lab9_1.JPG (https://cilearn.csuci.edu/files/2807376/download)

Question 2

3 / 5 pts

For the results in this section (***and all following sections***), modify the data in your database to include your name as "documentOwner" and an "updatedDate" using the "new Date()".

Please upload a screenshot of the following command and result for your database.

```
> db.cities.find({}).pretty().limit(2)
{
        "_id" : "01008",
        "city" : "BLANDFORD",
        "location" : [
                -72.936114,
                42.182949
        ],
        "population" : 1240,
        "state" : "MA",
        "documentOwner" : "Eric Kaltman",
        "updatedDate" : ISODate("2019-10-15T23:37:54.321Z")
}
{
        "_id" : "01012",
        "city" : "CHESTERFIELD",
        "location" : [
                -72.833309,
                42.38167
        ],
        "population" : 177,
        "state" : "MA",
        "documentOwner" : "Eric Kaltman",
        "updatedDate" : ISODate("2019-10-15T23:37:54.321Z")
}
```

Lab9_2.JPG (https://cilearn.csuci.edu/files/2807377/download)

Question 3

1.5 / 3 pts

Query for all documents naming cities in the states New York and California (use an $or in this query).

Please upload a screenshot of your query and its results.

Lab9_3.JPG (https://cilearn.csuci.edu/files/2807378/download)

this is filtering for cities named new york and california, not cities within those states

Question 4

3 / 3 pts

Query for all documents where the population is less than 10,000 people.

Please upload a screenshot of your query and its results.

Lab9_4.JPG (https://cilearn.csuci.edu/files/2807379/download)

Question 5

3 / 3 pts

Query for all cities located roughly within California (32°32′ N to 42° N and 114°8′ W to 124°26′ W).

You can just assume an unconverted square area, however there are also geo-location commands in MongoDB.

Please upload a screenshot of your query and its results.

Lab9_5.JPG (https://cilearn.csuci.edu/files/2807380/download)

Question 6

3 / 3 pts

Query for all cities with "New" in their name as a separate word.

Please upload a screenshot of your query and its results.

Lab9_6.JPG (https://cilearn.csuci.edu/files/2807381/download)

Question 7

1.5 / 3 pts

The information in "cities" is organized by zip code. Update Camarillo's zip codes to their current population based on:

https://www.california-demographics.com/zip_codes_by_population (https://www.california-demographics.com/zip_codes_by_population)

Query for all documents with referring to Camarillo's zip codes and upload a screenshot of the query and results.

Lab9_7.JPG (https://cilearn.csuci.edu/files/2807382/download)

Question 8

3 / 3 pts

What is the total number of distinct cities in the collection?

Please upload a query and result that answers this question.

Lab9_8.JPG (https://cilearn.csuci.edu/files/2807383/download)

Question 9

6 / 6 pts

What is the total population of Los Angeles according to the "cities" collection? (Use either map-reduce or aggregate pipeline approach for this).

Please upload a screenshot of your query and its result.

Lab9_9.JPG (https://cilearn.csuci.edu/files/2807384/download)

Question 10

3 / 6 pts

Write a Map Reduce function that returns the total number of zip codes contained by each city.

Please upload a screenshot of your map reduce query run for the city "SAN FRANCISCO" that shows the total number of zip codes.

Lab9_10.JPG (https://cilearn.csuci.edu/files/2807400/download)

Quiz Score: **32** out of 40