Assignment 11

Instructions

i. If you are performing tasks in mongoDB shell, write command and execute and paste screenshots and make a pdf. You need to show a screenshot to demonstrate the correctness of your code/query. Or if you are using a jupyter notebook then submit the notebook.
ii. Submit one file .pdf/ipynb file containing all answers. The name should be
<roll_no>_assignment<number>.pdf/ipynb
iii. Show the questions before the answers there will be a penalty if not.
v. The code should be executable and show output.

MongoDB installation
Ubuntu:
1. sudo apt-get install mongodb
2. sudo service mongodb start
3. Mongo

Official installation guide:
https://docs.mongodb.com/manual/administration/install-community/
* Install the pymongo package using the command: 'pip install pymongo'.

Note: Windows users should install other mongoDB tools separately as they dont come with mongoDB server installation. You will need them to import/export data.
https://docs.mongodb.com/database-tools/installation/installation-windows/#installation

Questions:
Your results should be shown in organised manner in shell/notebook(use proper printing command to show outputs):
- Install mongoDB using guide given above
- Start mongoDB shell: mongo --host 127.0.0.1:27017
1. Create a nosql people database, containing a collection with at least 10 documents with:
    i. 3 ids as customised
    ii. Include nested documents
    iii. Show following CRUD operations on your database
        - insertOne(), insertMany()
        - Using find() show 3 documents with certain criteria
        - findOne(), findMany()
        - updateOne(), updateMany()
        - replaceOne()
        - deleteOne(), deleteMany()
        - Sort in descending order
    iv. Show 2 search using regex.
2. i. Import primer-dataset.json in a database test_db with collection name restaurants.

ii. Show cuisines with restaurants more than 100.

Iii. List all the attributes in restaurants collection.

iv. Count number of Hawaiian cuisine restaurants with grade=A

v. Show the number of restaurants corresponding to each cuisine using 'cursor' mode (you can view it in parts and show more like setting) in sorted order so that the highest number cuisines appear first.

Resources:

 * https://docs.mongodb.com/manual/reference/sql-comparison/ **Dont forget to check this comparison between SQL and mongoDB.**

 * https://docs.mongodb.com/manual/tutorial/install-mongodb-on-ubuntu/   Install mongo

 * https://docs.mongodb.com/drivers/ Official Packages for each language

 * https://docs.mongodb.com/manual/reference/mongo-shell/ Mongo on terminal tutorial

 * https://docs.mongodb.com/manual/tutorial/getting-started/#getting-started MongoDB tutorial with online terminal

 * https://university.mongodb.com/courses/M220P/about Official free online certification Course: Mongo for Python

 * https://pymongo.readthedocs.io/en/stable/tutorial.html Pymongo tutorial

 * https://docs.mongodb.com/manual/reference/operator/ Operators

 * https://docs.mongodb.com/manual/reference/operator/query/ IMP