

## INF 551 – MongoDB Lab

100 points

Due: 4/5/2020, Sunday

Consider the restaurant dataset (<https://raw.githubusercontent.com/mongodb/docs-assets/primer-dataset/primer-dataset.json>). Import it into your MongoDB server.

Write a MongoDB operation (find, aggregate, etc) for each of the following questions:

1. Find names and streets (no need to include `_id`) of restaurants whose streets contain either "north" or "south" (as a substring, case insensitive). "Northern Boulevard" is an example of such streets. Return the first 10 names in the ascending order of name.
2. Find out how many restaurants have received at least one grade of "A" with the corresponding score of at least 20. For example, "grades" : [ { "date" : ..., "grade" : "A", "score" : 22 }, ...]. Your output should be the count, i.e., an integer.
3. Find out how many different cuisines there are for the restaurants located in Brooklyn and Manhattan (borough).
4. Find out, among the restaurants in Brooklyn, how many restaurants there are for each different cuisine. Output top 10 cuisines and their corresponding numbers of restaurants.
5. Create an index for borough. Show and compare the query evaluation plans for question 4 above (with and without index). Explain if the index helps in evaluating the query.
6. Add a new field "status" for all restaurants NOT located in Manhattan and set its value to "open".

Submit a document that contains your queries/commands, results, and explanation.