

CSCI585 HW 4 rubrics

(Yuming Gu)

Question1:

The screenshot shows the MongoDB Compass interface. On the left, a sidebar lists namespaces: HW4DB, HW3Data (selected), NPS, and Spiro. The main panel displays the 'HW4DB.HW3Data' collection. At the top, it shows 'COLLECTION SIZE: 1.15KB', 'TOTAL DOCUMENTS: 13', and 'INDEXES TOTAL SIZE: 36KB'. Below this, there are tabs for 'Find', 'Indexes', 'Schema Anti-Patterns', 'Aggregation', and 'Search Indexes'. A filter bar contains the query: `{ "popularity": { "$gte": 50 } }`. Below the filter bar, it says 'QUERY RESULTS 1-8 OF 8'. Three document snippets are visible, each with fields: `_id`, `name`, `popularity`, and `loc`. The first document is for 'Trader Joe', the second for 'Ralphs', and the third for 'MCBarberShop'. Each document has a popularity of 100. To the right of each document snippet are icons for edit, copy, and delete.

+ Create Database

Q NAMESPACES

▼ HW4DB

HW3Data

NPS

Spiro

HW4DB.HW3Data

COLLECTION SIZE: 1.15KB TOTAL DOCUMENTS: 13 INDEXES TOTAL SIZE: 36KB

Find Indexes Schema Anti-Patterns Aggregation Search Indexes

INSERT DOCUMENT

FILTER `{ "popularity": { "$gte": 50 } }` Find Reset

QUERY RESULTS 1-8 OF 8

```
{
  "_id": ObjectId("607a879f07e3498bc49479ad"),
  "name": "Trader Joe",
  "popularity": 100,
  "loc": Array
}
```

```
{
  "_id": ObjectId("607a879f07e3498bc49479ae"),
  "name": "Ralphs",
  "popularity": 100,
  "loc": Array
}
```

```
{
  "_id": ObjectId("607a879f07e3498bc49479b1"),
  "name": "MCBarberShop",
  "popularity": 100,
  "loc": Array
}
```

+1 if name, popularity, and loc are correctly displayed in the screenshot, and the query is correct.

Question2)



+0.5 for correctly showing the chart type, as shown in the above screenshot.(ANY chart type including non-spatial ones such as heatmap is fine)

(This is just an example, it should be the location in the campus.)

+0.5 for correctly displaying all the points on the Map/Chart.

Question3:

Example of what the query should look like:

Query

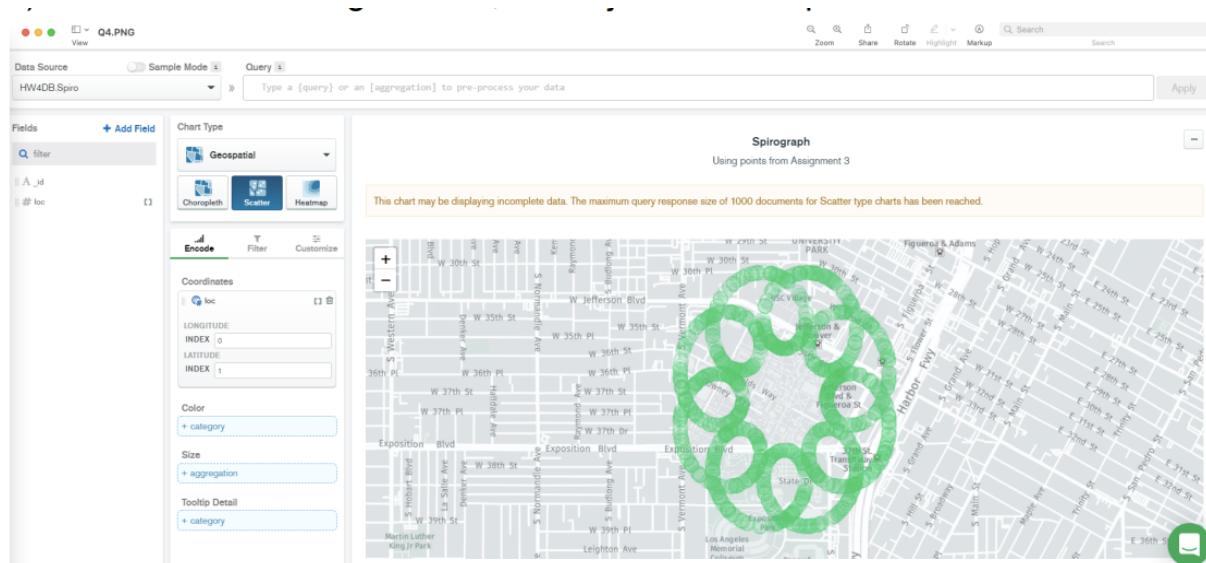
```
{ loc: { $geoWithin: { $box: [ [34.022, -118.288], [34.033, -118.283 ] ] } } }
```

+ 0.5 for correct query, else 0

+ 0.5 for correct display: Screenshot should show northern half of the 12 points (around 6/7 points)

Corner case: Some set of points may be hard to split exactly in half in which a different number of points is acceptable. 0 in case of choosing some other orientation (e.g. south) 0 in case a chart type is chosen that does not allow the visualization of the locations

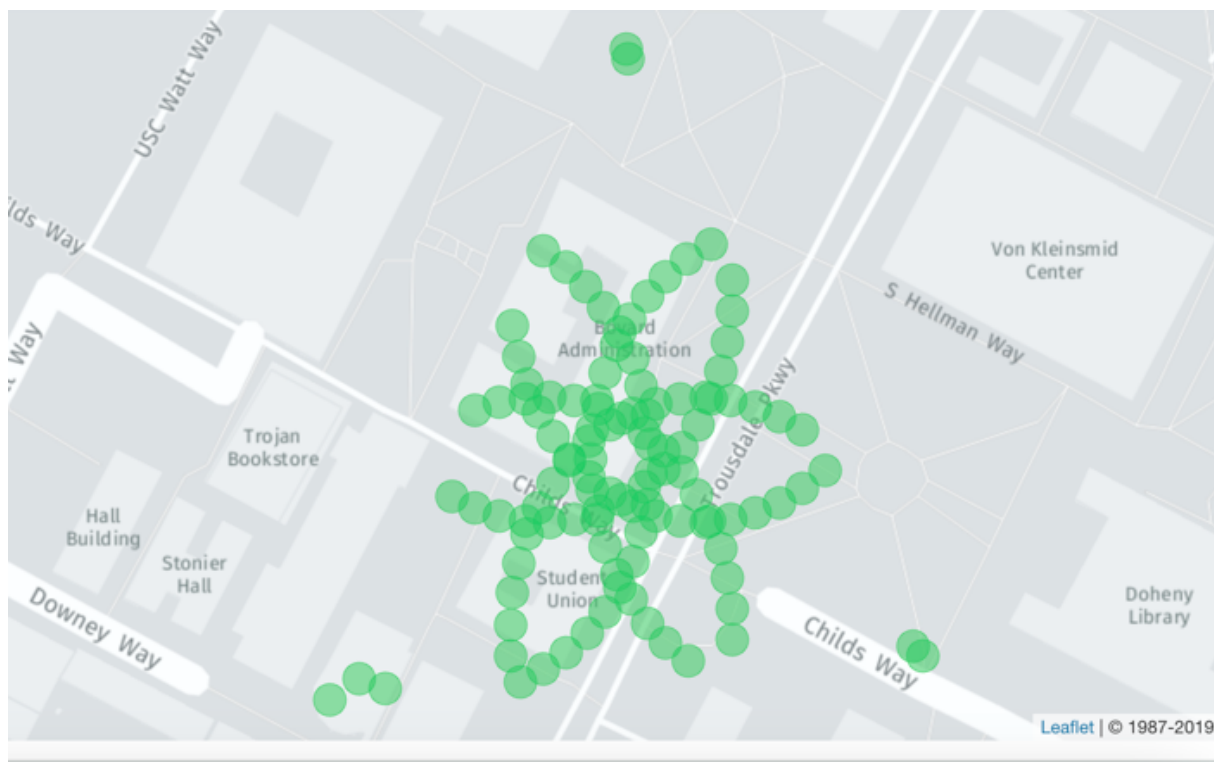
Question4:



+1 for bringing in some locations, screen shot
no need for the sampled locations. Just the Spirograph points
showing up will do

5)

Example:



+0.5 for providing an Image like this or similar, the
spirograph could be that completed.

+0.5 for correct code like this:

```
[ [ [-118.28541111001465, 34.02170480701826], [-118.28638691566698, 34.01992875306928], [-118.2844355619319, 34.02004720505945] ] ] }
```

Students can screenshot the over-imposed one on a map. They can specify the coordinates of three-corner or three-line functions etc.

Question 6:

Example:

+1 for showing the correct size of National Parks

Only the western half.

Notes: Some students might have chosen alternate locations (instead of West of Rockies) to get 198 points in the western half. No deductions for this. Not showing points in Alaska/Hawaii is also fine.

