

HW 4 rubrics

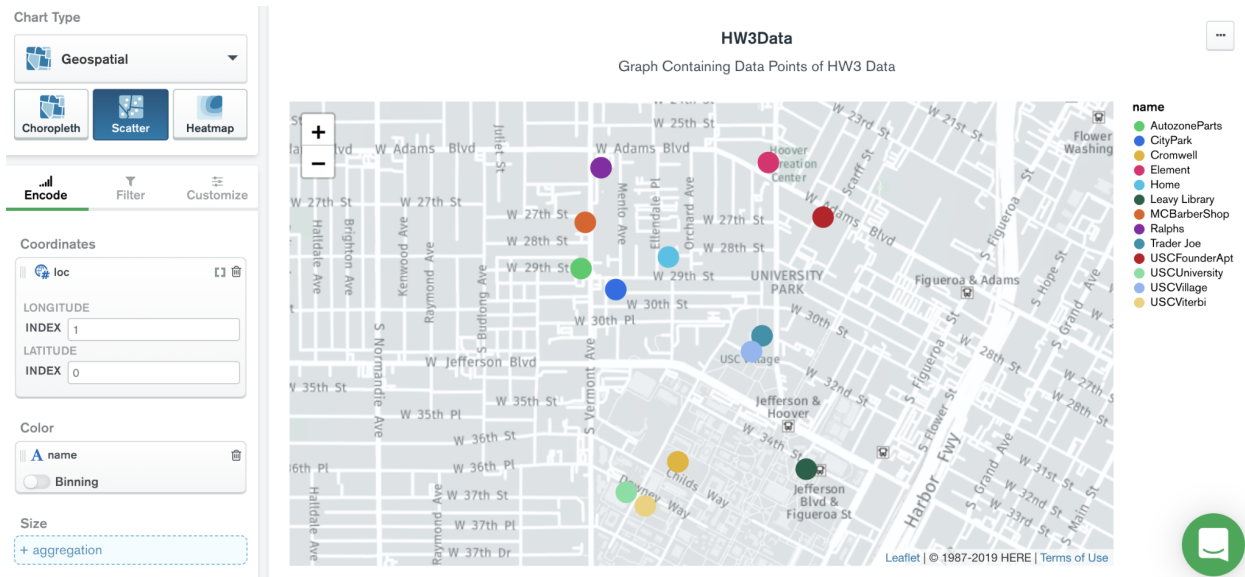
Q1)

The screenshot shows the MongoDB Compass interface for a database named HW4DB. The left sidebar shows the namespace structure: HW4DB > HW3Data > NPS > Spiro. The main panel displays the HW3Data collection with a filter: {"popularity": {"\$gte": 50}}. The query results show 1-8 of 8 documents. The documents are:

- `{ "_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 }`
- `{ "_id": ObjectId("607a879f07e3498bc49479b2"), "name": "USCFounderApt", "popularity": 50, "loc": Array }`

+1 if the query is correct and the results are displayed correctly in the screenshot.

Q2)



+0.5 for selecting appropriate chart type (Geospatial > Scatter or HeatMap?)
 [Saty] - ANY chart type (incl non-spatial ones such as heatmap) is fine!
 +0.5 for correct display of all the points on the Map/Chart.

Q3)

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:

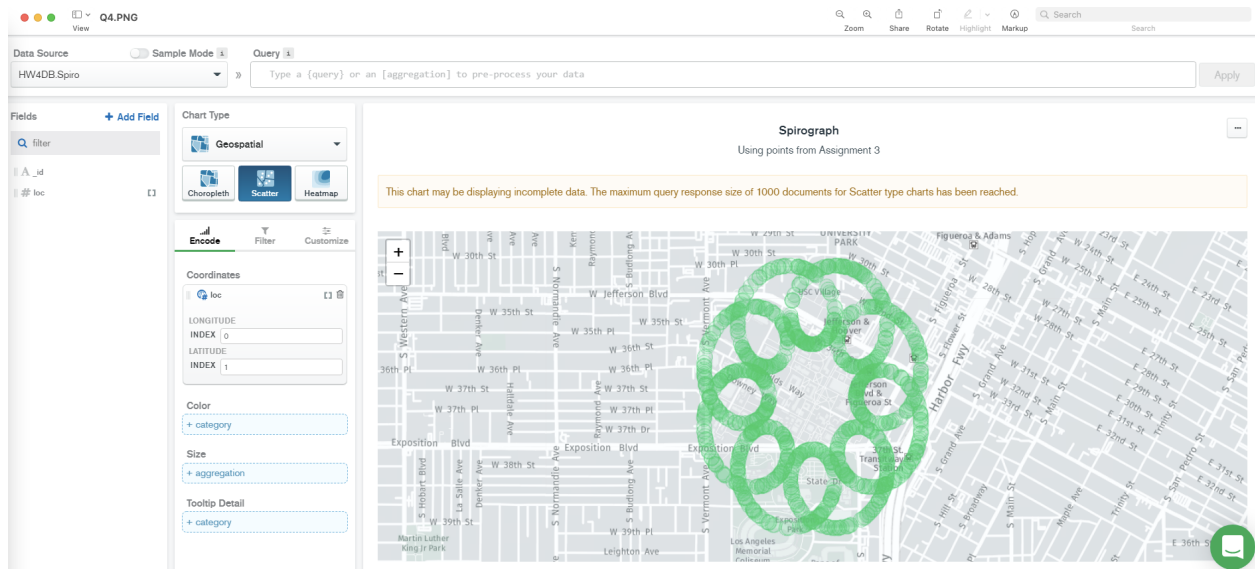
Screenshot should show **northern half** of the 13 points (6/7 points)

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.

4) should be something like this, this is just an example

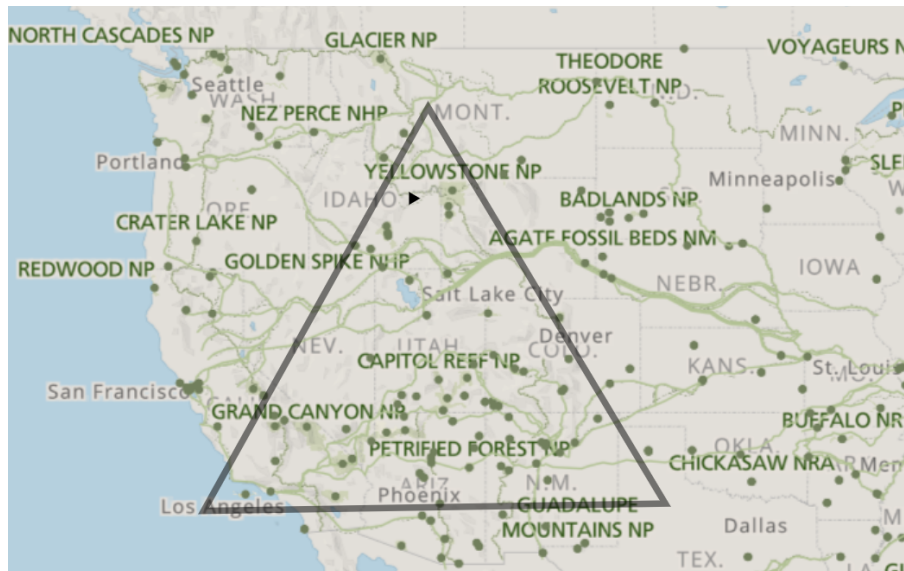


+0.5 for bring in some locations, screen shot

+0.5 for bring in all 13 locations and nice screen shot.

[Saty: no need for the sampled locations, just the Spirograph points showing up will do]

5) This is the example of a triangle provided in the homework, but the size of the triangle can be any size. Should be as equilateral as possible.



+0.25 for providing a triangle. Any form to represent the triangle should be fine, They can screenshot their code like this

Query 

```
{loc:{$geoWithin:{$polygon:[[-115,36],[-120,33],[-123,33]]}}}
```

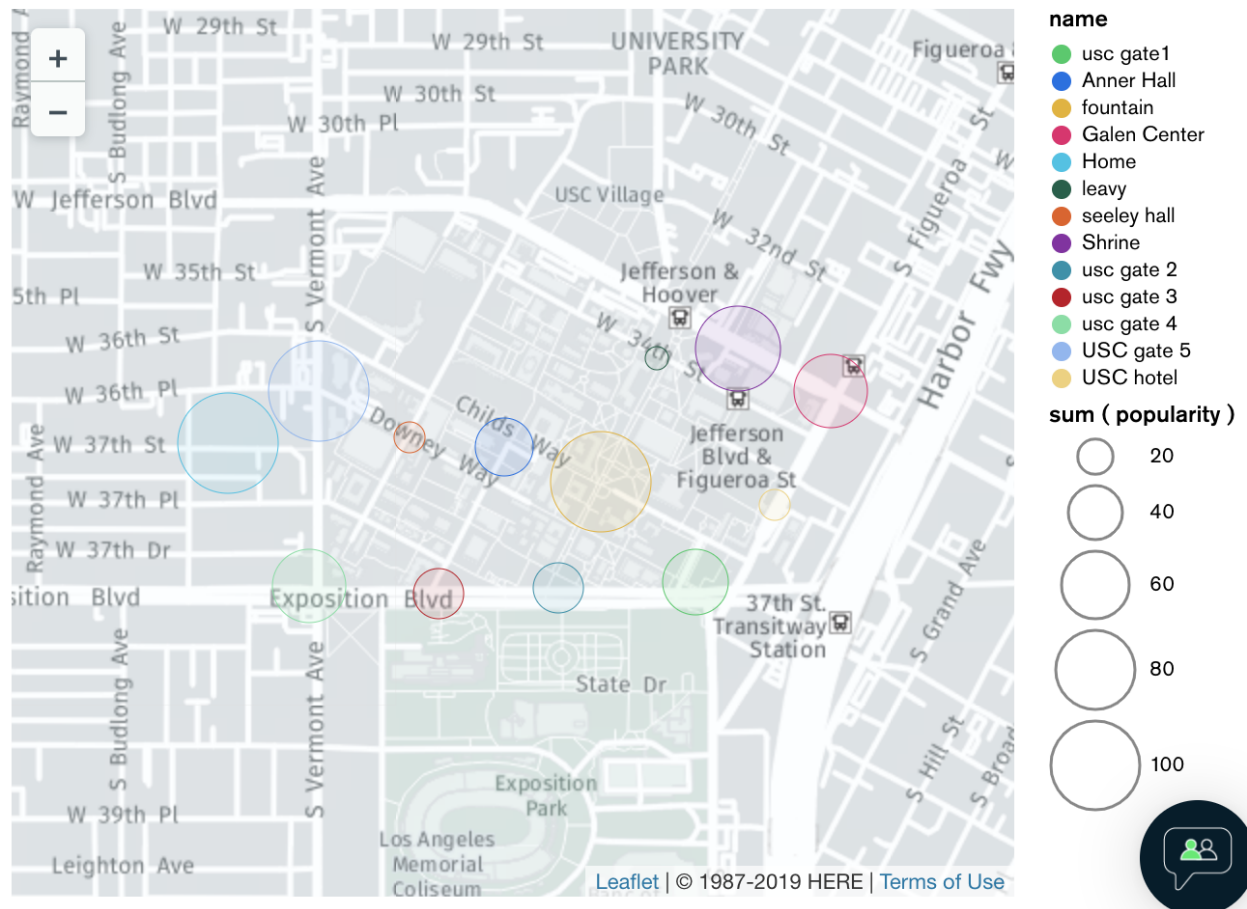
they can screen shot of the overlaid one on map, they can specify the coordinates of three corner, or three line function,

+0.25 for output at least a correct single location in the triangle by their query

+0.5 output all correct locations in the triangle and screen shot them.

[Saty: no need to show the triangle overlaid - just the contained (in the triangle) points will do]

6) The screenshot should include something like this



+0.5 for using the correct style

+0.5 for using the 'Size' aggregation so that the location size is displayed in various sizes.