

## (CL-219) Database Systems Lab

### Lab 13 MongoDB Query Modifiers and Indexing

Use the cities collections that you have already imported in lab 12.

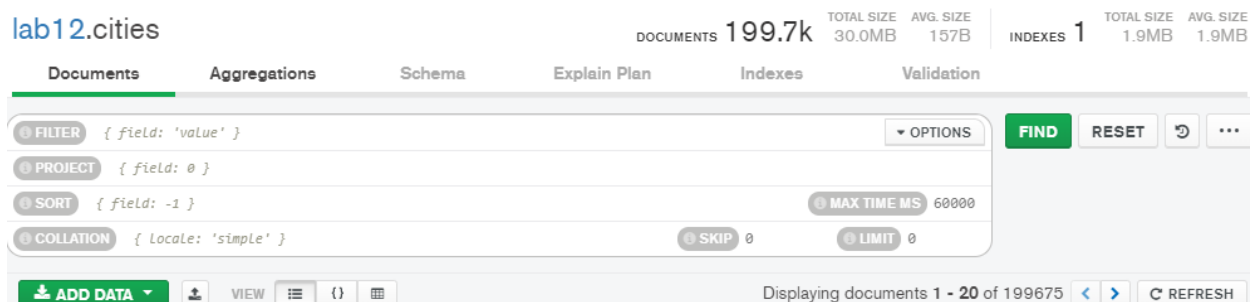
**Note:** First remove the collection data and then Reimport the cities collection from datasets directory to get the desired output according to the provided query, as we have updated, and removed some of the documents in the previous lab.

#### Exercises

The Cities collection document has layout as shown.

```
> { "_id": ObjectId("60b9239f1111a556b5030496"),  
  "name": "Chitungwiza",  
  "country": "ZW",  
  "timezone": "Africa/Harare",  
  "population": 55000,  
  "location": Object  
    { "latitude": -18.01274,  
      "longitude": 31.07555  
    }  
}
```

- 1) Write a Query to return all the documents whose cities population is less than 30 not equal to zero, then uses the limit clause to limit the number of documents being returned to just 2.
- 2) Write a Query to count the number of the documents whose timezone is “Asia/Jakarta”.
- 3) Write a Query to return all the documents whose country is “PK” and country timezone is “Asia/Karachi” and return the documents based on the descending order of population.
- 4) Write a query to get all the Indexes of cities collection and then add the index on population field and then drop the index on population field.
- 5) Use MongoDB compass filter tab to write queries for finding:



- i. All those cities whose time zone is Europe/Andorra.
- ii. All those cities whose population is greater than 12955000 and country is AR.

- iii. A city whose longitude equals to 1.6. Your query should return location and population fields only. (*hint: use project*)