Spring 2019 CS157C: NoSQL Database Systems

Programming Assignment 3

Instructor: Dr. Kim

This assignment is to have hands-on exercises for MongoDB replica set and sharding. Specific tasks you need to finish include 1) setting up a replica set in a single node, 2) setting up a replica set in a cluster of three nodes, and 3) setting up sharding in a single node

Given instructions should serve as guidelines to accomplish the assigned tasks.Troubleshooting required to finish the tasks should be considered as part of this assignment.

Tasks

1. To set up a replica set of three members in one vm
   1. Follow the instruction in this document as a guideline to setup a MongoDB replica set.
   2. Create a collection with 1000 of a simple documents of your choice.
   3. Get screenshots to prove your work done in steps 1 and 2.
2. To set up a replica set of three members in three virtual machines, i.e. there will be a total of three members, one for each virtual machine.
   1. Follow the instruction in this document as a guideline to setup three virtual machines.
   2. Research how to setup a replica set in multiple nodes and implement it in the three virtual machines you created from the previous step.
   3. Write all the steps you took to set up the multi-node replica set.
   4. Get screenshots to prove your work done in steps 1 and 2. (You may include only selected screenshots necessary to prove your work.)
3. To set up sharding in one virtual machine
   1. Follow the instruction in this document as a guideline to setup and test sharding in one virtual machine.
   2. Get screenshots to prove your work done.

Deliverable

- Hard copy: Print all the required screenshots and answers and submit them in class.
- No soft copy is required.

Due Date

Monday, March 18 in class