CHATROOM SETUP INSTRUCTIONS

- Install Mongodb at port 27017.
- Create a db in mongo using command **“use chatroom”**.
- Do a **npm install** in the project directory.
- Run the server.js file using command **“node server.js”.**
- Access the application at “http://localhost:8000”.

CHATROOM WORKFLOW

- Chatroom will initiate at multiple cores of the CPU and will launch a pool of threads for various operations like read, write and deletion operations.
- Chatroom uses mongodb and mydb.json file to store data and read the data. It also uses **npm node-json-db** module to read and write in the json file which is used as an inmem-storage.
- Request at **/add-entry** API caches the request in mydb.json file under path **“/data/”+timestamp(time at which request arrived)** and the parameters until the number of requests become 1000, then the write_thread pushes the data to **chatroom** db in mongo and deletes the entry at **“/data/”.**
- Request at **/chat** API launches three schedulers- one for reading entries from mongodb every 5sec based on current timestamp and storing the data in **mydb.json** at path **“/display/”**, second for removing entries having timestamp lesser than current timestamp from mongo every 60 sec, third worker pool is for displaying result from **mydb.json** at path **“/display/”** every one second.
- Results of **record insertion/write job** can be seen in write_success.txt file.
- Results of display job can be seen in **display.txt**.
- Results of **read job** can be seen in read_success.txt.

NOTE- One of the features yet to be implemented in Chatroom is to be able to share db connections among different pool of threads so that creation of new connections to mongo could be avoided for every read, write and delete operation.