ECE568 HW4 Report

In order to test the scalability, first, we run the file scalability.sh:
./client vcm-32297.vm.duke.edu
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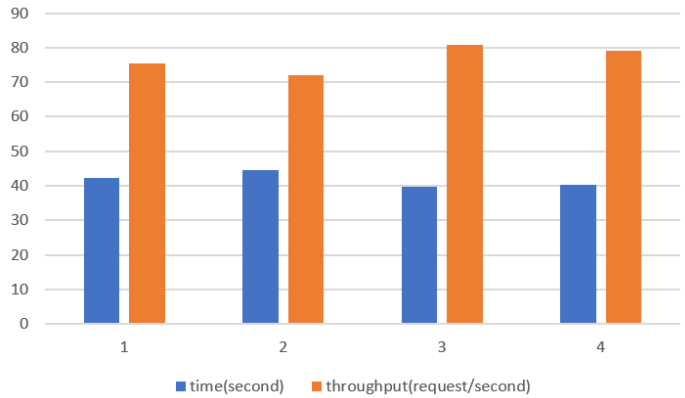
./client vcm-32297.vm.duke.edu

For each client, we have 800 requests including create account, create symbol, transact order, transact query and transact cancel. The result is as following:

core num	time(second)	throughput(request/second)
1	42.4164	75.44251752
2	44.4563	71.98079912
3	39.6405	80.72552062
4	40.4478	79.11431524



As we can see, when we run the program using multiple cores, the execution time indeed decreases, but the reduction is not very significant. We suspect that this is because when the process switches between multiple cores, it requires a longer time interval compared to using a single core. As a result, the execution time for running on multiple cores does not decrease substantially.

Second, we open four terminals, and run ./client vcm-32297.vm.duke.edu in each terminal. For each terminal we send 800 requests also including account create, symbol create, transact order, query and cancel. The result is as follows:

core num	time(second)	throughput(request/second)
1	17.0507	187.6755793
2	17.8571	179.2004301
3	16.3724	195.4508808
4	15.9218	200.982301