Manual

The instruction says 8 servers can be setup on the same machine (different directories) or different machines.

To support run servers and clients in the same machine, we firstly update makefile 5th line, redefine DEFS = -DHASHTHREADED. In the other hand, if we verify performance repeating put/get/del 100K times in different machines and do not allow the server in same IP, we should define DEFS = -DHASHTEST -DHASHTHREADED.

I chose the 1st option and start the following steps using single client.
1) Start up servers
fei@yu:~/Dropbox/CS550S2/p1$ ./test 9001
fei@yu:~/Dropbox/CS550S2/p2$ ./test 9002
...
fei@yu:~/Dropbox/CS550S2/p8$ ./test 9008

I deployed 8 servers, which port are from 9001 to 9008.

2) Run client
fei@yu:~/Dropbox/CS550S2/csHash$ ./test 8881

3) Edit the “servers.cfg” file in the client executable file folder, here is my configuration

servers.cfg ×

```
1 127.0.0.1:9001
2 127.0.0.1:9002
3 127.0.0.1:9003
4 127.0.0.1:9004
5 127.0.0.1:9005
6 127.0.0.1:9006
7 127.0.0.1:9007
8 127.0.0.1:9008
```

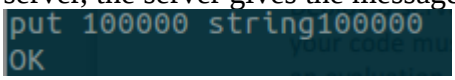
4) In client's terminal, type “conn” to read the servers.cfg and connect to 8 servers, here is the result

```
conn
connected to connectfd:4 host:127.0.0.1 port:9001
connected to connectfd:5 host:127.0.0.1 port:9002
connected to connectfd:6 host:127.0.0.1 port:9003
connected to connectfd:7 host:127.0.0.1 port:9004
connected to connectfd:8 host:127.0.0.1 port:9005
connected to connectfd:9 host:127.0.0.1 port:9006
connected to connectfd:10 host:127.0.0.1 port:9007
connected to connectfd:11 host:127.0.0.1 port:9008
```

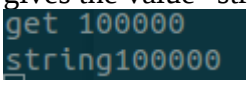
The servers shows the connection information like this

```
connected from host:127.0.0.1 port:42887
```

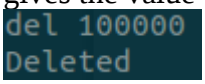
5) In client's terminal, type “put 100000 string100000” and press enter, send the put command to server, the server gives the message “OK” back.



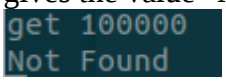
6) In client's terminal, type “get 100000 ” and press enter, send the get command to server, the server gives the value “string10000” for key 100000 back.



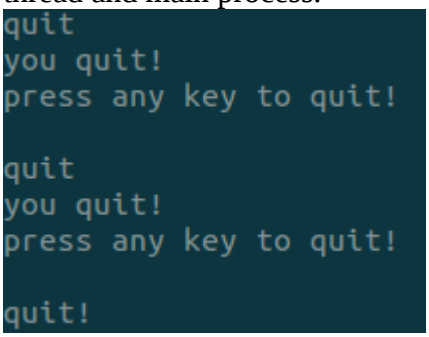
7) In client's terminal, type “del 100000 ” and press enter, send the del command to server, the server gives the value “Deleted” for key 100000 back.



8) In client's terminal, type “get 100000 ” and press enter, send the del command to server, the server gives the value “Not Found” for key 100000 back because we already deleted.



9) In client's terminal, type “quit” to exit the client's thread, then type “quit” again to exit the server thread and main process.



10) In server's console, type “quit' to exit the server thread and main process. The massage “write is wrong!” means the client already exited.