Technical Impression

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For this project, it is built upon the last one. However, it takes me some time to get it done. First, I thought I need to build a multi-thread version of project 1, so it takes me some time to refractor the code, then when I built the RMI part, I found that code is not reusable, as RMI has little to do with sockets. What I would do instead is to build the RMI directly so that would save my time building the multi-thread version of kvstore.

There are few impressions I have while I was developing and debugging my project. First, the RMI supports multi-thread by itself, while using TCP protocol for server and clients, they need to use thread to make sure things work properly. For the semaphore part, it is the job of server to handle multiple clients, when using RMI, each remote method needs to have a lock before it manipulates the shared data kv-store. Hence, we need to have a critical session for each of the method. Also, I notice that the kv-store must be shared. At first, if multiple users send put/get requests to the server, they shared different kv-store. After debugging, I found that the new kv-store was created every time the client is created, so I then add a unique kv-store to the server, so the store will be only created once.