

Our program has five classes, a Master, Client, Slave, ClientThread, and SlaveThread. The Master gets started and spawns two Client Threads and two Slave Threads. The threads connect with their corresponding Slave/Client classes. The Client can type a request of two words they would like to concatenate into a compound word. The Master then uses the load balancing algorithm to choose which slave should get the received job. The load-balancing algorithm sorts the slaves based on their total load value. Each slave starts with a total load of 0 and based on the number of letters in the words it is computing, that's the amount that totalLoad gets incremented by. The slave with the smallest TotalLoad gets the job. We attached the clientID to the end of the job to know which client should get the response. In the slave class the slave takes the two words, removes the space to make it one word and returns the result to the client that sent it the job. Since we only tried the program with 2 slaves and two clients, the slaves finished before we could even type another request in the other client, so we had to put the slave that received the first job to sleep, in order to properly load balance.

Thank you!