**<Simple File Transfer using TCP>**

**Team12**

1. **Connect**



You have to enter “connect” with IP address and port number to connect with server..



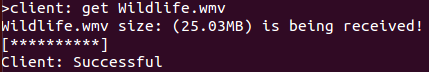
You have to enter port number, when you implement server.

1. **Put**



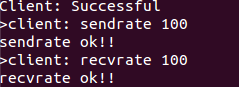
When you connect with server, you can send file to server by entering “put” and file name.

1. **Get**



When you connect to server, you can receive file from server by entering “get” and file name.

1. **Control Send rate and receive rate**



You can use keyword “sendrate” to control send rate and you can also use keyword “recvrate” to control receive rate.



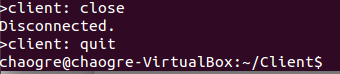
If you enter “ratecurr”, you can confirm send rate and receive rate.

1. **Credit**



You can enter “credit” and student ID to see each member’s role.

1. **Close and quit**



If you enter “close”, connection will be disconnected. You can use “quit” to finish the work.

How to get Send & recv transfer rate?

gettimeofday(&time1, NULL); // this is a start time of send 1KB

retcode = send(sockid, msg, numfread, 0);

gettimeofday(&time2, NULL); // It is end time of the send 1KB

if ((1000000 / sendrate) - abs(time2.tv\_usec - time1.tv\_usec) >= 0)

{

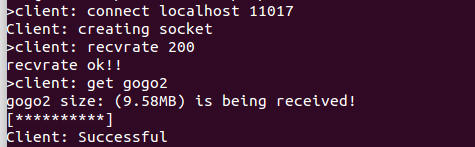
speed = ((1000000 / sendrate) - abs(time2.tv\_usec - time1.tv\_usec));

// if you divide a second by sendrate, you can calculate how much you send. And just subtract send time .

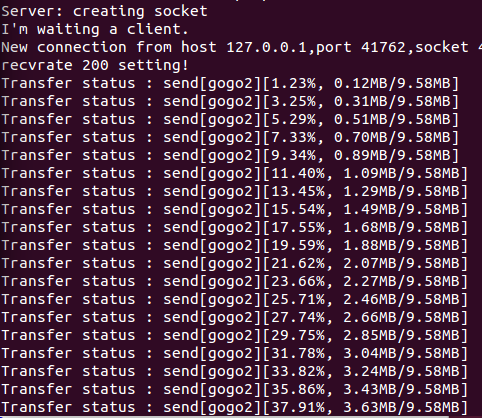
usleep(abs((speed \* 71) / 86)); // and sleep (71/86 mean overhead time)

}

If you set recvrtate 200.



You can get a these result!!



12조 역할

이경빈 : sendrate, recvrate 작성, put , get부분 tcp로 바꿈, refactoring, 프로젝트총괄

차진원 : get부분 tcp로 바꾸기, credit파트, 보고서 작성

성연진 : credit파트, udp를 tcp connection 연결