PA1 Report

For this part of the assignment, we are meant to deliver a short analysis of our program and the relationship between the time it takes to send a file and the buffer size that is given to the program. To get our data I created a 512M test file that I would use as an independent variable when changing the buffer size. The buffer size in terms of this program is basically saying how many different pieces, or packets, you want to break the file binary down into in order to send it between the server and client. In my testing, I collected 8 total data points starting from 256 bytes and doubling the buffer size each time till I got to 40768 bytes. After each test, I noticed an exponential decrease in the time it takes to send a file as I doubled the buffer size. Basically, each time I doubled the buffer size, the time it took to complete the program halved in size.

The command to make a 512M file is "truncate -s 512M BIMDC/test2.bin"

The command to test the time to send a file is "time ./client -f test2.bin -m 256"

Buffer Size (bytes)	256	512	1024	2048	5096	10192	20384	40768
Time (sec)	255	77.8	52	29	12	8	4	2.2