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PA2 report

Design:

The design of this program is basically that we create a pipe between the server side and the client side, and both server and client has the ability to read and write on the pipe. Since we only need to design the client, there is no need to explain the server side functionality. We just need to know that we write the type of data(data message, file message, and quit message) on the pipe and for file message we also need to concatenate the file name after the type of the data. The server will read and process the information on buffer, and it will write the information that is requested by the client side on the buffer. Only then the client side will retrieve the information on the buffer(pipe). As long as the request is formatted correctly the server will send back the correct data point or file on the pipe.

Timing Chart

	CSV file	Binary file	CSV file with 1000 as buffer size
File Transfer	0.061042s	0.071566s	0.017204s
Data Point Transfer	94.1536s	N/A	N/A

Explanation:

The data point transfer method takes a lot longer than file transfer because it communicated with server a lot more than the file transfer, and communication is costly between sever. Binary file takes about the same time as the CSV file. Increasing the size of the buffer will

sometime increase the run time because it decrease the frequency of communication between sever and client.