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How to compile:

First you need to open two terminal. One for **Client** and one for **server**.

A. On the client terminal put the client's ".c" files and compile with this:

→ gcc -Wall client.c -o client -pthread

→ ./client -c <columnfield> -p <portnum> -h <hostname> -d <this/that dir> -o <output path>

Flags can be any any order but make sure -d and -o flags are last 2 flags, Other flags after -o or -d will not work for some reason i can't figure out.

B. On the server terminal put the ".c" files from the server tar compile with this:

→ gcc -Wall server.c mergesort.c -o server -pthread

→ ./server -p <portnum>

OUTPUT: THE OUTPUT FILE WILL BE LISTED AS Allsorted<column name>.csv. If the -o field is given it will be present in that path otherwise in the root path

Dump Request is sent when client is done sending files to server.

Algorithm:

For this project on the server side we created socket and then after we are creating threads for each csv's. If all csv's are found it will open the file and read each line's byte and send to server and then it will send the line buffer. It call write function twice. So we sent right amount of bytes to server for each line so we don't mess things on server side. After it is done sending all the csv files to server and the client will again send a dump request letting the server know to sort the file and give back the file to client.

On the server side We created thread for each client so it will perform task parallel. It keeps listening to client's request. Everytime a client joins to a server it will print the IP address of that client In the worker thread function we actually read the line of each files and we store it in an global array. After receiving the dump request from client the program will merge sort the array and write back to the client. However the server will not end. To end the server you have to press ctrl+c to end the server connection otherwise it will keep listening to clients. If you would like you can also check the sorted file on the server directory, where the .c files are.