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CMPE 156: Lab 1 Documentation

In order to compile the program, first go to src folder which has the makefile and client.c. First

run make clean, then run make which will create an executable called client in the bin folder. In

the src folder, run ../bin/client and the following arguments to run the file client.c. In order to

use this program client.c, the user has to insert three arguments with the third argument being

optional. The first argument is the ip address of the website. The second argument is the URL

which consists of the host name, port number and the path name. The final argument determines

whether to send a GET or HEAD request. If the user enters -h, it's a HEAD request and if the user

enters nothing it is a GET request. I added error checking to make sure the user enters a valid and

correct ip address, valid host name and also whether or not the last argument was entered

correctly. I also added logic so that the user can enter the hostname only, hostname and port

number only, hostname and pathname only, hostname, port number and pathname. I account

for all these combinations. I parse through the url to find the index of the colon and slash to

determine what is the host, port and path. I also set some of these to null terminators in order

to eliminate some extra characters in the HTTP request. Once the user enters the arguments, a

file is outputted depending on the third argument. If the third argument was present with -h, the

contents would be printed on stdout and if there was no third argument present, the contents

would be printed in a file called output.dat. I also added error checking for the socket, connection

to the server reading from the socket. I used the functions write and read to request and output

to file. The shortcomings I have in my program is that when I output the contents of the request

on either stdout or output.dat, I get extra characters after the correct output. The correct

contents are displayed but extra lines

of content are also printed at the end referring to HTTP 1.0 501 Not Implemented.