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CSCI 361

Mini-Project Report

The protocol design for this particular file transfer system is simple. At any given moment the server is listening for a message that is quite short. It is this initial message sent by the client that directs the server on how to proceed in response. For instance, if the client sends a message with the “DIR” command, the server responds with a message containing the current directory as well as a second message with a list of files within that directory. Immediately afterwards, the server is listening for another command.

The above command example follows the communication rules that each command in this protocol follows. The client is the first to send a message once the user has given indication of what is desired. Then there is a few messages exchanged between the server and client. Once the tasks behind each command are complete, the server always has the responsibility of sending the last message which usually signifies “success” or “completion.”

To run the server and client, first run the server by navigating to the folder it is located in and typing “java FTPServer (port)”. The server is then waiting for connection with the client. To run the client, navigate to the folder it is located in and type “java FTPClient (host) (port)”. The client will send the appropriate connection messages to the server with a response that will ask for a username and password. Once authentication is complete a menu with a list of commands is displayed on the client side. The user chooses what command is desired, and the client sends the appropriate messages. During the execution of the client and server programs, the user is informed of what is taking place by several lines printed to the screen. As a file is being sent, the client side with print "Sending File ..." then the server side will send "File Send Successful" once the transmission is complete. Choosing the “disconnection function on the client side will notify the server and terminate the FTPClient program. The server will loop back to wait for a new connection and ultimately a new user.