

159.334 Assignment 1 2017

Cai Gwatkin 15146508

Checklist

	ITEM	DETAILS
1	Name and ID	Cai Gwatkin 15146508
2	Operating system	Windows 10
3	Compiler used	gcc 5.1.0
4	IDE used	Sublime Text 3
5	Required functionalities	FULL / FULL / FULL
6	Snap shots	YES
7	Bonus work	NO :(

Documentation

This documentation will give an overview, using pseudo code, of how the FTP program I have developed works. The server.cpp file should be set out and commented in a way that explains the entire program if further detail is required.

Pseudo code

```
check if debug mode on;
start winsock;
get address information for server;
allocate a socket for the server to listen on;
bind that socket to the server's address and port number;
get the server's address information from the socket (for debug purposes);
start listening on the socket;
while (no errors) {
    accept new client;
    while (still connected) {
        receive command from client;
        for USER {
            get user name from buffer;
            if authorised user (nhreyes) {
                flag that authorised user password required;
            }
            send confirmation to client;
        }
        for PASS {
            get password from buffer;
            if authorised user flagged {
                require authorised user password (334);
            }
            else {
                require email address as password;
            }
            send confirmation of success or failure to client;
        }
        for SYST {
            send the system type to the client;
        }
        for PORT {
            get address information of client from buffer;
            allocate socket for data transfer;
            connect socket to client;
        }
    }
}
```

```

        send confirmation of connection to client;
    }
    for LIST {
        create temp file of directory listing;
        send packets of file via socket created from PORT command;
        close data transfer socket when transfer complete;
        send confirmation of file being sent;
    }
    for RETR {
        send packets of file via socket created from PORT command;
        close data transfer socket when transfer complete;
        send confirmation of file being sent;
    }
    for STOR {
        receive packets of file via socket created from PORT command;
        close data transfer socket when transfer complete;
        send confirmation of file being received;
    }
    for QUIT {
        send disconnection message to client;
        end connection;
        break receive loop for current client;
    }
}
clean up winsock;

```

Screenshots

Please see attached files as they would not be readable in this file.