

Q530 Project 3: Remote File Transfer

Due date: 12 Dec, midnight

You are asked to use the server/client model to build a file transfer system in which files can be shared across two computers.

1. the server runs first and can accept the connection from a client. When the server receives a connection request, it needs to ask the client to enter the user id and password, and allows the client to build a connection only if the information is correct. At the server end, there is a text file called passwd.txt which contains a list of users and their passwords.
2. next, the client is allowed to enter the following commands:
 - ls – see the files in the current directory of the server.
 - cd – go to another directory.
 - cp – copy a file from the server site to the client site
 - load – upload a file from the client site to the server site.
3. When you transfer a file, either from the server to the client or vice versa, you need to segment the entire file into several blocks with size 1024, and transfer them one by one, and then assemble them back into one big file at the receiver's end.
4. There are three advanced features that you need to implement at least one of them:
 - count the transfer time and display that information to users. Also keep track and analyze the variation of traffic between the client and server.
 - Allow to copy multiple files through one command line.
 - Read a configuration file which contains a list of files that the client cannot access.