

filename: README.pdf
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OVERVIEW:

This collection of applications allows users to run a simple file transfer service across one or more of Oregon State's Linux servers (i.e. Flip). The server-side application `ftserver` listens on a Linux socket for incoming connection requests. When an `ftclient` connects, the server opens up a second connection with this client, parses and validates the incoming request and reacts accordingly. This can mean one of either two things: in case of an error or list request, this data is sent back to the client user; in the case of a valid file request, the server opens up yet another connection and transfers the file.

COMPILATION INSTRUCTIONS:

1. `gcc ftserver.c -o ftserver`

RUNNING INSTRUCTIONS – GET LIST OF FILES:

1. `./ftserver [port]`
2. `python ftclient flip[suffix] [port] -l [new port]`
e.g. `python ftclient flip3 24601 -l 24602`

RUNNING INSTRUCTIONS – TRANSFER FILE FROM SERVER:

1. `./ftserver [port]`
2. `python ftclient flip[suffix] [port] -g [filename] [new port]`
e.g. `python ftclient flip3 24601 -g README.txt 24602`

Note: files are downloaded in the client's current working directory under `../downloads/`

REFERENCES:

1. For C:
 - a. Beej's guide to networking using internet sockets
 - b. Stack overflow - e.g. [stackoverflow.com/questions/<number>](https://stackoverflow.com/questions/238603/fseek-method-for-counting-bytes-in-file):
 - x. 238603 - fseek method for counting bytes in file
 - x. 4204666 - get files in working dir
 - x. 230062 - check whether file exists
2. For python:
 - a. Tutorialspoint.com
https://www.tutorialspoint.com/python/python_networking.htm
 - b. The Python documentation
<https://docs.python.org/2/library/socket.html>
 - b. Stack overflow - e.g. [stackoverflow.com/questions/<number>](https://stackoverflow.com/questions/273192/check-whether-file-or-dir-exists):
 - x. 273192 - check whether file or dir exists
 - x. 22747152 - strip null terminators from incoming c-strings