Concurrent File Server

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1 FTP

The File Transfer Protocol (FTP) is a standard network protocol used for the transfer of computer files between a client and server on a computer network.

FTP is built on a client-server model architecture and uses separate control and data connections between the client and the server.[1] FTP users may authenticate themselves with a clear-text sign-in protocol, normally in the form of a username and password, but can connect anonymously if the server is configured to allow it.

2 Server

```
import socket
import sys
import os

sock = socket.socket(socket.AF_INET,socket.SOCK_STREAM)
sock.bind(('127.0.0.1',3004))
sock.listen(1)

while True:
        connection,client = sock.accept()
        try:
                while True:
                        fileName = connection.recv(16)

                        if fileName:
                                #If File exists
                                if(os.path.exists(fileName)):
                                        connection.sendall("1")
                                        oper = connection.recv(5)
                                        if(oper == "get"):
                                                content = ""
                                                with open(fileName,'r') as f:
```

```
                                                content = f.read()
                                        connection.sendall(content)
                                else:
                                        #Send PID. (It's in the question :P)
                                        connection.sendall(str(client[1]))
                                        oper = connection.recv(5)
                                        if(oper == "put"):
                                                buff = connection.recv(300)
                                                print(buff)
                                                f = open(fileName,"a+")
                                                f.write(buff)
                                                f.close()
                                                connection.sendall("1")
                        else:
                                print("No Requests From Client")
                                break
        finally:
                connection.close()
```

3 Client

```
import socket
import sys

sock = socket.socket(socket.AF_INET,socket.SOCK_STREAM)
sock.connect(('127.0.0.1',3004))

while True:
        try:
                print("\nEnter FileName To Open At Server: ")
                fileName = raw_input()
                sock.sendall(fileName)
                res = sock.recv(5)
                if(res == '1'):
                        print("\n1. Open File")
                        n = input()
                        if(n == 1):
                                sock.sendall("get")
                                fileData = sock.recv(100)
                                print(fileName+"\n==================")
                                print(fileData)
                        else:
                                buff = sock.recv(20)
                                print(buff)
                else:
```

```
                print("File NOT FOUND "+str(res))
                print("\n2. Send a File")
                n = input()
                if(n == 2):
                        sock.sendall("put")
                        content = ""
                        with open(fileName,'r') as f:
                                content = f.read()
                        sock.sendall(content)
                        resp = sock.recv(1)
                        print("Successfully Tranferred File")
                else:
                        continue
finally:
        pass
```