Server port: 5021 **Quit scenario** File Transfer port: 5020 Server Client Client post = random · Client enters 'quit' 'q' Client program sends a 'q' Breaks out of the while command loop 'q' Closes Connection Prints out SUCCESS Print "FINISHED" **Initial Connection:** Server Client Connects to the server accepts connection a' (server sends ACK) Sends ACK back 'a' (client sends ACK) · Start listening to commands from client Shows 'ftp>' to client program Prints out SUCCESS CONNECTION Is command scenario Server Client Client types "Is" " sends 'l' makes a new socket waits for 'o' (control ch) sends 'o' to let client connect [Packet] Client connects then connects Send information [Packet] Prints out packet 'a' send ACK 'a' Close connection · Print out SUCCESS **PUT scenario** [Packet] = [ data length (10 bytes) | data ] Client writes "put" Server Client makes a new socket Client program sends 'p' sends 'o' to let client connect Client waits for 'o' then (control channel) 'p' **Detects connection** Client connects to socket 5020 from client to socket 'a' sends ACK Open file and save file name, file length, and data [Packet] Send packet Opens [packet] reads the file name, size, and contents

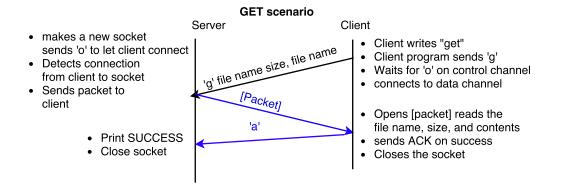
closes socket

[Packet] = [ file name size (10 bytes) | file name | file size (10 bytes) | data ]

'a'

sends ACK prints SUCCESS

Closes the socket if file could not be read: Prints FAILURE



### **Error Checking:**

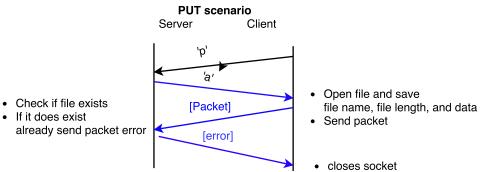
### If file does not exist on client side

# **PUT** scenario

Client Server

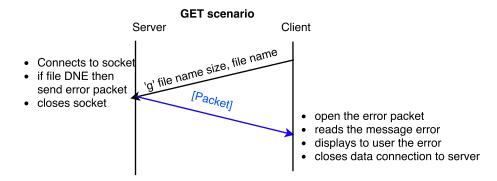
- Client will check is file exists
- Client will output "file does not exist " to client
- return to 'ftp>' on screen and wait for next command

### If file already exists on server



[Packet] = [e | msgsize (10 bytes) | error message]

## If file does not exists on server side



[Packet] = [ e | msgsize (10 bytes) | error message ]