**Client Pseudocode**

## Connect to Server

Create TCP socket with given host name and port 7005

Attempt to connect to server

If connection fails

Print error message

Exit

Else

Create TCP socket

Bind socket to first available interface

Listen for server connection on port 7006

Accept connection

## Wait for Command

Prompt user to enter command

Wait for line from stdin

Call Parse Command with line

If Parse Command succeeds

If command is SEND

Call Client.Send with command arguments

If command is GET

Call Client.Get with command arguments

If command is EXIT

Exit application

Else

Display Command Syntax

## Parse Command

Separate line by spaces

If the separated line has less than two parts

Return false

Else

If the first word in line is SEND

Command is SEND

Command argument is the rest of the line

Else If the first word in line is GET

Command is GET

Command argument is the rest of the line

Else

Return false (invalid command)

## Display Command Syntax

Display "Command format: SEND|GET [filename]"

## Send GET Packet

Strip the file name from the requested file

Open a file with the given file name

Create a GET packet with the file name

Send the GET packet over the control socket

If sending failed

Print Error Message

Else

Receive Server Response

## Receive Server Response

Wait for a packet number to arrive

If the packet number is SEND

Read the SEND packet from the socket

Receive File with the file size in the SEND packet

Else if the packet number is ERROR

Print Error Message

## Receive File

Calculate the number of 1KB chunks to receive using the file size

While there are still chunks to receive

Receive 1KB chunk on the data socket

If receiving failed

Print Error Message

Return

Write 1KB chunk to file

If writing fails

Print Error Message

Continue receiving (otherwise we’ll read stale data later)

## Validate File Name

Check that the file exists

Check that the file isn’t a directory

If either of these is false

Print Error Message

## Send SEND Packet

Strip the file name from the file

Open the file for reading

Create a SEND packet with the file name and file size

Send the SEND packet over the control socket

If sending fails

Print Error Message

Else

Send File

## Send File

Calculate the number of 1KB chunks to send using the file size

While there are chunks to send

Read a 1KB chunk from the file

If reading failed

Print Error Message

Return

Send 1KB chunk

If sending failed

Print Error Message

Return

## Print Error Message

Print given string to stderr

Return