**Pseudocode**

**Server**

Server Start:

Initialize Variables

Bind to a Port

Call Listen to Listen for connections

Listen:

Listen for up to 5 connection requests

Loop:

Accept a connection

Call Create Connection

Read from the client

Read Client:

Loop:

Read data from client

If data is SEND [filename] [length of file]

Create Connection

If file already exists

Open file

Else create new file

While data is less than length

Read data from create socket

Write data to file

Close file

Close socket

If data is GET [filename]

Get length of file

Send client the file length

If the data is START

Create Connection

Open the file

Send the file to the client

If data is CLOSE

Close the connection

If data is EXIT and there is only one connection

Close the connection

Close the server

Create Connection:

Initialize Variables

Create a Socket

Bind to Port

Connect to client

**Client**

Client Start:

Create Process for Server (Client)

Initialize Variables

Create the Socket

Bind to Port

Connect to Server (Server)

Get user input

If input is GET [filename]

Send GET [filename] to the server

Wait for the file length from the server

Start the client server

If input is SEND [filename]

Get the file length

Tell Server (client) it’s SEND [filename] [filelength]

Start the client server

If input is CLOSE

Send CLOSE to server(server)

Close server(client)

End Program

If input is EXIT

Send EXIT to server(server)

Close server(client)

End Program

Create Server:

Initialize Variables

Create a Socket

Bind to a Port

Call Listen to Listen for connections

Listen:

Listen for up to 5 connection requests

Loop:

Accept a connection

If GET

While it’s not the length

Receive the file

Close connection

If SEND

Open File

Send File

Close File

State Diagrams

Client



Server



Protocol