### Client Server Protocol

#### Client

- Establishes control connection with server
- Initializes client to ready
- Accepts server input
- Closes control connection

### **Sending Data:**

- Establishes data flow connection with the server
- Sends the message size so that the proper buffer size is used
  - Sends until all of the data has been sent
- Sends the message
  - Sends the message until all of the data has been sent
- Closes the sending socket after all of the data has been sent

### Receiving Data:

- Establishes listening socket with server
- Receives size of message and establishes a buffer size based on the size
- Receives data
- Sends amount of data sent
- Closes the listening socket

### Server

- Establishes control connection with the client
- Initializes server to ready
- Accepts client input
- Closes control connection

### **Sending Data:**

- Establishes data flow connection with the client
- Sends the message size so that the proper buffer size is used
  - Sends until all of the data has been sent
- Sends the message
  - Sends the message until all of the data has been sent
- Closes the sending socket after all of the data has been sent

# Receiving Data:

- Establishes listening socket
- Receives the size of the message and establishes a buffer based on the message size
- Receives data
- Sends the total amount of data sent
- Closes the listening socket after all of the data has been sent

# File Transfer module

- Used as a middleman to send files back and forth
- Uses same protocol as the client/server in which proper buffer sizes are established
- Sends data until all data has been sent
- Uses transfer socket to send data
- Invoked when sending and receiving files