

Main

- set mode to client

Start button callback

- get port

- get protocol

- if client mode

 - get host

 - get incoming file source

 - get packet size

 - get packet count

 - create ClientNetworkAdapter and assign it to global

 - ClientNetworkAdapter.Run()

- else if server mode

 - create ServerNetworkAdapter and assign it to global

 - ServerNetworkAdapter.Run()

ClientNetworkAdapter

- init

 - initialize winsock

 - create host structure

 - initialize socket based on protocol type

 - assign host to socket

 - if protocol is tcp

 - connect to socket

 - open file to prepare for sending

Run

- allocate buffer for packet size

- if a file was specified

 - sendFile()

- else

 - sendPackets()

sendFile

- while file still has new data to read

 - send packetSize packet

 - if error

 - grab error and alert about it

sendPackets

- if tcp

 - for packetCount times

 - tcp send packetSize packet with given string inside

 - if error

```
        grab error and alert about it
    if udp
        for packetCount times
            udp send packetSize packet with given string inside
            if error
                grab error and alert about it
```

ServerNetworkAdapter

```
init
    initialize winsock
    create host structure
    initialize socket based on protocol type
```

Run

```
    set packetReceiveCounter to 0
    set dataReceivedTotal to 0
```

```
    bind the socket
```

```
    if tcp
        listenTCP
    if udp
        listenUDP
```

listenTCP

```
    listen for a connection
```

```
    while the thread is running
        if a new connection is accepted and there is no error
```

```
            while there is more data to read from the stream
                read the stream
                write it to file
                dataReceivedTotal += amount of data that was received
```

listenUDP

```
    while the thread is running
        listen for packets
        if a packet was successfully read
            write it to file
            packetReceiveCounter++
            dataReceivedTotal += amount of data that was received
        else
            grab error and alert about it
```