

Window Setup

Open new window and register the window

Setup menu with “tcp/udp”, “client/server”, “packet size”, “port number”, “ip”, “send count”, “select file”, “connect” options

Set default selected values for “tcp/udp”, “client/server”, “packet size”, “port number”, “send count”,

Listen for User Options

Listen for user to select menu option

If user selects “tcp” or “udp”

Set the communication protocol to user selection

If user selects “client” or “server”

Set the communication side to the user selection

If user selects “packet size”

Set the packet size to the user selection

If user selects “port number”

Set the port number to the user selection

If user selects “ip”

Open dialogue box

Set the ip address to the user input

If user selects “send count”

Set the send count to the user selection

If user selects “select file”

Open file dialog box

Set the file path to the user selection

If user selects “connect” options

Go to ***Open Socket***

Open Socket

If protocol is "tcp"

 Attempt to open socket for streaming

 If socket failed

 Record error

 Exit program

 If socket opened successfully

 If selected side is "server"

 Go to ***Open file for reading***

 If selected side is "client"

 Go to ***Open file for writing***

If protocol is "udp"

 Attempt to open socket for datagrams

 If socket failed

 Record error

 Exit program

 If socket opened successfully

 If selected side is "server"

 Go to ***Open file for reading***

 If selected side is "client"

 Go to ***Open file for writing***

Open file for writing

Attempt to open file with selected path for writing

If open file is unsuccessful

 Print error message

 Go to ***Listen for User Options***

If open file is successful

 If protocol is "tcp"

 Go to ***Connect to Server***

 If protocol is "udp"

 Go to ***Bind Socket***

Open file for reading

Attempt to open file with selected path for reading

If open file is unsuccessful

 Print error message

 Go to ***Listen for User Options***

If open file is successful

 If protocol is "tcp"

 Go to ***Bind Socket and Listen***

 If protocol is "udp"

 Go to ***Bind Socket***

Bind Socket

Attempt to bind socket to selected ip address and port number

If bind is unsuccessful

Print error message

Go to ***Listen for User Options***

If bind is successful

Set network events for bound socket to prompt windows notification

If selected side is "client"

Go to ***Listen for Read Event***

If selected side is "server"

Go to ***Wait for Write Event***

Bind Socket and Listen

Attempt to bind socket to selected ip address and port number

If bind is unsuccessful

Print error message

Go to ***Listen for User Options***

If bind is successful

Attempt to listen bound socket

If listen is unsuccessful

Print error message

Go to ***Listen for User Options***

If listen is successful

Set network events for bound socket to prompt windows notification

Go to ***Wait for Write Event***

Connect to Server

Attempt to connect socket to selected ip address and port number

If connect is unsuccessful

Print error message

Go to ***Listen for User Options***

If connect is successful

Set network events for bound socket to prompt windows notification

Go to ***Wait for Write Event***

Wait for Write Event

If a write event is received

Go to ***Send Data***

Send Data

Iterate through file
While not at the end of file
 Read packet size amount of data
 Send data through socket
If end of file is reached
 Send special end code through socket
 Go to Cleanup Session

Listen for Read Event

If a read event is received
 Go to ***Read Data and Write to File***

Read Data and Write to File

Read data from socket
If data received equals special end code
 Go to Cleanup Session
If data received does not equal special end code
 Write data to file
 Go to ***Listen for Read Event***

Cleanup Session

Close opened file
Close bound socket
Go to ***Listen for User Options***