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# **Global defined structs**



# **Client Pseudocode**

### **Determine Server Type**

Waits for windows messages received from **WNDPROC**

Check the message and see if TCP radio button is selected

If it is

Close winsock session if its already opened

transition to **Initialize TCP**

Else

Close winsock session if its already opened

Transition to **Initialize UDP**

### **Initialize TCP**

Start a WINSOCK session

Create a TCP socket for sending packet streams

Initialize the server address structure

* Get IP input from GUI
* Get Port number input from GUI
* Set sin\_familiy to AF\_INET
* Set IP address and port number

Transition to **Connect**

### **Connect**

Call WSAConnect by passing in the server address and port number

If succeeded, create a thread to send packets to server

Transition to **Send Thread**

### **Initialize UDP**

Start a WINSOCK session

Create a UDP socket for sending datagrams

Initialize the server address structure

* Get IP input from GUI
* Get Port number input from GUI
* Set sin\_familiy to AF\_INET
* Set IP address and port number

Bind the server address to the socket

Create a thread to send packets to server

Transition to **Send Thread**

### **Send Thread**

Retrieve packet size from GUI

Retrieve send times from GUI

Allocate memory space for SOCKET\_INFORMATION structure

Check if we’re sending a file

Send an initial control message with the format of “Packetsize.sendtimes”

If so

Transition to **Read from File**

Else

Transition to **Create Dummy**

### **Read from file**

Open the file name specified by the GUI

While the file has not reached EOF

Read packet size buffer into a buf

Store the buf into the SOCKET\_INFORMATION struct

Transition to **Send**

Clear the buf

Send a last packet with null characters to indicate EOT

Wait until server has done processing data

Close the socket

Exit

### **Create Dummy**

Create a dummy packet of size packet size

Store the dummy packet into the SOCKET\_INFORMATION struct

While I is less than send times

Transition to **Send**

Send a last packet with null characters to indicate EOT

Wait until server has done processing data

Close the socket

Exit

### **Send**

If we’re using TCP

Call WSASend

If we’re using UDP

Call WSASendTo, with the server address structure specified