**Pseudo code**

**General**

**Initialize Program** Create GUI elements  
 Start Winsock  
 Disable Server Specific Elements  
 Load last used playlist

**Wait for user Input** if Server button pressed  
 Go to Server  
 if Media button pressed  
 Go to Playback  
 if Client button pressed  
 Go to Client  
 if Exit button pressed  
 WSACleanup  
 Exit Program

**Server***See Server Pseudo code*

**Client***See Client Pseudo code*

**Playback***See Playback Pseudo code*

**Server**

**Wait for User Input** Broadcast button pressed  
 if (broadcasting)   
 unset broadcasting flag  
 else   
 Start Thread with function: Connect to Multicast group

**Connect to Multicast group**  
 Create UDP socket  
 Set broadcast option  
 Fill in Address structure for broadcast  
 Go to Check for enough data to send

**Check for enough data to send** if (file open)  
 if end of file  
 close file  
 go to Broadcast data  
 else   
 go to Check if broadcasting

**Check if broadcasting** if (broadcasting)  
 go to Check for enough data to send  
 else  
 Terminate Thread

**Broadcast data** send udp packet(s) out  
 go to Check if Broadcasting

**Listen Socket** Create a TCP Socket  
 Bind address  
 Set socket to Listen mode  
 go to Accept Socket

**Accept Socket** while servermode  
 perform asynchronous accept call  
 Start new thread with function Wait for Request

**Wait for request** if client requesting list  
 go to Prepare File list for Sending  
 if client requesting file  
 go to Transfer File

**Prepare file list for sending** search for compatible files in current directory  
 add file names to list  
 go to Send List

**Send List** Send list of file names   
 Close Client Socket, Terminate Thread

**Transfer File** Open requested file  
Send requested file  
 Close file  
 Close Client Socket, Terminate Thread

**Client**

**Wait for User Input** if exit button pressed  
 End client mode, Exit application  
 if Listen to broadcast  
 go to Connect to multicast channel  
 if Initiate microphone conversation  
 go to Connect to Server  
 if Listen to playlist  
 go to Play Music

**Connect to Multicast Channel** if failed to connect  
 go to Wait for User Input

**Receive Data**

**Process Data**

**Connect to Server**

**Send control message**

**Wait for confirmation message**

**Create UDP socket**

**Receive Data**

**Send Data**

**Play Music**

**Send control message**

**Wait for list**

**Display media list**

**Wait for Data**

**Process Data**

**Playback**

**asdfgh**