**MP3 DESIGN DOCUMENT**

* **Server:**
* A struct called ChatRoom will hold the following information about the chat room: name, number of members, fd\_sets, port number, and the socket (slave) descriptor.
* A vector of pointers to ChatRooms will keep track of the available chat rooms.

1. Create a chat room: CREATE <name> Generate different ports for each new chat room created. Create a thread to handle the new chatroom.
2. Join a chat room: JOIN <name> Checks if there is a chat room with the requested name in the vector. If there is, return the port number of that chat room and the number of members.
3. Delete a chat room: DELETE <name> Checks if there is a chat room with the requested name in the vector. If there is, it sends a message to all the clients in present in the room and closes the slave descriptor and all the client descriptors.
4. Wrong option: send error to client.

* Thread that handles the new chat room should be able to monitor the different socket descriptors of the clients for reads and writes. It should also handle connections closed by the clients.
* **Client:**

1. Create chatroom: pick from the menu and provide chatroom name. close connection
2. Join chatroom: pick from list and enter chatroom
3. Delete chatroom: delete from list of chatroom. Close connection

* **How to compile**

Using linux.cs.tamu.edu

Server:

g++ crsd.cpp –o crsd –lpthread

Client:

???????

* **How to run**