**PSEUDO CODE FOR CHAT APPLICATION USING SOCKETS AND MULTITHREADING**

**SERVER SIDE**

1.Login as User

Enter the IP Address of the Server in Client Side

2. Create Structure called Client

Struct Client

{

Int valid ;

Int fd\_id;

Int socket;

Char name;

}

3. Send Function is created to Send the Data

Void Send message (void \*data)

Send message

Wait until New message received

If Message queue is not full send message

If (len < 0)

{

Print ”message”

}

4. Get Messages from the Client and Push in to queue

Void Receive message(void data)

If (message\_len == 0)

{

Print “ name”;

}

5. For loop is created to send the message to every client.

If (client\_num < max\_client\_num)

{

Print “message will be send to all clients”;

}

6. Chat with Each Client

If client enters the IP and Connect to the Server

Print “ Welcome to join the chat room”

Print “Online User number”

7. For Loop Created to send the messages to other users who are connected to the server.

8. In Main Function

Int main()

{

Create a Server Socket

Get Server Port and Bind with Client

Listen to the Client.

Print “ Server Start Successfully”

Print “You can join to the chatroom by connecting to the Server IP with respect to Server PORT”

Print “Enter Server PORT”

9. Waiting for the New Client to Join in

While {

Create a new connect

Print “New Client Joined”

}

10. Check Whether the Chat Room is Full or Not

If(current\_Client\_num < max)

{

Print ”Send”

}

Else

{

Print “Error”

}

11. Socket Close

Print “ Connection Ended”

**CLIENT SIDE**

1)Receive message and print the message

2)Int main()

{

Creation of socket to connect with server

Print “socket created successfully”

3) Get IP address and port of the server and connect

While()

{

Print “please enter IP address of server”

Print “please enter Port number of server”

4) connect to server

If (connect(client\_sock, (struct sockaddr\*) &addr,sizeof(addr))

{

Print “ connected successfully”

Continue;

}

break;

}

5) checking the status of server

If (recv(client\_sock,state,sizeof(state),0)<0)

{

Prinf “received successfully”

}

6) if(strcmp(state, OK))

{

Print “chatroom is full”

}

Else

{

Print “connect successfully”

}

7) Get client name

Print “welcome to use Multi-person chat room”

While()

{

Print “enter your name”

If no input is given then

Print “you need to input atleast one word”

Continue;

}

Else if(name\_length= =0)

{

Print “ you need to input atleast one word”

}

If (name\_length > NAME\_LENGTH -2)

{

Print “Reached upper limit of the words”

Continue;

}

Break;

}

8) Creation of new thread to handle receive message

Pthread\_t recv\_thread;

9) To get message and send

While()

{

Print “enter message”

If no input is given then

Print “you need to input atleast one word”

Continue;

}

Else if(n= =0)

{

reset

}

If (n> BUFFER\_LENGTH -2)

{

Print “Reached upper limit of the words”

Continue;

}

Break;

}

10) Shudown client socket.