Exercise 3: Multiuser Chat Using UDP

AIM:

Develop a chat application between a client and server using UDP. Update the program to support multiple clients (using fd_set() and select() functions of C.)

ALGORITHM

SERVER

1. Create a UDP socket using socket() system call.
2. Bind() is used to bind the socket with a specified address defined by sockaddr_in pointer, with the address, family, port set accordingly, bzero() is used to clear the address pointer initially.
3. Initialize a descriptor set for select and calculate a maximum of 3 descriptor for which server will wait
4. Call select and get the ready descriptor (UDP)
5. Handle new connection and receive the data gram

   CLIENT(S)

1. Create a UDP socket using socket() system call.
2. Send message to server
3. Wait until response from server is received.
4. Close socket descriptor and exit.

Sample Input Output:

Client Side
Client1:   "hi this is from ssn.

           ------------------"

Message from Server: "hi this is from ssn.

           ------------------"

Server Side
Message from Client1:   "hi this is from ssn.

        ------------------"

Message sent: "hi this is from ssn.

        ------------------"

Client2:   "hi this is from ssn.

        ------------------"

Message from Server: "hi this is from ssn.

        ------------------"
Server Side
Message from Client2:   "hi this is from ssn.

        ------------------"

Message sent: "hi this is from ssn.