

Assignment - 04

# Title : Peer to Peer chat & multicasting  
With UDP.

# Problem : Write a program using TCP socket  
Statement for wired to implement  
(a) Peer to peer chat  
(b) Multicast chat.

Demonstrate packets captured traces using  
Wireshark packet analyzer tool.

# Objectives : ① To learn & understand UDP  
② To implement P2P &  
multicasting.

# Outcomes : Students will be able to  
1) Understand the concept of UDP.  
2) Learn & Implement P2P &  
multicasting.

# H/W & S/W : i5 processor, Wireshark  
Requirements packet analyzer, Java  
eclipse, windows 10.

## # Theory

→ It is an internal endpoint for sending  
& receiving data at a single node in  
a computer network.

2, It is a representation of this endpoint in networking software.

# P2P → Peer to peer chat

In P2P, a node can be a server or client depending on whether it is sending or receiving data.

Advantages →

- ① Low cost
- ② Good Availability

Disadvantages →

- ① Single point of failure.
- ② Resource consumption greater on server side in infrastructure cost.

# Multicasting / Multicast - chat

- ① Many users can chat simultaneously
- ② Message can be send & sent.
- ③ users have different privileges.
- ④ User numbers can be restricted.

## Test Cases

### Input

### Result

#### ① P2P

Client : hey there

Server : Hi, I'm available

Client : Sure

Successful

#### ② Multi casting

Client 1 : Hello

Client 2

[by client 1] Hello.

Hello.

Client 3.

[by client 1] Hello

[by client 2] Hello

Successful

#### # Conclusion

I learnt & implemented peer to peer chat & multi casting concept and developed chat app.