

COMPUTER CODING CLUB
MOTILAL NEHRU NATIONAL INSTITUTE OF TECHNOLOGY, PRAYAGRAJ

SOFTABLITZ

Socket Programming



Agenda for today

Client-Server Architecture

What is a socket

TCP vs UDP

Types of socket

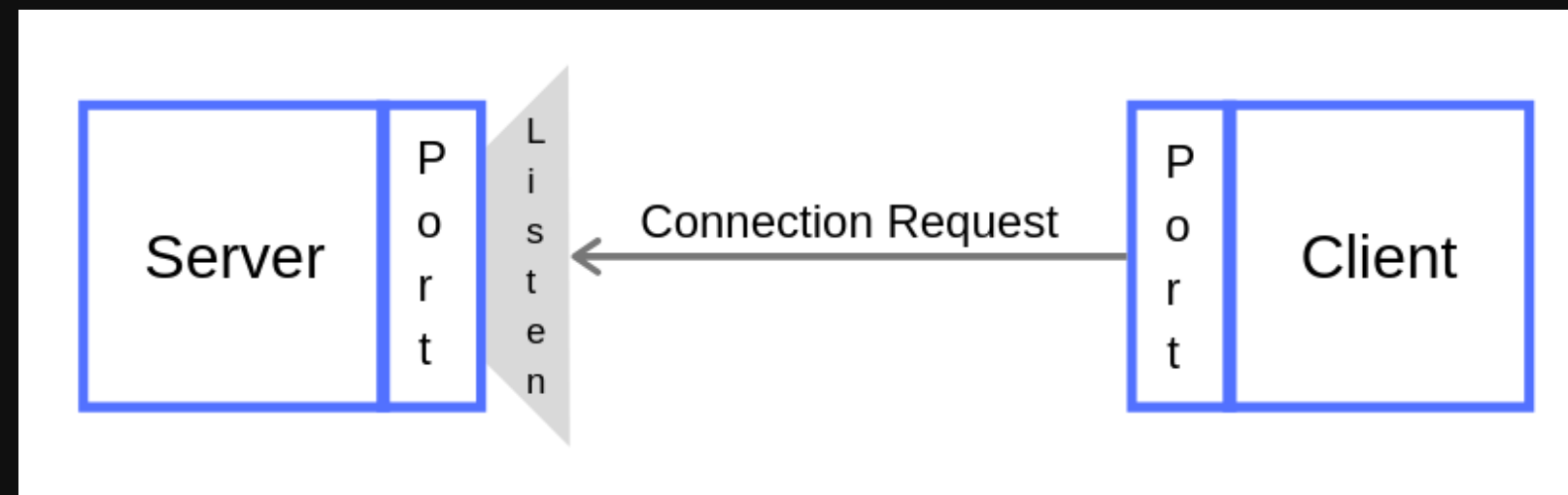
Socket Programming

Client-Server Architecture

In the client-server architecture, the client computer sends a request for data, the server accepts it and deliver the data packets requested back to the client.

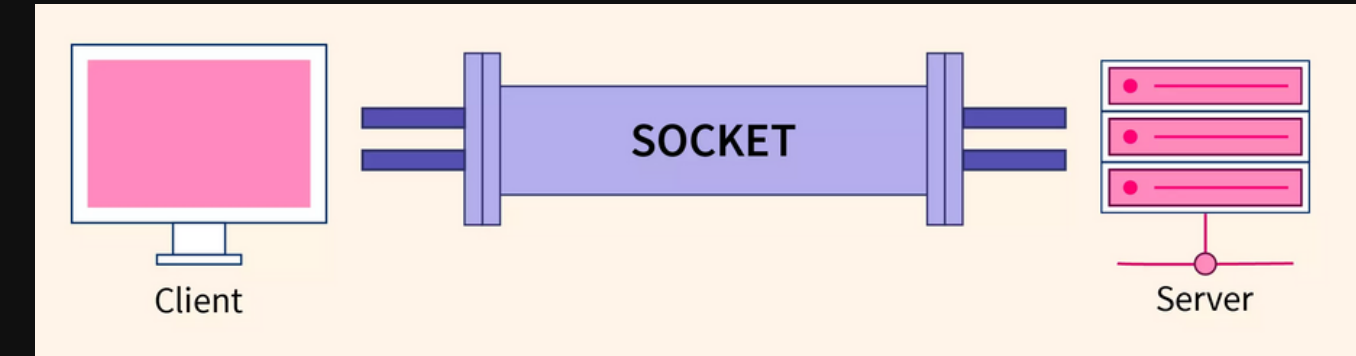
Client: It is the active entity, one that generated this request to connect to a particular port number on a particular server.

Server: It is a passive entity, one that listens for request from the clients. Service provider.

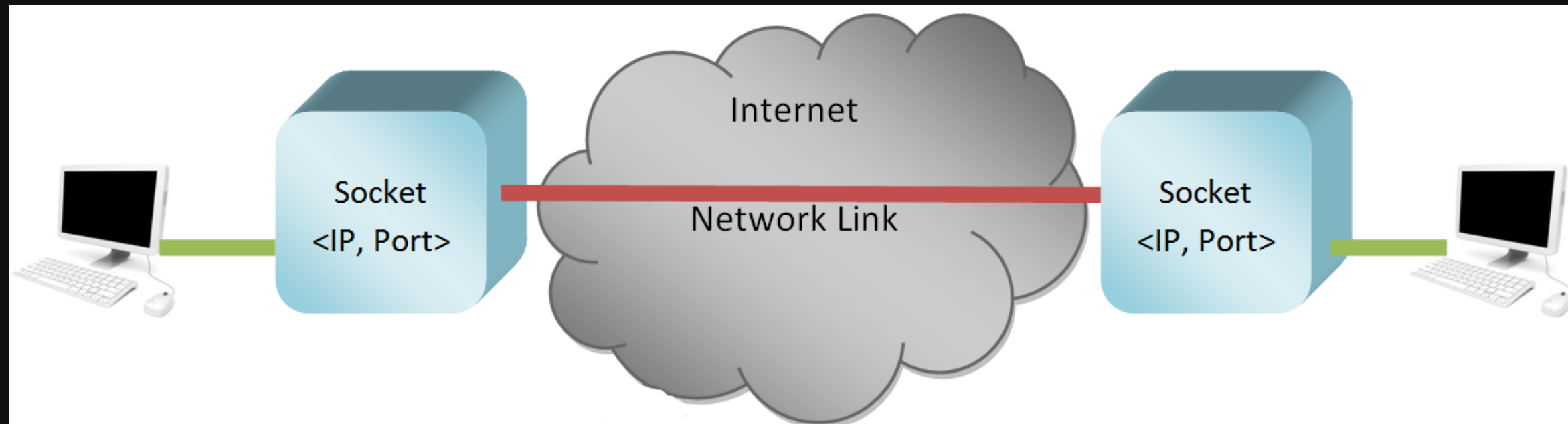




What is a Socket?



- Socket is an abstraction of the type of physical socket.
- A physical socket is an entry point for a power cable.
- A software socket is also an entry point, but instead of accepting a power cable, it accepts a network connection from another computer.
- Socket is simply the combination of an IP address and a port.



- Let A and B be two persons in a room. If A has to talk to B, then

he would call out the name of B



if B is listening then he would respond.

- Let A and B be two systems; A wants to connect to B. But how?

A will have to send request to B. But Does A know B?



So get the IP ADDR of B and also the port.
But Is B ready for connection?



Make B ready for connection.



B will have to accept and, you are ready to go.

TCP vs UDP

***TCP**



would you like to see
a TCP/IP meme?



Yes i would like to see
a TCP/IP meme



Ok, here is the meme
did you recieve it?



Yes, i recieved the meme

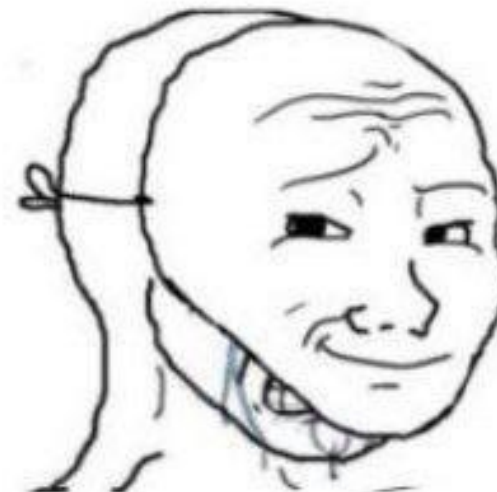


Excellent, TCP/IP meme is over.



nice

***UDP**



Here is your data:

01100100 01010001 01110111 00110100 01110111 00111001 01010111 01100111 01011000 01100011 01010001



No, pls wait... let me..just..

Types of Socket

Stream Socket

- Uses TCP
- Connection oriented
- Reliable
- Applications: telnet, http

Datagram Socket

- Uses UDP
- Connectionless
- Not reliable
- Applications: audio/video stream