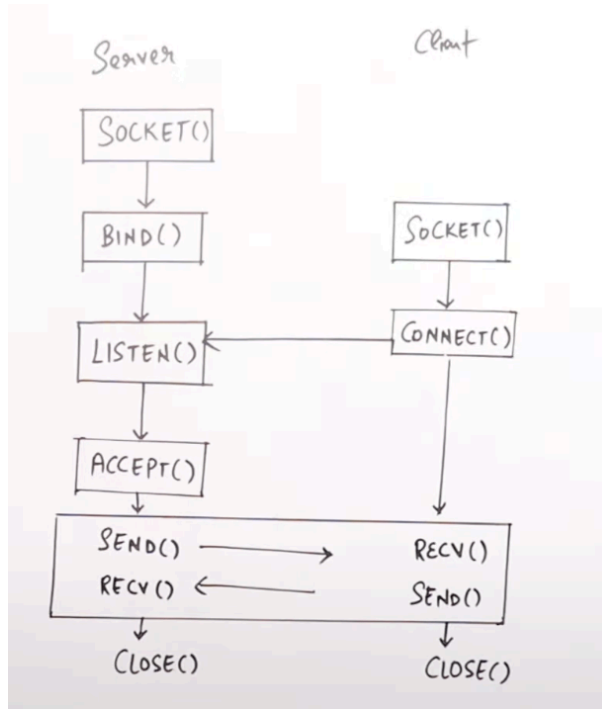


SOCKET PROGRAMMING

IT IS A WAY THAT How applications will be communicating with each other over the internet
Socket means node or end-point or machine

In short we can say that data will be generated by some application in application layer and it will be sent to the application layer of other node , so actually the socket is an endpoint

The Flowchart of the server->



Socket is the first system call and its purpose is to activate the endpoint .
There are three parameters in the socket

1. First parameter here is domain
2. Second parameter is type
3. Third parameter is Protocol

1) Domain

In Domain we tell either we are using IPv4 or IPv6 network

2)Type

In type we tell weather we're using the stream service. Means, either we are using TCP or UDP.

If we are using TCP then we mention it as sock_stream.

If we are using UDP(datagram service) then it is known as sock_dgram

3) Protocol

Identifies the type of protocol used within the domain and type. Typically it is 0.

For ex if we see this as a real life example, . suppose i have two telephones here . so these are you end points, means this one telephone and that other telephone .

1) so you can say that socket means you have to install the telephones first.

Now communication won't start now.

So when will Communication start”?

2)Binding is the next in the case of server. Binding means associating the address. So if you talk by telephone point of view then associating the telephone number. You have just brought the box . you haven't associated number to it. Now we'll associate telephone number . in the flow char we can refer that the as the address of the server. Which address? The socket address

Socket Address?

It is a combination of IP address+port number

In IPv4

It has 32 bit address, that is a logical address+ port number of 16 bit. So we can say that you are assigning 48 bit socket address

3) Now listen means , number is given, now the server is waiting in passive mode means whn client/phone will be received like you can say if this is my server , so you gave address at the server, after giving address the ring that comes when the receiver picks the call. Ring comes continuously that one but there no call received yet, so the server is waiting here through listen command.

In this command the important thing is backlog. Backlog is a queue and we mention the length of queue in that queue and we put the request from multiple clients, we'll put all that pending requests in the queue and when it comes in the queue and the queue is filled completely, then we will send a message to the client that our queue is full, the connection can not be made now , please try after sometime.

4)Connect means dialing the number.You have picked up the receiver and started to dial the number that is what a connect system call is . so in connect we will give the socket number of the server. Its ip address and its port number

5)And when we will accept 1-2 request from the queue . accept means now i will pick up the call.

Means when i am waiting for the call that is listen and when the call comes and i picked up the receiver and started to talk. So this is the main story here the communication is build here

6) send mens speak and receiver means listen the talk

7) when communication is complete then we will close it means we will hang up the call