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ASSIGNMENT- 6

AIM : SOCKET PROGRAMMING

PROBLEM STATEMENT : SOCKET PROGRAMMING IN C/C++ FOR TCP CLIENT, TCP SERVER , UDP CLIENT, UDP SERVER.

THEORY:

- SOCKETS :
  - Used for IPC.
  - Most of the IPC follow client - server
  - Server & client exchange messages over N/w through a common socket API.
  - Socket is basically an interface b/w application & N/w which is used for communication b/w processes.

- TYPES OF SOCKETS:
  2 essential types of sockets are:

i. SOCK_STREAM :
- TCP
- connection - oriented
- reliable - delivery
- in - order guaranteed
- bidirectional

ii. SOCK_DGRAM :
- UDP

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- Unreliable delivery
- Can send or recieve

- SOCKET PRIMITIVES :

i. SOCKET :
Create a new communication end point.

ii. BIND :
Attach a local address to a socket

iii. LISTEN :
Announce willingness to accept connections.
Give queue size.

iv. ACCEPT :
Block calles until a connection attempt arrives

v. CONNECT :
Actively attempt to establish connection.

vi. SEND :
Send some data over the connection

vii. RECEIVE :
Recieve some data from the connection.

viii. CLOSE :
Release the connection.

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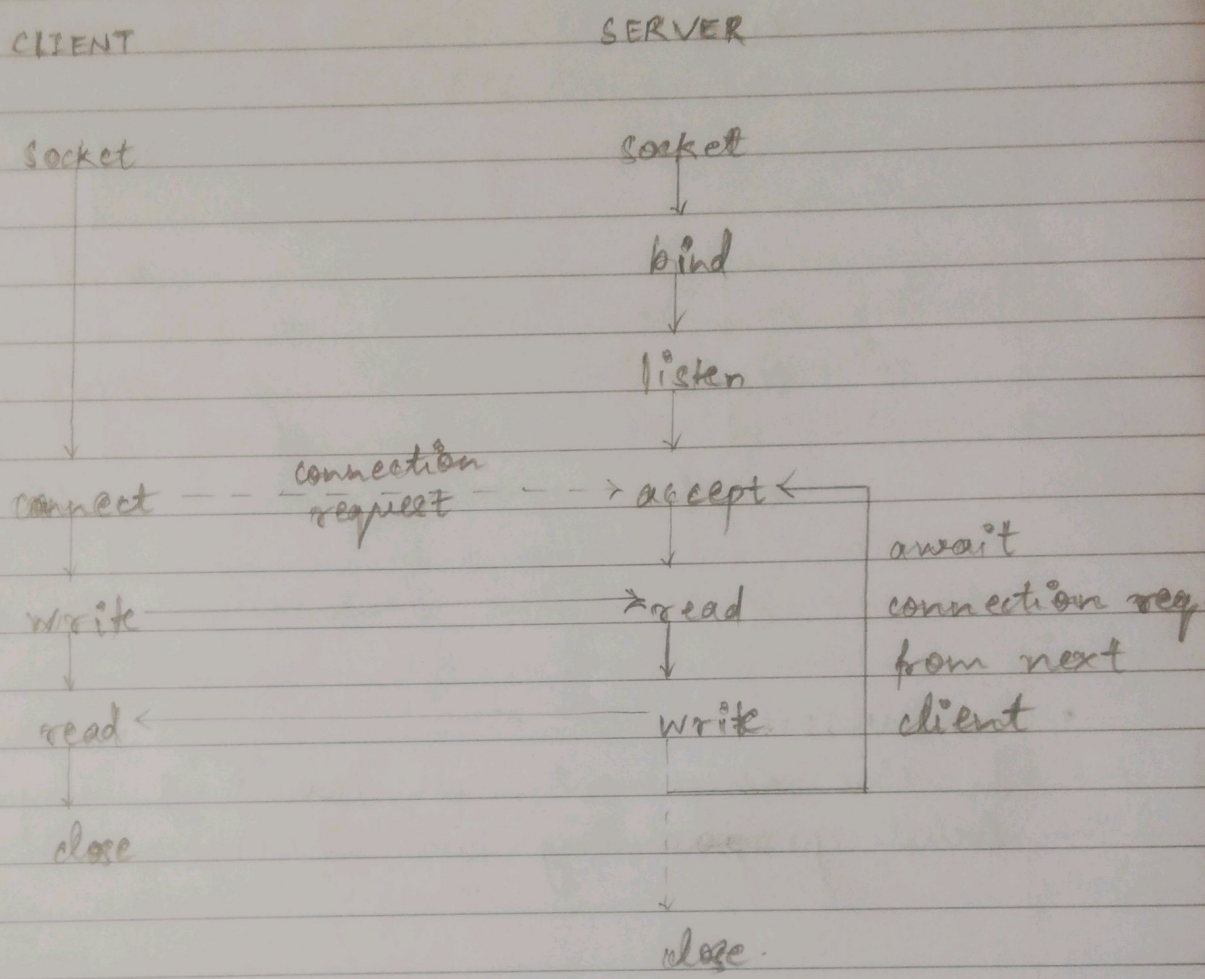
- SOCKET PROGRAMMING WITH TCP:



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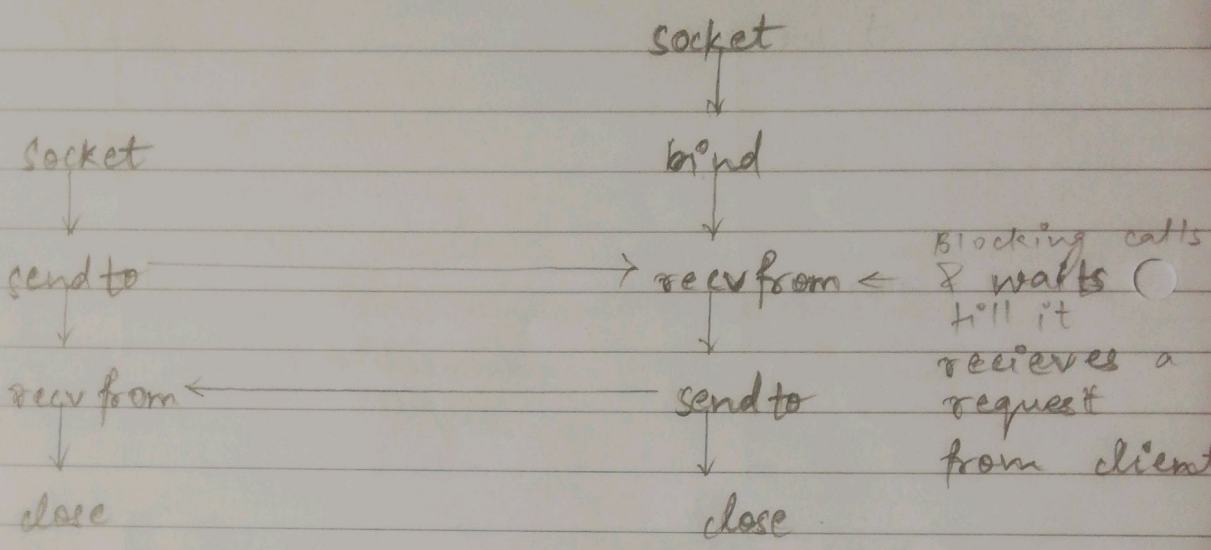
- SOCKET PROGRAMMING WITH UDP :



- CONCLUSION :

In this assignment, we learnt & implemented socket programming in c/c++.