

Assignment - 06

\* Problem statement :- Write a program in c++ using sockets API.

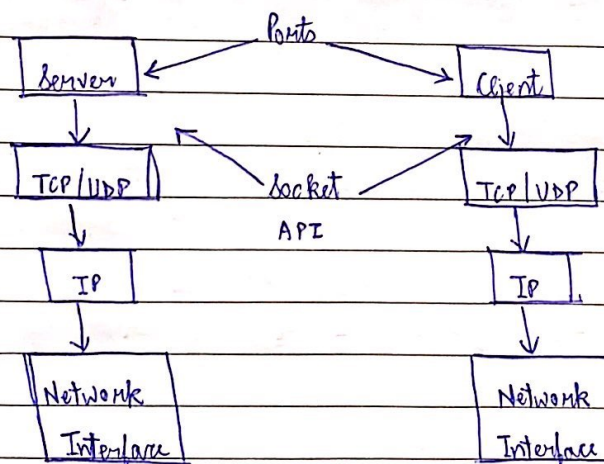
i) TCP sockets

ii) UDP sockets

\* Theory :-

1. Sockets are used for interprocess communication (IPC).
2. Most of the IPC follow a client-server model, where client and server are two separate processes in itself.

Servers and clients exchange messages over the network through a common socket API.



• How a client finds a server →

1. IP address in the server socket address identifies the host.
2. The well known port in the server identifies the service.

• 2 Essential types of sockets →

1. SOCK\_STREAM -
  - i) TCP
  - ii) Reliable delivery
  - iii) Inorder guarantee
  - iv) Bidirectional

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2. SOCKS DIAGRAM -
- i) UDP
  - ii) No notion of connection
  - iii) Unreliable delivery

• Socket Primitives →

1. SOCKET
2. BIND
3. LISTEN
4. ACCEPT
5. CONNECT
6. SEND
7. RECEIVE
8. CLOSE

\* Conclusion :- TCP and UDP socket programs are studied and executed.