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Assignment 8 (TCP) CN

Title:- TCP Socket Programming

Aim:-

Write a C program for wired network using TCP socket to demonstrate.

a. Chat application (50% students)

b. Mathematical operations (50% students)

Show packet captured traces using Wireshark Packet Analyzer Tool.

FAQ

Q1 State the IANA range for ports. List at least six well known ports.

Ans Well known ports : 0-1023
Registered ports : 1024-49151
Dynamic ports : 49152-65535.

Some well known ports.

- | | |
|--------------|------------|
| ① 7-ECHO | ④ 37-Time |
| ② 20, 21-FTP | ⑤ 53-DNS |
| ③ 22-SSH. | ⑥ 80-HTTP. |

Q2 If bind() fails, what should I do with socket descriptor?

Ans The unix system will close all open file descriptors

on exit. If the code is not exited, the programmer can close it with close () call.

Q3 Draw & explain header?

Ans

Source Port	Destination Port
Sequence Number	
Acknowledgement Number	
Header Length	Reserved
Checksum	Flags
Options	
Window	
Urgent pointer	

- ① Source port: 16 bit field that specifies sender
- ② Destination port: Specifies Receiver
- ③ Acknowledgement: 32 bit field is used by receiver to request next TCP segment.
- ④ Header Length: 4 bit data indicating length of header
- ⑤ Reserved: 3 bit reserved data
- ⑥ Flag: 9 bit for flag
- ⑦ Window: 16 bit field specifies how many bytes the receiver is willing to receive.