**ASSIGNMENT NO: 8**

**Title:** TCP Socket Programming:

**Aim:**

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

1. Chat application (50% students)
2. Mathematical operations. (Remaining 50% students)

Show packet captured traces using Wireshark Packet Analyzer Tool

**Objectives:**

1. To understand concept of socket programming

**Theory: (Handwritten & Scanned)**

* Student's should write Two page theory report (Handwritten & Scanned)
  + 1. Client / Server Communication
    2. Introduction to TCP (Transmission Control Protocol)
    3. The TCP segment Header.
    4. TCP Connection Establishment & Release
    5. Introduction to Sockets
    6. TCP Socket functions
    7. TCP Socket Flow Description on Server
    8. TCP Socket Flow Description on Client

# Design Screenshots:

* Paste design screen shots

# Program Code (for programming assignment)

# 

# Output Screenshots:

* Student's should write/paste Code here (Screenshots/Snaps are not accepted)

# Students Observation:

* Write observations

**FAQ (Handwritten & Scanned)**

* Student's should write Answer for following questions

1. State the IANA range for ports. List at least six well known ports.
2. If bind ( ) fails, what should I do with the socket descriptor?
3. Draw and explain TCP header.