

Data Communication and Networking Practical

Assignment-1

Date: 31-01-2025

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Program-1:- Write a java program to implement Client-Server Chat Application using TCP, in which when the client writes "bye", then only the connection gets closed.

Program-2:- Write a java program to Send and Receive Messages between two parties using UDP.

Program-3:- Write a java program to create an Echo Server using TCP, in which whatever message the client writes to the server, the server replies back with the same message.

Program-4:- Write a java program to demonstrate UDP implementation, in which client sends a number to the server and the server calculates the Cube of that number and sends back the result.

Program-5: Write a Java program to implement a Server-Client Calculator application using TCP, where the client sends two numbers and an arithmetic operation (like addition, subtraction, multiplication, division) to the server, and the server responds with the result.

Program-6: Write a Java program to demonstrate a UDP-based server-client application where the client sends a string to the server, and the server returns the number of vowels in the string.

Program-7: Write a Java program to implement a UDP-based client-server system where the client sends a list of numbers to the server, and the server returns the highest and lowest number from the list.

Program-8: Write a Java program to implement a UDP-based server-client system where the client sends an array of integers to the server, and the server returns the sum of all even numbers in the array.

Program-9: Write a Java program using UDP/TCP to implement a "Reverse String" service. The client sends a string to the server, and the server returns the reversed version of the string. The program should handle errors like empty strings or strings that exceed a certain length.

Scenario: The server needs to handle large numbers of requests and respond quickly. The server must also check if the input string exceeds a certain length and handle cases where the string is empty.