

Indian Institute of Information Technology, Allahabad.
Course: Computer Networks (CNE532)
Batch: Batch 2014 (IT, ECE and Integrated Programs)

Lab Assignment #2
Lab Sessions: 26.08.2016
Deadline: 26.08.2016

1. Introduction to Sockets and Tasks are:
 - a. Create three programs, two of which are clients to a single server. Client1 will send a character to the server process. The server will decrement the letter to the next letter in the alphabet and send the result to client2. Client2 prints the letter it receives and then all the processes terminate. Compile and run this exercise in both the UNIX and the Internet domains.
 - b. Follow the same procedure as in part a except that the data type of the message should be integer and the server should decrement the integer before transmitting it to client2.
 - c. Next write a socket program to enable client1 to send a float value to the server. The server process should increase the value of the number it receives by a power of 1.5. The server should print both the value it receives and the value that it sends. Client2 should print the value it receives from the server.
 - d. Send a C structure that includes data of type character, integer and float from client1 to the server. The server should change the values so that client2 receives a structure with entirely different data. It is not permitted that the data should be converted to any other data type before transmission. Do this exercise in both the UNIX and the Internet domains.
2. Write a client server application to provide file transfer facility.
3. Write a server program, which can handle more than one client concurrently and demonstrate its operation. (Hint: Use fork() system routine)