LAB ASSIGNMENT 3

22nd August 2019

About

This is the report written for the Lab assignment 3 done during the course of CSN 361 – Computer Networks Lab – Autumn 2019-2020
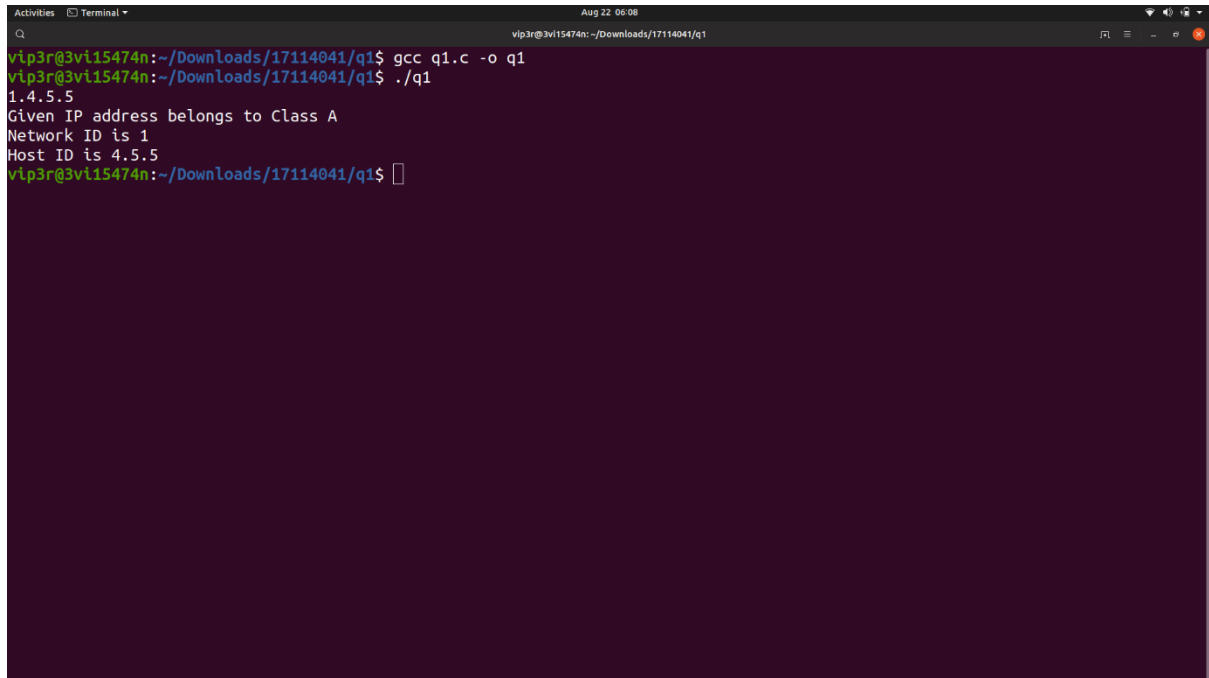
Mahesh Kale

17114041

Problem Statement 1

Write a socket program in C to determine class, Network and Host ID of an IPv4 address.

Input : 1.4.5.5

Output : Given IP address belongs to Class A Network ID is 1 Host ID is 4.5.5

Problem Statement 2
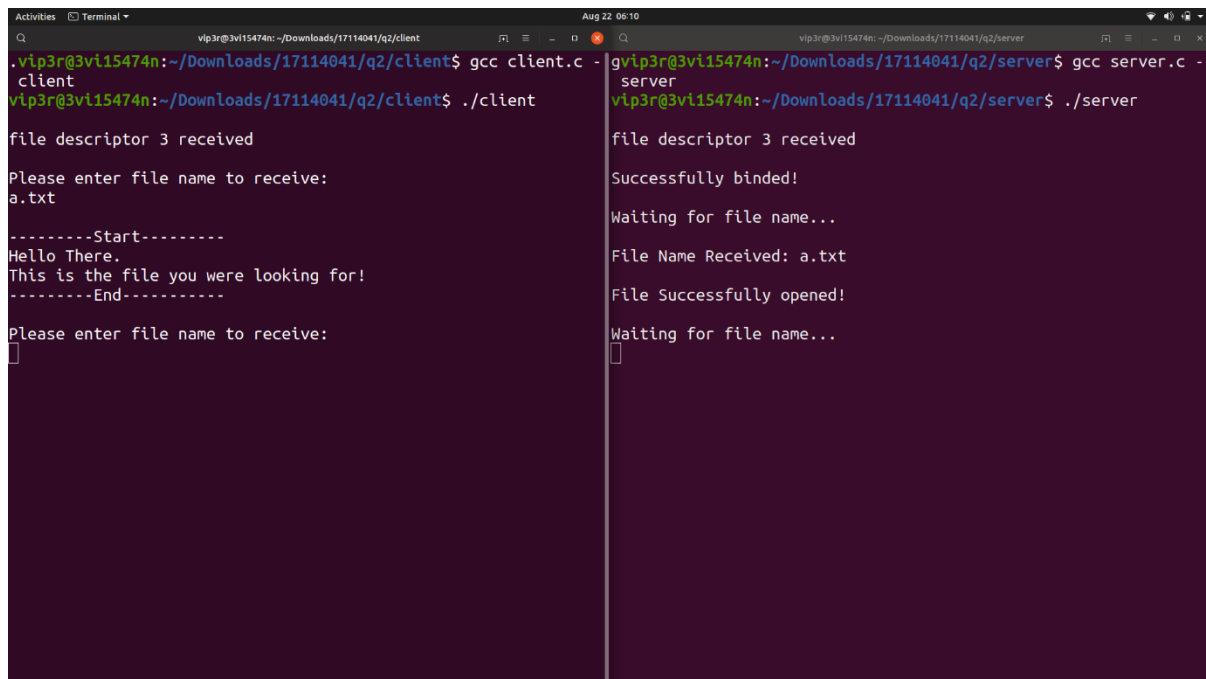
Write a C program to demonstrate File Transfer using UDP.

Input :

./client | ./server

a.txt |

Output : |
File Transferred | Success Message

Here we are reading the files and maintain a buffer to transfer the data inside the file. Here we are running sessions continuously using loops with no end conditions which exit only on signal interrupts.

For Problem 3 , Problem 4 and Problem 5

Input :

N = 5 ; K = 2
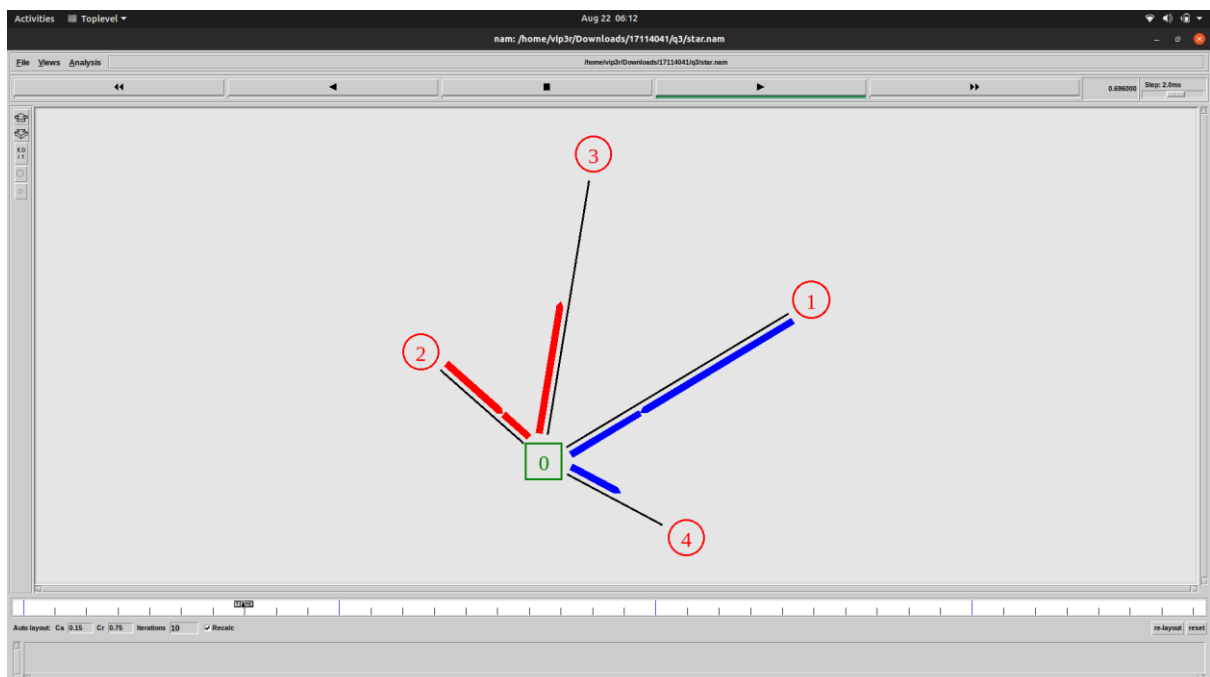
Node pairs <source> <sink>

1 4

2 3

Problem Statement 3

Write a TCL code for network simulator NS2 to demonstrate the star topology among a set of computer nodes. Given N nodes, one node will be assigned as the central node and the other nodes will be connected to it to form the star. You have to set up a TCP connection between k pairs of nodes and demonstrate the packet transfer between them using Network Animator (NAM). Use File Transfer protocol (FTP) for the same. Each link should have different color of packets to differentiate the packets transferred between each pair of nodes. The program should take the number of nodes (N) as input followed by k pairs of nodes
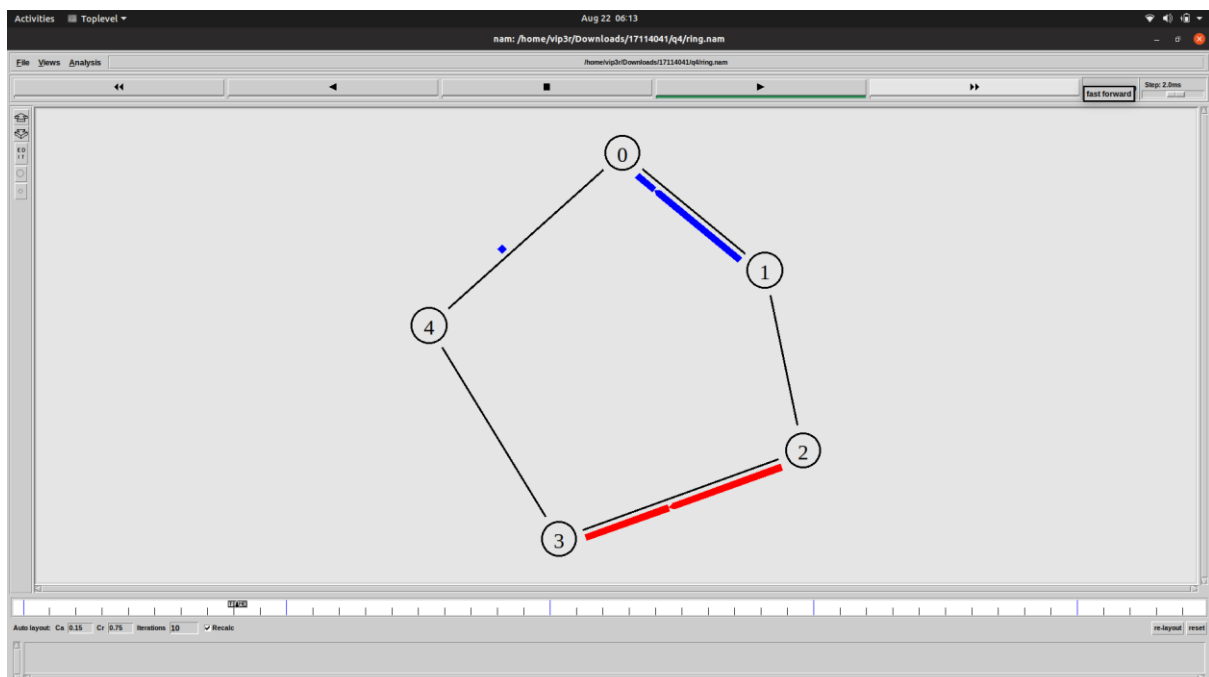
Problem Statement 4

Write a TCL code for network simulator NS2 to demonstrate the ring topology among a set of computer nodes. Given N nodes, each node will be connected to two other nodes in the form of a ring. You have to set up a TCP connection between k pairs of nodes and demonstrate packet transfer between them using Network Animator (NAM). Use File Transfer protocol (FTP) for the same. Each link should have different color of packets to differentiate the packets transferred between each pair of nodes. The program should take the number of nodes (N) as input followed by k pairs of nodes.

Problem Statement 5

Write a TCL code for network simulator NS2 to demonstrate the star topology among a set of computer nodes. Given N nodes, one node will be assigned as the central node and the other nodes will be connected to it to form the star. You have to set up a TCP connection between k pairs of nodes and demonstrate the packet transfer between them using Network Animator (NAM). Use File Transfer protocol (FTP) for the same. Each link should have different color of packets to differentiate the packets transferred between each pair of nodes. The program should take the number of nodes (N) as input followed by k pairs of nodes.