



SIDDAGANGA INSTITUTE OF TECHNOLOGY, TUMKUR-03

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

NETWORK PROGRAMMING LAB (7CSL01)

Program No.		Date:		
Student Name:		USN:		Batch No:
Evaluation:				
Observation writing and File maintenance (10 Marks)	Clarity in concepts (05 Marks)	Implementation and execution of the program (10 Marks)	Viva (10 Marks)	Total (35 Marks)
Sl.No	Name of the Faculty In-Charge			Signature
1.				
2.				

Question No. 6

Write a socket program to demonstrate IP multicasting which provides the capability for an application to send a single IP datagram that a group of hosts in a network can receive.

Pre-requisite

An application program can send or receive multicast datagrams by using connectionless protocol (i.e UDP).

Sender Program (Server) :

1. Create an AF_INET, SOCK_DGRAM type socket.
2. Initialize a sockaddr_in structure with the destination group IP address and port number.
3. Set the IP_MULTICAST_LOOP socket option according to whether the sending system should receive a copy of the multicast datagrams that are transmitted.
4. Set the IP_MULTICAST_IF socket option to define the local interface over which you want to send the multicast datagrams.
5. Send the datagram.

Receiver Program (Client):

1. Create an AF_INET, SOCK_DGRAM type socket.
2. Set the SO_REUSEADDR option to allow multiple applications to receive datagrams that are destined to the same local port number.
3. Use the bind() verb to specify the local port number. Specify the IP address as INADDR_ANY in order to receive datagrams that are addressed to a multicast group.
4. Use the IP_ADD_MEMBERSHIP socket option to join the multicast group that receives the datagrams. When joining a group, specify the class D group address along with the IP address of a local interface. The system must call the IP_ADD_MEMBERSHIP socket option for each local interface receiving the multicast datagrams.
5. Receive the datagram.