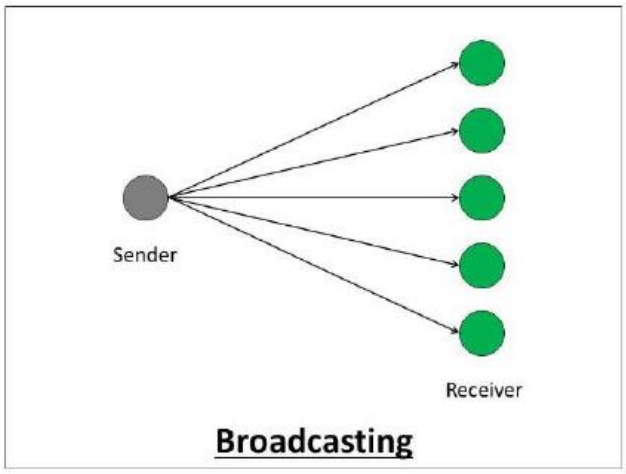
Network Programming Laboratory (UCS413)
Assignment:6

Objective: WAP to implement broadcasting using connectionless socket programming.

Each network segment has a corresponding broadcast address. Take the class C network segment 192.168.1.x as an example, where the smallest address 192.168.1.0 represents the network segment; and the largest address 192.168.1.255 is the broadcast address in the network segment. When we want to send a data packet to this address, all hosts on the network segment will receive and process it.



Note: Broadcast packets are sent and received through UDP sockets.

The broadcast packet sending process is as follows:

a. Create a UDP socket; socket(AF_INET, SOCK_DGRAM, 0)
b. Fill the broadcast information structure; struct sockaddr_in
c. Set socket options to allow broadcast packets to be sent; setsockopt(,--- ,SO_BROADCAST,-------)
d. Send data packet; sendto()

The broadcast packet receiving process is as follows:

a. Create a UDP socket; socket(AF_INET, SOCK_DGRAM, 0)
b. Fill the broadcast information structure; struct sockaddr_in
c. Bind address and port; bind()
d. Receive data packet; recvfrom()