



NATIONAL UNIVERSITY
of Computer & Emerging Sciences

Name: Usama Yousuf Khan

Sec: 5A

Roll no 20P-0646

Course: Computer Network LAB

LAB 10 TASKS

Submitted to Miss Hurmat Hidayat

TASK

Task 1 :

Determine Network Address of the following IP Address

IP address : 10.128.240.50/30. Also, determine broadcast and range of host addresses.
Calculating Number of Hosts

Sol:

IP address: 10.128.240.50/30

Subnet Mask: 255.255.255.252

converting ip address and subnet mask into binary

Ip address : 00001010 10000000 11110000 00110010

Subnet Mask: 11111111.11111111.11111111.11111100

Performing AND operation on ip address and subnet mask

AND : 00001010 10000000 11110000 00110000

Network Address: 10.128.240.48

Broadcast Address: 10.128.240.51

Number of Hosts: $(2^2) - 2 = 2$

Range: 10.128.240.49

10.128.240.50

Task 2 :

Determine the network and broadcast addresses and number of hosts bits and hosts for the given IPv4 addresses and prefixes in the following table.

IPv4 Address/Prefix	Network Address	Broadcast Address	Total Number of Host Bits	Total Number of Hosts
192.168.100.25/28	192.168.100.16	192.168.100.31	4	$2^4 - 2 = 14$
172.30.10.130/30	172.30.10.128	172.30.10.131	2	$2^2 - 2 = 2$
10.1.113.75/19	10.1.96.0	10.1.127.255	13	$2^{13} - 2 = 8190$
198.133.219.250/24	198.133.219.0	198.133.219.255	8	$2^8 - 2 = 254$