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Section:

   BSCS-5B

Computer Networks lab:
   10

   FAST NUCES PWR Campus

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**.

IP:	10.128.240.50
	—-> 00001010.10000000.11110000.00110010
Subnet:	255.255.255.252
	—-> 11111111.11111111.11111111.11111100
Network Address:	10.128.240.48
	—-> 00001010.10000000.11110000.00110000
Broadcast:	10.128.240.51
	—-> 00001010.10000000.11110000.00110011
Range:	10.128.240.49 — 10.128.240.50

00001010.10000000.11110000.00110001 —---00001010.10000000.11110000.00110010

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	Network Address	Broadcast Address	T.No of Host Bits	T.No of Hosts
192.168.100.25/28	192.168.100.16	192.168.100.31	04	14
172.30.10.130/30	172.30.10.128	172.30.10.131	02	02
10.1.113.75/19	10.1.96.0	10.1.127.255	13	8190
198.133.219.250/24	198.133.219.0	198.133.219.255	08	254

Network Address
192.168.100.16 ——--> 11000000.10101000.01100100.00010000
172.30.10.128 ——-->   10101100.00011110.00001010.10000000
10.1.96.0   ——->   00001010.00000001.01100000.00000000
198.133.219.0 ——--> 11000110.10000101.11011011.0000000

Broadcast Address
192.168.100.31   11000000.10101000.1100100.00011111
172.30.10.131   10101100.00011110.00001010.10000011
10.1.127.255   00001010.00000001.01111111.11111111
198.133.219.255   11000110.10000101.11011011.11111111