Semester 5th | Practical Assignment | Computer Networks (2101CS501)

Date: 17/09/2024

Lab Practical #09:

Study of IP Addressing and sub-netting.

Practical Assignment #09:

- 1. Find default subnet marks, network bits, host bits, hosts per subnet, no of subnets, subnet number, 1st valid IP address, last valid IP address, and broadcast address.
 - i. 8.1.4.5/16

(1)	ci) 8.j.4.5/j6
	-) CIGSS : A
	-) Default Subnet Mask: 955.0.0.0
	-) Bit Bornowed: 8
	-> Network bits: 16
	-) Subnet Mask: 255.0.0.0
	-) submet 145k. 255.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.
	-) Subnet number: Il subnet rush
	: 8.1.0.0
	-> 15t valid TP: 8.1.6.]
	-) last valid IP: 8.1.255.254
	-) Brodcast Address: 8.1.255.255

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130.4.102.1/24 ii.

ciio	730.4.702.7 /24
-)	Class: B Default Submet Mask: 255.255.0.0 Bit bornowed: 8 Network Bits: 24 Host bits: 8 Submet Mask: 255.255.255.0 No. of submets: 28 - 2 - 254 Host Per Submet: 28 - 2 - 254 Submet number: IP & Submet Mask: 130.4.102.0 Submet number: 120.4.102.1
-)	Broad Cast Address: 130.4.102.255

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199.1.1.1/24 iii.

111.	799.7.7.7/24
	-) class: C
	-) default Subnet Mask: 255.255.255.0
	-) Rit Robbowed . O
	-) Network bits: 24
	1 1 2 1 6
	The Peb Sunnet: 2-2=259
	12 Coloret mask: 755.755.755.
	-) No. of Subnet: 20=7
MA	-) Subnet numbeh: IP & subnet mask
The last	; 199.1.1.0
	-) 1st valid TP: 199.7.7
	1:1 +0: 799 7 7.254
	-) last valid II. -) last valid II. -) Brodast Address: 199. J. J. 255
	-) hr.ou const

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130.4.102.1/22 iv.

iv.	130.4.769.1/92
	-) class: B
	-) default Subnet mask: 255.255.0.0 -) bit bobbowed: 6
	> net work bits: 22
	-) host bits: 70
	-) No. of Submet: 210-2= 1022 -) HOSTS Per Submet: 210-2= 1022
	-) Hosts per Subnet. -) Subnet number: IP & Subnet mask & : 130. 4.700.0
	GL I TP. 730.4.700.7
	131 430 4 107 231
	-> Lost valid IP: 150. -> Broad cast Address: 730.4.703.255

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199.1.1.100/27 ٧.

V.	799.7.7.700/97
-)	class: C
-)	default Subnet Mask: 255.255.255.0
-)	bit boppo wed: 3
-)	Network bits: 27
-)	basts bit : 5
-)	Submet mask: 255.255.255.929
-)	(C. Langt .) = 8
-)	u te Den Sunnet: 2 - 2 - 00
-)	Subnet number: IP & Subnet 1951
	: 199.7.7.96
2	75t valid Ir: 199.7.7.97
-/	last valid IP: 799. J. 7. 126
-)	Broadcast IP: 199. J. 1. 727
-)	Drogards II. Ille I

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2. A host in a class C network has been assigned an IP address 192.168.17.9. Find the number of addresses in the block, the first address, and the last address.

Pacific Philippes : 1971 1 5 65
A host in class c network has been
assigned on TP Address 142, 168, 17.9.
Find the no of Addhesses in the block,
the First Address and the 1951 Fladress
the transfer that the territory is the territory in the t
-) here, class: C
So, host bit = 8
nr alla fand C
-) No. of Address in the block: 28 = 256
-> with valid host: (28-2)=254
2000 1000 10000 3 95 5 49400 m. 1200 6
-) 1 St Address: 192. 168. 77.0
-) Last Address: 792.768.77.255
Tay for all the property of th

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3. An address in a block is given as 185.28.17.9. Find the number of addresses in the block, the first address, and the last address.

(3)	Here class: B
	so, host Bit: 16
[H. S. C.]	Smart friedra tras in Ettad of , gapti
	-) NO. of Address in the block: 216 = 65536
	-) (with valid host): (216-2) = 65534
	-) 1 St Addhess: 185.28.00
	-) lost Address: 785.28.255.255
	Ethnody's 187

4. A block of addresses is granted to a small organization. We know that one of the addresses is 205.16.37.39/28. What is the first address, last address, number of addresses in a block.

(4)	Here class: C Bit Bohnowed: 4 So, host bit: 4
	-) No. of Addresses in the Block: 24=16 (with valid host): (24-2)= 14
Con	-) 1 St Address: 205. 16.37.32 -) last Address: 205. 16. 37. 47

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5. Subnet the IP address 216.21.5.0 into 30 hosts in each subnet. Find Class, Default Mask, Bit Borrowed, New subnet mask, No. of Hosts & Subnet, Network Ranges (Subnets).

The state of	
(5)	Here class: C default Mask: 255.255.255.0 Here, 30 hosts in each subnet means (25-2) so, hosts bit = 5 Network bit = 97
	So, IP: 216.21.5.0/27
	-) Bit bophowed = 3 -) New Submet Mask: 255.255.255.224
	-> No. of subnets: 23=8
71	-> No. of hosts Pet Subnet: 25-2=30
	-> Network Ranges (subnets):
	=) Submet -7: 276.27.5.0 to 276.27.5.32 =) Submet -2: 276.27.5.32 to 216.27.5.63
	and so on upto 8 Subnet.

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6. Subnet the IP address 192.10.20.0 into 52 hosts in each subnet. Find Class, Default Mask, Bit Borrowed, New subnet mask, No. of Hosts & Subnet, Network Ranges (Subnets).

1 Jahra Clacc. C
c6) here, class: C -) default Submet mask: 255.255.255.0
7 461441 0415166 11451 8 755-755-755
-) Here, 52 Hosts in each Subnet
megns 52 x (26-2) => 52 x 62
so, host hits = 6 =) Bit Bornowed = 2
=) Network Bits = 26
=> 50, TP will be 192.70.20.0/26
-> New Subnet Mask: 255.255.255.792
-> No. of Sybnet: 22=4
=> No. of valid hosts Per Subnet: 26-2
= 62
=> Network Ranges (Submets):
100 10 00 0 +0 792.10.20.63
=) Submet -7: 192.10.20.0 to 192.10.20.63 =) Submet -2: 192.10.20.64 to 192.10.20.127
and so, on upto 4 subnet.
und ser o