الجامعة العربية الأمريكية
ARAB AMERICAN UNIVERSITY

FACULTY OF ENGINEERING & INFORMATION TECHNOLOGY

COMPUTER NETWORKS LAB **Exercise 1**

Section (1) CSE

Dr. Asem Salah & Mr. Eng. Iyas Alsuqi

You have to return the solution before 8:30 am 26/5/2021

Use WinRAR or ZIP to compression the Assignments files

The compressed file must contain the followings:

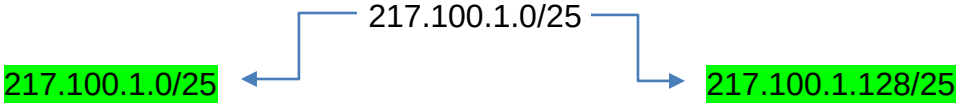
- This Word Doc file for the written answers/ and print screens
- Packet tracer file for the complete scenario.

Student Name: …adan alalawni…… Student ID:…201811151……

Q1) Suppose that you have been given the network scenario as shown in the picture, which consists of 3 routers, and each one is connected to a LAN segments with a different number of hosts as shown in the figure. You need to calculate the Variable Length Subnet Masking (VLSM) for the network to serve all hosts in a perfect manner and implement it in the packet tracer.

IP:217.100.1.0/24

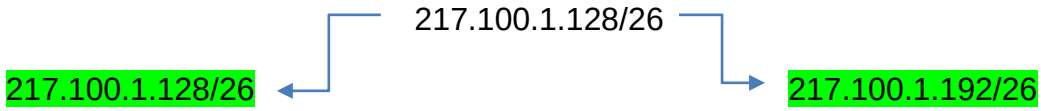
NO	#host	Block size	# borrowed bit	Subnet mask
1	99	128	1	255.255.255.128
2	45	64	2	255.255.255.192
3	12	16	4	255.255.255.240
4	2	4	6	255.255.255.252
5	2	4	6	255.255.255.252
6	2	4	6	255.255.255.252
7	1	4	6	255.255.255.252



First subnetwork: 217.100.1.0/25

VH IP : 217.100.1.(1-126)/25

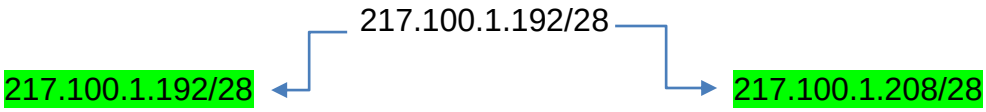
BC IP : 217.100.1.127/25



Second subnetwork: 217.100.1.128/26

VH IP : 217.100.1.(129-190)/26

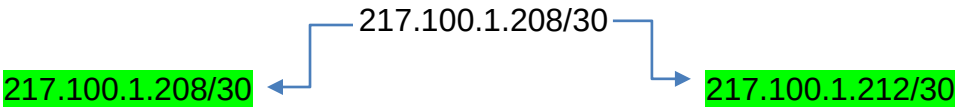
BC IP : 217.100.1.191/26



Third subnetwork: 217.100.1.192/28

VH IP : 217.100.1.(193-206)/28

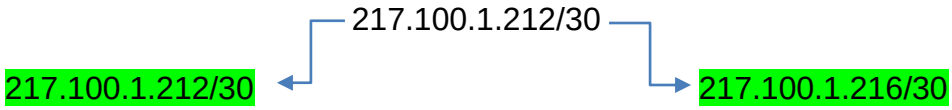
BC IP : 217.100.1.207/28



Fourth subnetwork: 217.100.1.208/30 (WAN link 1)

VH IP : 217.100.1.(209-210)/30

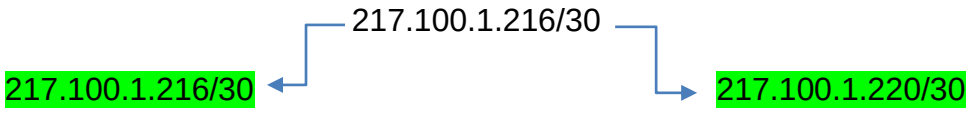
BC IP : 217.100.1.211/30



Fifth subnetwork: 217.100.1.212/30 (WAN link 2)

VH IP : 217.100.1.(213-214)/30

BC IP : 217.100.1.215/30



sixth subnetwork: 217.100.1.216/30 (WAN link 3)

VH IP : 217.100.1.(217-218)/30

BC IP : 217.100.1.219/30

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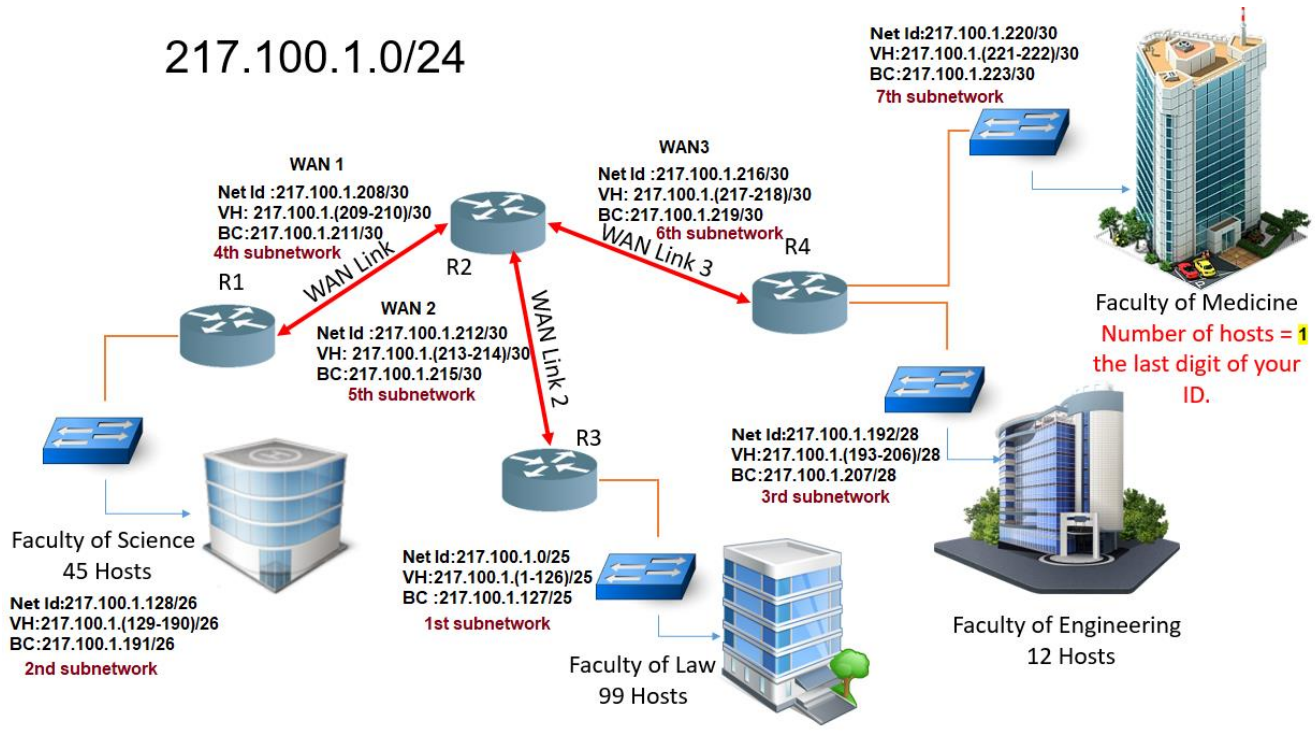
217.100.1.220/30

217.100.1.220/30 217.100.1.224/30

seventh subnetwork: 217.100.1.220/30

VH IP : 217.100.1.(221-222)/30

BC IP : 217.100.1.223/30



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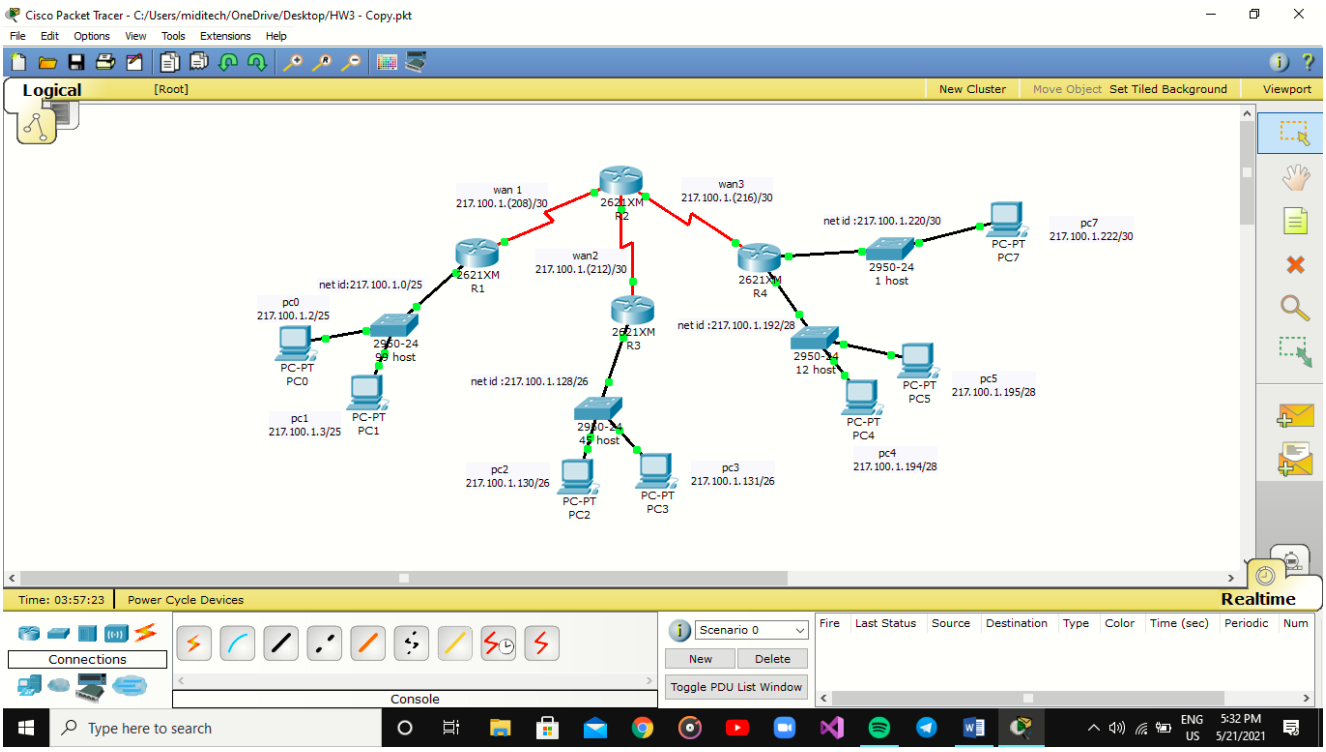
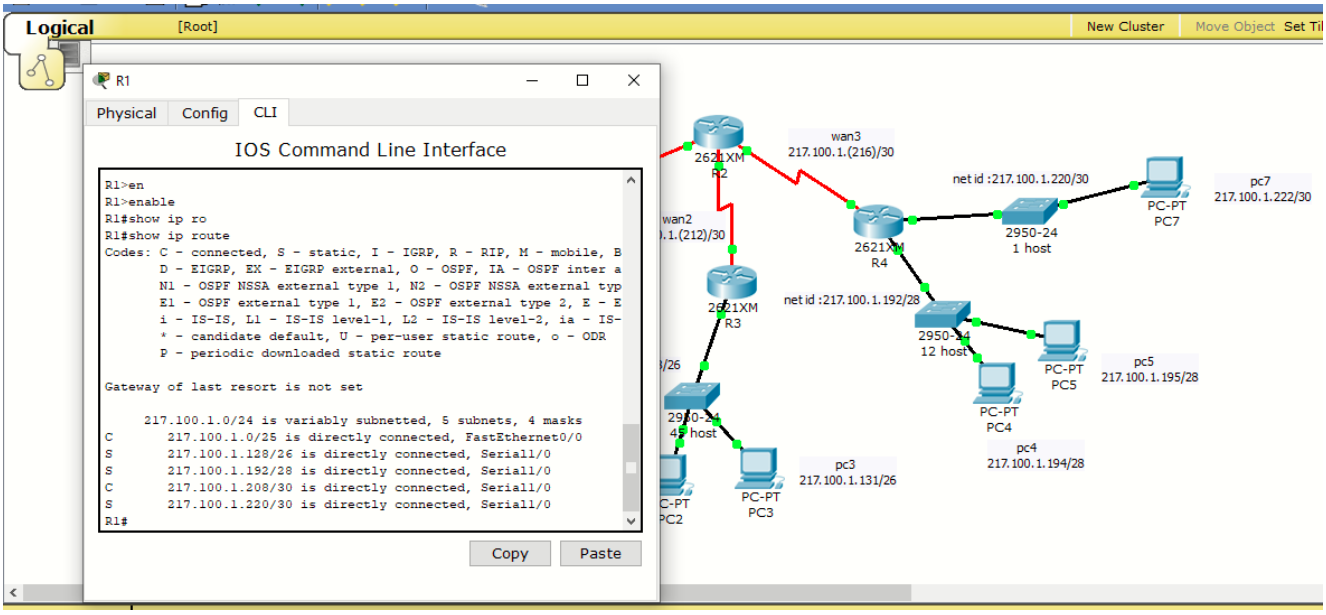


R1:



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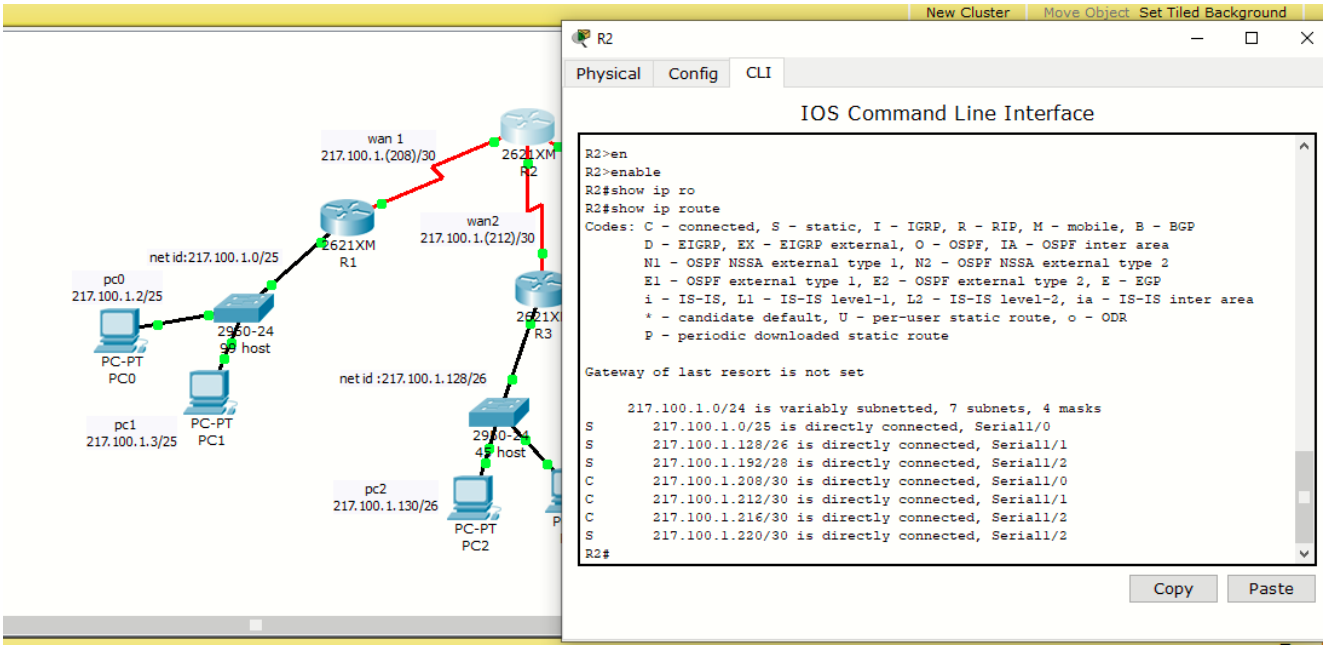
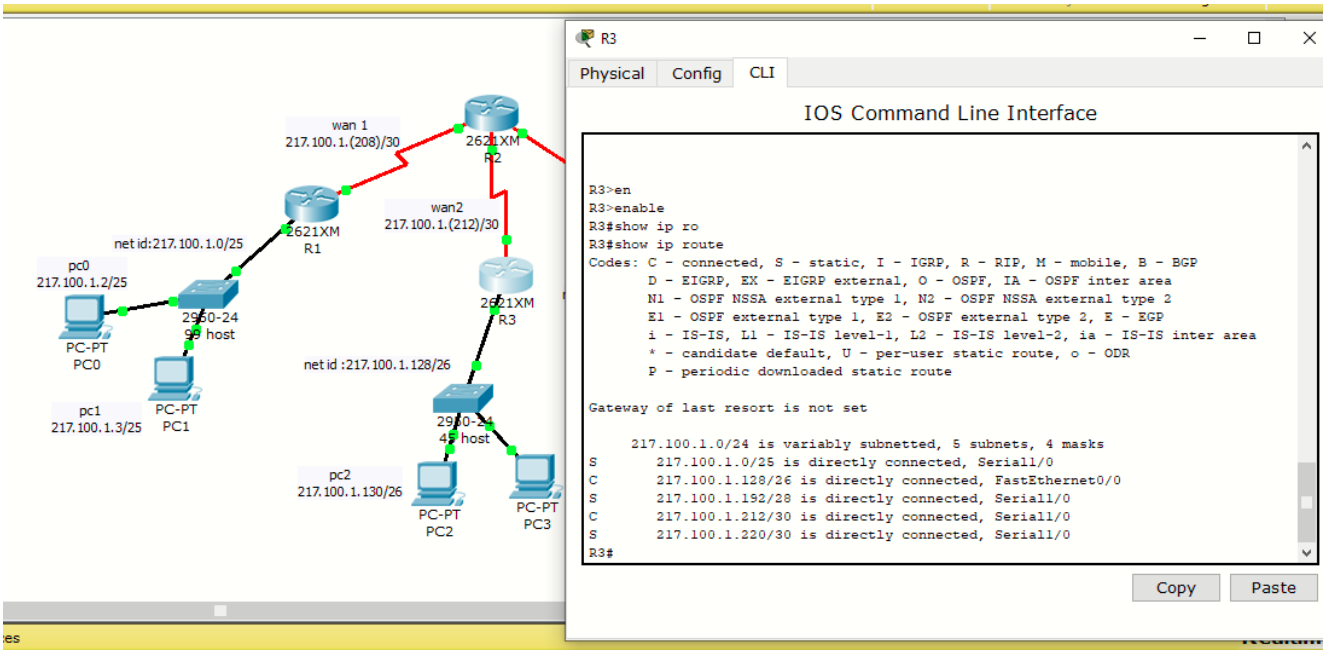
R2:



R3:



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R4: