



SUPERIOR UNIVERSITY

Name: Zohaib Karamat

Roll No: SU92-BSSEM-F22-207

Subject: Computer Networks Lab

Lab 9

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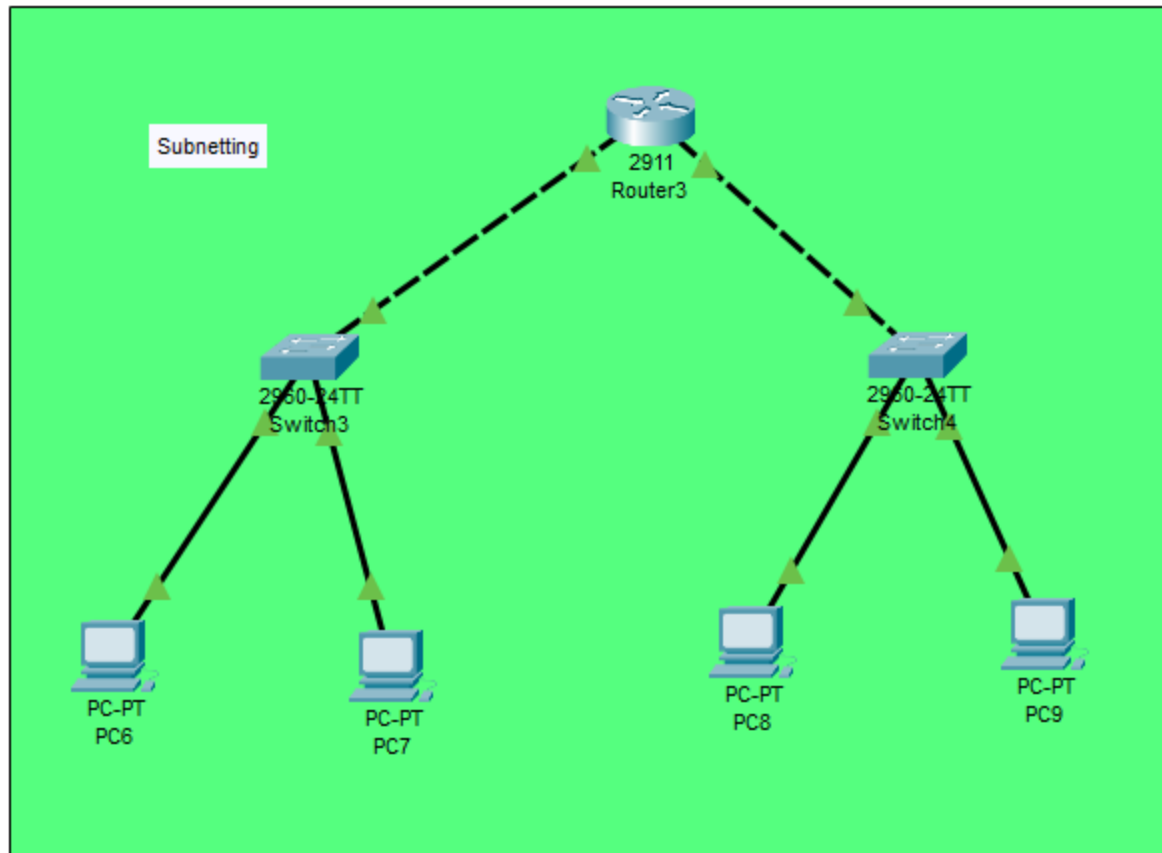
Submitted To: Sir Rasikh

Section: 5D

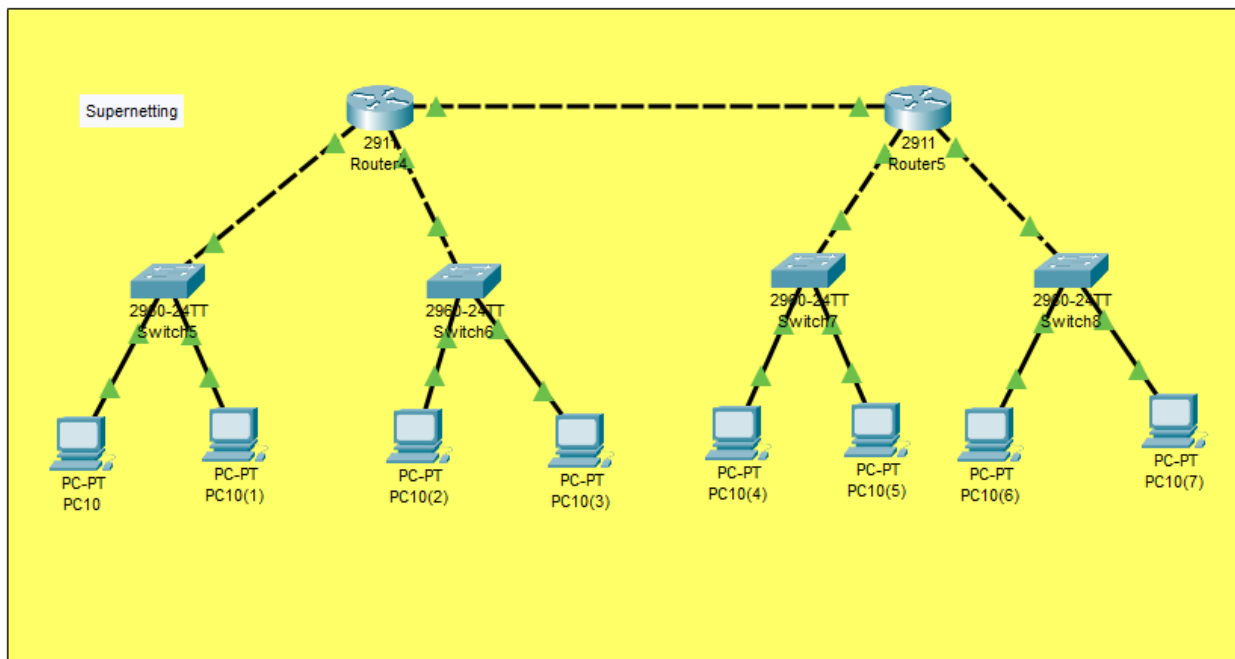
Difference between Subnetting and Supernetting

Subnetting	Supernetting
Subnetting is the procedure to divide the network into sub-networks.	While Supernetting is the procedure of combining small networks.
In subnetting, Network addresses' bits are increased.	While in supernetting, Host addresses' bits are increased.
In subnetting, The mask bits are moved towards the right.	While In supernetting, The mask bits are moved towards the left.
Subnetting is implemented via Variable-length subnet masking.	While supernetting is implemented via Classless interdomain routing.
In subnetting, Address depletion is reduced or removed.	While It is used for simplifying the routing process.

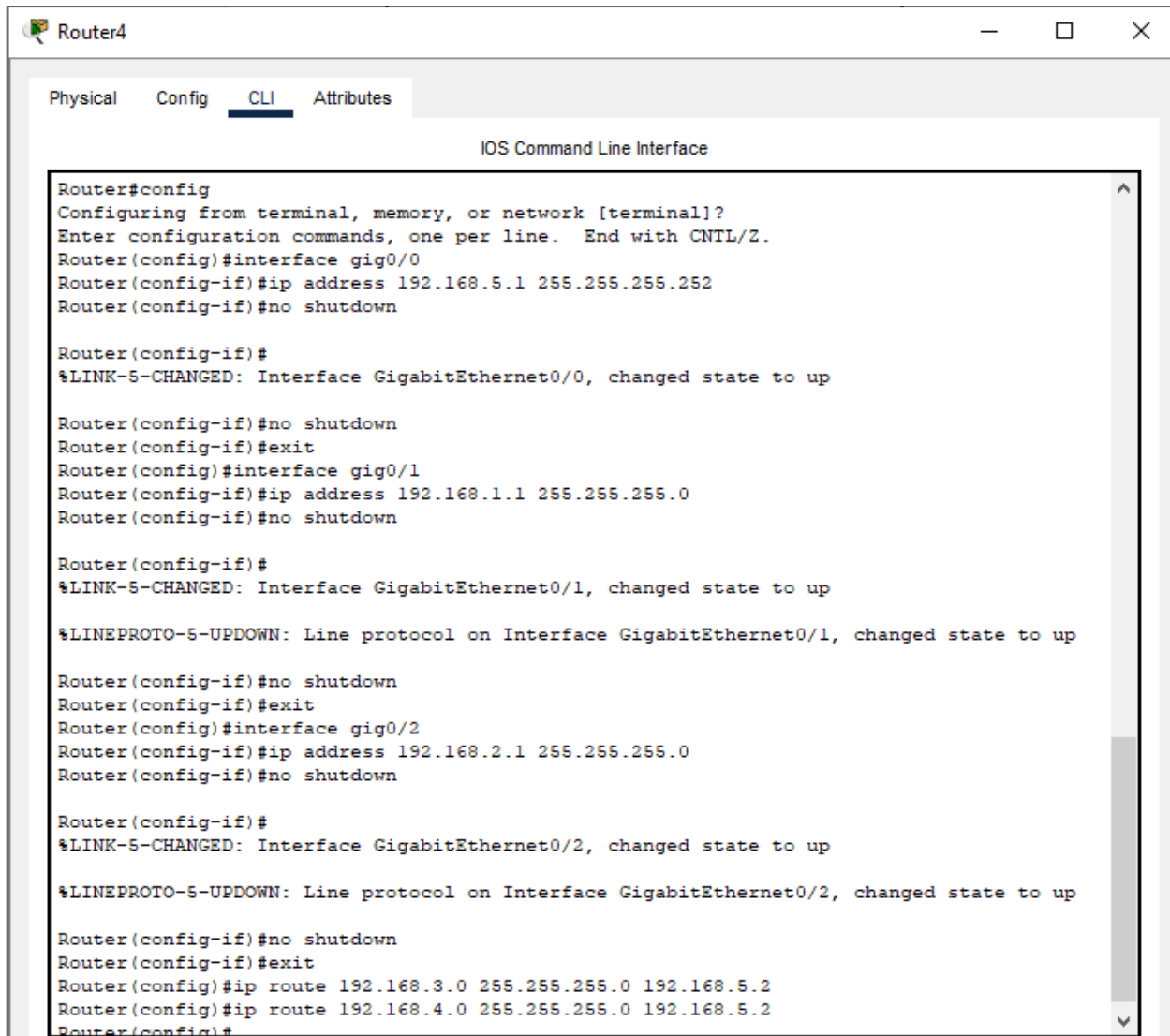
Subnetting:



Supernetting:



Supernetting Commands: First router



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Router4
Physical Config CLI Attributes
IOS Command Line Interface

Router#config
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface gig0/0
Router(config-if)#ip address 192.168.5.1 255.255.255.252
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up

Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface gig0/1
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface gig0/2
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/2, changed state to up

Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#ip route 192.168.3.0 255.255.255.0 192.168.5.2
Router(config)#ip route 192.168.4.0 255.255.255.0 192.168.5.2
Router(config)#
```

Second router:

