

CO1507 Introduction to Networking

Lab 17: Revision

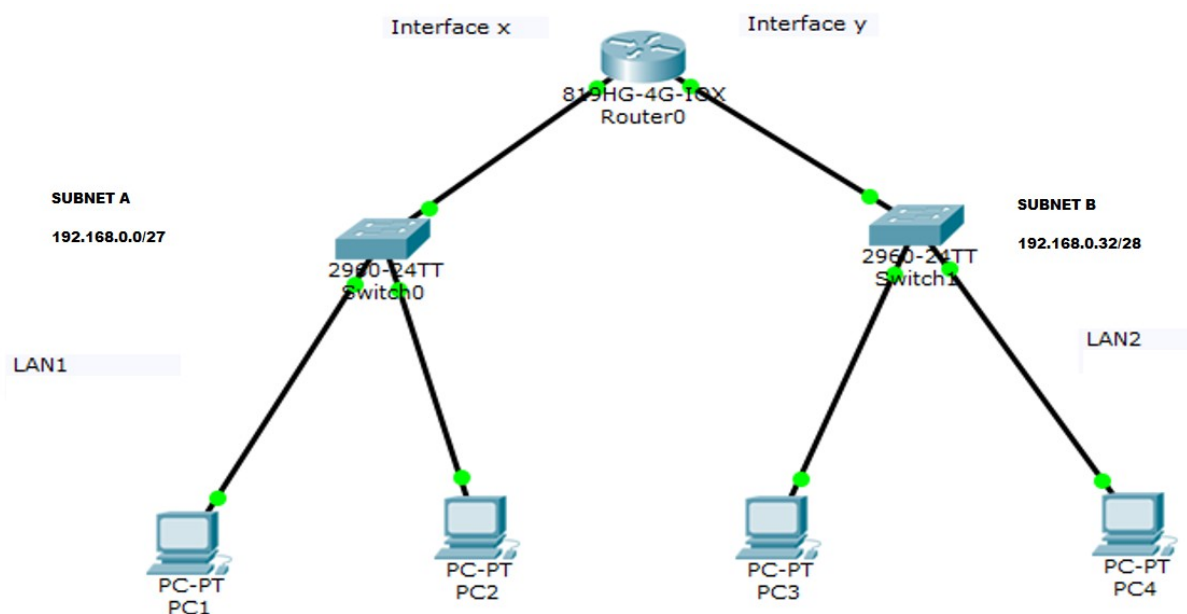
Task 1:

Complete the multiple-choice quiz on Blackboard called “April 2023 Networking Revision Quiz” (link in this week’s folder)

Make a note of each question you get wrong, and make sure you make note of the correct answer. Ask your tutor for help where you do not understand a question.

Task 2:

Complete the full addressing requirements for the following network in the table below:



SUBNET A		SUBNET B	
Router IP Address: (Interface x)		Router IP Address: (Interface y)	
Router Subnet Mask: (Interface x)		Router Subnet Mask: (Interface y)	
PC1 IP Address:		PC3 IP Address:	
PC1 Subnet Mask:		PC3 Subnet Mask:	
PC1 Default Gateway:		PC3 Default Gateway:	
PC2 IP Address:		PC4 IP Address:	
PC2 Subnet Mask:		PC4 Subnet Mask:	
PC2 Default Gateway:		PC4 Default Gateway:	

Task 3:

- Explain the effect of broadcast traffic on the operation of a network and how subnetting can improve network performance and security.

Given the network address 192.168.23.16/28

- What is the number of valid IP addresses that the network can support?
- What is the subnet mask?
- What is the first valid IP address?
- What is the last valid IP address?
- What is the broadcast IP address?

- What is the critical difference between the address 192.168.1.16/24 and 192.168.1.16/28?

Task 4:

A local college has just finished a new building to house a Computer and Networks departments. The college needs to setup 4 networked teaching labs. Each lab is required to support between 50 and 60 computers and must be on a separate subnet. You have been given the following network address 192.168.0.0/24 you must create subnets within this address space by first choosing an alternative custom subnet mask.

- The number of subnet bits needed is: _____
- The new subnet mask will be: _____
- The CIDR notation is: /_____
- The number of a available hosts in the second subnet will be: _____
- The first subnet address (address for lab1) will be: _____
- The second subnet address (address for lab2) will be: _____

- The third subnet address (address for lab3) will be: _____
- The fourth subnet address (address for lab4) will be: _____

For second subnet (lab 2) find:

- The first host address (available address) in the second subnet will be: _____
- The last host address (available address) in the second subnet will be: _____
- The broadcast address in the second subnet will be: _____