# 6-2 Project One: Network Modification Brief

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CYB-210

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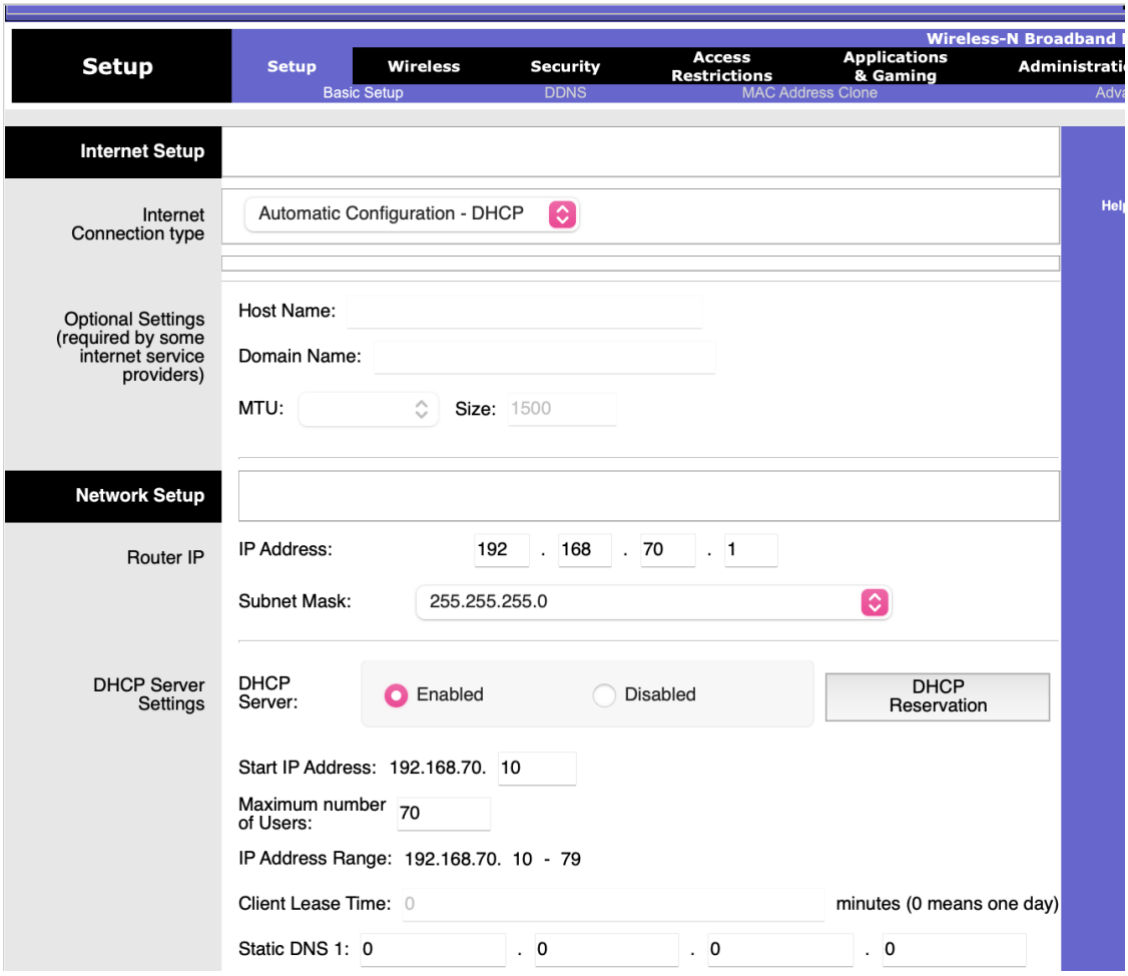
10 April 2024

## I. Network Reconfiguration

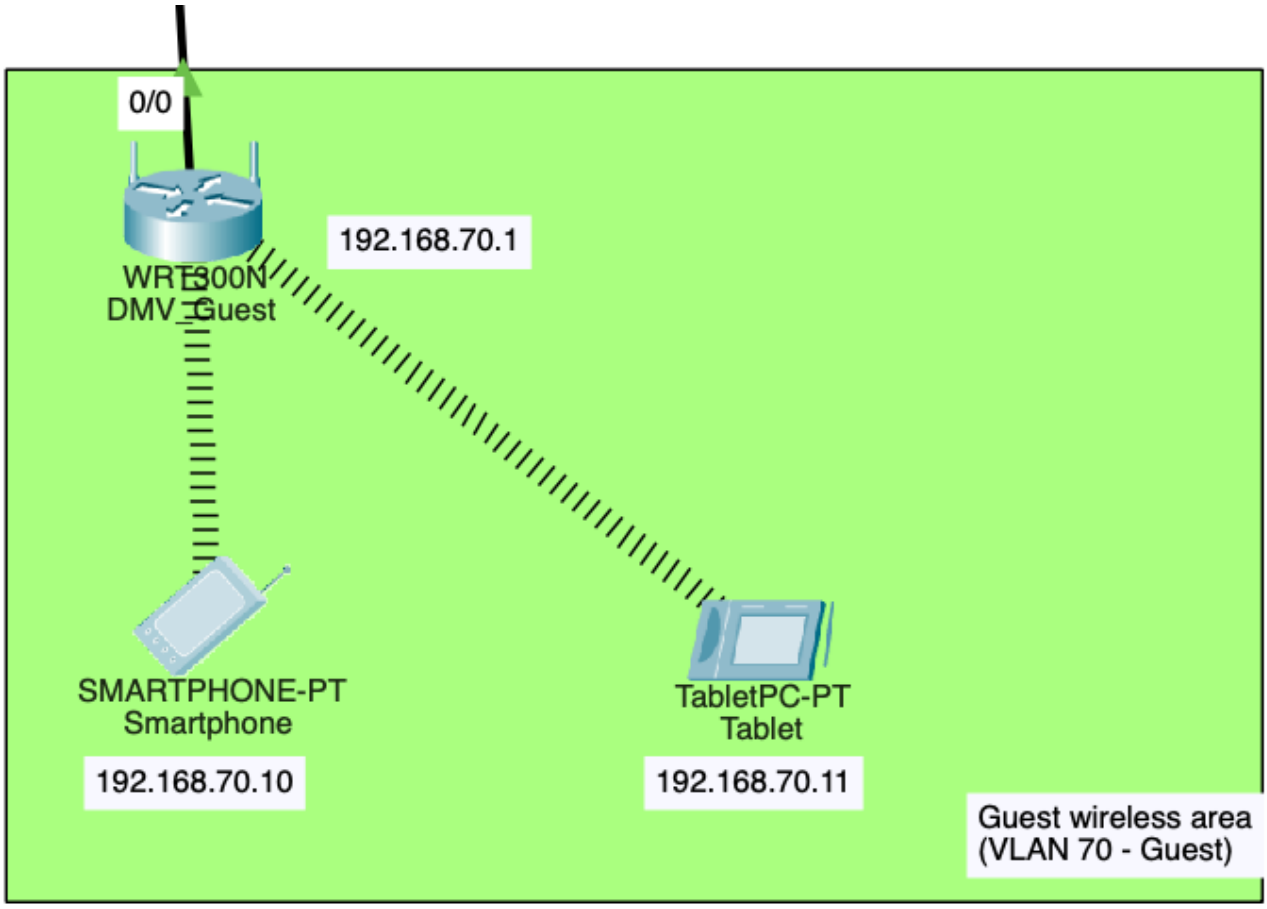
A. Properly configure the **VLAN** for guest and video connections to meet the project requirements. Submit a screenshot of the VLAN table.

```
Switch#show vlan

VLAN Name                                Status    Ports
---- ----------------------------------- --------- -------------------------------
1    default                             active    Fa0/4, Fa0/7, Fa0/8, Fa0/9
                                                   Fa0/10, Fa0/11, Fa0/12, Fa0/13
                                                   Fa0/14, Fa0/16, Fa0/17, Fa0/18
                                                   Fa0/19, Fa0/20, Fa0/21, Fa0/22
                                                   Fa0/23, Fa0/24, Gig0/1, Gig0/2
50   Data                                active    Fa0/5, Fa0/6
70   Guest                               active    Fa0/1
80   Video                               active    Fa0/2, Fa0/3
150  Voice                               active    Fa0/15
1002 fddi-default                        active
1003 token-ring-default                  active
1004 fddinet-default                     active
1005 trnet-default                       active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
50   enet  100050     1500  -      -      -        -    -        0      0
70   enet  100070     1500  -      -      -        -    -        0      0

Switch#
```

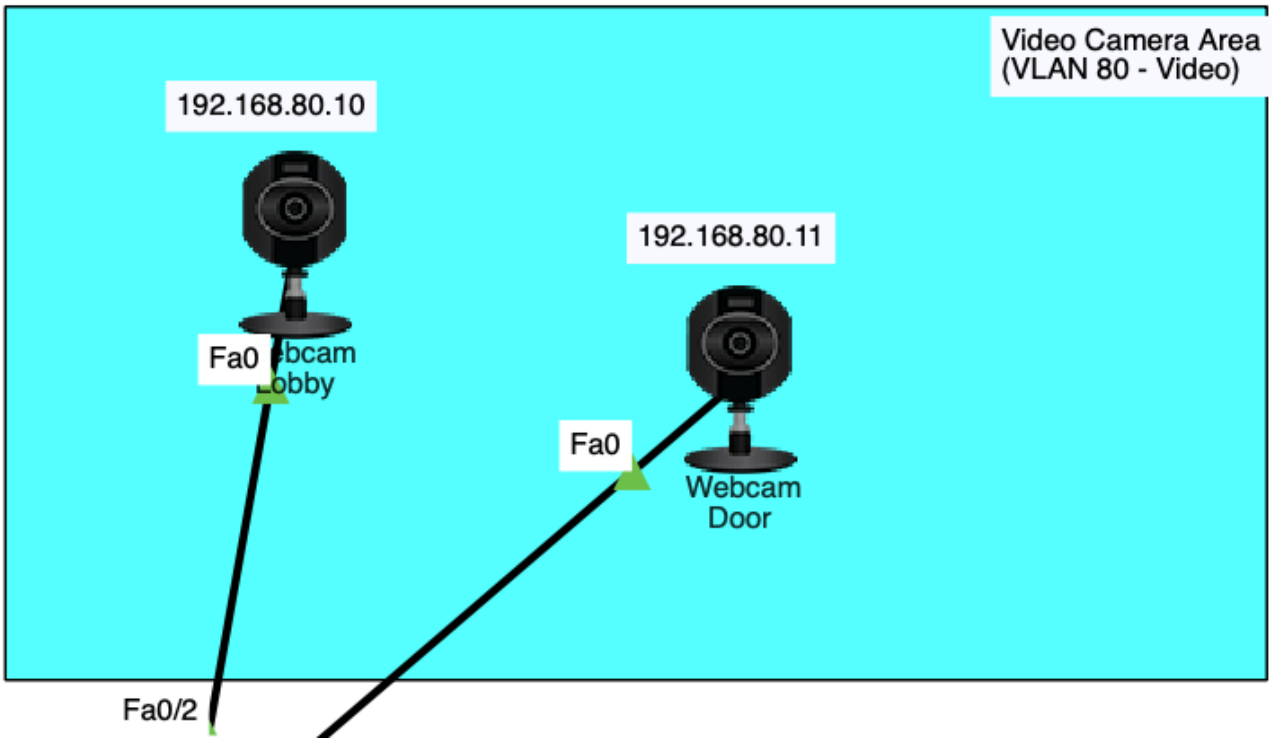
B. Properly configure the **guest wireless network** to meet the project requirements. Submit a screenshot of the wireless settings for the wireless router.



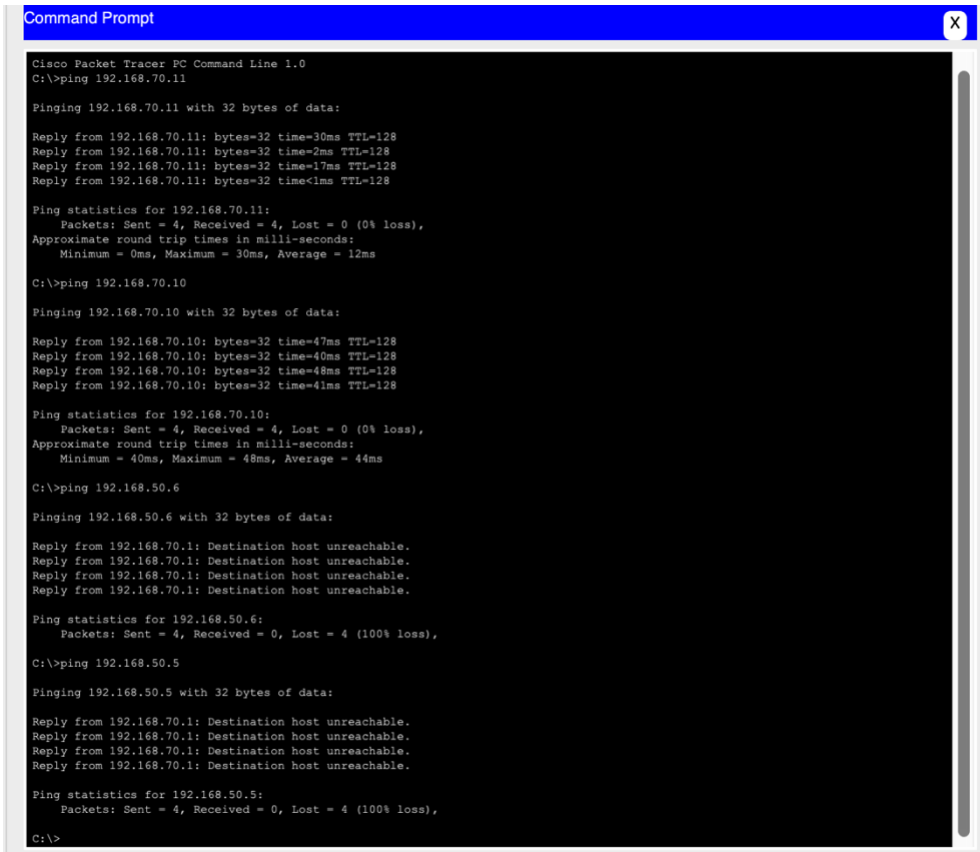

C. Make sure that **devices** are connected to the guest wireless network to meet the project requirements. IP addresses for the devices should be noted in the network diagram PNG or PDF.

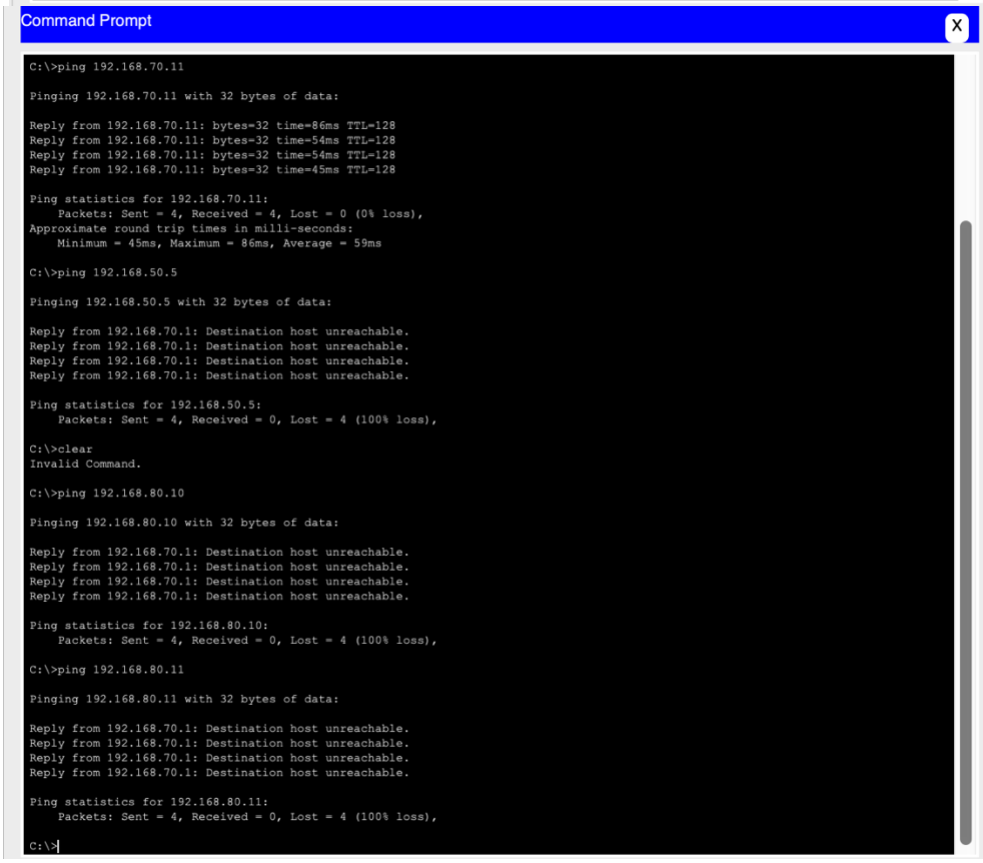



D. Make sure that **cameras** are connected to the video network to meet the project requirements. IP addresses for the cameras should be noted in the network diagram PNG or PDF.

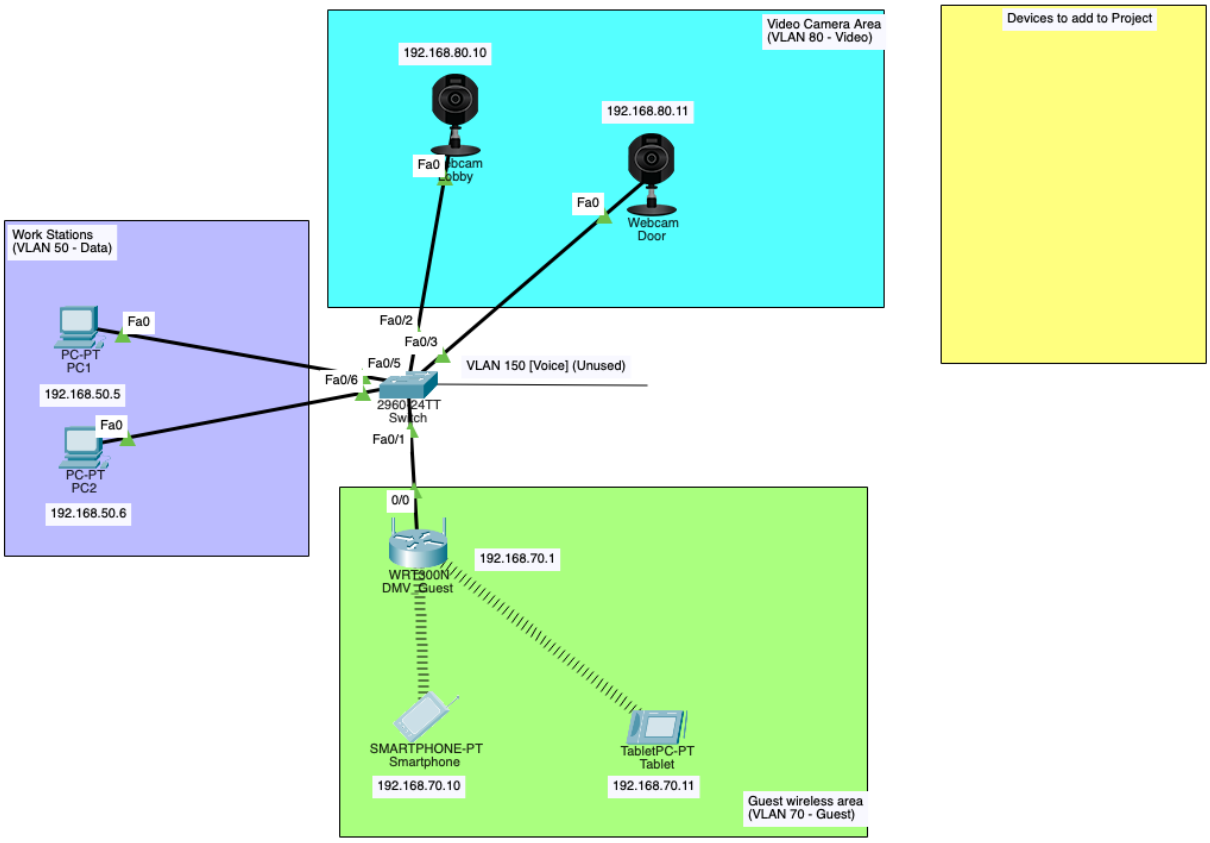



A. Make sure that guest and video networks are **properly segmented.** Submit screenshots of ping tests that prove you have met this project requirement.


Command Prompt
X
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.70.11
Pinging 192.168.70.11 with 32 bytes of data:
Reply from 192.168.70.11: bytes=32 time=30ms TTL=128
Reply from 192.168.70.11: bytes=32 time=2ms TTL=128
Reply from 192.168.70.11: bytes=32 time=17ms TTL=128
Reply from 192.168.70.11: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.70.11:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 30ms, Average = 12ms
C:\>ping 192.168.70.10
Pinging 192.168.70.10 with 32 bytes of data:
Reply from 192.168.70.10: bytes=32 time=47ms TTL=128
Reply from 192.168.70.10: bytes=32 time=40ms TTL=128
Reply from 192.168.70.10: bytes=32 time=48ms TTL=128
Reply from 192.168.70.10: bytes=32 time=41ms TTL=128
Ping statistics for 192.168.70.10:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 40ms, Maximum = 48ms, Average = 44ms
C:\>ping 192.168.50.6
Pinging 192.168.50.6 with 32 bytes of data:
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Ping statistics for 192.168.50.6:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>ping 192.168.50.5
Pinging 192.168.50.5 with 32 bytes of data:
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Ping statistics for 192.168.50.5:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>


Command Prompt
X
C:\>ping 192.168.70.11
Pinging 192.168.70.11 with 32 bytes of data:
Reply from 192.168.70.11: bytes=32 time=86ms TTL=128
Reply from 192.168.70.11: bytes=32 time=54ms TTL=128
Reply from 192.168.70.11: bytes=32 time=54ms TTL=128
Reply from 192.168.70.11: bytes=32 time=45ms TTL=128
Ping statistics for 192.168.70.11:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 45ms, Maximum = 86ms, Average = 59ms
C:\>ping 192.168.50.5
Pinging 192.168.50.5 with 32 bytes of data:
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Ping statistics for 192.168.50.5:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>clear
Invalid Command.
C:\>ping 192.168.80.10
Pinging 192.168.80.10 with 32 bytes of data:
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Ping statistics for 192.168.80.10:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>ping 192.168.80.11
Pinging 192.168.80.11 with 32 bytes of data:
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Reply from 192.168.70.1: Destination host unreachable.
Ping statistics for 192.168.80.11:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>

Network Diagram:




## II. Explanation of Network Segregation

Articulate your response to the questions below.

a. Describe **how network traffic was segmented** to meet the project requirements for guest and video connections.

The start to the segmentation was to create multiple VLANS. I configured the VLANS through the switch and added VLAN 70 and VLAN 80. VLAN 70 was created for the Guest network and VLAN 80 was created as the Video Network for the cameras. VLAN 50 was already created for the computers, so I did not need to configure that VLAN. I then went into the router and

configured the IP address (192.168.70.1) for the Guest Network and the starting IP address (192.168.70.10) with a maximum number of users at 70. I then set the router to DHCP and disabled the authentication. I also configured the IP address (192.168.80.10) and IP address (192.168.80.11) for the lobby camera and door camera. This has created 3 subnets to keep the networks segmented from one another.

b. Explain how you considered the **scalability** of the guest wireless network in order to meet the project requirements (IP addressing, leasing, and so on).

Scalability was considered in my configuration by limiting the number of users to 70 to start. I could not changed the time to 4 hours but more than likely they will not be there for 4 hours at a time. With that being said I think only allowing 70 total guests is appropriate for the DMV. I also think if it needs to be changed, you can easily go into the GUI of the Router and change it from 70, and everything will be fine since the subnets are already set and ready to go.