

6-2 Project One Submission: Network Modification Brief

Andree Salvo

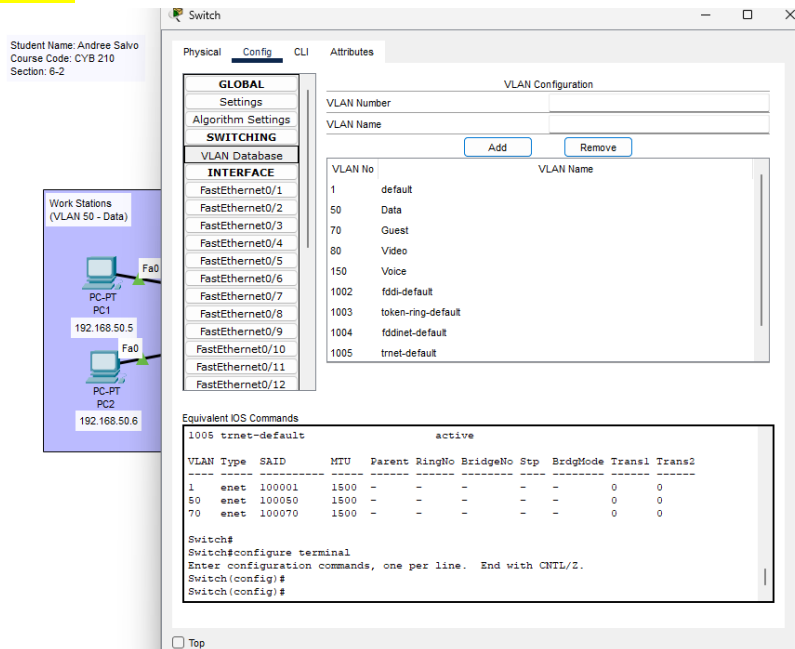
Southern New Hampshire University

Cyb 210

Instructor: Bruce Gonzalez

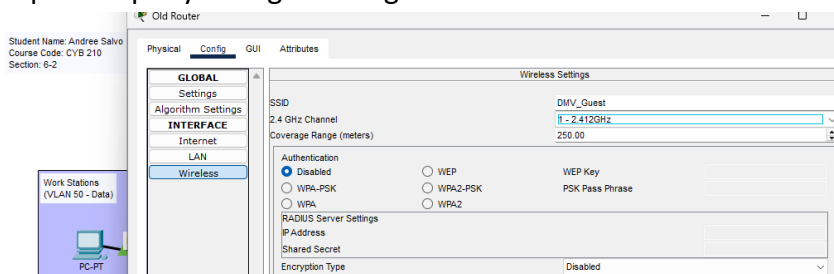
I. Network Reconfigurations

Step A: Properly configure the **VLAN** for guest and video connections



1. Opened the switch
2. Clicked VLAN Database
3. I added VLANs **Guest 70** and **Video 80**. **VLAN 50** and **VLAN 150** were preset.

Step B: Properly configure the guest wireless network



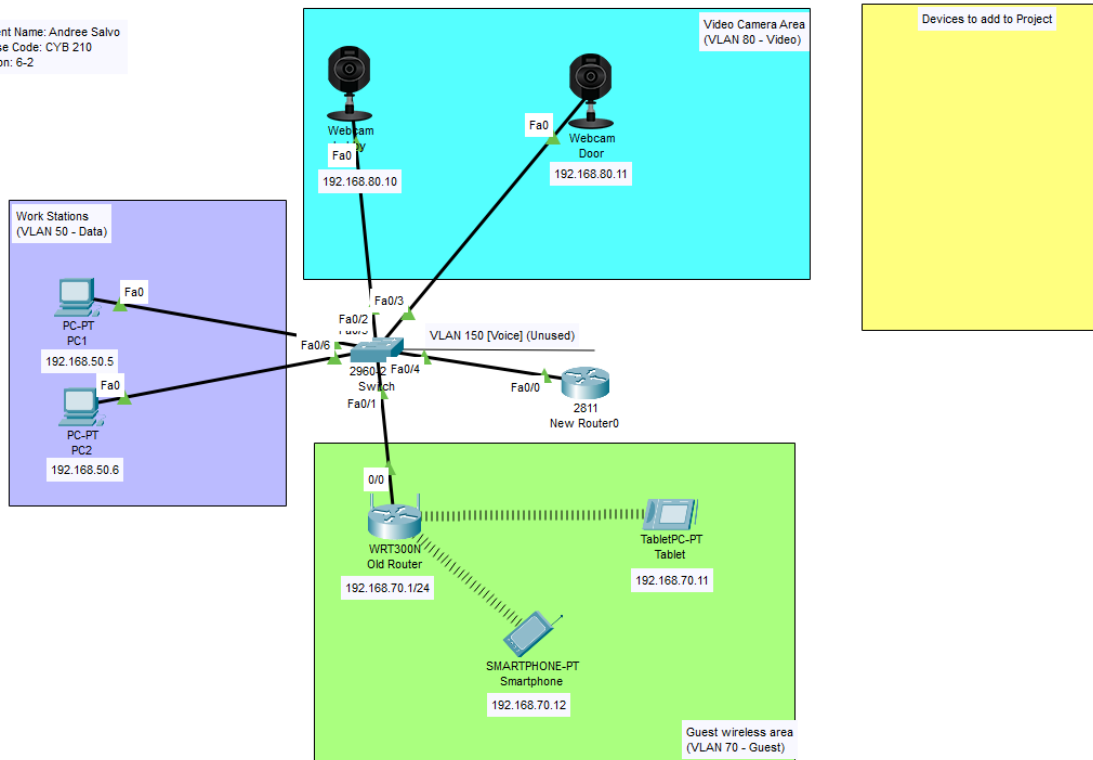
Explanation:

1. Opened the OLD Router
2. Click the config tab
3. Select Wireless
4. Renamed the "SSID" to "DMV_Guest"
5. Authentication > I disabled

Step C: Make sure that **devices** are connected to the guest wireless network

Answer: they are connected

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Step D: Make sure that cameras are connected to the video network

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Work Stations (VLAN 50 - Data)

PC-PT
PC1
192.168.50.5

Fa0
PC-PT

Lobby

Specifications Physical **Config** Attributes

GLOBAL

Settings

Algorithm Settings

Files

INTERFACE

FastEthernet0

Bluetooth

FastEthernet0

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0040.0B56.C7D3

IP Configuration

☐ DHCP

☒ Static

IPv4 Address 192.168.80.110

Subnet Mask 255.255.255.0

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

Link Local Address: FE80::240:BFF:FE56:C7D3

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Work Stations (VLAN 50 - Data)

PC-PT
PC1
192.168.50.5

Fa0
PC-PT
PC2

Door

Specifications Physical **Config** Attributes

GLOBAL

Settings

Algorithm Settings

Files

INTERFACE

FastEthernet0

Bluetooth

FastEthernet0

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 000B.BEE8.A870

IP Configuration

☐ DHCP

☒ Static

IPv4 Address 192.168.80.111

Subnet Mask 255.255.255.0

IPv6 Configuration

☐ Automatic

☒ Static

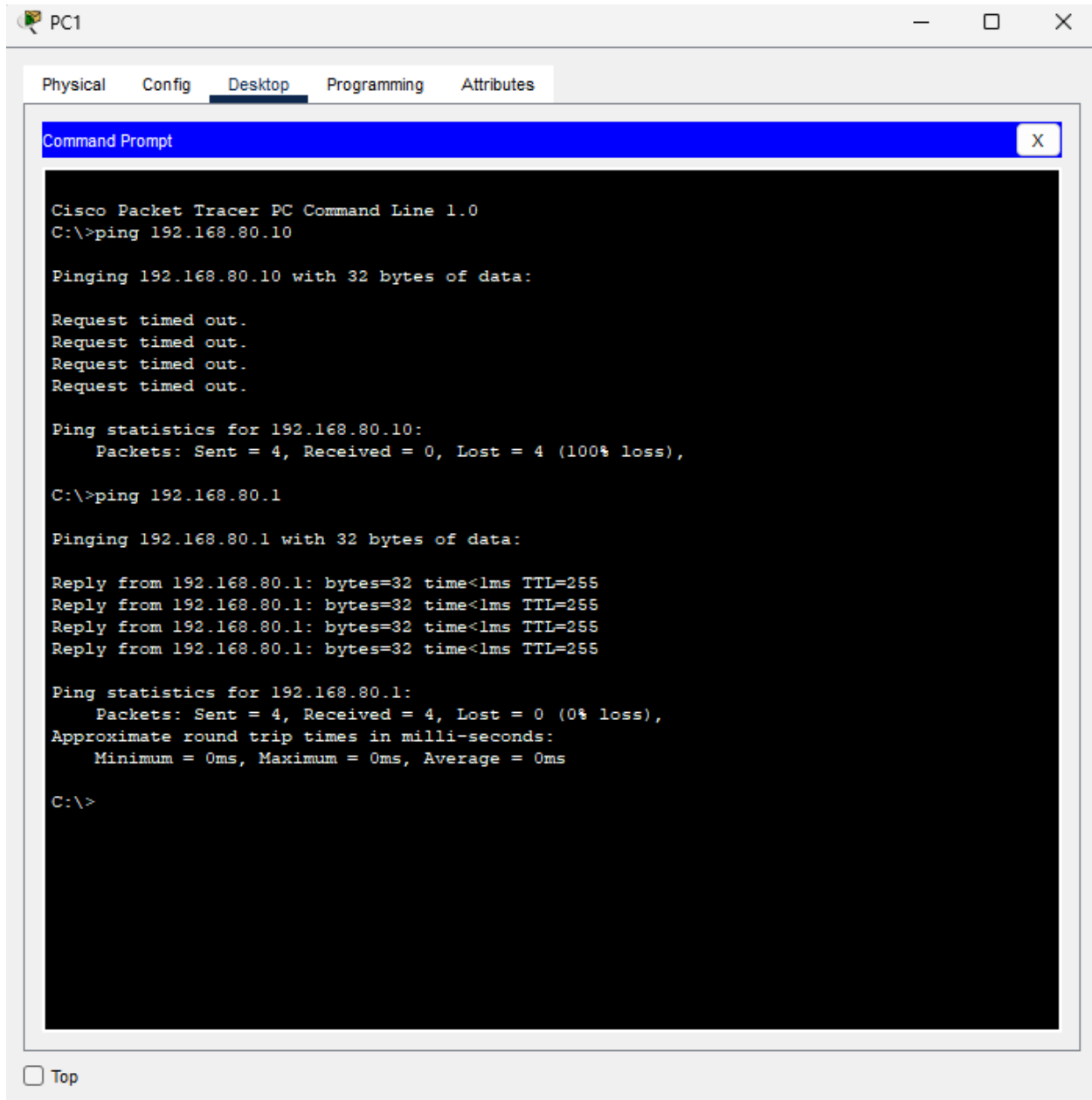
IPv6 Address

Link Local Address: FE80::20B:BEFF:FEE8:A870

Answer: Cameras are connected!

Step E: Make sure that guest and video networks are **properly segmented**, ping tests that prove **you have met this project requirement**.

Answer: I pinged the cameras, and they are properly segmented!



The screenshot shows a Cisco Packet Tracer PC Command Line window for a device named PC1. The window has tabs for Physical, Config, Desktop, Programming, and Attributes, with Desktop selected. The Command Prompt window displays the following text:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.80.10

Pinging 192.168.80.10 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.80.10:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 192.168.80.1

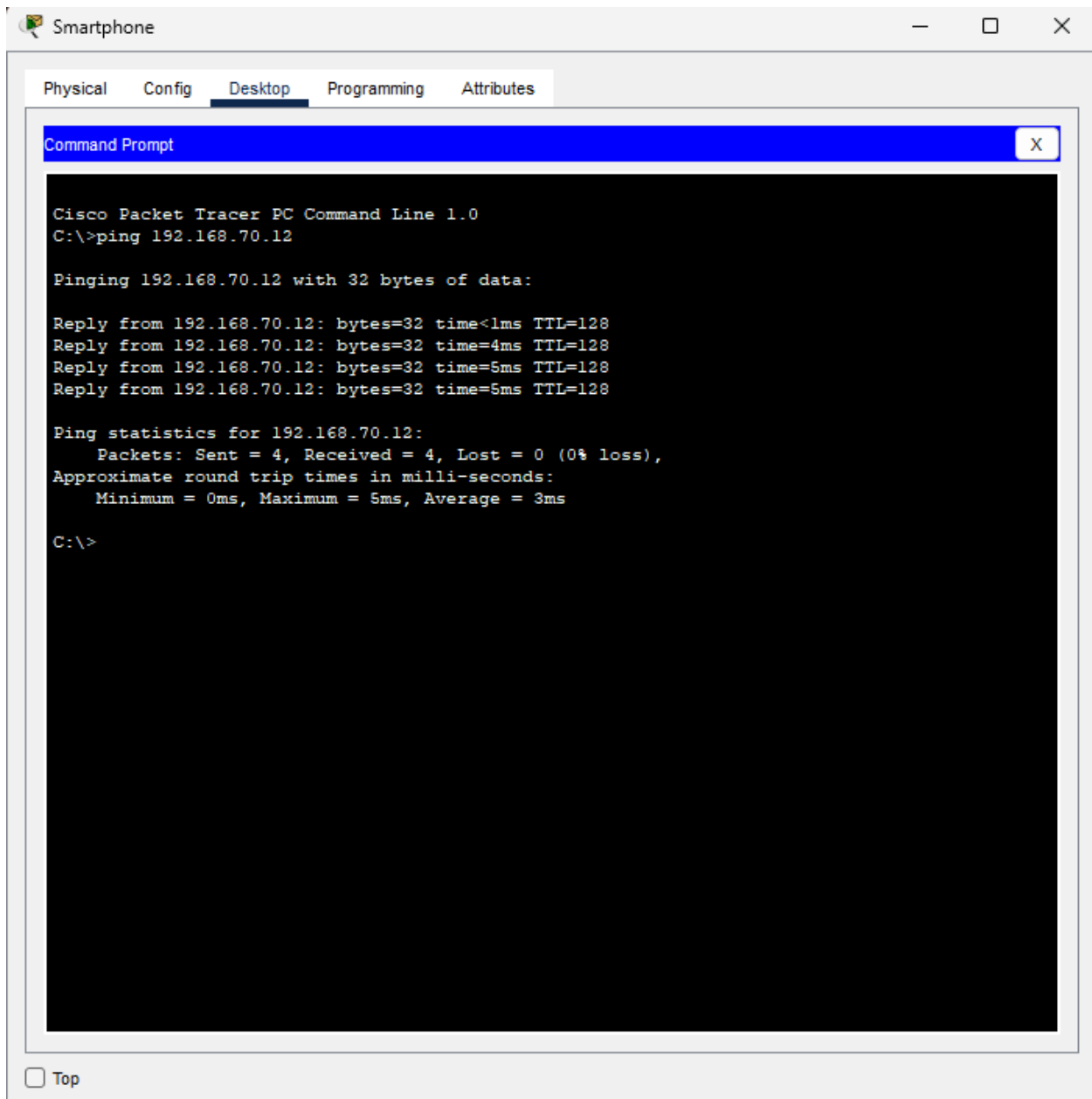
Pinging 192.168.80.1 with 32 bytes of data:

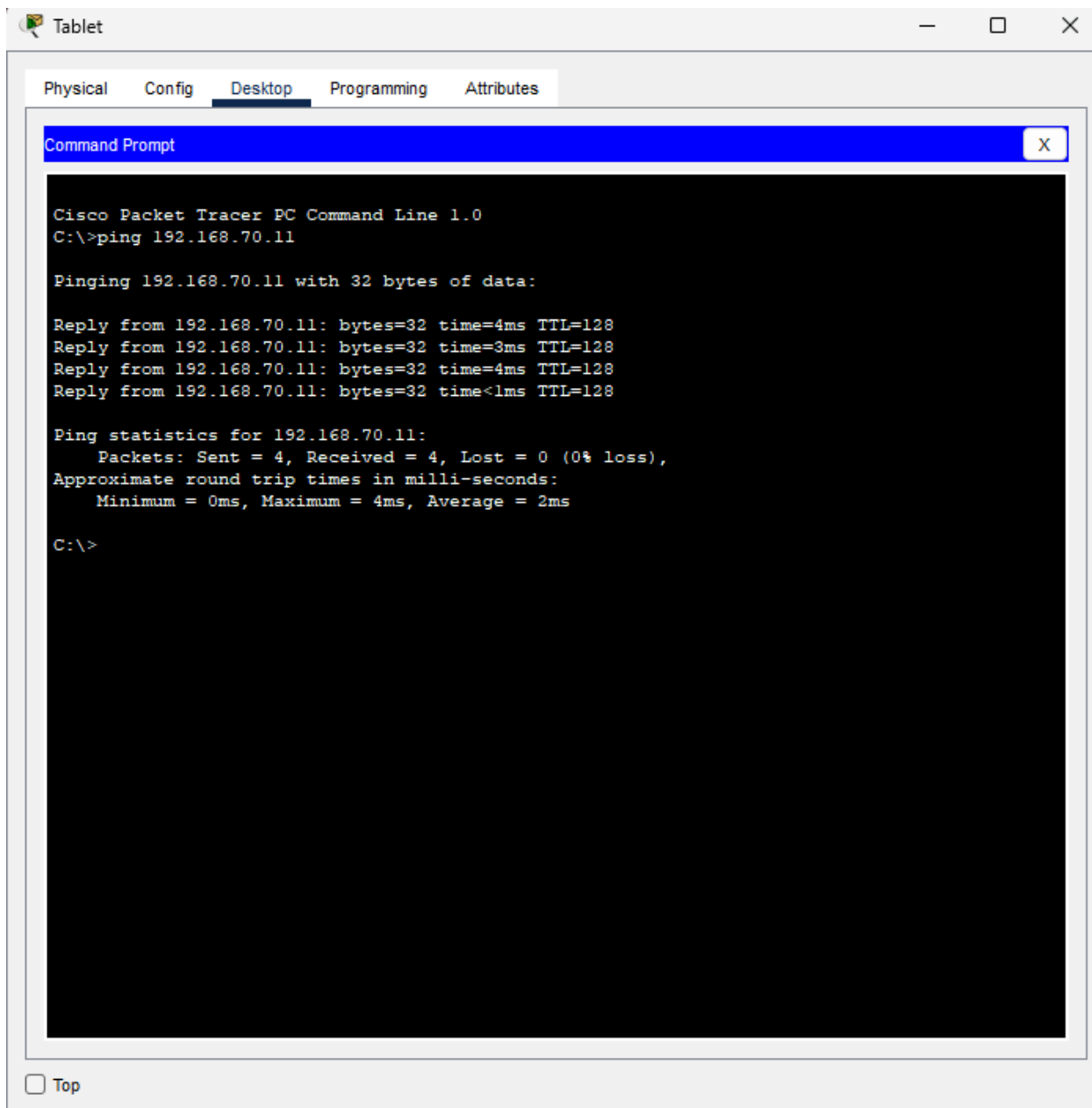
Reply from 192.168.80.1: bytes=32 time<1ms TTL=255
Reply from 192.168.80.1: bytes=32 time<1ms TTL=255
Reply from 192.168.80.1: bytes=32 time<1ms TTL=255
Reply from 192.168.80.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.80.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

At the bottom left of the window, there is a checkbox labeled "Top".





NOTE: I added a new router in Cisco Packet Tracer to enable communication between all VLANs.

```

Device Name: New Router0
Custom Device Model: 2811 IOS15
Hostname: Router

```

Port	Link	VLAN	IP Address	IPv6 Address	MAC Address
FastEthernet0/0	Up	--	<not set>	<not set>	00D0.97B9.B701
FastEthernet0/0.50	Up	--	192.168.50.1/24	<not set>	00D0.97B9.B701
FastEthernet0/0.70	Up	--	192.168.70.1/24	<not set>	00D0.97B9.B701
FastEthernet0/0.80	Up	--	192.168.80.1/24	<not set>	00D0.97B9.B701
FastEthernet0/1	Down	--	<not set>	<not set>	00D0.97B9.B702
Vlan1	Down	1	<not set>	<not set>	00D0.BC82.D5D7

```

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router0

```

I. Explanation of Network Segregation

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

Explanation: The switch segmented the network traffic by multiple VLAN databases. (1) VLAN 70, VLAN 70 is to be used for the guest, which connects to a wireless router, smartphone, and tablet. (2) VLAN 80 is for video. There were only two webcams for this scenario: "Lobby" and "Door." (3) Lastly, VLAN 50 and 150 were already preset and were already segmented by two PCs. PC1 and PC2. VLAN 50 is data, and VLAN 150 is Voice. All four of these VLANs connect together by the switch, and all four work together differently.

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).

Explanation: The scalability of meeting the project requirements allows up to 70 users to connect to a wireless network through the DHCP IP address. I did this from the Router's GUI tab. Although the DMV may be slow, guests are not there for longer than 4 hours and cannot be connected to the guest network for a long.