Question 5.1

Q 5.1.1

Number of Collision Domains: _________ 14
Every port on a switch is a collision domain.
Every port on a router is a collision domain.

Number of Broadcast Domains: _________ 5
Every port on a router is a broadcast domain.
Q 5.1.2

Number of Collision Domains: ________ = 7

Every port on a switch is a collision domain.
Every port on a router is a collision domain.
Everything connected to a hub is in one collision domain.

Number of Broadcast Domains: ________ = 3

Every port on a router is a broadcast domain.
Bridges separate segments into different broadcast domains.
Hubs don’t do anything to separate collisions or broadcasts. They just multiply the signal and send it to every port.
Question 5.2

Q 5.2.6a: How many Fast Ethernet interfaces does the switch have? 24

Q 5.2.6b: How many Gigabit Ethernet interfaces does the switch have? 2

Q 5.2.6c: What is the range of values shown for the VTY lines? 0 – 4 and 5 - 15

Q 5.2.6d: Is an IP address set on the switch? no

Q 5.2.7a Record commands and results

Switch> enable
Switch# conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)# hostname doug_switch
doug_switch(config)#
%SYS-5-CONFIG_I: Configured from console by console

Q 5.2.8a: What is the IOS version that the switch is running? 12.2

Q 5.2.8b: What is the system image filename? C2960-LANBASE-M

Q 5.2.8c: What is the base MAC address of this switch? 0007.EC82.B1ED

Q 5.2.8c: What is the size of NVRAM (Non-Volatile Memory)? 63488K of non-volatile RAM

Q 5.2.9a Try logging from the user mode to the privileged mode and record the results
doug_switch# enable
Password: After typing cisco1 I was allowed to enter the privileged mode.
doug_switch(config)#

5.2.10
doug_switch# enable
Password: After typing cisco1 I was allowed to enter the privileged mode.
doug_switch(config)# enable secret cisco2
CTRL + Z
doug_switch# enable
Password: After typing cisco2 (the elevated secret password) I was allowed to enter the privileged mode.
Question 5.3

For the following questions, everything I typed/entered is in blue. The CLI output is in black.

Q. 5.3.1 Please execute example 9-1 commands and record the results

**SW1>show vlan brief**

<table>
<thead>
<tr>
<th>VLAN Name</th>
<th>Status</th>
<th>Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 default</td>
<td>active</td>
<td>Fa0/1, Fa0/2, Fa0/3, Fa0/4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fa0/5, Fa0/6, Fa0/7, Fa0/8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fa0/9, Fa0/10, Fa0/11, Fa0/12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fa0/13, Fa0/14, Fa0/15, Fa0/16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fa0/17, Fa0/18, Fa0/19, Fa0/20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fa0/21, Fa0/22, Fa0/23, Fa0/24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>G01/1, G01/2</td>
</tr>
<tr>
<td>1002 fddi-default</td>
<td>active</td>
<td></td>
</tr>
<tr>
<td>1003 token-ring-default</td>
<td>active</td>
<td></td>
</tr>
<tr>
<td>1004 fddinet-default</td>
<td>active</td>
<td></td>
</tr>
<tr>
<td>1005 trnet-default</td>
<td>active</td>
<td></td>
</tr>
</tbody>
</table>

**SW1>enable**

**SW1#conf t**

Enter configuration commands, one per line. End with CNTL/Z.

**SW1(config)#vlan 2**

**SW1(config-vlan)#name Freda-vlan**

**SW1(config-vlan)#exit**

**SW1(config)#int range fastEthernet 0/13-14**

**SW1(config-if-range)#switchport access vlan 2**

**SW1(config-if-range)#end**

**SW1**

%SYS-5-CONFIG_I: Configured from console by console

**SW1#show running-config** Note: The name Freda was accepted and applied, but it didn’t show up when I ran show running-config at this point. Ports 13 and 14 are shown as being part of vlan 2, though.

Building configuration...
Current configuration : 1082 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password
!
hostname SW1
!
!
spanning-tree mode pvst
!
interface FastEthernet0/1
!
interface FastEthernet0/2
!
interface FastEthernet0/3
!
interface FastEthernet0/4
!
interface FastEthernet0/5
!
interface FastEthernet0/6
!
interface FastEthernet0/7
!
interface FastEthernet0/8
!
interface FastEthernet0/9
!
interface FastEthernet0/10
!
interface FastEthernet0/11
!
interface FastEthernet0/12
!
interface FastEthernet0/13
switchport access vlan 2
!
interface FastEthernet0/14
switchport access vlan 2
!
interface FastEthernet0/15
!
interface FastEthernet0/16
!
interface FastEthernet0/17
!
interface FastEthernet0/18
!
interface FastEthernet0/19
EdTech 552: Lab Answer Sheet

interface FastEthernet0/20
interface FastEthernet0/21
interface FastEthernet0/22
interface FastEthernet0/23
interface FastEthernet0/24
interface GigabitEthernet1/1
interface GigabitEthernet1/2
interface Vlan1
no ip address
shutdown

line con 0
line vty 0 4
login
line vty 5 15
login

End

**SW1#** show vlan brief

<table>
<thead>
<tr>
<th>VLAN Name</th>
<th>Status</th>
<th>Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>default</td>
<td>active</td>
<td>Fa0/1, Fa0/2, Fa0/3, Fa0/4 Fa0/5, Fa0/6, Fa0/7, Fa0/8 Fa0/9, Fa0/10, Fa0/11, Fa0/12 Fa0/15, Fa0/16, Fa0/17, Fa0/18 Fa0/19, Fa0/20, Fa0/21, Fa0/22 Fa0/23, Fa0/24, Gig1/1, Gig1/2</td>
</tr>
<tr>
<td>Freda-vlan</td>
<td>active</td>
<td>Fa0/13, Fa0/14</td>
</tr>
<tr>
<td>1002 fddi-default</td>
<td>active</td>
<td></td>
</tr>
<tr>
<td>1003 token-ring-default</td>
<td>active</td>
<td></td>
</tr>
<tr>
<td>1004 fddinet-default</td>
<td>active</td>
<td></td>
</tr>
<tr>
<td>1005 trnet-default</td>
<td>active</td>
<td></td>
</tr>
</tbody>
</table>

**SW1#** show vlan id 2

<table>
<thead>
<tr>
<th>VLAN Name</th>
<th>Status</th>
<th>Ports</th>
</tr>
</thead>
</table>
Q. 5.3.2 Please execute example 9-2 commands and record the results

SW1>enable

SW1#conf t

Enter configuration commands, one per line. End with CNTL/Z.

SW1(config)#int range fastEthernet 0/15-16

SW1(config-if-range)#switchport access vlan 3

% Access VLAN does not exist. Creating vlan 3

SW1(config-if-range)#^Z

SW1#

%SYS-5-CONFIG_I: Configured from console by console

SW1#show vlan brief

<table>
<thead>
<tr>
<th>VLAN Name</th>
<th>Status</th>
<th>Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 default</td>
<td>active</td>
<td>Fa0/1, Fa0/2, Fa0/3, Fa0/4 Fa0/5, Fa0/6, Fa0/7, Fa0/8 Fa0/9, Fa0/10, Fa0/11, Fa0/12 Fa0/17, Fa0/18, Fa0/19, Fa0/20 Fa0/21, Fa0/22, Fa0/23, Fa0/24 Gig1/1, Gig1/2</td>
</tr>
<tr>
<td>2 Freda-vlan</td>
<td>active</td>
<td>Fa0/13, Fa0/14</td>
</tr>
<tr>
<td>3 VLAN0003</td>
<td>active</td>
<td>Fa0/15, Fa0/16</td>
</tr>
<tr>
<td>1002 fddi-default</td>
<td>active</td>
<td>\</td>
</tr>
<tr>
<td>1003 token-ring-default</td>
<td>active</td>
<td>\</td>
</tr>
<tr>
<td>1004 fddinet-default</td>
<td>active</td>
<td>\</td>
</tr>
<tr>
<td>1005 trnet-default</td>
<td>active</td>
<td>\</td>
</tr>
</tbody>
</table>

Q. 5.3.3 Please execute example 9-3 commands and record the results

SW1# show interfaces gigabit 1/1 switchport Note: SW1 in the file didn’t have a gigabit port on 0/1. I checked show running-config to find the gigabit ports are 1/1 and 1/2. Port 1/1 did work.
Q. 5.3.4 Please execute example 9-4 commands and record the results

SW1# show interface gigabit 0/1 switchport

%Invalid interface type and number

SW1# show interfaces gigabit 1/1 switchport Note: SW1 in the file didn’t have a gigabit port on 0/1. I checked show running-config to find the gigabit ports are 1/1 and 1/2. Port 1/1 did work.

SW1# conf t

Enter configuration commands, one per line. End with CNTL/Z.

SW1(config)# int gigabit 0/1

%Invalid interface type and number

SW1(config)# int gigabit 1/1

SW1(config-if)# switchport mode dynamic desirable
SW1#

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/1, changed state to up

SW1(config-if)#

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/1, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/1, changed state to up
%SYS-5-CONFIG_I: Configured from console by console

SW1# show interfaces gigabit 1/1 switchport

Name: Gig1/1
Switchport: Enabled
Administrative Mode: dynamic desirable
Operational Mode: trunk
Administrative Trunking Encapsulation: dot1q
Operational Trunking Encapsulation: dot1q
Negotiation of Trunking: On
Access Mode VLAN: 1 (default)
Trunking Native Mode VLAN: 1 (default)
Voice VLAN: none
Administrative private-vlan host-association: none
Administrative private-vlan mapping: none
Administrative private-vlan trunk native VLAN: none
Administrative private-vlan trunk encapsulation: dot1q
Administrative private-vlan trunk normal VLANs: none
Administrative private-vlan trunk private VLANs: none
Operational private-vlan: none
Trunking VLANs Enabled: ALL
Pruning VLANs Enabled: 2-1001
Capture Mode Disabled
Capture VLANs Allowed: ALL
Protected: false
Appliance trust: none

SW1# show interfaces trunk

<table>
<thead>
<tr>
<th>Port</th>
<th>Mode</th>
<th>Encapsulation</th>
<th>Status</th>
<th>Native vlan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gig1/1</td>
<td>auto</td>
<td>n-802.1q</td>
<td>trunking</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port</th>
<th>Vlans allowed on trunk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gig1/1</td>
<td>1-1005</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port</th>
<th>Vlans allowed and active in management domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gig1/1</td>
<td>1,2,3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port</th>
<th>Vlans in spanning tree forwarding state and not pruned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gig1/1</td>
<td>1,2,3</td>
</tr>
</tbody>
</table>
SW1# show vlan id 2

<table>
<thead>
<tr>
<th>VLAN Name</th>
<th>Status</th>
<th>Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Freda-vlan</td>
<td>Fa0/13, Fa0/14</td>
</tr>
</tbody>
</table>

SW1# show interfaces trunk

<table>
<thead>
<tr>
<th>Port</th>
<th>Mode</th>
<th>Encapsulation</th>
<th>Status</th>
<th>Native vlan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gig1/1</td>
<td>auto</td>
<td>n-802.1q</td>
<td>trunking</td>
<td>1</td>
</tr>
</tbody>
</table>

Port   Vlans allowed on trunk
Gig1/1  1-1005

Port   Vlans allowed and active in management domain
Gig1/1  1,2,3,4

Port   Vlans in spanning tree forwarding state and not pruned
Gig1/1  1,2,3,4

Q. 5.3.5 Please execute example 9-5 commands and record the results

SW1> enable

SW1# show interfaces trunk

SW1(config)# vlan 4

SW1(config-vlan)# interface vlan 2 Note: The commands given on page 258 include an error. Since shutdown is an interface command, we needed to add “interface” before the vlan 2 in this statement, as shown in the assignment document.

SW1(config-if)# shutdown

SW1(config-if)#

%LINK-5-CHANGED: Interface Vlan2, changed state to administratively down
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan2, changed state to down

SW1(config-if)# int gig 1/1 Note: SW1 in the file didn’t have a gigabit port on 0/1. I checked show running-config to find the gigabit ports are 1/1 and 1/2. Port 1/1 did work.

SW1(config-if)# switchport trunk allowed vlan remove 3
SW1(config-if)#^Z

SW1#
%SYS-5-CONFIG_I: Configured from console by console

SW1# show interfaces trunk

<table>
<thead>
<tr>
<th>Port</th>
<th>Mode</th>
<th>Encapsulation</th>
<th>Status</th>
<th>Native vlan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gig1/1</td>
<td>auto</td>
<td>n-802.1q trunking</td>
<td>trunking</td>
<td>1</td>
</tr>
</tbody>
</table>

Port Vlans allowed on trunk

<table>
<thead>
<tr>
<th>Port</th>
<th>Vlans allowed on trunk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gig1/1</td>
<td>1-2,4-1005</td>
</tr>
</tbody>
</table>

*Note: VLAN 2 has been shutdown, but it still shows in this list. That is due to a bug in Packet Tracer.*

Port Vlans allowed and active in management domain

<table>
<thead>
<tr>
<th>Port</th>
<th>Vlans allowed and active in management domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gig1/1</td>
<td>1,2,4</td>
</tr>
</tbody>
</table>

Port Vlans in spanning tree forwarding state and not pruned

<table>
<thead>
<tr>
<th>Port</th>
<th>Vlans in spanning tree forwarding state and not pruned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gig1/1</td>
<td>1,2,4</td>
</tr>
</tbody>
</table>