

ASSIGNMENT

COURSE	Networking Fundamental	ASSIGNMENT NO	7
MODULE	vlan	ASSIGNMENT DATE	29/08/2024
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Q1. What is the concept of VLAN and what are its advantages?

Ans:

Definition: A VLAN (Virtual Local Area Network) is a logical grouping of devices on a network that allows them to communicate as if they were on the same physical network, regardless of their actual physical location.

Segmentation: VLANs segment a larger network into smaller, isolated subnetworks, each functioning as an independent network.

Broadcast Control: Devices within the same VLAN can broadcast to each other, but broadcasts do not cross VLAN boundaries unless explicitly routed.

Security: VLANs enhance network security by isolating sensitive data and restricting access to specific groups of users.

Logical Grouping: VLANs allow for the logical grouping of devices based on function, department, or project, rather than physical location.

Advantages of VLAN:

Improved Security: VLANs can isolate sensitive data and limit access to it by segmenting the network into different sections.

Reduced Broadcast Traffic: By confining broadcast traffic to specific VLANs, the overall network traffic is reduced, improving efficiency.

Better Network Management: VLANs simplify network management by allowing network administrators to group devices logically rather than physically.

Flexibility and Scalability: VLANs make it easier to add, move, or change network devices without needing to reconfigure the physical network.

Enhanced Performance: By reducing unnecessary broadcast traffic and segmenting the network, VLANs can improve overall network performance.

Cost-Effective: VLANs eliminate the need for additional physical networks, reducing the cost of hardware and infrastructure.

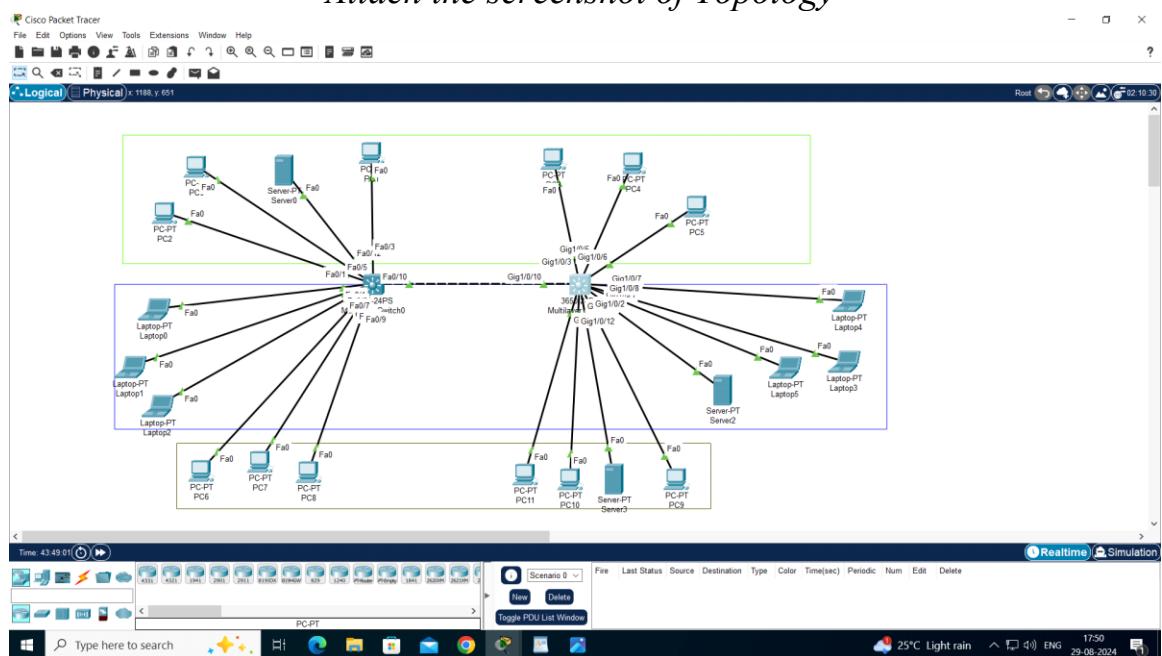
Q2. Your next role involves using two switches divide the internal LAN of your organisation into 3 VLAN's, having 3 end devices in each switch, you can configure a DHCP server.

The Network assigned to you is 10.15.0.0/16, divide this network into required subnet's and assign IP to end devices using DHCP servers.

Solution:

- **Draw the Network and show the topology in Packet Tracer**

“Attach the screenshot of Topology”



- Calculate the total subnet required, show the maths on how many networks required and host ID's

“Do maths clearly showing the new subnet mask and subnets”

Network assigned → 10.15.0.0/16
Netw position → 16
Host position → 16
Original subnet mask → 00001010, 00001111, 00000000, 00000000
11111111, 11111111, 00000000, 00000000
255.255.0.0/16

calculating subnet:

$$\text{No of VLAN required} = 3$$

$\frac{8}{2} \geq 3 \Rightarrow 3 \text{ host bits}$

New subnet Mask:	<u>11111111.11111111.11111111.11</u>	<u>00000000.00000000</u>
	N/W	Host
	→ 255.255.192.0	
10.15.0.0/18	→ 000001010.00001111.00	000000.00000000
Network	→ 000001010.00001111.00	000000.00000000
	10.15.0.0	+1
First host	→ 000001010.00001111.00	000000.00000001
	10.15.0.1	+1
Last host	→ 000001010.00001111.00	111111.11111110
	10.15.63.254	+1
Broadcast	→ 00001010.00001111.00	111111.11111111
	10.15.63.255	+1
<u>Subnet 1:</u> 10.15.0.0/18		
Usable IP: 10.15.0.1 - 10.15.63.255	[+00 -00]	000000.00000000
		111111.11111111
<u>Subnet 2:</u> 10.15.64.0/18		
Usable IP: 10.15.64.1 - 10.15.137.254	[+01 -01]	000000.00000000
		111111.11111111
<u>Subnet 3:</u> 10.15.128.0/18		
Usable IP: 10.15.128.0 - 10.15.191.254	[+10 -10]	000000.00000000
		111111.11111111
<u>Subnet 4:</u> 10.15.192.0/18		
Usable IP: 10.15.192.1 - 10.15.255.254	[+11 -11]	000000.00000000
		111111.11111111

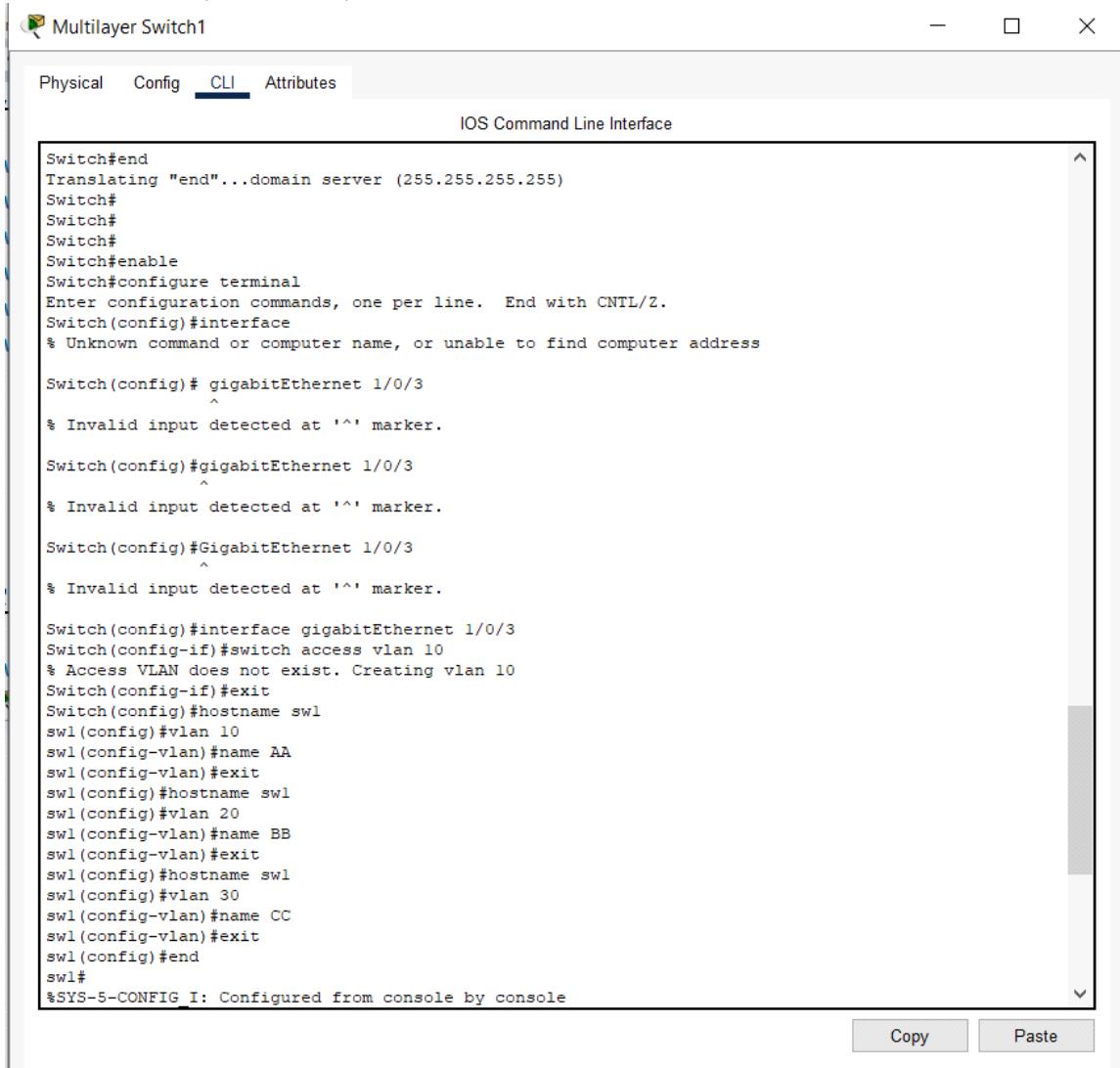
- **Switch Configuration Steps on packet tracer**

Go to Switch>>CLI Press ENTER
Type the following Commands

Switch > enable

Switch# configure Terminal

Switch(conf)# hostname<.....> (Switch Name)
Switch Name(conf)# vlan <.....> (VLAN Number)
Switch Name(conf-vlan)# name <.....> (VLAN Name)
Switch Name(conf-vlan) # exit



```

Switch#end
Translating "end"...domain server (255.255.255.255)
Switch#
Switch#
Switch#
Switch#enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface
% Unknown command or computer name, or unable to find computer address

Switch(config)# gigabitEthernet 1/0/3
^
% Invalid input detected at '^' marker.

Switch(config)#gigabitEthernet 1/0/3
^
% Invalid input detected at '^' marker.

Switch(config)#GigabitEthernet 1/0/3
^
% Invalid input detected at '^' marker.

Switch(config)#interface gigabitEthernet 1/0/3
Switch(config-if)#switch access vlan 10
% Access VLAN does not exist. Creating vlan 10
Switch(config-if)#exit
Switch(config)#hostname swl
swl(config)#vlan 10
swl(config-vlan)#name AA
swl(config-vlan)#exit
swl(config)#hostname swl
swl(config)#vlan 20
swl(config-vlan)#name BB
swl(config-vlan)#exit
swl(config)#hostname swl
swl(config)#vlan 30
swl(config-vlan)#name CC
swl(config-vlan)#exit
swl(config)#end
swl#
%SYS-5-CONFIG_I: Configured from console by console

```

“Similarly configure all VLAN’s”
“Attach screenshot showing all assigned VLAN’s”

Check VLAN Assignment using command

Switch Name# show vlan brief

Multilayer Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
swo#show vlan brief

VLAN Name          Status    Ports
---- -----
1     default      active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                  Fa0/5, Fa0/6, Fa0/7, Fa0/8
                  Fa0/9, Fa0/10, Fa0/11, Fa0/12
                  Fa0/13, Fa0/14, Fa0/15, Fa0/16
                  Fa0/17, Fa0/18, Fa0/19, Fa0/20
                  Fa0/21, Fa0/22, Fa0/23, Fa0/24
                  Gig0/1, Gig0/2

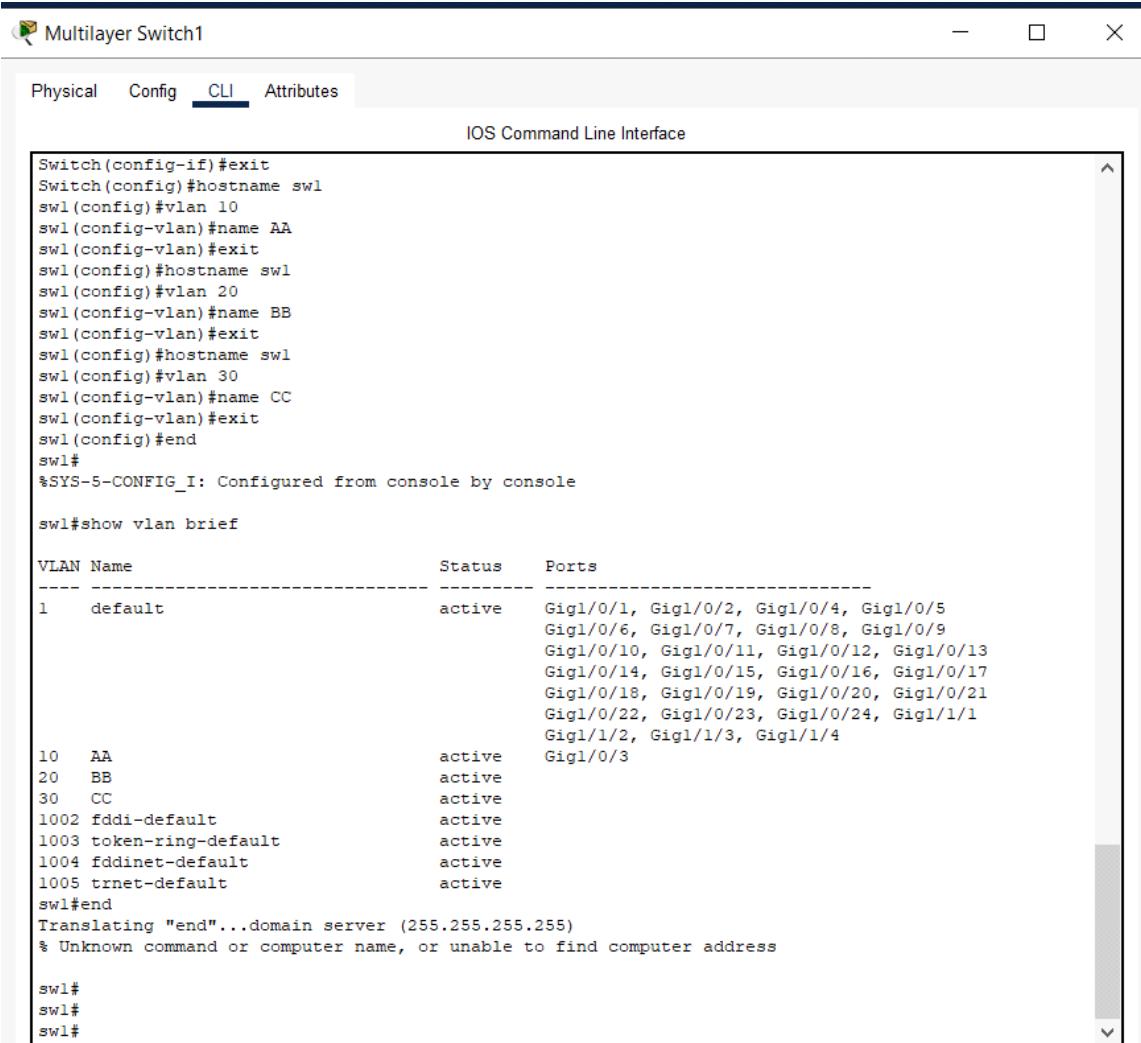
10    AA           active
20    BB           active
30    CC           active
1002  fddi-default active
1003  token-ring-default active
1004  fddinet-default active
1005  trnet-default active
swo#


swo con0 is now available


Press RETURN to get started.
```

Top

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Multilayer Switch1

Physical Config **CLI** Attributes

IOS Command Line Interface

```

Switch(config-if)#exit
Switch(config)#hostname swl
swl(config)#vlan 10
swl(config-vlan)#name AA
swl(config-vlan)#exit
swl(config)#hostname swl
swl(config)#vlan 20
swl(config-vlan)#name BB
swl(config-vlan)#exit
swl(config)#hostname swl
swl(config)#vlan 30
swl(config-vlan)#name CC
swl(config-vlan)#exit
swl(config)#end
swl#
%SYS-5-CONFIG_I: Configured from console by console

swl#show vlan brief

VLAN Name          Status      Ports
---- -----
1    default        active     Gig1/0/1, Gig1/0/2, Gig1/0/4, Gig1/0/5
                                Gig1/0/6, Gig1/0/7, Gig1/0/8, Gig1/0/9
                                Gig1/0/10, Gig1/0/11, Gig1/0/12, Gig1/0/13
                                Gig1/0/14, Gig1/0/15, Gig1/0/16, Gig1/0/17
                                Gig1/0/18, Gig1/0/19, Gig1/0/20, Gig1/0/21
                                Gig1/0/22, Gig1/0/23, Gig1/0/24, Gig1/1/1
                                Gig1/1/2, Gig1/1/3, Gig1/1/4
                                Gig1/0/3

10   AA             active
20   BB             active
30   CC             active
1002 fddi-default  active
1003 token-ring-default  active
1004 fddinet-default  active
1005 trnet-default   active
swl#end
Translating "end"...domain server (255.255.255.255)
% Unknown command or computer name, or unable to find computer address

swl#
swl#
swl#

```

Now, Configure the VLAN Switch Ports

Switch Name(conf)# interface fastethernet 0/... (Port Number)
 Switch Name(conf-if)# switchport access vlan <...> (VLAN Number)
 Switch Name(conf-if)# switchport mode access
 Switch Name(conf-if)# exit

“Similarly configure all VLAN access ports for all VLAN’s”

“Attach screenshots showing VLAN Port assignment”

Multilayer Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
swo>enable
swo#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
swo(config)#interface fastethernet 0/1
swo(config-if)#switchport access vlan 10
swo(config-if)#exit
swo(config)#interface fastethernet 0/3
swo(config-if)#switchport access vlan 10
swo(config-if)#exit
swo(config)#interface fastethernet 0/5
swo(config-if)#switchport access vlan 10
swo(config-if)#exit
swo(config)#interface fastethernet 0/12
swo(config-if)#switchport access vlan 10
swo(config-if)#exit
swo(config)#interface fastethernet 0/4
swo(config-if)#switchport access vlan 20
swo(config-if)#exit
swo(config)#interface fastethernet 0/6
swo(config-if)#switchport access vlan 20
swo(config-if)#exit
swo(config)#interface fastethernet 0/7
swo(config-if)#switchport access vlan 20
swo(config-if)#exit
swo(config)#interface fastethernet 0/2
swo(config-if)#switchport access vlan 30
swo(config-if)#exit
swo(config)#interface fastethernet 0/8
swo(config-if)#switchport access vlan 30
swo(config-if)#exit
swo(config)#interface fastethernet 0/9
swo(config-if)#switchport access vlan 30
swo(config-if)#exit
swo(config)#end
swo#
%SYS-5-CONFIG_I: Configured from console by console
swo#show vlan brief
```

VLAN Name	Status	Ports
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Multilayer Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
swo(config-if)#exit
swo(config)#interface fastethernet 0/12
swo(config-if)#switchport access vlan 10
swo(config-if)#exit
swo(config)#interface fastethernet 0/4
swo(config-if)#switchport access vlan 20
swo(config-if)#exit
swo(config)#interface fastethernet 0/6
swo(config-if)#switchport access vlan 20
swo(config-if)#exit
swo(config)#interface fastethernet 0/7
swo(config-if)#switchport access vlan 20
swo(config-if)#exit
swo(config)#interface fastethernet 0/2
swo(config-if)#switchport access vlan 30
swo(config-if)#exit
swo(config)#interface fastethernet 0/8
swo(config-if)#switchport access vlan 30
swo(config-if)#exit
swo(config)#interface fastethernet 0/9
swo(config-if)#switchport access vlan 30
swo(config-if)#exit
swo(config)#end
swo#
%SYS-5-CONFIG_I: Configured from console by console

swo#show vlan brief

VLAN Name          Status      Ports
---- 
1    default        active     Fa0/10, Fa0/11, Fa0/13, Fa0/14
                           Fa0/15, Fa0/16, Fa0/17, Fa0/18
                           Fa0/19, Fa0/20, Fa0/21, Fa0/22
                           Fa0/23, Fa0/24, Gig0/1, Gig0/2
10   AA             active     Fa0/1, Fa0/3, Fa0/5, Fa0/12
20   BB             active     Fa0/4, Fa0/6, Fa0/7
30   CC             active     Fa0/2, Fa0/8, Fa0/9
1002 fddi-default  active
1003 token-ring-default  active
1004 fddinet-default  active
1005 trnet-default  active
swo#
```

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Multilayer Switch1

Physical Config **CLI** Attributes

IOS Command Line Interface

```
swl>enable
swl#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
swl(config)#interface gigabitEthernet 1/0/3
swl(config-if)#switchport access vlan 10
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/5
swl(config-if)#switchport access vlan 10
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/6
swl(config-if)#switchport access vlan 10
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/4
swl(config-if)#switchport access vlan 20
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/7
swl(config-if)#switchport access vlan 20
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/8
swl(config-if)#switchport access vlan 20
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/1
swl(config-if)#switchport access vlan 20
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/2
swl(config-if)#switchport access vlan 30
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/9
swl(config-if)#switchport access vlan 30
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/12
swl(config-if)#switchport access vlan 30
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/11
swl(config-if)#switchport access vlan 30
swl(config-if)#exit
swl(config)#end
swl#
```

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Multilayer Switch1

Physical Config **CLI** Attributes

IOS Command Line Interface

```

swl(config)#interface gigabitEthernet 1/0/7
swl(config-if)#switchport access vlan 20
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/8
swl(config-if)#switchport access vlan 20
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/1
swl(config-if)#switchport access vlan 20
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/2
swl(config-if)#switchport access vlan 30
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/9
swl(config-if)#switchport access vlan 30
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/12
swl(config-if)#switchport access vlan 30
swl(config-if)#exit
swl(config)#interface gigabitEthernet 1/0/11
swl(config-if)#switchport access vlan 30
swl(config-if)#exit
swl(config)#end
swl#
%SYS-5-CONFIG_I: Configured from console by console

swl#show vlan brief

VLAN Name          Status      Ports
-----  

1    default        active     Gig1/0/10, Gig1/0/13, Gig1/0/14, Gig1/0/15
                                Gig1/0/16, Gig1/0/17, Gig1/0/18, Gig1/0/19
                                Gig1/0/20, Gig1/0/21, Gig1/0/22, Gig1/0/23
                                Gig1/0/24, Gig1/1/1, Gig1/1/2, Gig1/1/3
                                Gig1/1/4
10   AA             active     Gig1/0/3, Gig1/0/5, Gig1/0/6
20   BB             active     Gig1/0/1, Gig1/0/4, Gig1/0/7, Gig1/0/8
30   CC             active     Gig1/0/2, Gig1/0/9, Gig1/0/11, Gig1/0/12
1002 fddi-default  active
1003 token-ring-default  active
1004 fddinet-default  active
1005 trnet-default   active
swl#

```

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Command for configuring Trunk Port For Switch No: 2960

Switch Name(conf)# interface fastethernet 0/... (Port Number)
 Switch Name(conf-if)# switchport trunk allowed vlan all
 Switch Name(conf-if)# switchport mode trunk
 Switch Name(conf-if)# exit

```
swl>enable
swl#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
swl(config)#interface gigabitethernet 1/0/10
swl(config-if)#switchport trunk allowed vlan all
swl(config-if)#switchport trunk mode
^
% Invalid input detected at '^' marker.

swl(config-if)#switchport mode trunk
swl(config-if)#exit
swl(config)#[
```

```
Switch1(config)# interface fastethernet 0/24
Switch1(config-if)# switchport trunk allowed vlan all
Switch1(config-if)# switchport mode trunk
Switch1(config-if)# exit
```

For Switch No: 3650 & 3560

```
Switch Name(conf)# interface fastethernet 0/... (Port Number)
Switch Name(conf-if)# switchport trunk encapsulation dot1q
Switch Name(conf-if)# switchport mode trunk
Switch Name(conf-if)# exit
```

The screenshot shows a Cisco Multilayer Switch (Switch0) running the IOS Command Line Interface (CLI). The window title is "Multilayer Switch0". The tabs at the top are "Physical", "Config", "CLI" (which is selected), and "Attributes". The main area displays the following CLI session:

```
swo con0 is now available

Press RETURN to get started.

swo>enable
swo#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
swo(config)#interface fastethernet 0/10
swo(config-if)#switchport trunk allowed vlan all
swo(config-if)#switch mode trunk
Command rejected: An interface whose trunk encapsulation is "Auto" can not be configured to "trunk" mode.
swo(config-if)#switchport mode trunk
Command rejected: An interface whose trunk encapsulation is "Auto" can not be configured to "trunk" mode.
swo(config-if)#switchport trunk encapsulation dot1q
swo(config-if)#switchport mode trunk

swo(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/10, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/10, changed state to up
swo(config-if)#exit
swo(config)#

```

```
Switch1(config)# interface fastethernet 0/24
Switch1(config-if)# switchport trunk allowed vlan all
Switch1(config-if)# switchport mode trunk
Switch1(config-if)# exit
```

Again, Check VLAN Assignment using command

Switch Name# show vlan brief
switch 0

```

swo>enable
swo#show vlan brief

VLAN Name          Status    Ports
----- -----
1     default       active    Fa0/11, Fa0/13, Fa0/14, Fa0/15
                           Fa0/16, Fa0/17, Fa0/18, Fa0/19
                           Fa0/20, Fa0/21, Fa0/22, Fa0/23
                           Fa0/24, Gig0/1, Gig0/2
10    AA            active    Fa0/1, Fa0/3, Fa0/5, Fa0/12
20    BB            active    Fa0/4, Fa0/6, Fa0/7
30    CC            active    Fa0/2, Fa0/8, Fa0/9
1002  fddi-default active
1003  token-ring-default active
1004  fddinet-default active
1005  trnet-default   active
swo#

```

switch 1

```

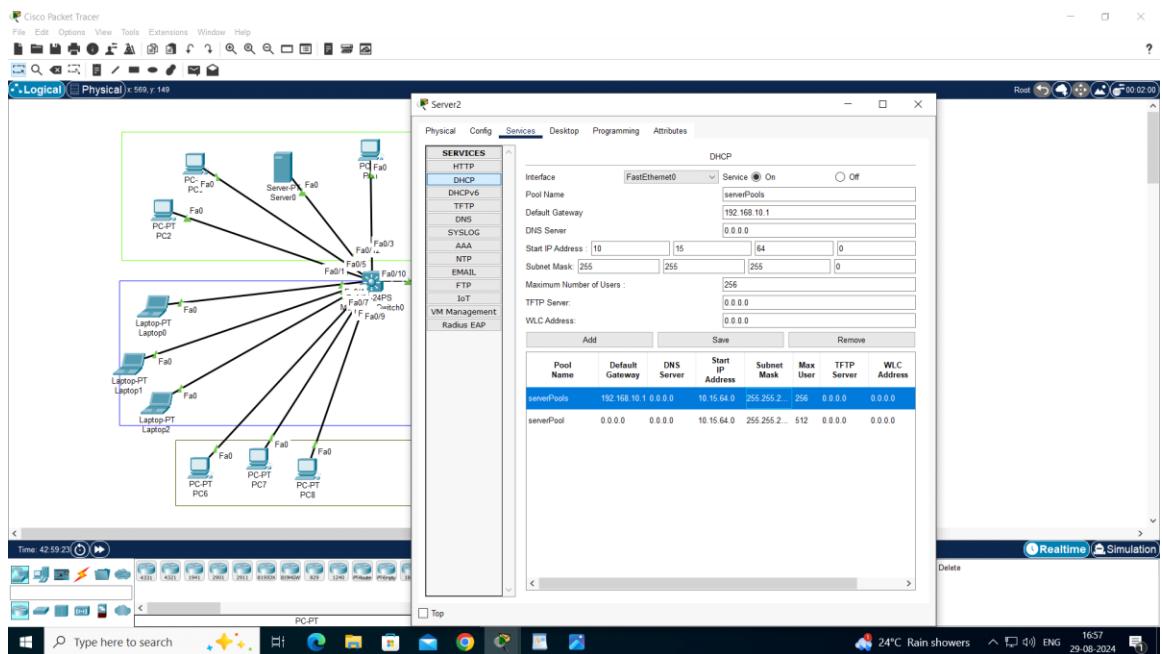
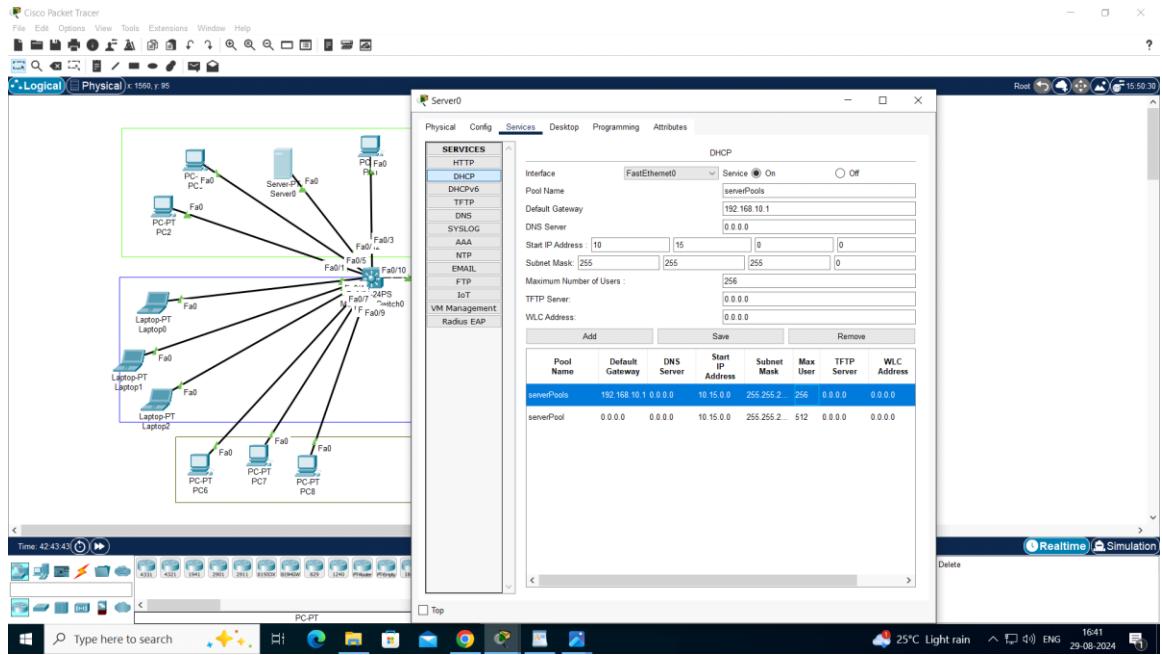
sw1#show vlan brief

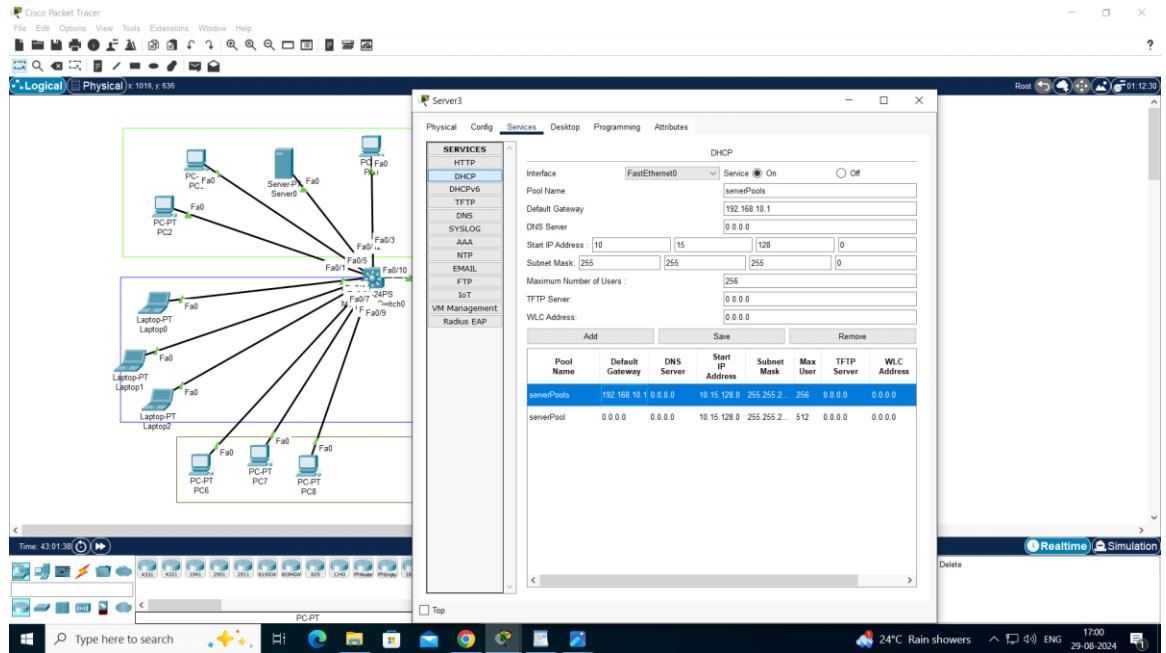
VLAN Name          Status    Ports
----- -----
1     default       active    Gig1/0/13, Gig1/0/14, Gig1/0/15, Gig1/0/16
                           Gig1/0/17, Gig1/0/18, Gig1/0/19, Gig1/0/20
                           Gig1/0/21, Gig1/0/22, Gig1/0/23, Gig1/0/24
                           Gig1/1/1, Gig1/1/2, Gig1/1/3, Gig1/1/4
10    AA            active    Gig1/0/3, Gig1/0/5, Gig1/0/6
20    BB            active    Gig1/0/1, Gig1/0/4, Gig1/0/7, Gig1/0/8
30    CC            active    Gig1/0/2, Gig1/0/9, Gig1/0/11, Gig1/0/12
1002  fddi-default active
1003  token-ring-default active
1004  fddinet-default active
1005  trnet-default   active
sw1#

```

- Configure DHCP Server of each VLAN (Refer Day 5 Assignment)

“Attach the screenshots of each allocated subnets on DHCP Server”

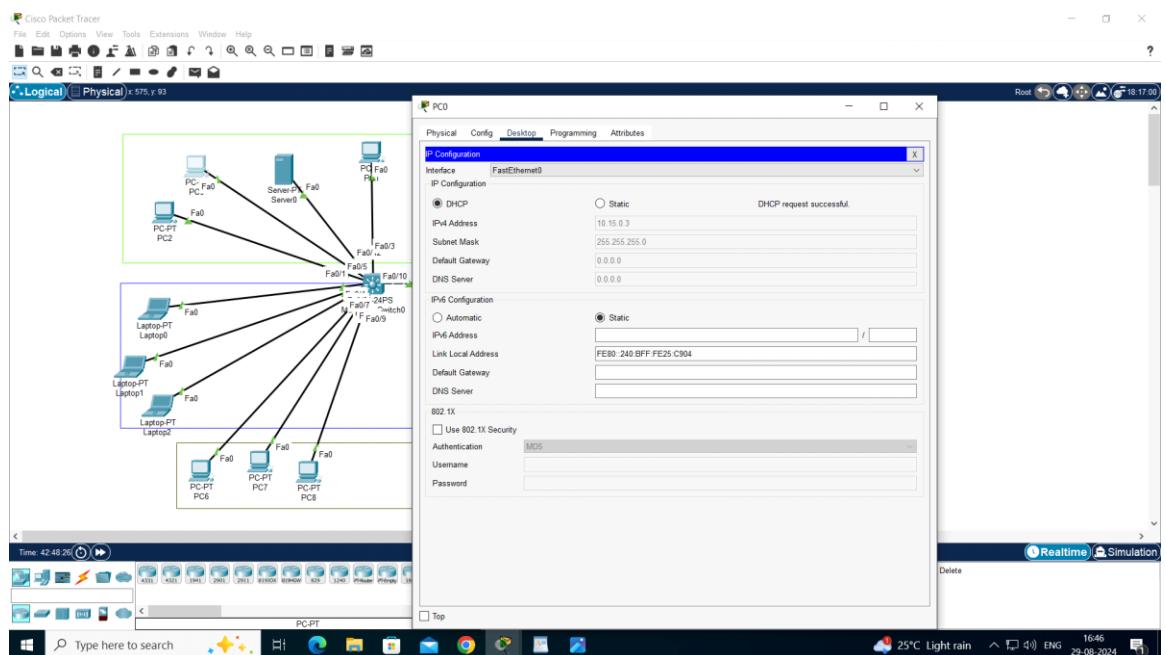


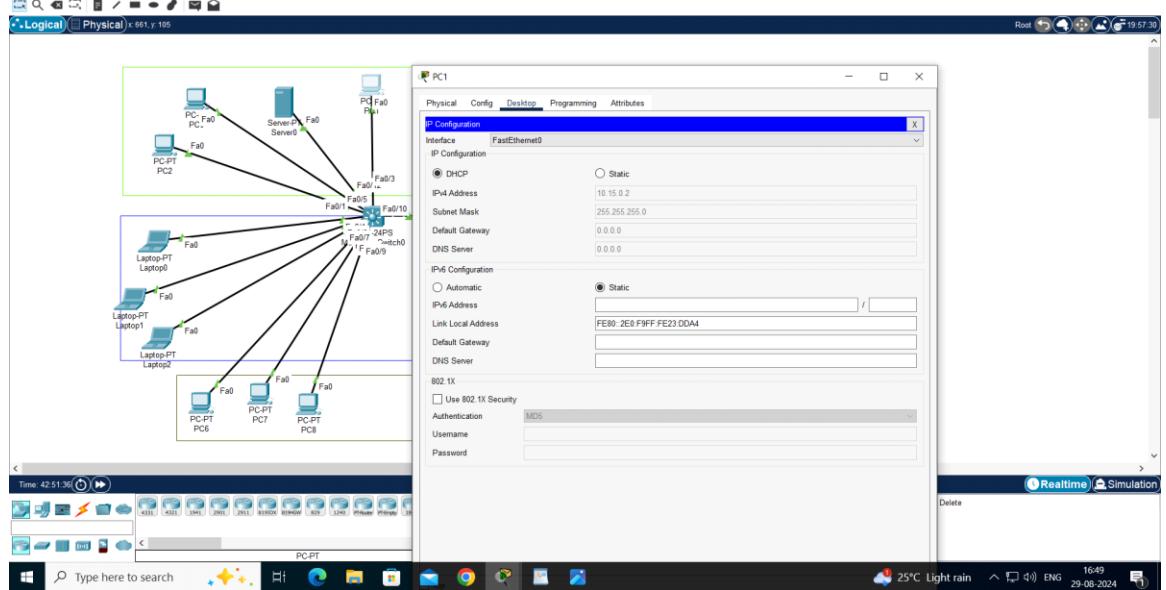
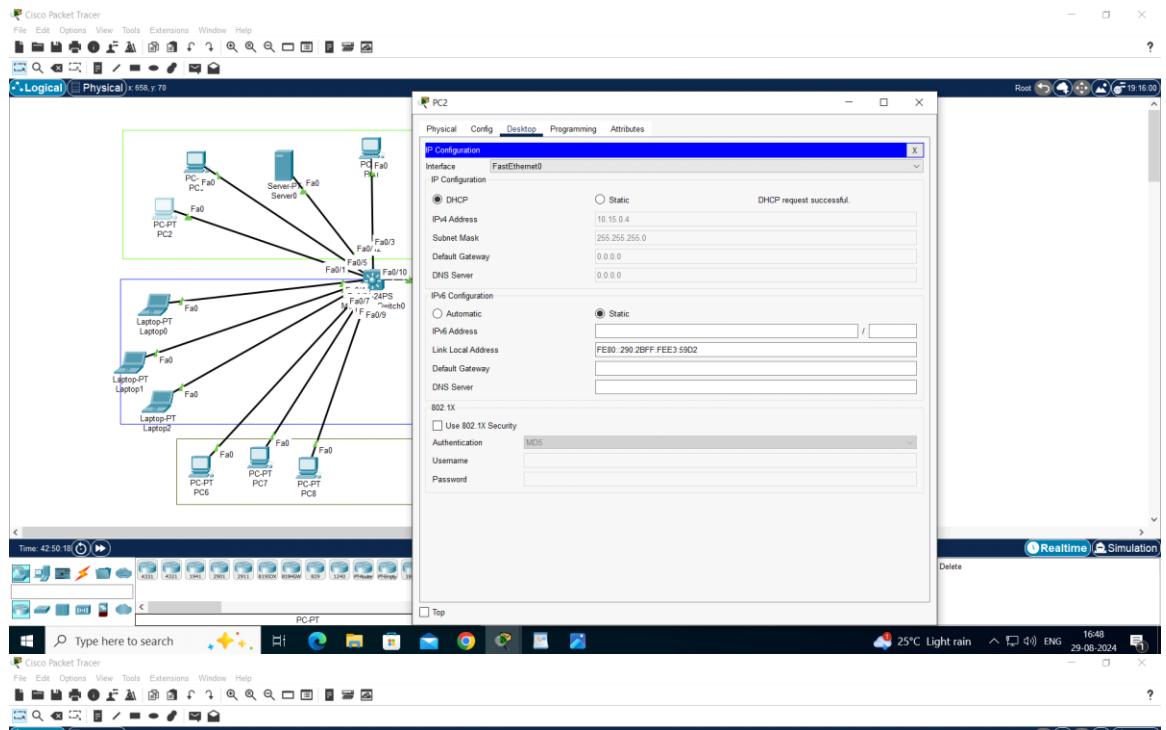


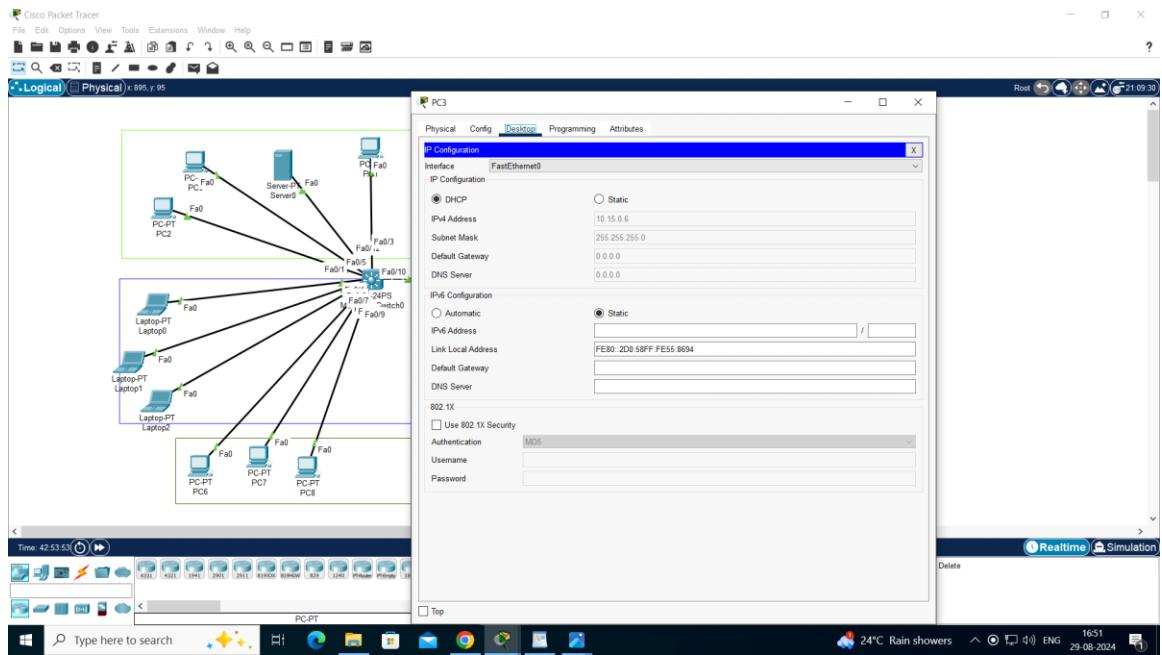
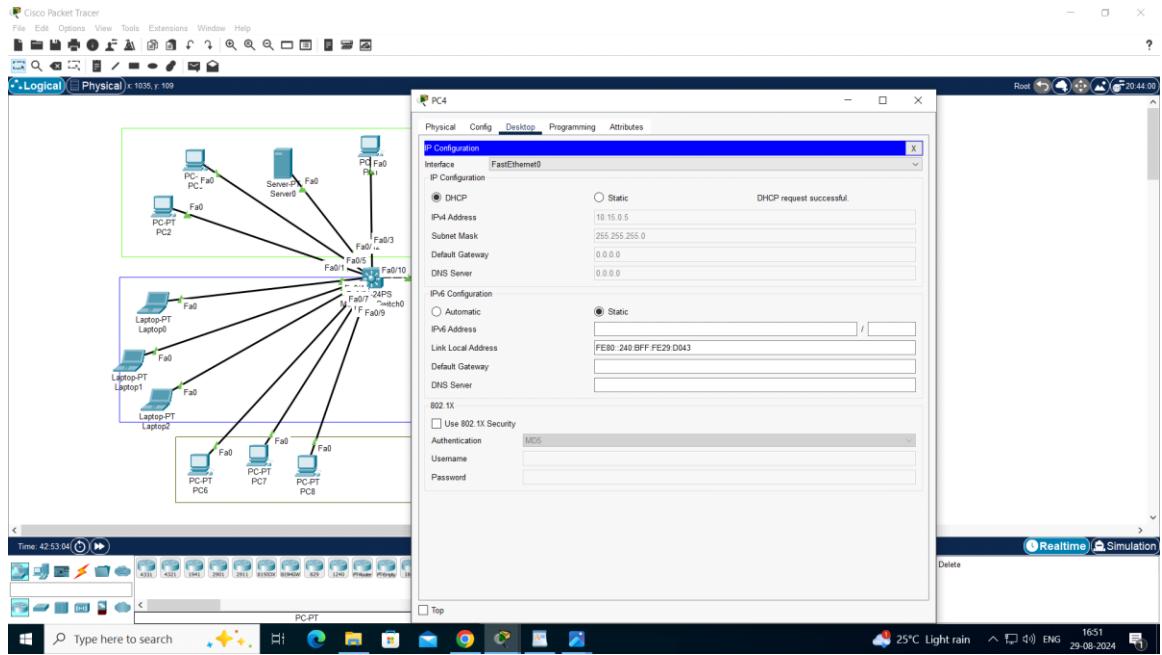
- Assign IP to all end devices using DHCP Server on each VLAN**

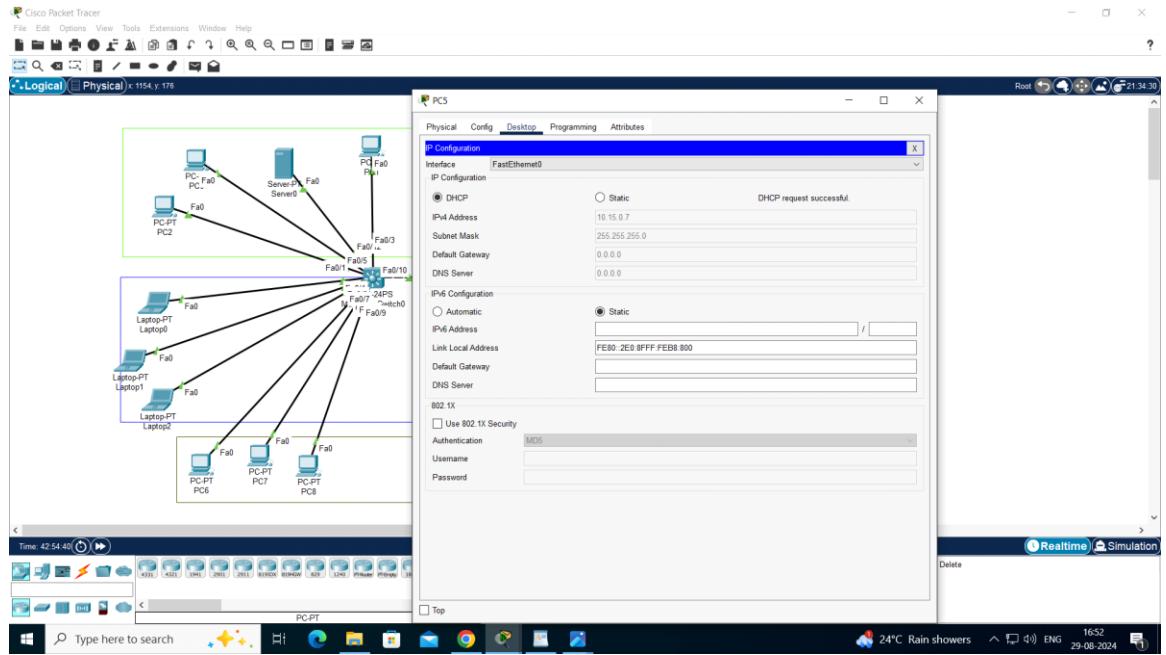
“Attach one screenshot of each subnet”

vlan 1

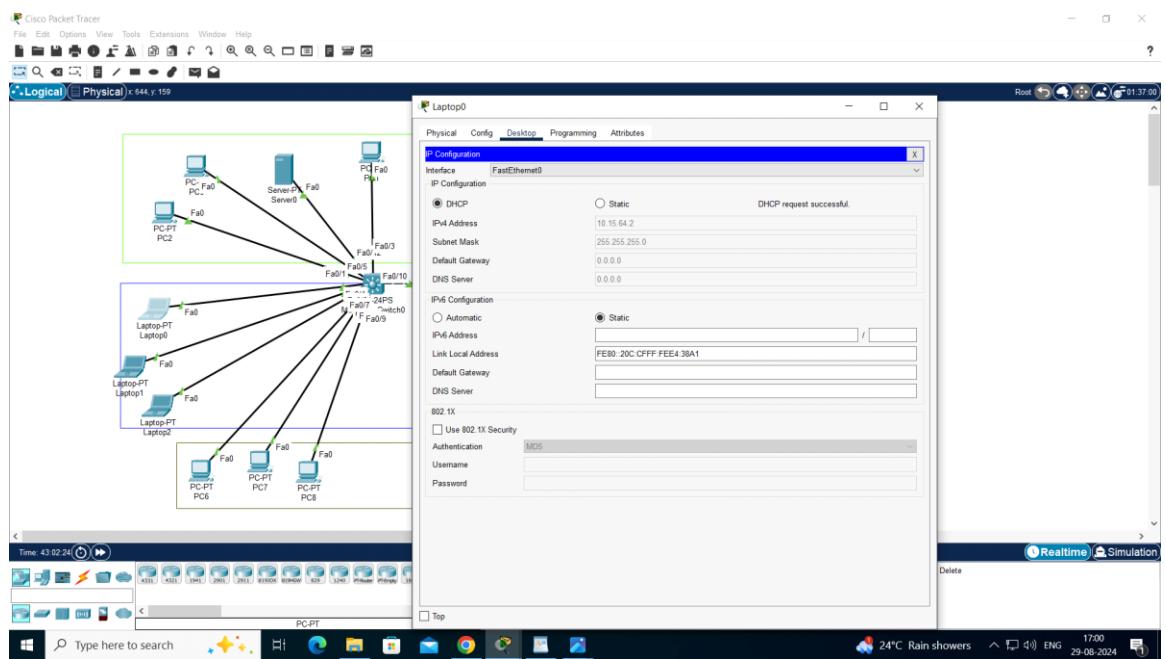


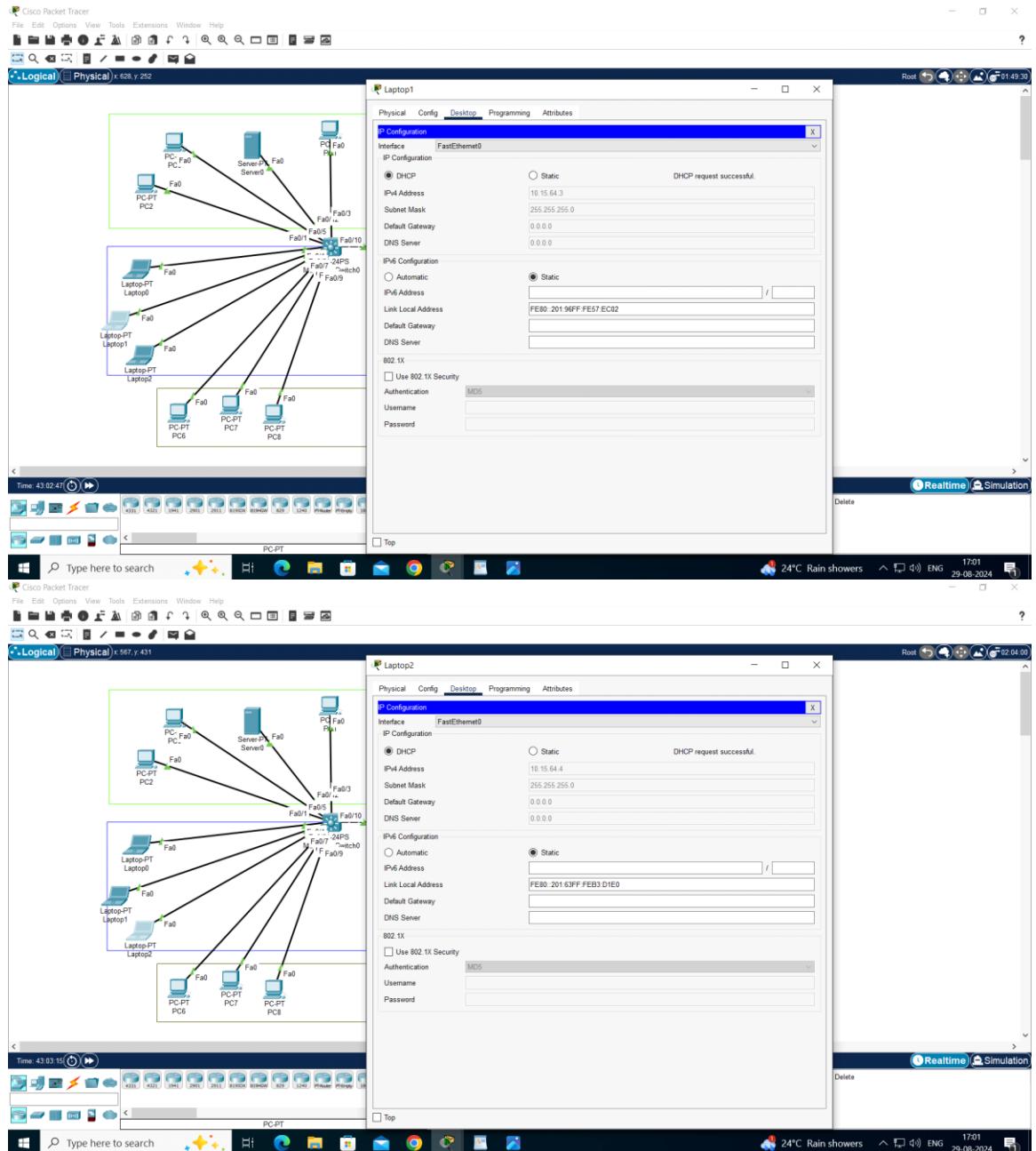


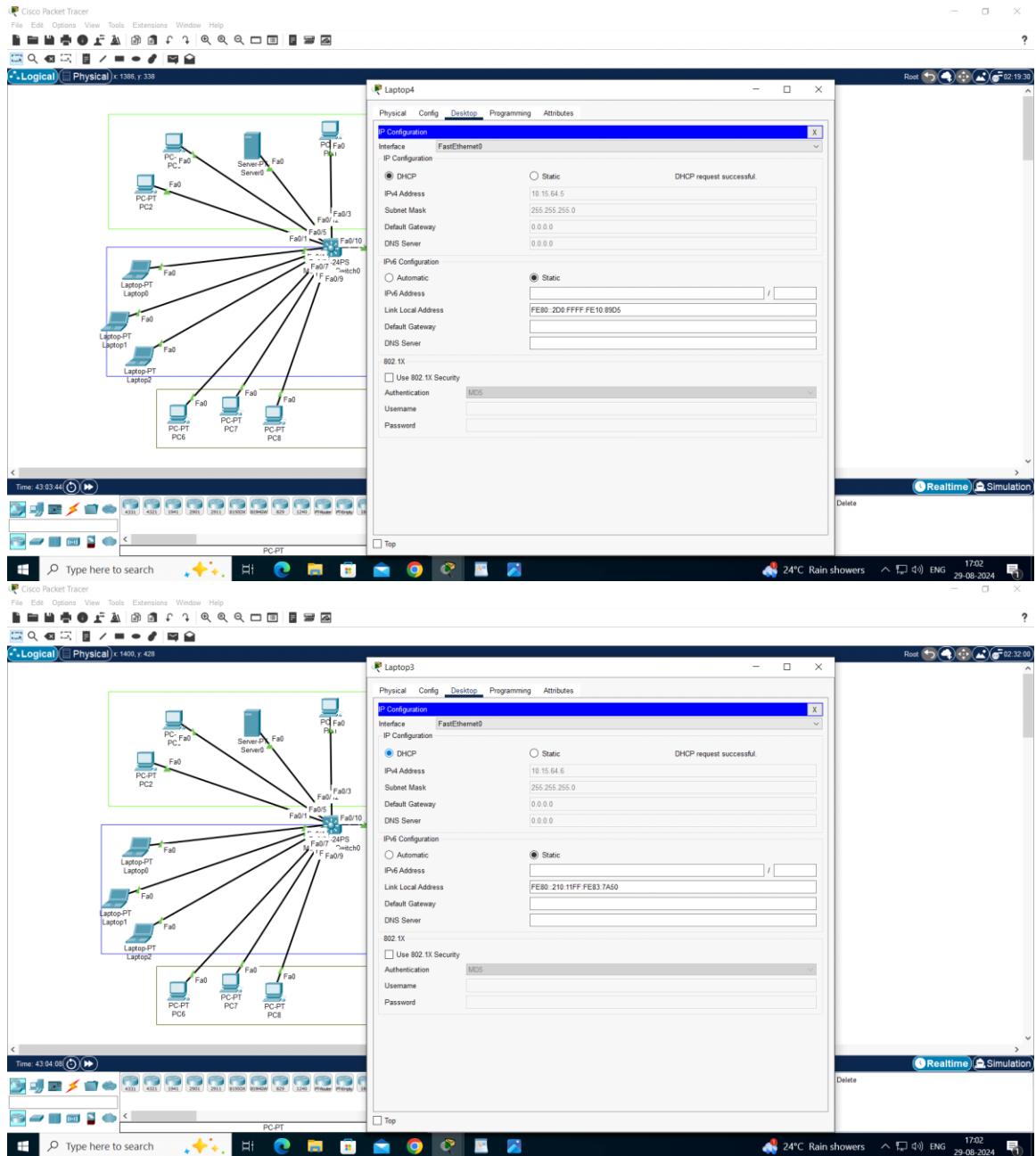


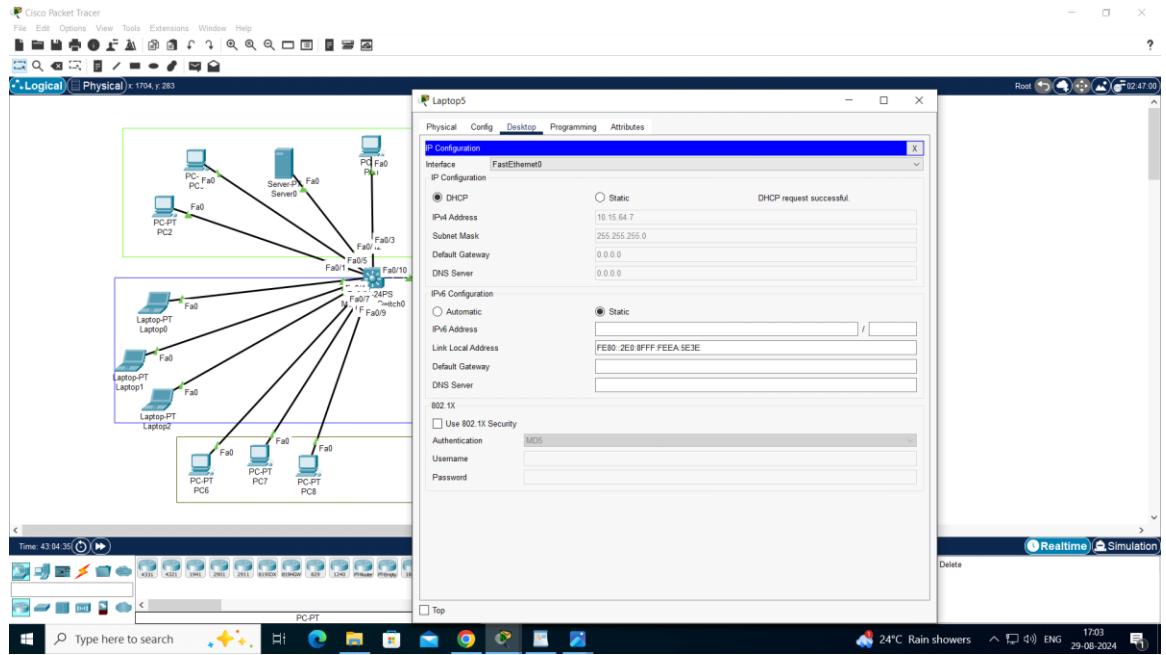


vlan 2

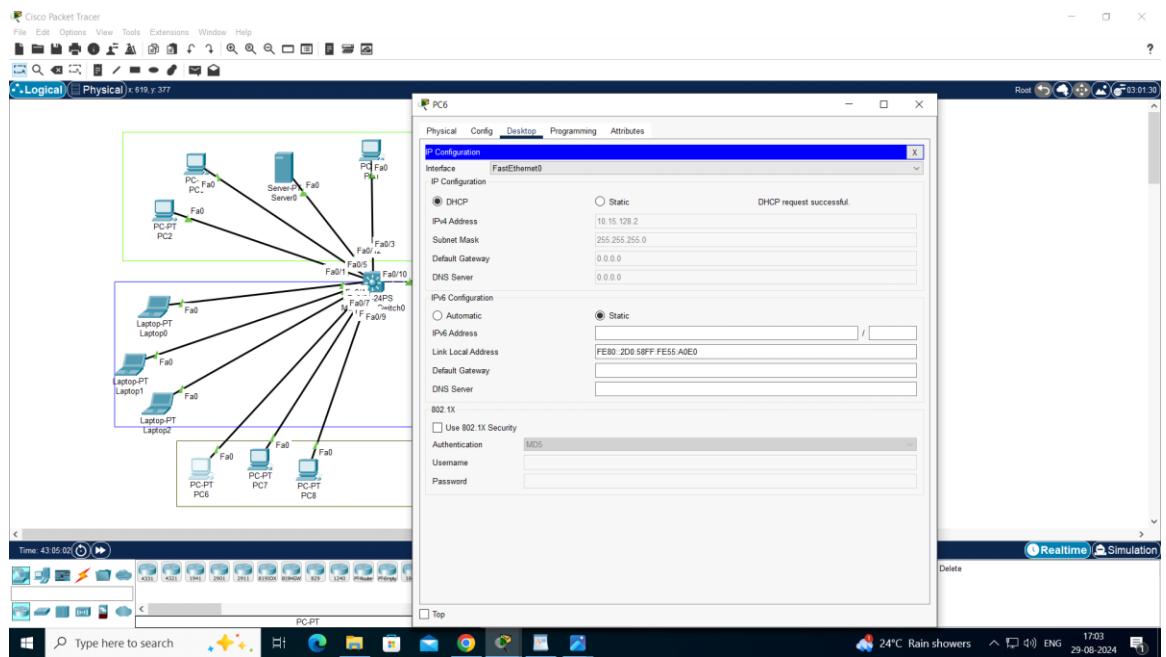


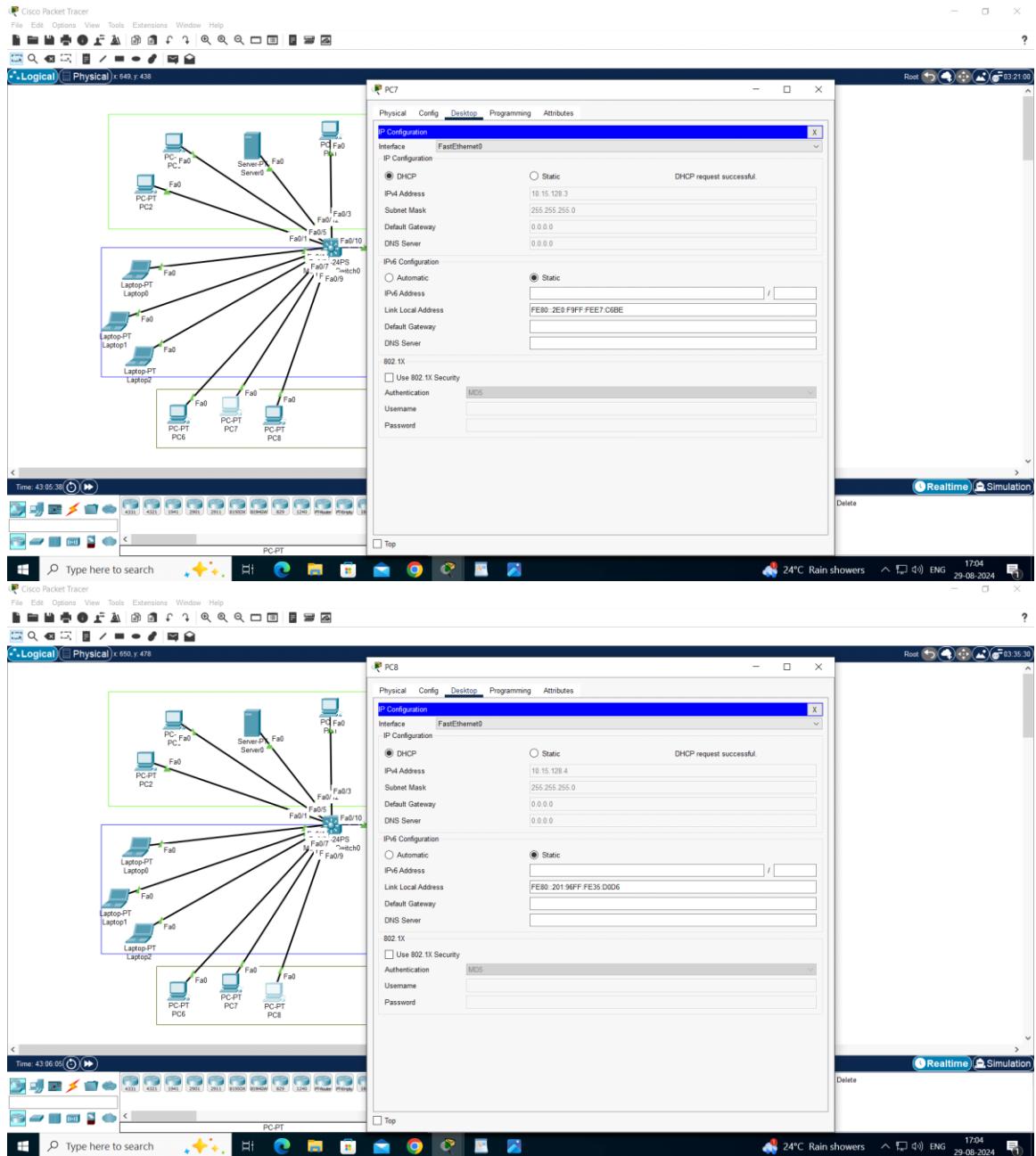


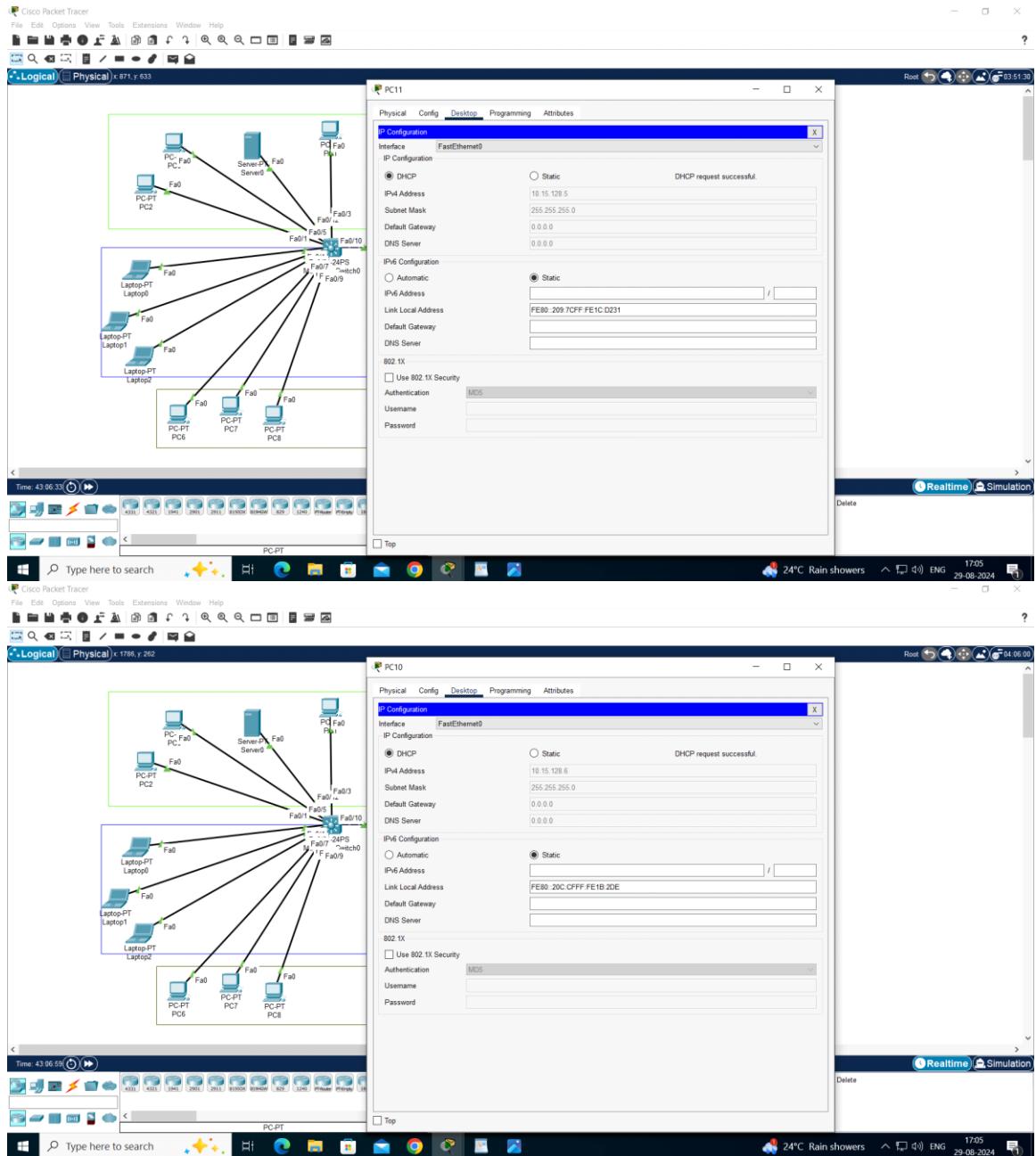


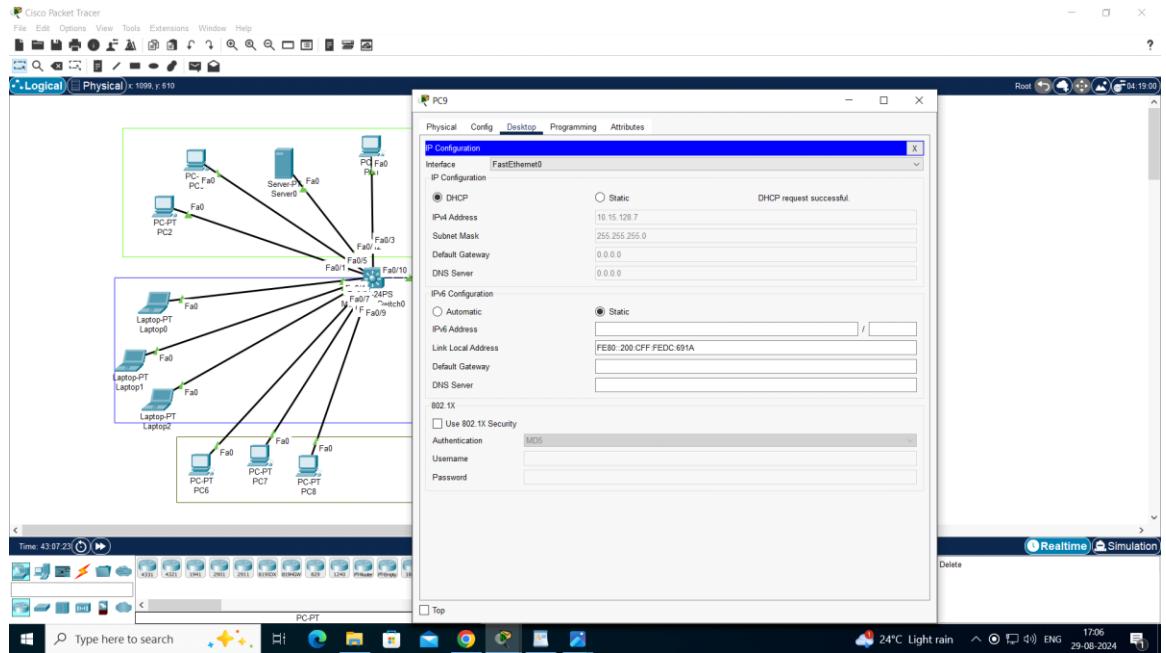


vlan 3









- Check continuity of each VLAN one within VLAN and second INTERVLAN**

“Attach one screenshot of continuity check within VLAN”
“Attach one screenshot of continuity check inter VLAN”

```

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 10.15.0.2 with 32 bytes of data:
Reply from 10.15.0.2: bytes=32 time=1ms TTL=128

Ping statistics for 10.15.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\>ping 10.15.0.4

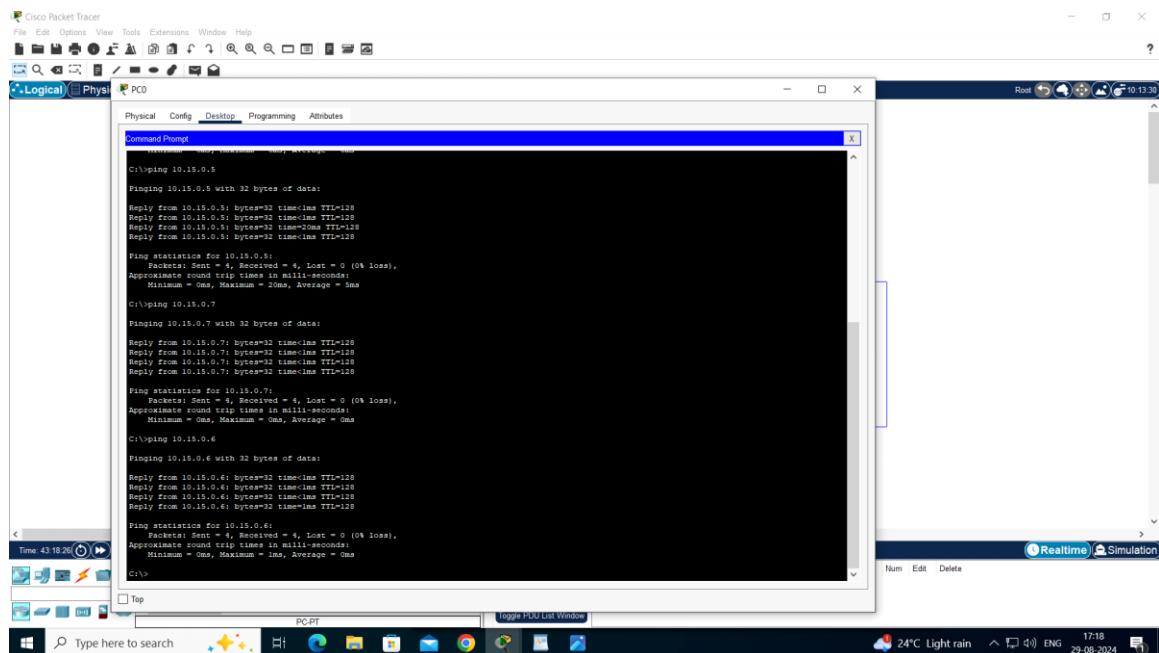
Finging 10.15.0.4 with 32 bytes of data:
Reply from 10.15.0.4: bytes=32 time=1ms TTL=128

Ping statistics for 10.15.0.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 1ms, Average = 1ms

C:\>ping 10.15.0.5

Pinging 10.15.0.5 with 32 bytes of data:
Reply from 10.15.0.5: bytes=32 time=1ms TTL=128
Reply from 10.15.0.5: bytes=32 time=1ms TTL=128
Reply from 10.15.0.5: bytes=32 time=20ms TTL=128
Reply from 10.15.0.5: bytes=32 time=1ms TTL=128

Ping statistics for 10.15.0.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 20ms, Average = 5ms
  
```



Laptop0

Physical Config Desktop Programming Attributes

Command Prompt X

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.64.4

Pinging 192.168.64.4 with 32 bytes of data:

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

Ping statistics for 192.168.64.4:
  Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
```

pc6:

```
C:\>ping 10.15.0.3

Pinging 10.15.0.3 with 32 bytes of data:

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

Ping statistics for 10.15.0.3:
  Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
```

PC6

Physical Config Desktop Programming Attributes

Command Prompt X

```
Invalid Command.

C:\>ping 10.15.128.5

Pinging 10.15.128.5 with 32 bytes of data:

Reply from 10.15.128.5: bytes=32 time<1ms TTL=128

Ping statistics for 10.15.128.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 10.15.128.6

Pinging 10.15.128.6 with 32 bytes of data:

Reply from 10.15.128.6: bytes=32 time<1ms TTL=128
Reply from 10.15.128.6: bytes=32 time=17ms TTL=128
Reply from 10.15.128.6: bytes=32 time<1ms TTL=128
Reply from 10.15.128.6: bytes=32 time=1ms TTL=128

Ping statistics for 10.15.128.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 17ms, Average = 4ms

C:\>ping 10.15.128.7

Pinging 10.15.128.7 with 32 bytes of data:

Reply from 10.15.128.7: bytes=32 time<1ms TTL=128

Ping statistics for 10.15.128.7:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Top

- **After finishing the connectivity check continuity of each VLAN from both sides check MAC-Address Table**

First Switch

Command **Switch# show mac-address-table**

Multilayer Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
swo>enable
swo#show mac-address-table
^
% Invalid input detected at '^' marker.

swo#show mac address table
^
% Invalid input detected at '^' marker.

swo#show mac address-table
Mac Address Table
-----
Vlan      Mac Address          Type      Ports
----      -----
1        000c.859b.750a    DYNAMIC   Fa0/10
swo#
swo#sh mac address-table
Mac Address Table
-----
Vlan      Mac Address          Type      Ports
----      -----
1        000c.859b.750a    DYNAMIC   Fa0/10
10       0040.0b25.c904    DYNAMIC   Fa0/1
20       0001.63b3.d1e0    DYNAMIC   Fa0/7
20       0001.9657.ec02    DYNAMIC   Fa0/6
20       000c.cfe4.38a1    DYNAMIC   Fa0/4
20       0010.1183.7a50    DYNAMIC   Fa0/10
20       0040.ff10.89d5    DYNAMIC   Fa0/10
20       00e0.8fea.5e3e    DYNAMIC   Fa0/10
30       0000.0cdc.691a    DYNAMIC   Fa0/10
30       0001.9635.d0d6    DYNAMIC   Fa0/9
30       0009.7clc.d231    DYNAMIC   Fa0/10
30       000c.cf1b.02de    DYNAMIC   Fa0/10
30       00d0.5855.a0e0    DYNAMIC   Fa0/2
30       00e0.f9b6.95ed    DYNAMIC   Fa0/10
30       00e0.f9e7.c6be    DYNAMIC   Fa0/8
swo#
```

“Write down your observation”
“Attach the screenshot of your findings”

Second Switch

Command **Switch# show mac-address-table**

Multilayer Switch1

Physical Config **CLI** Attributes

IOS Command Line Interface

```
sw1>enable
sw1#show mac address-table
      Mac Address Table
-----
Vlan   Mac Address        Type      Ports
----  -----
  1    00d0.58c0.310a  DYNAMIC   Gig1/0/10
 10   00d0.58c0.310a  DYNAMIC   Gig1/0/10
 20   00d0.58c0.310a  DYNAMIC   Gig1/0/10
 30   00d0.58c0.310a  DYNAMIC   Gig1/0/10
sw1#sh mac address-table
      Mac Address Table
-----
Vlan   Mac Address        Type      Ports
----  -----
  1    00d0.58c0.310a  DYNAMIC   Gig1/0/10
 10   00d0.58c0.310a  DYNAMIC   Gig1/0/10
 20   000c.cfe4.38a1  DYNAMIC   Gig1/0/10
 20   0010.1183.7a50  DYNAMIC   Gig1/0/4
 20   00d0.58c0.310a  DYNAMIC   Gig1/0/10
 20   00d0.ff10.89d5  DYNAMIC   Gig1/0/7
 20   00e0.8fea.5e3e  DYNAMIC   Gig1/0/8
 30   0000.0cdc.691a  DYNAMIC   Gig1/0/2
 30   0001.9635.d0d6  DYNAMIC   Gig1/0/10
 30   0009.7clc.d231  DYNAMIC   Gig1/0/11
 30   000c.cf1b.02de  DYNAMIC   Gig1/0/12
 30   00d0.5855.a0e0  DYNAMIC   Gig1/0/10
 30   00d0.58c0.310a  DYNAMIC   Gig1/0/10
 30   00e0.f9b6.95ed  DYNAMIC   Gig1/0/9
 30   00e0.f9e7.c6be  DYNAMIC   Gig1/0/10
sw1#
```

“Write down your observation”
“Attach the screenshot of your findings”