Lab – 7

Name: Amit Kumar Sahu

Reg. No: 18mis7250

1. MAN

Network 1
192.168.1.0/24

Network 2
192.168.2.0/24

2911
Router0

LAN 1
192.168.1.0
255.255.255.0

LAN 2
192.168.2.0
255.255.255.0

PC-PT
192.168.2.5

PC-PT
192.168.1.5

2960-24TT
Switch0

2960-24TT
Switch1

PC-PT
192.168.2.6

PC-PT
192.168.1.6

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PC-PT
192.168.1.7

PC-PT
192.168.2.7
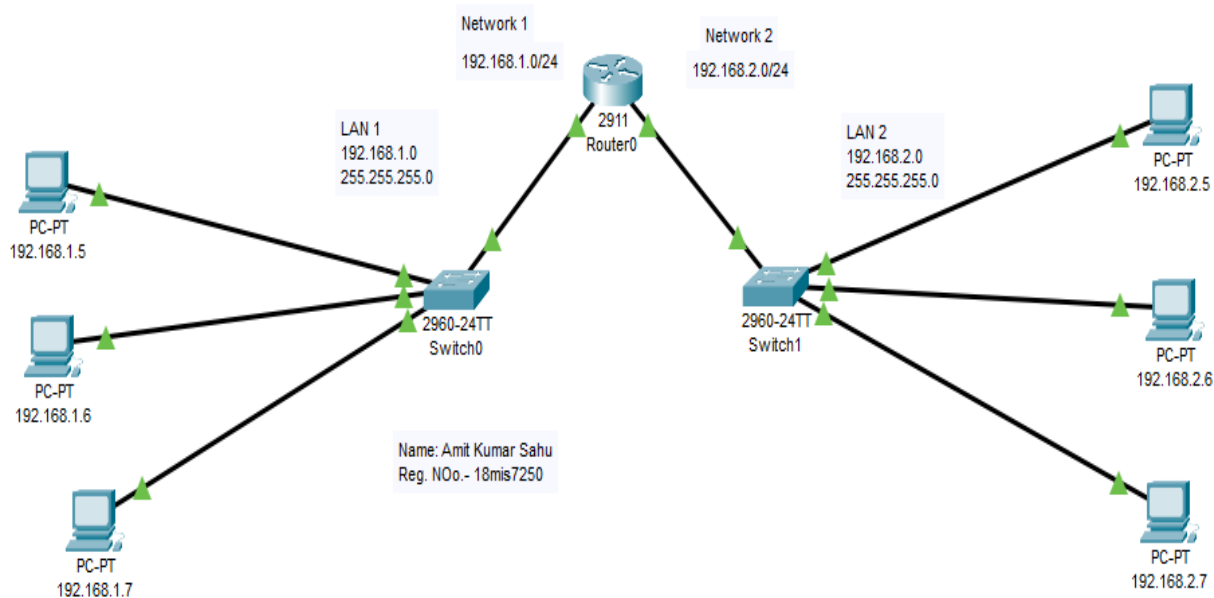
```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0
Router(config-if)#no ip address
Router(config-if)#ip address
% Incomplete command.
Router(config-if)#no ip address
Router(config-if)#ip address
% Incomplete command.
Router(config-if)#ip address
% Incomplete command.
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0
Router(config-if)#no ip address
```

Router(config-if)#ip address 255.255.255.0
% Incomplete command.
Router(config-if)#no ip address
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/1
Router(config-if)#no ip address
Router(config-if)#
Router(config-if)#end
Router#vlan database
% Warning: It is recommended to configure VLAN from config mode,
as VLAN database mode is being deprecated. Please consult user
documentation for configuring VTP/VLAN in config mode.

Router(vlan)#
%SYS-5-CONFIG_I: Configured from console by console

Router(vlan)#exit
APPLY completed.
Exiting....
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/1
Router(config-if)#ip address
% Incomplete command.
Router(config-if)#no ip address
Router(config-if)#ip address
% Incomplete command.
Router(config-if)#no ip address
Router(config-if)#no ip address
Router(config-if)#ip address
% Incomplete command.
Router(config-if)#shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to administratively down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to
down
ip address 255.255.255.0
% Incomplete command.

```
Router(config-if)#no ip address
Router(config-if)#ip address
% Incomplete command.
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/1
Router(config-if)#no ip address
Router(config-if)#ip address 255.255.255.0
% Incomplete command.
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to
up
no ip address
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface GigabitEthernet0/1
Router(config-if)#
Router(config-if)#
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#interface
Translating "interface"...domain server (255.255.255.255)
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to administratively down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to
down

% Unknown command or computer name, or unable to find computer address

Router#no shutdown
^
% Invalid input detected at '^' marker.
Router#
```

%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up

Router#configure
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface gigabitEthernet 0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
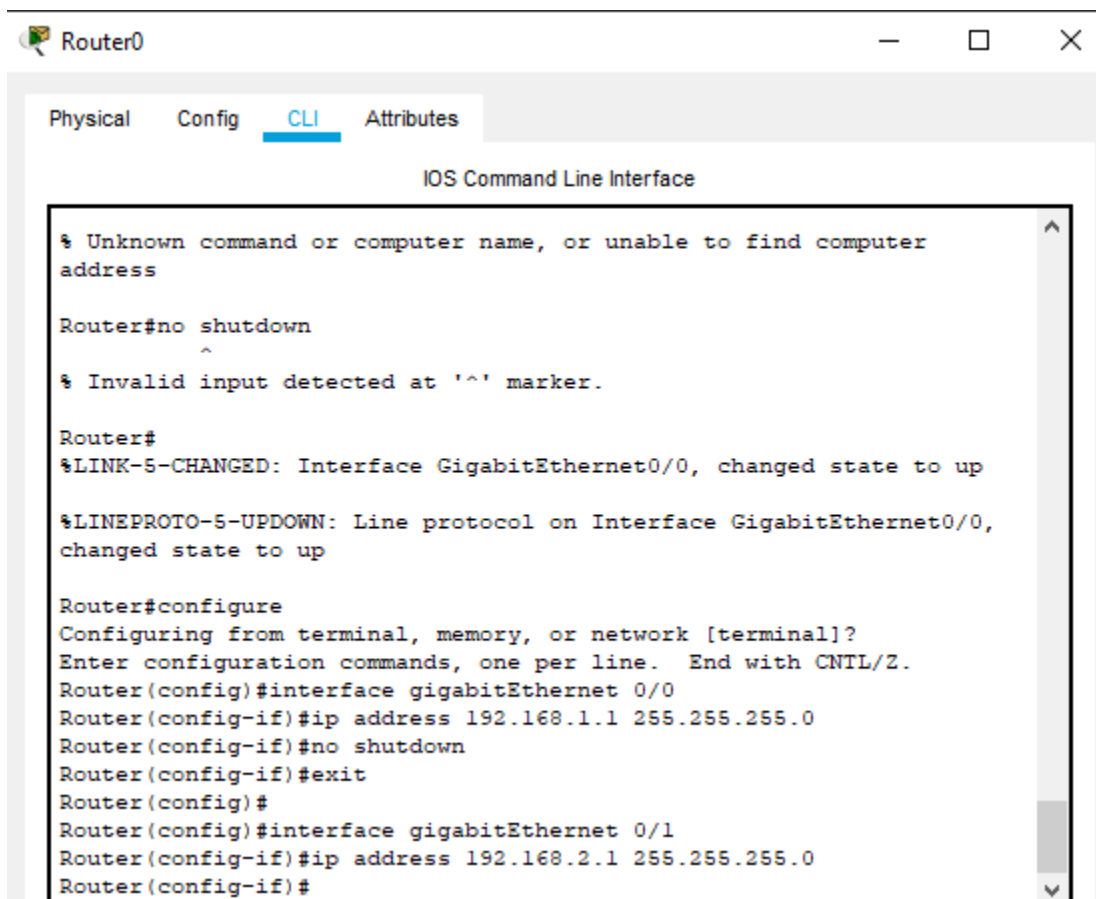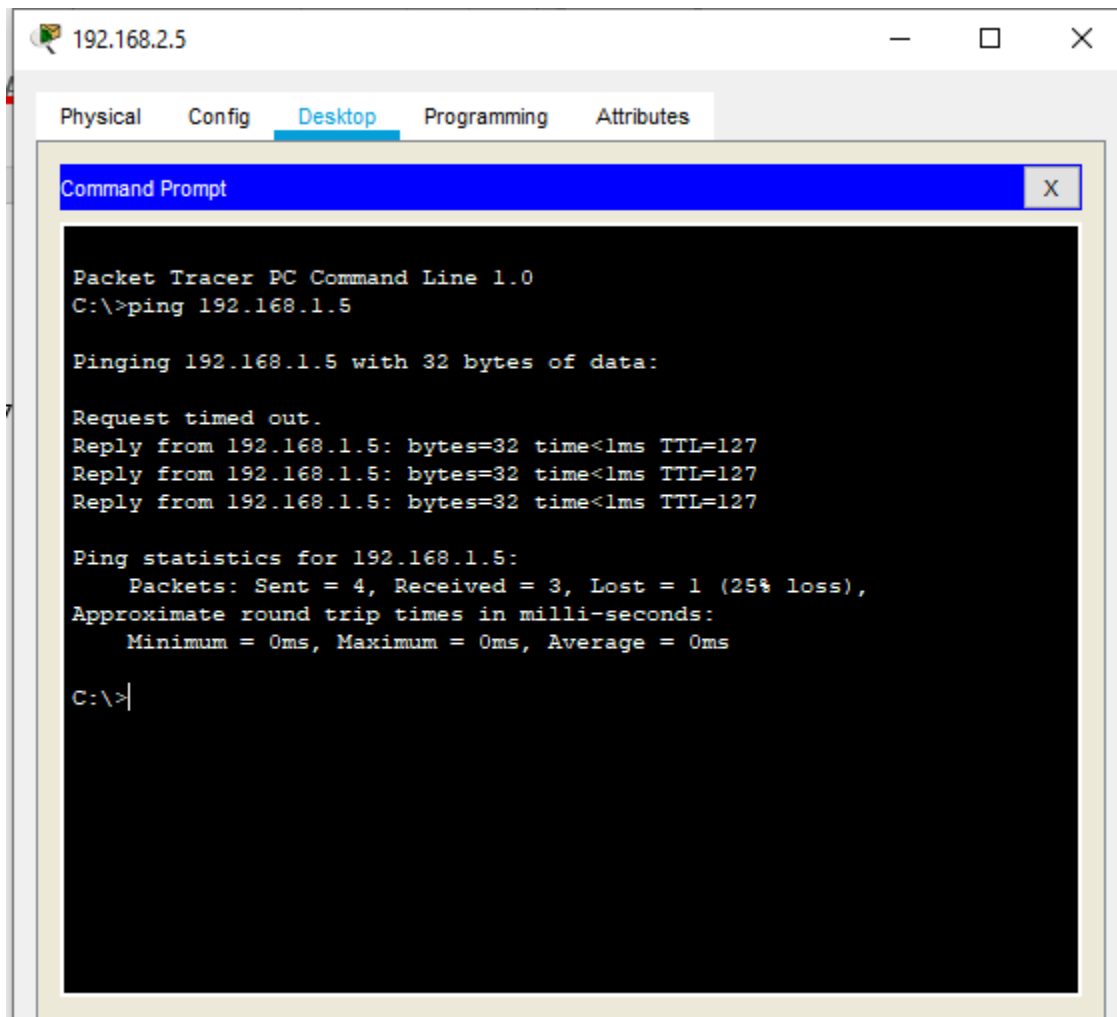Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#
Router(config)#interface gigabitEthernet 0/1
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#

Configuring through CLI

Pinging other LAN to check whether connection is established! Successfully pinged! Connection Successful

```
192.168.2.5                                                    —    □    ✕

 Physical    Config    Desktop    Programming    Attributes

 Command Prompt                                                        X

  Packet Tracer PC Command Line 1.0
  C:\>ping 192.168.1.5

  Pinging 192.168.1.5 with 32 bytes of data:

  Request timed out.
  Reply from 192.168.1.5: bytes=32 time<1ms TTL=127
  Reply from 192.168.1.5: bytes=32 time<1ms TTL=127
  Reply from 192.168.1.5: bytes=32 time<1ms TTL=127

  Ping statistics for 192.168.1.5:
      Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
  Approximate round trip times in milli-seconds:
      Minimum = 0ms, Maximum = 0ms, Average = 0ms

  C:\>
```
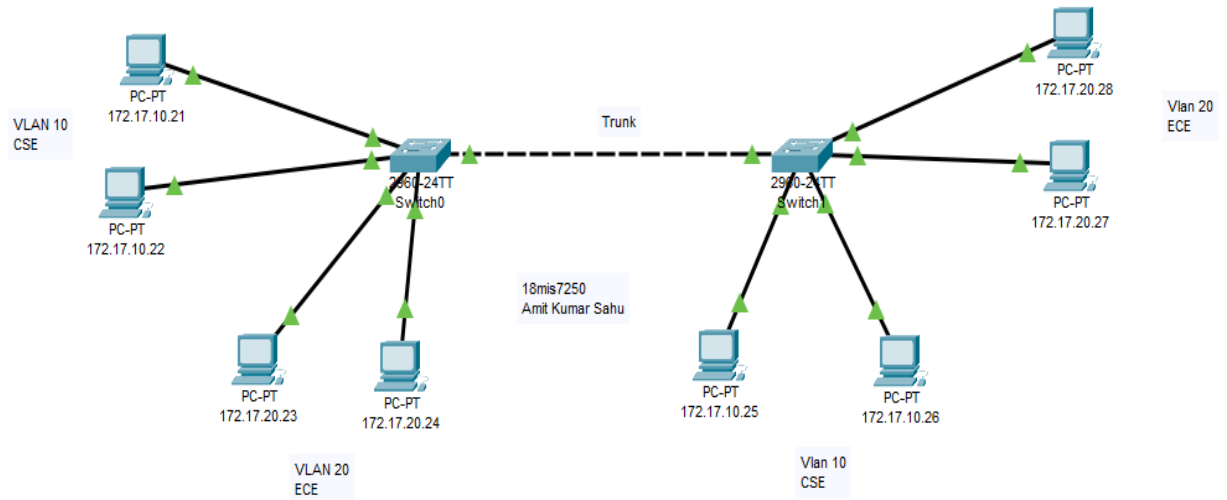
2. VANS and Trunks

Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name CSE
Switch(config-vlan)#EXIT
Switch(config)#vlan 20
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 20
Switch(config-vlan)#name ECE
Switch(config-vlan)#exit
Switch(config)#end

Switch(config)#interface fa0/2
Switch(config-if)#switchport mode access
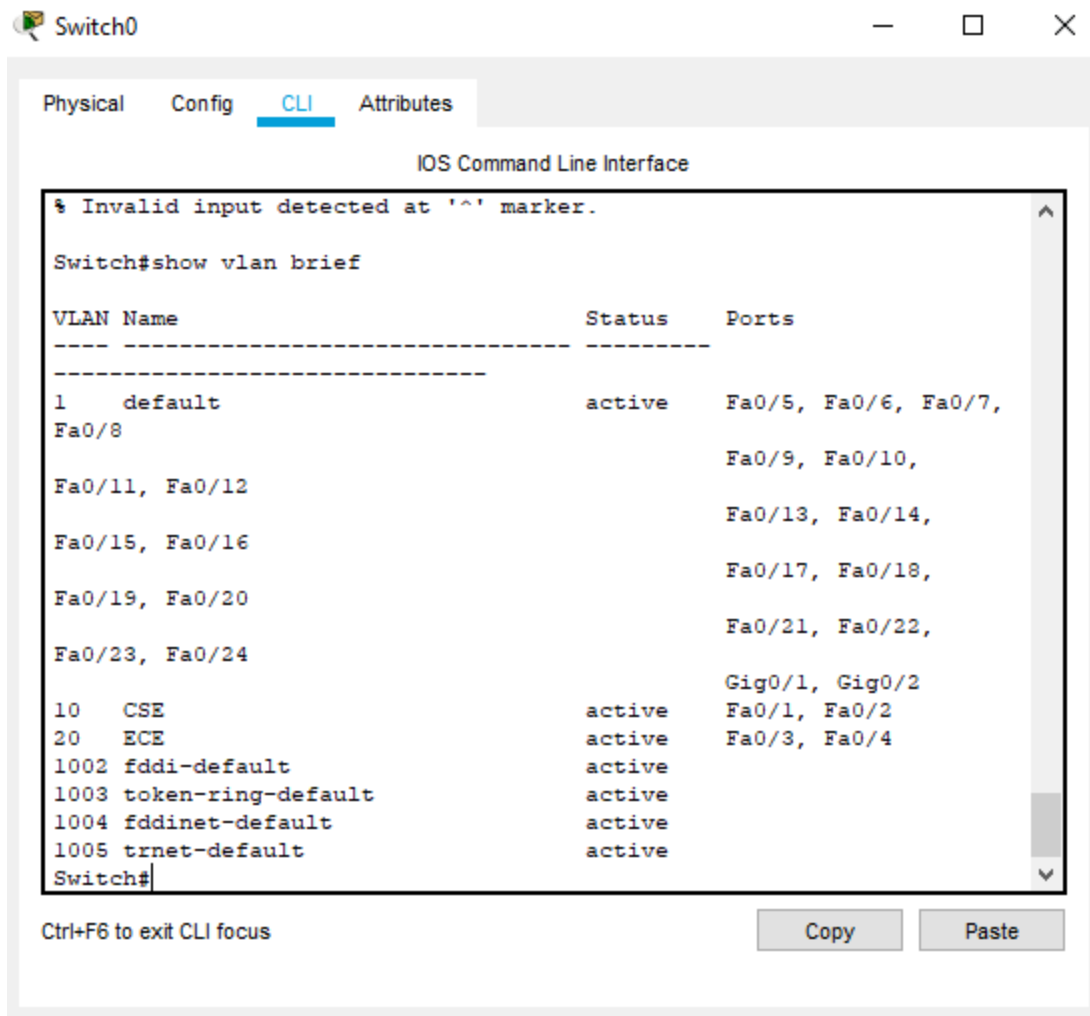Switch(config-if)#switchpor access vlan 10
Switch(config-if)#switchport access vlan 10
Switch(config-if)#end
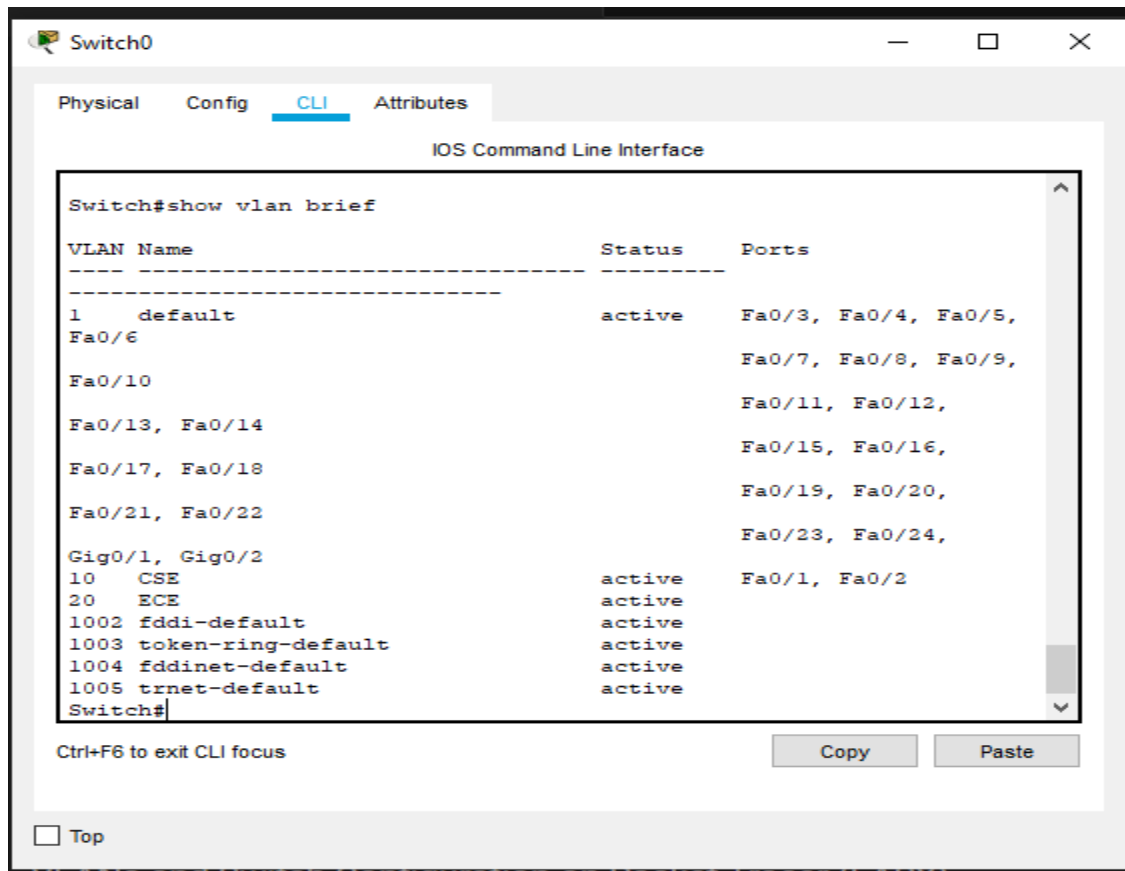
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa0/3
Switch(config-if)#switchport access vlan 20
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#end
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa0/4
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#end
Switch#

Connecting both the routers via trunk

Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface fa0/5
Switch(config-if)#switchport mode trunk

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

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed state to up

Configuring vlan 10 and 20 in switch 2

Switch(config)#vlan 10
Switch(config-vlan)#name CSE
Switch(config-vlan)#vlan 20
Switch(config-vlan)#ananame ECE
Switch(config-vlan)#exit
Switch(config)#interface fa fa-/2-3
^
% Invalid input detected at '^' marker.
Switch(config)#swsinterface fa 0/2-3
^
% Invalid input detected at '^' marker.
Switch(config)#interface range fa0/2-3
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 10
Switch(config-if-range)#exit

Switch(config)#interface range fa0/4-5
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 20
Switch(config-if-range)#exit

Trunking switch 2 with switch 1

Switch(config)#interface fa0/1
Switch(config-if)#switchport mode trunk
Switch(config-if)#end
Switch#

Switch1 — □ ×

Physical   Config   CLI   Attributes

IOS Command Line Interface

```
% Invalid input detected at '^' marker.

Switch#show vlan brief

VLAN Name                             Status    Ports
---- -------------------------------- ---------
     --------------------------------
1    default                          active    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   CSE                              active    Fa0/2, Fa0/3
20   ECE                              active    Fa0/4, Fa0/5
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
Switch#
```
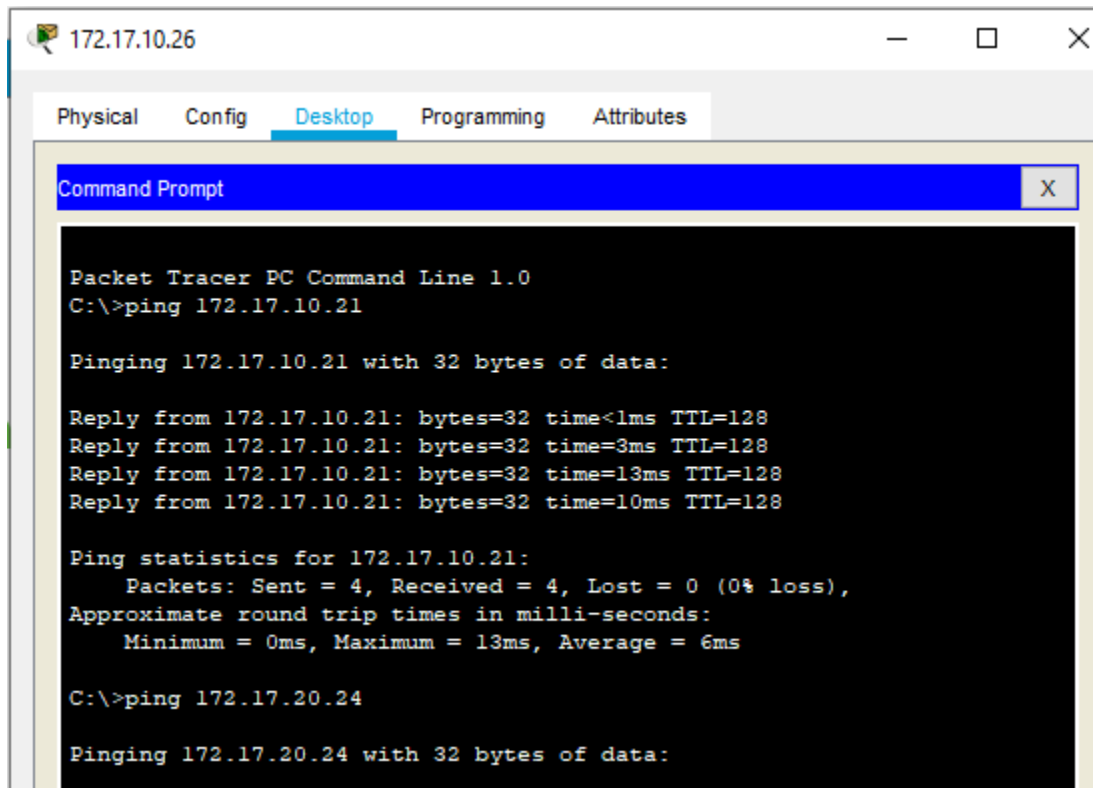
Ctrl+F6 to exit CLI focus   Copy   Paste

Verifying using ping

172.17.10.26 — □ ✕

| Physical | Config | Desktop | Programming | Attributes |

Command Prompt   X

```
Packet Tracer PC Command Line 1.0
C:\>ping 172.17.10.21

Pinging 172.17.10.21 with 32 bytes of data:

Reply from 172.17.10.21: bytes=32 time<1ms TTL=128
Reply from 172.17.10.21: bytes=32 time=3ms TTL=128
Reply from 172.17.10.21: bytes=32 time=13ms TTL=128
Reply from 172.17.10.21: bytes=32 time=10ms TTL=128

Ping statistics for 172.17.10.21:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 13ms, Average = 6ms

C:\>ping 172.17.20.24

Pinging 172.17.20.24 with 32 bytes of data:
```

Both the vlans are working properly

172.17.20.24

Physical   Config   Desktop   Programming   Attributes

Command Prompt   X

```
Packet Tracer PC Command Line 1.0
C:\>pingg 172.17.20.28
Invalid Command.

C:\>ping 172.17.20.28

Pinging 172.17.20.28 with 32 bytes of data:

Reply from 172.17.20.28: bytes=32 time<1ms TTL=128
Reply from 172.17.20.28: bytes=32 time=3ms TTL=128
Reply from 172.17.20.28: bytes=32 time=10ms TTL=128
Reply from 172.17.20.28: bytes=32 time=4ms TTL=128

Ping statistics for 172.17.20.28:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 10ms, Average = 4ms

C:\>
```