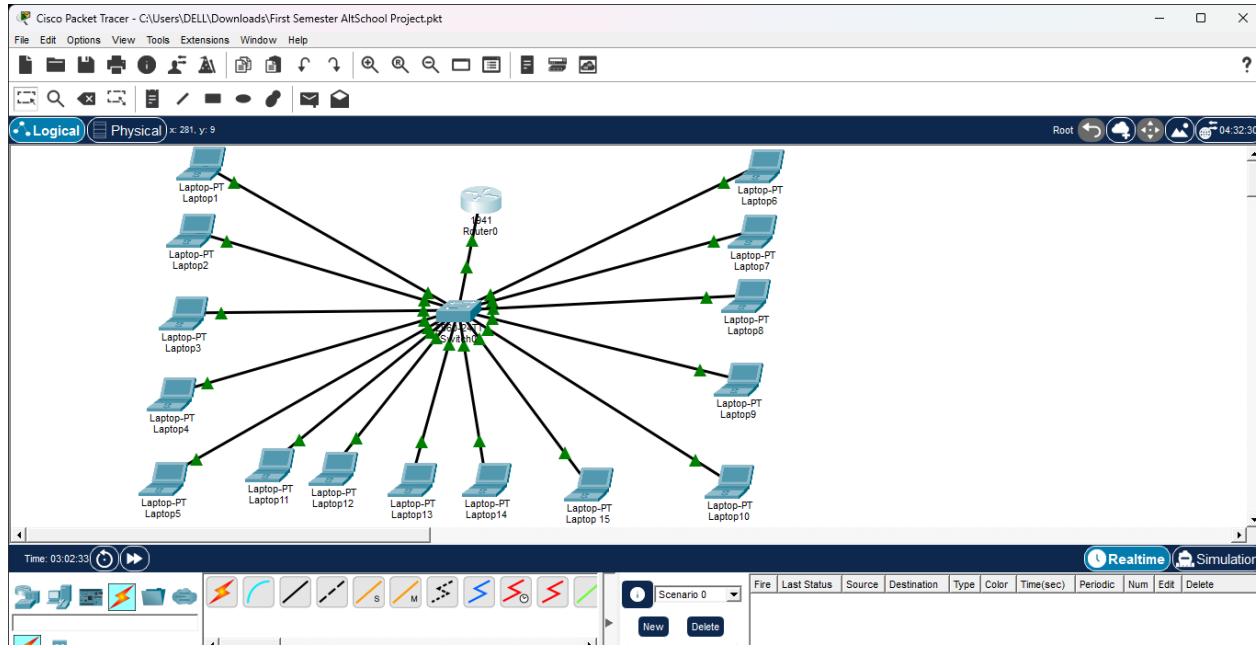


## PROJECT QUESTION 2



I assigned 5 PCs to each department and connect the PC to Switch using a copper straight wire and use the same to connect the switch to the router.

Router0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Importers, exporters, distributors and users are responsible for
compliance with U.S. and local country laws. By using this product you
agree to comply with applicable laws and regulations. If you are unable
to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:
http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to
export@cisco.com.

Cisco CISCO1941/K9 (revision 1.0) with 491520K/32768K bytes of memory.
Processor board ID FTX152400KS
2 Gigabit Ethernet interfaces
DRAM configuration is 64 bits wide with parity disabled.
255K bytes of non-volatile configuration memory.
249856K bytes of ATA System CompactFlash 0 (Read/Write)

--- System Configuration Dialog ---

Would you like to enter the initial configuration dialog? [yes/no]: no

Press RETURN to get started!

Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0
Router(config-if)#no shutdown

Router(config-if)#
*LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up

*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up
Router(config-if)#

```

Since the switch was connected to the Router using the Copper straight wire and there is no show of connection so I had to use the no shutdown command

Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/10, changed state to up
*LINK-5-CHANGED: Interface FastEthernet0/11, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/11, changed state to up
*LINK-5-CHANGED: Interface FastEthernet0/12, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/12, changed state to up
*LINK-5-CHANGED: Interface FastEthernet0/13, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/13, changed state to up
*LINK-5-CHANGED: Interface FastEthernet0/14, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/14, changed state to up
*LINK-5-CHANGED: Interface FastEthernet0/15, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/15, changed state to up
*LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name Admin
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name Sales
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name IT
Switch(config-vlan)#exit
Switch(config)#[
```

Copy Paste

All VLANs for each department was created (Admin, Sales and IT)

Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
*LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

Switch>enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name Admin
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name Sales
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name IT
Switch(config-vlan)#exit
Switch(config)#exit
Switch#
*SYS-5-CONFIG_I: Configured from console by console
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 Admin active
20 Sales active
30 IT active
1002 fddi-default active
1003 token-ring-default active
1004 fddinet-default active
1005 trnet-default active
Switch#
```

Copy Paste

I checked the VLANs created earlier to see if they are active

Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Switch(config)#exit
Switch#
*SYS-5-CONFIG_I: Configured from console by console
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   Admin          active
20   Sales          active
30   IT              active
1002 fddi-default  active
1003 token-ring-default  active
1004 fddinet-default  active
1005 trnet-default  active
Switch#enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface range FastEthernet0/1-5
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 10
Switch(config-if-range)#exit
Switch(config)#interface range FastEthernet0/6-10
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 20
Switch(config-if-range)#exit
Switch(config)#interface range FastEthernet0/11-15
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 30
Switch(config-if-range)#exit
Switch(config)#exit
Switch#
*SYS-5-CONFIG_I: Configured from console by console
show
```

Copy Paste

Each PCs was assigned to respective VLANs. Fa0/1-5 was assigned to Admin, Fa0/6-10 was assigned to Admin and Fa0/11-15 was assigned to IT

Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
1002 fddi-default          active
1003 token-ring-default    active
1004 fddinet-default       active
1005 trnet-default         active
Switch#enable
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface range FastEthernet0/1-5
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 10
Switch(config-if-range)#exit
Switch(config)#interface range FastEthernet0/6-10
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 20
Switch(config-if-range)#exit
Switch(config)#interface range FastEthernet0/11-15
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 30
Switch(config-if-range)#exit
Switch(config)#exit
Switch#
*SYS-5-CONFIG_I: Configured from console by console
show vlan brief

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

Copy Paste

Each device has been assigned to their individual VLANs

Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

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

```
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#interface range FastEthernet0/24
Switch(config-if-range)#switchport trunk encapsulation dot1Q
^
* Invalid input detected at '^' marker.

Switch(config-if-range)#switchport trunk encapsulation dot1Q
^
* Invalid input detected at '^' marker.

Switch(config-if-range)#switchport trunk encapsulation dot1Q
^
* Invalid input detected at '^' marker.

Switch(config-if-range)#exit
Switch(config)#interface gigabitEthernet0/1
Switch(config-if)#switchport mode trunk

Switch(config-if)#
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to down
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
```

Copy Paste

Trunk activated

Switch0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Switch(config-if-range)#exit
Switch(config)#interface gigabitEthernet0/1
Switch(config-if)#switchport mode trunk

Switch(config-if)#
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to down
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up

Switch(config-if)#exit
Switch(config)#hostname Altschool
Altschool(config)#ip-domain-name altschoolafrica.com
^
* Invalid input detected at '^' marker.

Altschool(config)#ip-domain-name admin
^
* Invalid input detected at '^' marker.

Altschool(config)#ip domain-name admin
Altschool(config)#crypto key generate rsa
The name for the keys will be: Altschool.admin
Choose the size of the key modulus in the range of 360 to 4096 for your
General Purpose Keys. Choosing a key modulus greater than 512 may take
a few minutes.

How many bits in the modulus [512]: 2048
* Generating 2048 bit RSA keys, keys will be non-exportable...[OK]

Altschool(config)#username Hamdan password Harkumeh87@
*Mar 1 0:58:5.87: %SSH-5-ENABLED: SSH 1.99 has been enabled
Altschool(config)#ip ssh version 2
Altschool(config)#line vty 0 15
Altschool(config-line)#transport input ssh
Altschool(config-line)#local login
^
* Invalid input detected at '^' marker.

Altschool(config-line)#login local
Altschool(config-line)#

```

Copy Paste

SSH was created successfully

Laptop1

Physical Config Desktop Programming Attributes

Command Prompt

```
Default Gateway..... :: 192.168.10.1

Bluetooth Connection:

Connection-specific DNS Suffix..:
Link-local IPv6 Address..... :: 
IPv6 Address..... :: 
IPv4 Address..... 0.0.0.0
Subnet Mask..... 0.0.0.0
Default Gateway..... :: 0.0.0.0

C:\>arp -a
Internet Address Physical Address Type
192.168.10.1 00d0.9775.ca01 dynamic

C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

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

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>ssh -l Hamdan 192.168.10.2

Connection refused by remote host
C:\>ssh -l Hamdan 192.168.10.1

Password:

Alschooll#exit

[Connection to 192.168.10.1 closed by foreign host]
C:\>
```

SSH was tested and shows that the SSH is working perfectly.

Router0

Physical Config **CLI** Attributes

IOS Command Line Interface

Press RETURN to get started.

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname Alschooll
Alschooll(config)#ip domain name altschoolafrica.com
Alschooll(config)#crypto key generate rsa
The name for the keys will be: Alschooll.altschoolafrica.com
Choose the size of the key modulus in the range of 360 to 4096 for your
General Purpose Keys. Choosing a key modulus greater than 512 may take
a few minutes.

How many bits in the modulus [512]: 2048
* Generating 2048 bit RSA keys, keys will be non-exportable...[OK]

Alschooll(config)#username Hamdan privilege 15 secret Harkumeh87@Mar 1 0:58:39.453: %SSH-5-ENABLED: SSH 1.99 has been enabled
^
* Invalid input detected at '^' marker.

Alschooll(config)#username Hamdan privilege 15 secret Harkumeh87@Alschooll(config)#line vty 0 4
Alschooll(config-line)#login local
Alschooll(config-line)#transport input ssh
Alschooll(config-line)#exit
Alschooll(config)#ip ssh version 2
Alschooll(config)#

```

Router0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Alschool1(config)#username Hamdan privilege 15 secret Harkumeh87@  
*Mar 1 0:58:39.453: %SSH-5-ENABLED: SSH 1.99 has been enabled  
^  
* Invalid input detected at '^' marker.  
  
Alschool1(config)#username Hamdan privilege 15 secret Harkumeh87@  
Alschool1(config)#line vty 0 4  
Alschool1(config-line)#login local  
Alschool1(config-line)#transport input ssh  
Alschool1(config-line)#exit  
Alschool1(config)#ip ssh version 2  
Alschool1(config)#interface GigabitEthernet0/0.10  
Alschool1(config-subif)#  
*LINK-3-UPDOWN: Interface GigabitEthernet0/0.10, changed state to down  
  
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.10, changed state to up  
encapsulation dot1Q 10  
Alschool1(config-subif)#ip address 192.168.10.1 255.255.255.0  
Alschool1(config-subif)#exit  
Alschool1(config)#interface GigabitEthernet0/0.20  
Alschool1(config-subif)#  
*LINK-3-UPDOWN: Interface GigabitEthernet0/0.20, changed state to down  
  
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.20, changed state to up  
encapsulation dot1Q 20  
Alschool1(config-subif)#ip address 192.168.20.1 255.255.255.0  
Alschool1(config-subif)#exit  
Alschool1(config)#interface GigabitEthernet0/0.30  
Alschool1(config-subif)#  
*LINK-3-UPDOWN: Interface GigabitEthernet0/0.30, changed state to down  
  
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.30, changed state to up  
encapsulation dot1Q 30  
Alschool1(config-subif)#ip address 192.168.30.1 255.255.255.0  
Alschool1(config-subif)#exit  
Alschool1(config)#ip routing  
Alschool1(config)#access-list 110 permit ip 192.168.10
```

Copy Paste

Sub Interfaces was created and assigned to their various IP addresses

Router0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
*LINK-3-UPDOWN: Interface GigabitEthernet0/0.10, changed state to down
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.10, changed state to up
encapsulation dot1Q 10
Alschooll(config-subif)#ip address 192.168.10.1 255.255.255.0
Alschooll(config-subif)#exit
Alschooll(config)#interface GigabitEthernet0/0.20
Alschooll(config-subif)#
*LINK-3-UPDOWN: Interface GigabitEthernet0/0.20, changed state to down
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.20, changed state to up
encapsulation dot1Q 20
Alschooll(config-subif)#ip address 192.168.20.1 255.255.255.0
Alschooll(config-subif)#exit
Alschooll(config)#interface GigabitEthernet0/0.30
Alschooll(config-subif)#
*LINK-3-UPDOWN: Interface GigabitEthernet0/0.30, changed state to down
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.30, changed state to up
encapsulation dot1Q 30
Alschooll(config-subif)#ip address 192.168.30.1 255.255.255.0
Alschooll(config-subif)#exit
Alschooll(config)#ip routing
Alschooll(config)#access-list 110 permit ip 192.168.10.0 0.0.0.255 192.168.20.0 0.0.0.255
Alschooll(config)#access-list 110 deny ip 192.168.10.0 0.0.0.255 192.168.30.0 0.0.0.255
Alschooll(config)#access-list 110 permit ip any any
Alschooll(config)#access-list 120 deny ip 192.168.20.0 0.0.0.255 192.168.10.0 0.0.0.255
Alschooll(config)#access-list 120 permit ip 192.168.20.0 0.0.0.255 192.168.30.0 0.0.0.255
Alschooll(config)#access-list 120 deny ip any any
Alschooll(config)#access-list 130 permit ip 192.168.30.0 0.0.0.255 any
Alschooll(config)#interface FastEthernet0/0.10
*Invalid interface type and number
Alschooll(config)#interface GigabitEthernet0/0.10
Alschooll(config-subif)#ip access-group 110 in
Alschooll(config-subif)#interface GigabitEthernet0/0.20
Alschooll(config-subif)#ip access-group 120 in
Alschooll(config-subif)#

```

**Copy** **Paste**

Router0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Alschooll#no access-list 110
^
* Invalid input detected at '^' marker.

Alschooll#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Alschooll(config)#no access-list 110
Alschooll(config)#no access-list 120
Alschooll(config)#no access-list 130
Alschooll(config)#exit
Alschooll#
*SYS-5-CONFIG_I: Configured from console by console
show access-list
Alschooll#show access-list
Alschooll#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Alschooll(config)#ip access-list extended ADMIN-ACL
Alschooll(config-ext-nacl)#permit ip 192.168.10.0 0.0.0.255 192.168.20.0 0.0.0.255
Alschooll(config-ext-nacl)#deny ip 192.168.10.0 0.0.0.255 192.168.30.0 0.0.0.255
Alschooll(config-ext-nacl)#permit ip any any
Alschooll(config-ext-nacl)#exit
Alschooll(config)#ip access-list extended SALES-ACL
Alschooll(config-ext-nacl)#deny ip 192.168.20.0 0.0.0.255 192.168.10.0 0.0.0.255
Alschooll(config-ext-nacl)#permit ip 192.168.20.0 0.0.0.255 192.168.30.0 0.0.0.255
Alschooll(config-ext-nacl)#permit ip any any
Alschooll(config-ext-nacl)#exit
Alschooll(config)#ip access-list extended IT-ACL
Alschooll(config-ext-nacl)#permit ip any any
Alschooll(config-ext-nacl)#exit
Alschooll(config)#interface gigabitEthernet0/0.10
Alschooll(config-subif)#ip access-group ADMIN-ACL in
Alschooll(config-subif)#exit
Alschooll(config)#interface gigabitEthernet0/0.20
Alschooll(config-subif)#ip access-group SALES-ACL in
Alschooll(config-subif)#exit
Alschooll(config)#interface gigabitEthernet0/0.30
Alschooll(config-subif)#ip access-group IT-ACL in
Alschooll(config-subif)#exit
Alschooll(config)#

```

Copy Paste

Router0

Physical Config **CLI** Attributes

IOS Command Line Interface

```
Alschool1(config)#username Hamdan privilege 15 secret Harkumeh87@  
*Mar 1 0:58:39.453: %SSH-5-ENABLED: SSH 1.99 has been enabled  
^  
* Invalid input detected at '^' marker.  
  
Alschool1(config)#username Hamdan privilege 15 secret Harkumeh87@  
Alschool1(config)#line vty 0 4  
Alschool1(config-line)#login local  
Alschool1(config-line)#transport input ssh  
Alschool1(config-line)#exit  
Alschool1(config)#ip ssh version 2  
Alschool1(config)#interface GigabitEthernet0/0.10  
Alschool1(config-subif)#  
*LINK-3-UPDOWN: Interface GigabitEthernet0/0.10, changed state to down  
  
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.10, changed state to up  
encapsulation dot1Q 10  
Alschool1(config-subif)#ip address 192.168.10.1 255.255.255.0  
Alschool1(config-subif)#exit  
Alschool1(config)#interface GigabitEthernet0/0.20  
Alschool1(config-subif)#  
*LINK-3-UPDOWN: Interface GigabitEthernet0/0.20, changed state to down  
  
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.20, changed state to up  
encapsulation dot1Q 20  
Alschool1(config-subif)#ip address 192.168.20.1 255.255.255.0  
Alschool1(config-subif)#exit  
Alschool1(config)#interface GigabitEthernet0/0.30  
Alschool1(config-subif)#  
*LINK-3-UPDOWN: Interface GigabitEthernet0/0.30, changed state to down  
  
*LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0.30, changed state to up  
encapsulation dot1Q 30  
Alschool1(config-subif)#ip address 192.168.30.1 255.255.255.0  
Alschool1(config-subif)#exit  
Alschool1(config)#ip routing  
Alschool1(config)#access-list 110 permit ip 192.168.10
```

Copy Paste

Router0

Physical Config **CLI** Attributes

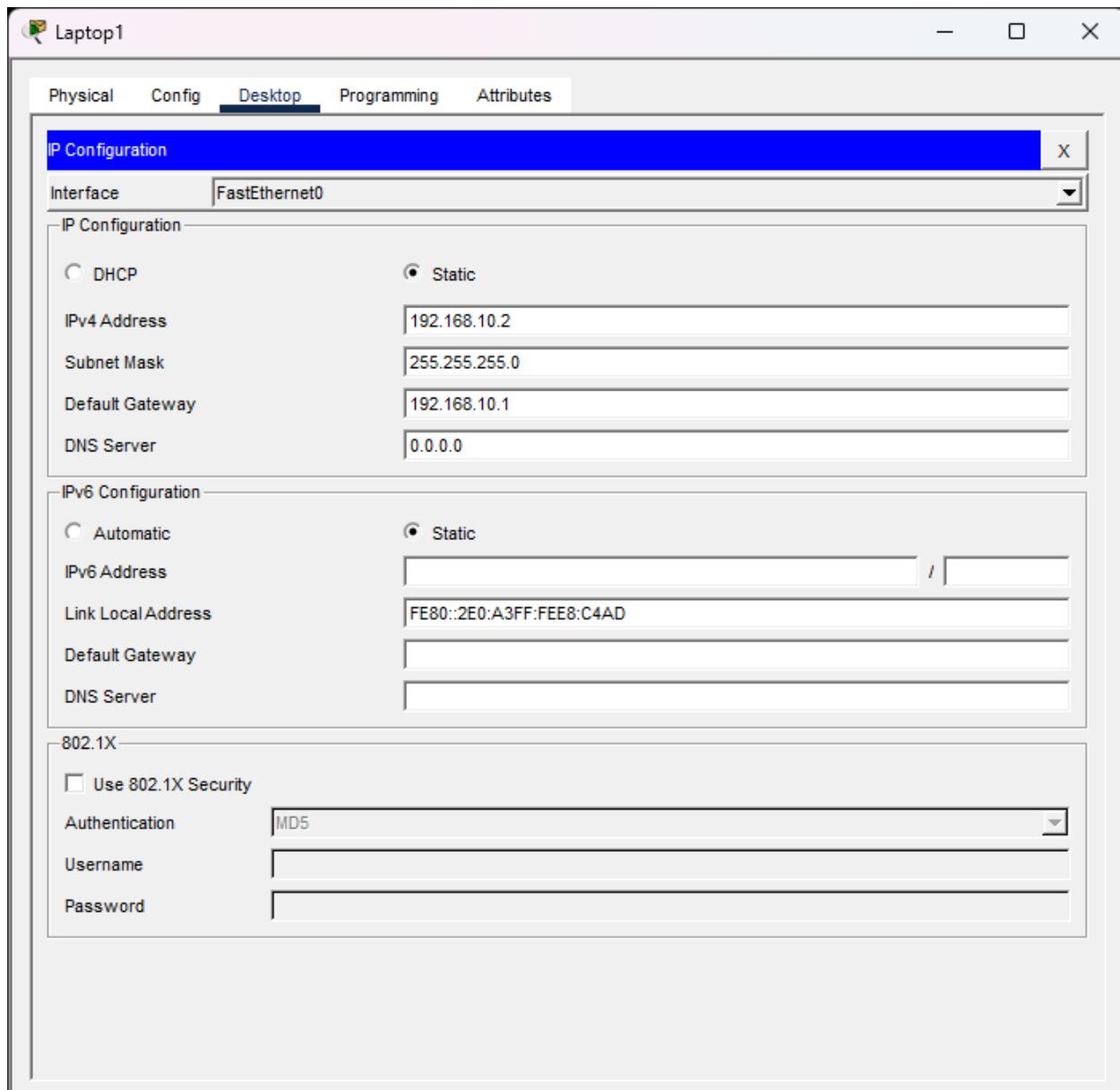
IOS Command Line Interface

```
Alschooll>show access list
^
* Invalid input detected at '^' marker.

Alschooll>show access-list
^
* Invalid input detected at '^' marker.

Alschooll>enable
Alschooll#show access-list
Extended IP access list ADMIN-ACL
  10 permit ip 192.168.10.0 0.0.0.255 192.168.20.0 0.0.0.255 (49 match(es))
  20 deny ip 192.168.10.0 0.0.0.255 192.168.30.0 0.0.0.255 (48 match(es))
  30 permit ip any any (58 match(es))
Extended IP access list SALES-ACL
  10 deny ip 192.168.20.0 0.0.0.255 192.168.10.0 0.0.0.255 (59 match(es))
  20 permit ip 192.168.20.0 0.0.0.255 192.168.30.0 0.0.0.255 (24 match(es))
  30 permit ip any any (5 match(es))
Extended IP access list IT-ACL
  10 permit ip any any (53 match(es))
Extended IP access list ADMIN_TO_OTHERS
  10 permit icmp 192.168.10.0 0.0.0.255 192.168.30.0 0.0.0.255 echo-reply
  20 permit icmp 192.168.10.0 0.0.0.255 192.168.30.0 0.0.0.255
  30 permit ip 192.168.10.0 0.0.0.255 192.168.20.0 0.0.0.255
  40 deny ip 192.168.10.0 0.0.0.255 192.168.30.0 0.0.0.255
  50 permit ip 192.168.10.0 0.0.0.255 host 192.168.10.1
  60 deny ip any any
Alschooll#
```

Copy Paste



IP Addresses was assigned to all PCs with their respective gateway

Laptop1

Physical Config Desktop Programming Attributes

Command Prompt

```
C:\>ping 192.168.10.1
Pinging 192.168.10.1 with 32 bytes of data:

Reply from 192.168.10.1: bytes=32 time<1ms TTL=255
Reply from 192.168.10.1: bytes=32 time<1ms TTL=255
Reply from 192.168.10.1: bytes=32 time=1ms TTL=255
Reply from 192.168.10.1: bytes=32 time=1ms TTL=255

Ping statistics for 192.168.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 192.168.20.1
Pinging 192.168.20.1 with 32 bytes of data:

Reply from 192.168.20.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.20.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.30.1
Pinging 192.168.30.1 with 32 bytes of data:

Reply from 192.168.10.1: Destination host unreachable.

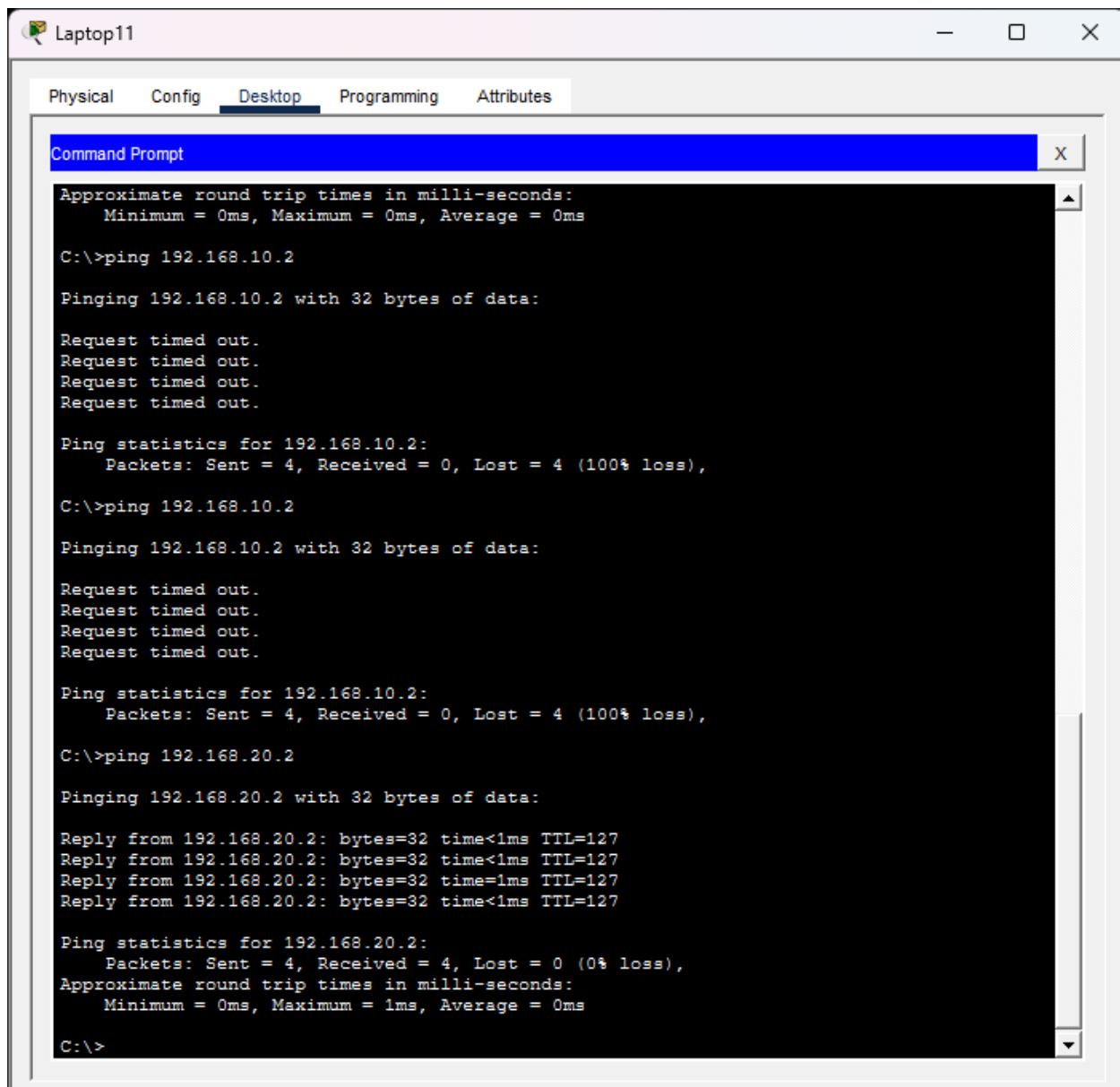
Ping statistics for 192.168.30.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
```

```
C:\>ping 192.168.20.2
Pinging 192.168.20.2 with 32 bytes of data:

Reply from 192.168.20.2: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

This is successful ping message from Admin to Sale and was denied by IT



Laptop11

Physical Config Desktop Programming Attributes

Command Prompt X

```
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.10.2

Pinging 192.168.10.2 with 32 bytes of data:

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

Ping statistics for 192.168.10.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    C:\>ping 192.168.10.2

Pinging 192.168.10.2 with 32 bytes of data:

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

Ping statistics for 192.168.10.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
    C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Reply from 192.168.20.2: bytes=32 time<1ms TTL=127
Reply from 192.168.20.2: bytes=32 time<1ms TTL=127
Reply from 192.168.20.2: bytes=32 time=1ms TTL=127
Reply from 192.168.20.2: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
    C:\>
```

Laptop11

Physical Config Desktop Programming Attributes

Command Prompt

```
Approximate round trip times in milli-seconds:  
    Minimum = 0ms, Maximum = 0ms, Average = 0ms  
  
C:\>ping 192.168.10.2  
  
Pinging 192.168.10.2 with 32 bytes of data:  
  
Request timed out.  
Request timed out.  
Request timed out.  
Request timed out.  
  
Ping statistics for 192.168.10.2:  
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),  
  
C:\>ping 192.168.10.2  
  
Pinging 192.168.10.2 with 32 bytes of data:  
  
Request timed out.  
Request timed out.  
Request timed out.  
Request timed out.  
  
Ping statistics for 192.168.10.2:  
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),  
  
C:\>ping 192.168.20.2  
  
Pinging 192.168.20.2 with 32 bytes of data:  
  
Reply from 192.168.20.2: bytes=32 time<1ms TTL=127  
Reply from 192.168.20.2: bytes=32 time<1ms TTL=127  
Reply from 192.168.20.2: bytes=32 time=1ms TTL=127  
Reply from 192.168.20.2: bytes=32 time<1ms TTL=127  
  
Ping statistics for 192.168.20.2:  
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  
Approximate round trip times in milli-seconds:  
    Minimum = 0ms, Maximum = 1ms, Average = 0ms  
  
C:\>
```

Laptop 15

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

Reply from 192.168.20.2: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Laptop1

Physical Config Desktop Programming Attributes

Command Prompt X

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

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

Ping statistics for 192.168.20.2:
  Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>ping 192.168.20.1

Pinging 192.168.20.1 with 32 bytes of data:

Reply from 192.168.20.1: bytes=32 time<1ms TTL=255
Reply from 192.168.20.1: bytes=32 time<1ms TTL=255
Reply from 192.168.20.1: bytes=32 time=10ms TTL=255
Reply from 192.168.20.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.20.1:
  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
  Minimum = 0ms, Maximum = 10ms, Average = 2ms
C:\>
```

Laptop10

Physical Config Desktop Programming Attributes

Command Prompt X

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.30.3

Pinging 192.168.30.3 with 32 bytes of data:

Request timed out.
Reply from 192.168.30.3: bytes=32 time<1ms TTL=127
Reply from 192.168.30.3: bytes=32 time<1ms TTL=127
Reply from 192.168.30.3: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.30.3:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.30.1

Pinging 192.168.30.1 with 32 bytes of data:

Reply from 192.168.30.1: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.30.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>clear
Invalid Command.

C:\>exit
```

Laptop10

Physical Config Desktop Programming Attributes

Command Prompt

```
Request timed out.  
Reply from 192.168.30.3: bytes=32 time<1ms TTL=127  
Reply from 192.168.30.3: bytes=32 time<1ms TTL=127  
Reply from 192.168.30.3: bytes=32 time<1ms TTL=127  
  
Ping statistics for 192.168.30.3:  
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),  
    Approximate round trip times in milli-seconds:  
        Minimum = 0ms, Maximum = 0ms, Average = 0ms  
  
C:\>ping 192.168.30.1  
  
Pinging 192.168.30.1 with 32 bytes of data:  
  
Reply from 192.168.30.1: bytes=32 time<1ms TTL=255  
  
Ping statistics for 192.168.30.1:  
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),  
    Approximate round trip times in milli-seconds:  
        Minimum = 0ms, Maximum = 0ms, Average = 0ms  
  
C:\>clear  
Invalid Command.  
  
C:\>exit  
ping 192.168.10.1  
  
Pinging 192.168.10.1 with 32 bytes of data:  
  
Reply from 192.168.20.1: Destination host unreachable.  
  
Ping statistics for 192.168.10.1:  
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),  
C:\>
```