Name: Muhammad Abeer

Roll no: 19P-0061

Section: 5-B

LAB WORK 1

Routing R1
Network:192.168.1.0
subnet:255.255.255.0
next HOP:10.10.10.1

10.10.10.2

10.10.10.1

Routing R2
Network:192.168.2.0
subnet:255.255.255.0
next HOP:10.10.10.2

2621XM
Router6

Router-PT
Router4

192.168.2.1

192.168.1.1

2950T-24
Switch1

2950T-24
Switch0

Laptop-PT
Laptop2

Laptop-PT
Laptop3
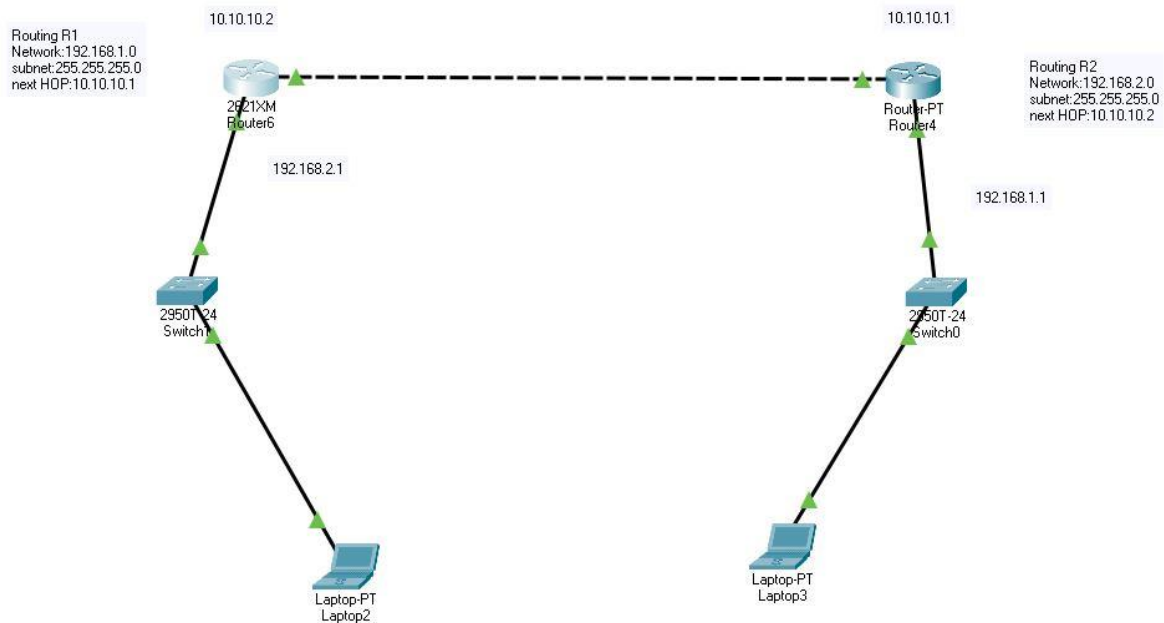
R1

```
Router(config)#interface FastEthernet0/1
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 10.10.10.2 255.0.0.0
Router(config-if)#
```

Ctrl+F6 to exit CLI focus

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R2

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 10.10.10.1 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#
```
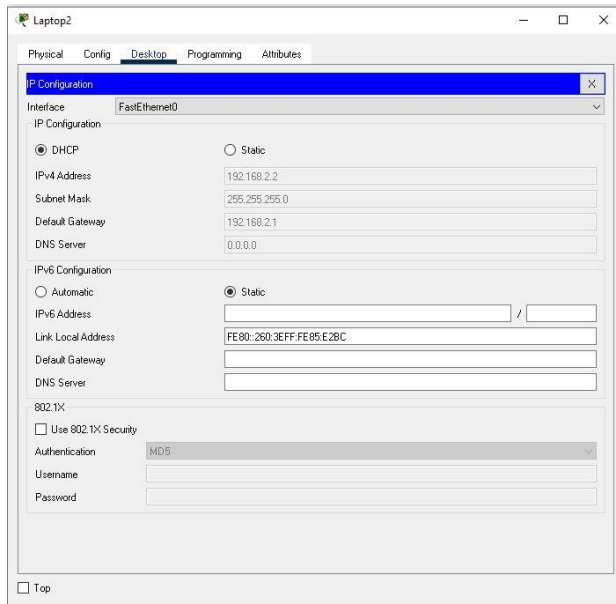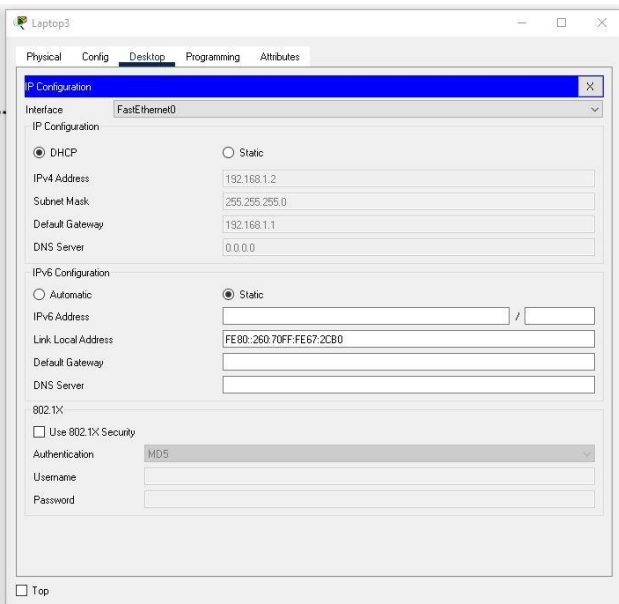
Ctrl+F6 to exit CLI focus

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] Top

PC IP

Laptop2 — IP Configuration

Interface	FastEthernet0

IP Configuration
- DHCP (selected) / Static
- IPv4 Address: 192.168.2.2
- Subnet Mask: 255.255.255.0
- Default Gateway: 192.168.2.1
- DNS Server: 0.0.0.0

IPv6 Configuration
- Automatic / Static (selected)
- IPv6 Address:
- Link Local Address: FE80::260:3EFF:FE85:E2BC
- Default Gateway:
- DNS Server:

802.1X
- Use 802.1X Security
- Authentication: MD5
- Username:
- Password:

Top

Laptop3 — IP Configuration

Interface	FastEthernet0

IP Configuration
- DHCP (selected) / Static
- IPv4 Address: 192.168.1.2
- Subnet Mask: 255.255.255.0
- Default Gateway: 192.168.1.1
- DNS Server: 0.0.0.0

IPv6 Configuration
- Automatic / Static (selected)
- IPv6 Address:
- Link Local Address: FE80::260:70FF:FE67:2CB0
- Default Gateway:
- DNS Server:

802.1X
- Use 802.1X Security
- Authentication: MD5
- Username:
- Password:

Top

Routing R1 & R2

Routing R1
Network:192.168.1.0
subnet:255.255.255.0
next HOP:10.10.10.1
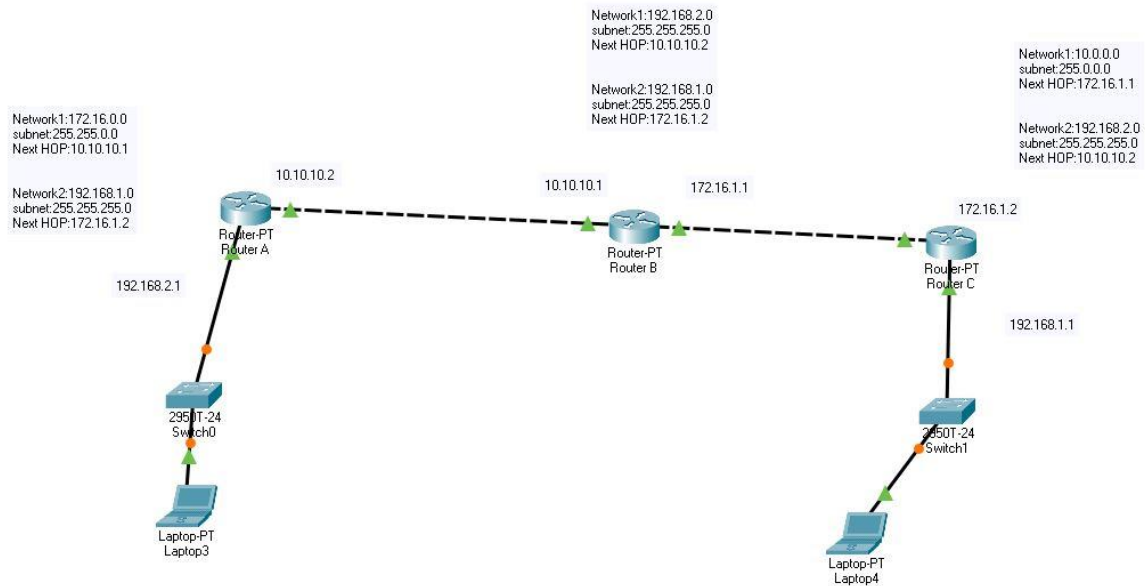

Routing R2
Network:192.168.2.0
subnet:255.255.255.0
next HOP:10.10.10.2

Result showing communication over the router

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
●	Successful	L1	L2	ICMP		0.000	N	0	(edit)	
●	Successful	L2	L1	ICMP		0.000	N	1	(edit)	

TASK 2

Network1:192.168.2.0
subnet:255.255.255.0
Next HOP:10.10.10.2

Network2:192.168.1.0
subnet:255.255.255.0
Next HOP:172.16.1.2

Network1:10.0.0.0
subnet:255.0.0.0
Next HOP:172.16.1.1

Network2:192.168.2.0
subnet:255.255.255.0
Next HOP:10.10.10.2

Network1:172.16.0.0
subnet:255.255.0.0
Next HOP:10.10.10.1

Network2:192.168.1.0
subnet:255.255.255.0
Next HOP:172.16.1.2

10.10.10.2

10.10.10.1

172.16.1.1

172.16.1.2

Router-PT
Router A

Router-PT
Router B

Router-PT
Router C

192.168.2.1

192.168.1.1

2950T-24
Switch0

2950T-24
Switch1

Laptop-PT
Laptop3

Laptop-PT
Laptop4

Router A

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 10.10.10.2 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#
```

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Router B

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 10.10.10.1 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#ip address 172.16.1.1 255.255.0.0
Router(config-if)#
```

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Router C

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 172.16.1.2 255.255.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#
```

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Laptop IP

Routing Router A B & C

Router A

Network1:172.16.0.0
subnet:255.255.0.0
Next HOP:10.10.10.1

Network2:192.168.1.0
subnet:255.255.255.0
Next HOP:172.16.1.2

Router B

Network1:192.168.2.0
subnet:255.255.255.0
Next HOP:10.10.10.2

Network2:192.168.1.0
subnet:255.255.255.0
Next HOP:172.16.1.2

Router C

Network1:10.0.0.0
subnet:255.0.0.0
Next HOP:172.16.1.1

Network2:192.168.2.0
subnet:255.255.255.0
Next HOP:10.10.10.2

Successful transmission of packets across routers

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete		Delete
●	Successful	Laptop I	Laptop B	ICMP	🟩	0.000	N	0	(edit)			(delete)
●	Successful	Laptop I	Laptop A	ICMP	🟨	0.000	N	1	(edit)			(delete)