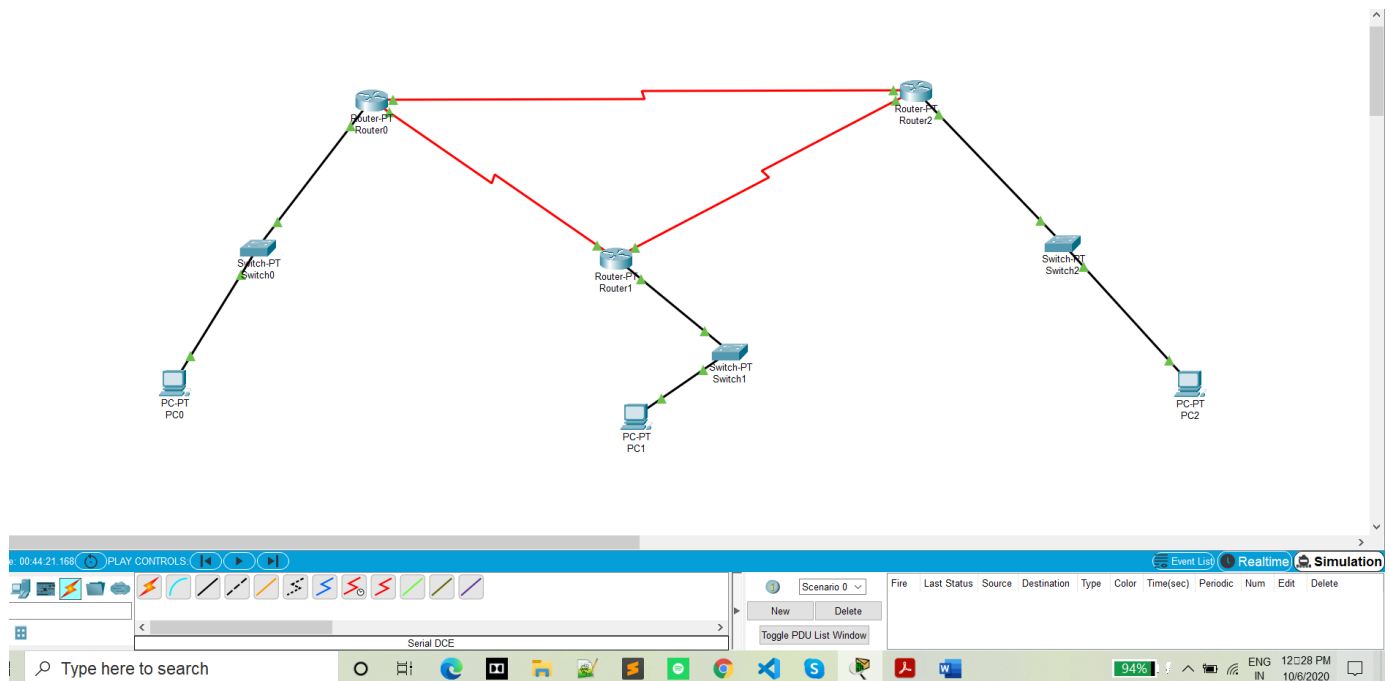


## Computer Network (Lab session 13)

Q-1) Create below topology.

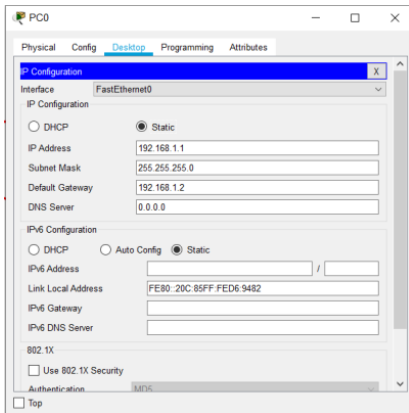
Set as RIP routing algorithm

A) -> Create topology

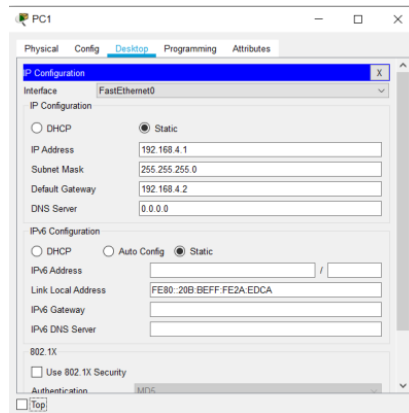


B) Now give every pc connect with switch and those switches connect with router

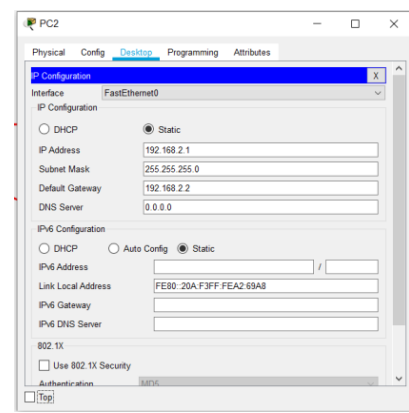
Pc-0



Pc-1

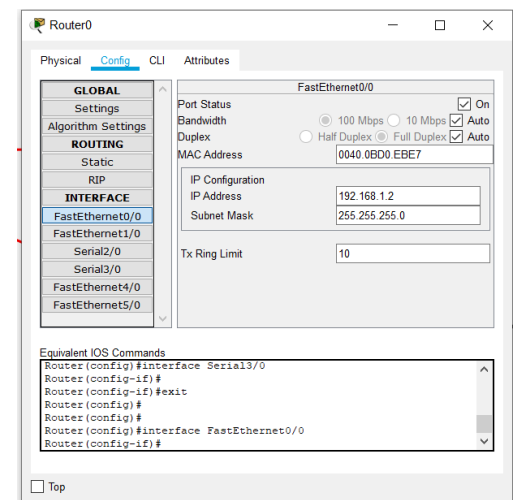
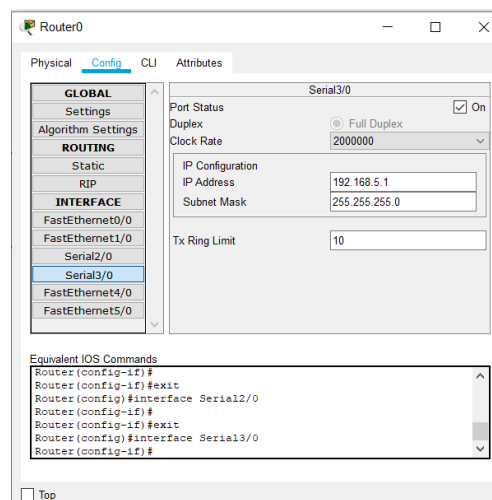
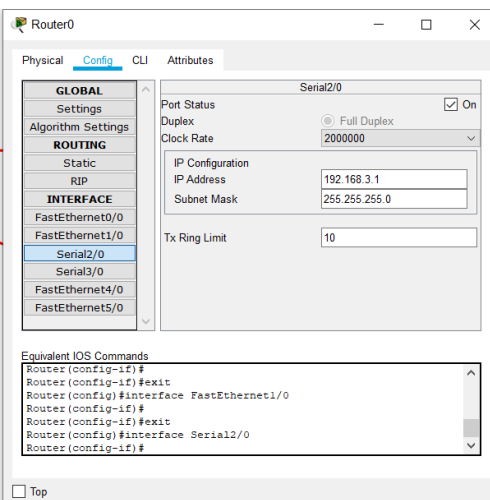


Pc-2



C) Router configure by connection of serial number 2-3 and Fast Ethernet.

Router-0



## Router-1

Router1

Physical Config CLI Attributes

**GLOBAL**  
Settings  
Algorithm Settings  
**ROUTING**  
Static  
RIP  
**INTERFACE**  
FastEthernet0/0  
FastEthernet1/0  
Serial2/0  
Serial3/0  
FastEthernet4/0  
FastEthernet5/0

Port Status  
Duplex ☒ Full Duplex ☐ On  
Clock Rate 2000000

IP Configuration  
IP Address 192.168.5.2  
Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
```

☐ Top

Router1

Physical Config CLI Attributes

**GLOBAL**  
Settings  
Algorithm Settings  
**ROUTING**  
Static  
RIP  
**INTERFACE**  
FastEthernet0/0  
FastEthernet1/0  
Serial2/0  
Serial3/0  
FastEthernet4/0  
FastEthernet5/0

Port Status  
Duplex ☒ Full Duplex ☐ On  
Clock Rate 2000000

IP Configuration  
IP Address 192.168.6.1  
Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
```

☐ Top

Router1

Physical Config CLI Attributes

**GLOBAL**  
Settings  
Algorithm Settings  
**ROUTING**  
Static  
RIP  
**INTERFACE**  
FastEthernet0/0  
FastEthernet1/0  
Serial2/0  
Serial3/0  
FastEthernet4/0  
FastEthernet5/0

Port Status  
Bandwidth 100 Mbps 10 Mbps ☒ Auto  
Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto  
MAC Address 000A.4183.2908

IP Configuration  
IP Address 192.168.4.2  
Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

☐ Top

## Router-2

Router2

Physical Config CLI Attributes

**GLOBAL**  
Settings  
Algorithm Settings  
**ROUTING**  
Static  
RIP  
**INTERFACE**  
FastEthernet0/0  
FastEthernet1/0  
Serial2/0  
Serial3/0  
FastEthernet4/0  
FastEthernet5/0

Port Status  
Duplex ☒ Full Duplex ☐ On  
Clock Rate 2000000

IP Configuration  
IP Address 192.168.3.2  
Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
```

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Router2

Physical Config CLI Attributes

**GLOBAL**  
Settings  
Algorithm Settings  
**ROUTING**  
Static  
RIP  
**INTERFACE**  
FastEthernet0/0  
FastEthernet1/0  
Serial2/0  
Serial3/0  
FastEthernet4/0  
FastEthernet5/0

Port Status  
Duplex ☒ Full Duplex ☐ On  
Clock Rate 2000000

IP Configuration  
IP Address 192.168.6.2  
Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial3/0
Router(config-if)#
```

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Router2

Physical Config CLI Attributes

**GLOBAL**  
Settings  
Algorithm Settings  
**ROUTING**  
Static  
RIP  
**INTERFACE**  
FastEthernet0/0  
FastEthernet1/0  
Serial2/0  
Serial3/0  
FastEthernet4/0  
FastEthernet5/0

Port Status  
Bandwidth 100 Mbps 10 Mbps ☒ Auto  
Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto  
MAC Address 000A.416B.9801

IP Configuration  
IP Address 192.168.2.2  
Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

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D)Now give all the router to network with RIP

## Router-0

Router0

Physical Config CLI Attributes

**GLOBAL**  
Settings  
Algorithm Settings  
**ROUTING**  
Static  
RIP  
**INTERFACE**  
FastEthernet0/0  
FastEthernet1/0  
Serial2/0  
Serial3/0  
FastEthernet4/0  
FastEthernet5/0

RIP Routing

Network

Network Address

192.168.1.0  
192.168.3.0  
192.168.5.0

Remove

Equivalent IOS Commands

```
LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0,
changed state to up
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
```

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## Router-1

Router1

Physical Config CLI Attributes

**GLOBAL**  
Settings  
Algorithm Settings  
**ROUTING**  
Static  
RIP  
**INTERFACE**  
FastEthernet0/0  
FastEthernet1/0  
Serial2/0  
Serial3/0  
FastEthernet4/0  
FastEthernet5/0

RIP Routing

Network

Network Address

192.168.4.0  
192.168.5.0  
192.168.6.0

Remove

Equivalent IOS Commands

```
LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0,
changed state to up
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
```

☐ Top

## Router-2

Router2

Physical Config CLI Attributes

**GLOBAL**  
Settings  
Algorithm Settings  
**ROUTING**  
Static  
RIP  
**INTERFACE**  
FastEthernet0/0  
FastEthernet1/0  
Serial2/0  
Serial3/0  
FastEthernet4/0  
FastEthernet5/0

RIP Routing

Network

Network Address

192.168.2.0  
192.168.3.0  
192.168.6.0

Remove

Equivalent IOS Commands

```
LINEPROTO-5-CHANGED: Interface Serial3/0, changed state to up
LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0,
changed state to up
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#
```

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E) All the path set packet and its simulation can view below  
From Path : 0-1 ,0-2, 1-2

