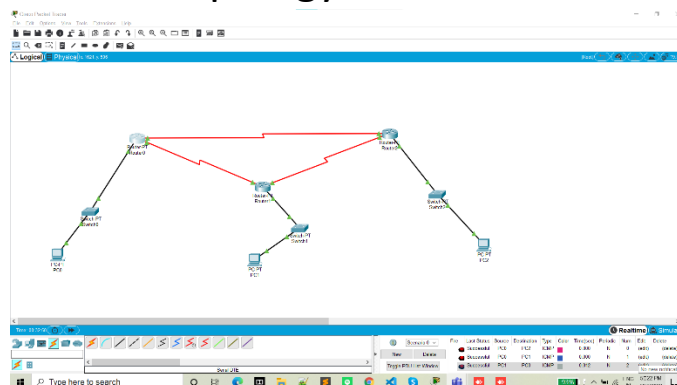


Computer Network (Lab session 12)

Q-1) Create below topology.

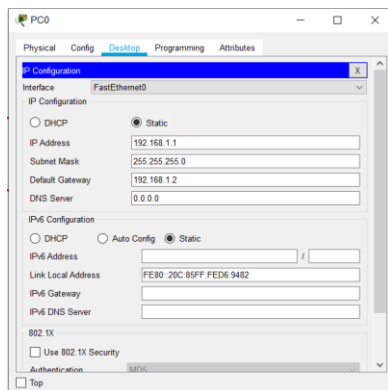
- Provide proper IP address to each interface as displayed here in the topology
- Add a path such that packets from network 192.168.1.0 with destination in network 192.168.2.0 will be routed via interface 192.168.3.2
- Add a path such that packets from network 192.168.1.0 with destination in network 192.168.4.0 will be routed via interface 192.168.5.2
- Observe the traffic flow by switching to the simulation mode in packet tracer
- Write down the steps you have followed with screenshots of each step.

 A) -> Create topology

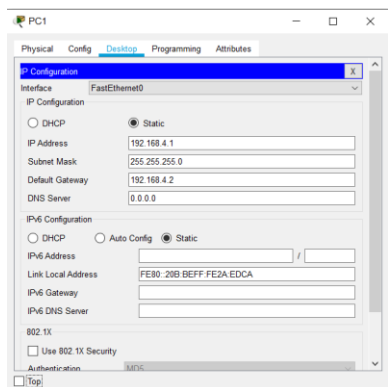


B) Now give every pc connect with switch and those switches connect with router

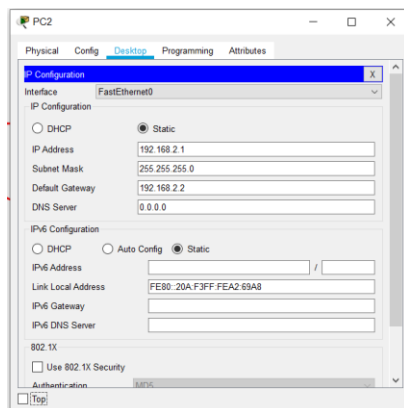
PC-0



PC-1



PC-2



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

Router-0

Router0 configuration window showing the configuration for Serial2/0. The interface is configured with IP Address 192.168.3.1 and Subnet Mask 255.255.255.0. The port status is set to Full Duplex and On. The clock rate is 2000000. The Tx Ring Limit is 10. The equivalent IOS commands are listed at the bottom.

```

Router0
Physical Config CLI Attributes
Serial2/0
Port Status: Duplex (Full Duplex), On
Clock Rate: 2000000
IP Configuration: IP Address 192.168.3.1, Subnet Mask 255.255.255.0
Tx Ring Limit: 10
Equivalent IOS Commands:
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#
  
```

Router0 configuration window showing the configuration for Serial3/0. The interface is configured with IP Address 192.168.5.1 and Subnet Mask 255.255.255.0. The port status is set to Full Duplex and On. The clock rate is 2000000. The Tx Ring Limit is 10. The equivalent IOS commands are listed at the bottom.

```

Router0
Physical Config CLI Attributes
Serial3/0
Port Status: Duplex (Full Duplex), On
Clock Rate: 2000000
IP Configuration: IP Address 192.168.5.1, 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)#
  
```

Router0 configuration window showing the configuration for FastEthernet0/0. The interface is configured with IP Address 192.168.1.2 and Subnet Mask 255.255.255.0. The port status is set to Full Duplex and On. The MAC Address is 0040.0B00.EBE7. The Tx Ring Limit is 10. The equivalent IOS commands are listed at the bottom.

```

Router0
Physical Config CLI Attributes
FastEthernet0/0
Port Status: Bandwidth (100 Mbps), Duplex (Full Duplex), On
MAC Address: 0040.0B00.EBE7
IP Configuration: IP Address 192.168.1.2, Subnet Mask 255.255.255.0
Tx Ring Limit: 10
Equivalent IOS Commands:
Router(config)#interface Serial3/0
Router(config-if)#
Router(config-if)#exit
Router(config-if)#
Router(config)#
Router(config)#interface FastEthernet0/0
Router(config-if)#
  
```

Router-1

Router1 configuration window showing the configuration for Serial2/0. The interface is configured with IP Address 192.168.5.2 and Subnet Mask 255.255.255.0. The port status is set to Full Duplex and On. The clock rate is 2000000. The Tx Ring Limit is 10. The equivalent IOS commands are listed at the bottom.

```

Router1
Physical Config CLI Attributes
Serial2/0
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)#exit
Router(config)#interface Serial2/0
Router(config-if)#
  
```

Router1 configuration window showing the configuration for Serial3/0. The interface is configured with IP Address 192.168.6.1 and Subnet Mask 255.255.255.0. The port status is set to Full Duplex and On. The clock rate is 2000000. The Tx Ring Limit is 10. The equivalent IOS commands are listed at the bottom.

```

Router1
Physical Config CLI Attributes
Serial3/0
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)#
  
```

Router1 configuration window showing the configuration for FastEthernet0/0. The interface is configured with IP Address 192.168.4.2 and Subnet Mask 255.255.255.0. The port status is set to Full Duplex and On. The MAC Address is 000A.41B3.2908. The Tx Ring Limit is 10. The equivalent IOS commands are listed at the bottom.

```

Router1
Physical Config CLI Attributes
FastEthernet0/0
Port Status: Bandwidth (100 Mbps), Duplex (Full Duplex), On
MAC Address: 000A.41B3.2908
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)#
  
```

Router-2

Router2 configuration window showing the configuration for Serial2/0. The interface is configured with IP Address 192.168.3.2 and Subnet Mask 255.255.255.0. The port status is set to Full Duplex and On. The clock rate is 2000000. The Tx Ring Limit is 10. The equivalent IOS commands are listed at the bottom.

```

Router2
Physical Config CLI Attributes
Serial2/0
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)#
  
```

Router2 configuration window showing the configuration for Serial3/0. The interface is configured with IP Address 192.168.6.2 and Subnet Mask 255.255.255.0. The port status is set to Full Duplex and On. The clock rate is 2000000. The Tx Ring Limit is 10. The equivalent IOS commands are listed at the bottom.

```

Router2
Physical Config CLI Attributes
Serial3/0
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)#
  
```

Router2 configuration window showing the configuration for FastEthernet0/0. The interface is configured with IP Address 192.168.2.2 and Subnet Mask 255.255.255.0. The port status is set to Full Duplex and On. The MAC Address is 000A.41B3.9801. The Tx Ring Limit is 10. The equivalent IOS commands are listed at the bottom.

```

Router2
Physical Config CLI Attributes
FastEthernet0/0
Port Status: Bandwidth (100 Mbps), Duplex (Full Duplex), On
MAC Address: 000A.41B3.9801
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)#
  
```

D) After set wired now, we have to give path of data sharing or routing static path

Router-0

Router0 configuration window showing Static Routes setup. The configuration is as follows:

Category	Field	Value
ROUTING	Static	Selected
	Network	192.168.2.0
	Mask	255.255.255.0
ROUTING	Next Hop	192.168.3.2
	Add	Button
INTERFACE	FastEthernet0/0	
	FastEthernet1/0	
	Serial2/0	
	Serial3/0	
INTERFACE	FastEthernet4/0	
	FastEthernet5/0	
Equivalent IOS Commands	Router(config-if)#exit	
	Router(config)#interface Serial3/0	
Equivalent IOS Commands	Router(config-if)#	
	Router(config-if)#exit	
Equivalent IOS Commands	Router(config)#	
	Router(config)#	

Router0 configuration window showing Static Routes setup. The configuration is as follows:

Category	Field	Value
ROUTING	Static	Selected
	Network	192.168.4.0
	Mask	255.255.255.0
ROUTING	Next Hop	192.168.5.2
	Add	Button
INTERFACE	FastEthernet0/0	
	FastEthernet1/0	
	Serial2/0	
	Serial3/0	
INTERFACE	FastEthernet4/0	
	FastEthernet5/0	
Equivalent IOS Commands	Router(config-if)#exit	
	Router(config)#interface Serial3/0	
Equivalent IOS Commands	Router(config-if)#	
	Router(config-if)#exit	
Equivalent IOS Commands	Router(config)#	
	Router(config)#	

Router-1

Router1 configuration window showing Static Routes setup. The configuration is as follows:

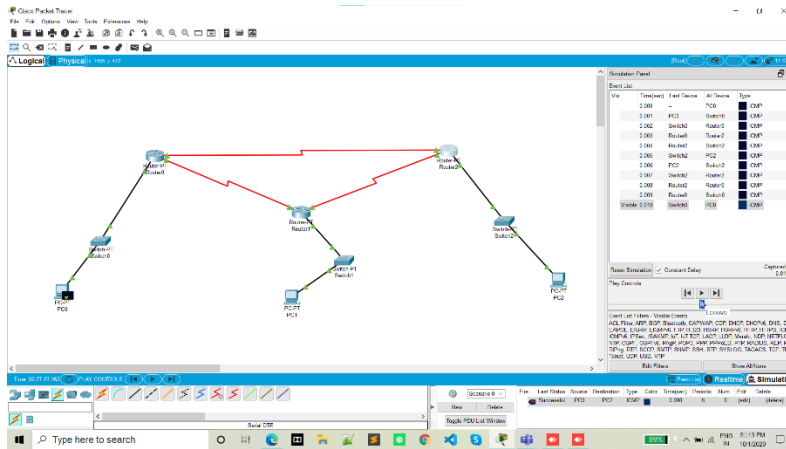
Category	Field	Value
ROUTING	Static	Selected
	Network	192.168.1.0
	Mask	255.255.255.0
ROUTING	Next Hop	192.168.5.1
	Add	Button
INTERFACE	FastEthernet0/0	
	FastEthernet1/0	
	Serial2/0	
	Serial3/0	
INTERFACE	FastEthernet4/0	
	FastEthernet5/0	
Equivalent IOS Commands	Router(config-if)#exit	
	Router(config)#interface Serial3/0	
Equivalent IOS Commands	Router(config-if)#	
	Router(config-if)#exit	
Equivalent IOS Commands	Router(config)#	
	Router(config)#	

Router-2

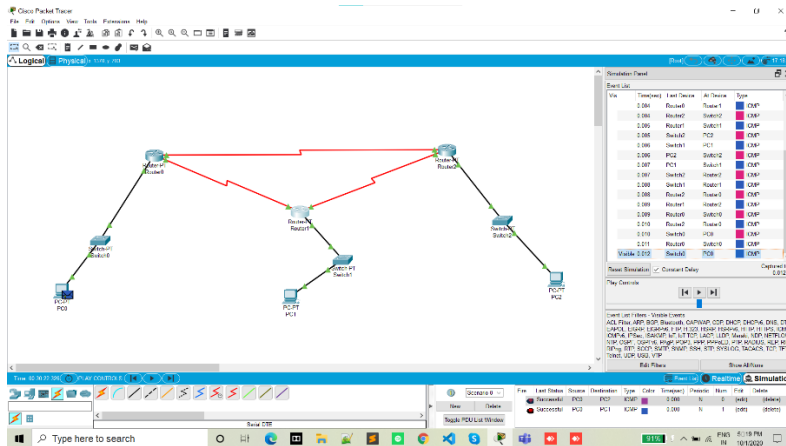
Router2 configuration window showing Static Routes setup. The configuration is as follows:

Category	Field	Value
ROUTING	Static	Selected
	Network	192.168.1.0
	Mask	255.255.255.0
ROUTING	Next Hop	192.168.3.1
	Add	Button
INTERFACE	FastEthernet0/0	
	FastEthernet1/0	
	Serial2/0	
	Serial3/0	
INTERFACE	FastEthernet4/0	
	FastEthernet5/0	
Equivalent IOS Commands	Router(config-if)#exit	
	Router(config)#interface Serial3/0	
Equivalent IOS Commands	Router(config-if)#	
	Router(config-if)#exit	
Equivalent IOS Commands	Router(config)#	
	Router(config)#	

E) At last we perform to send packet on packet 0-1 and 0-2,1-0
 , Those three-packet given below: Packet sending from 0-2



Packet sending from 0-1



Packet sending from 1-0

