NETWORK AND COMMUNICATIONS

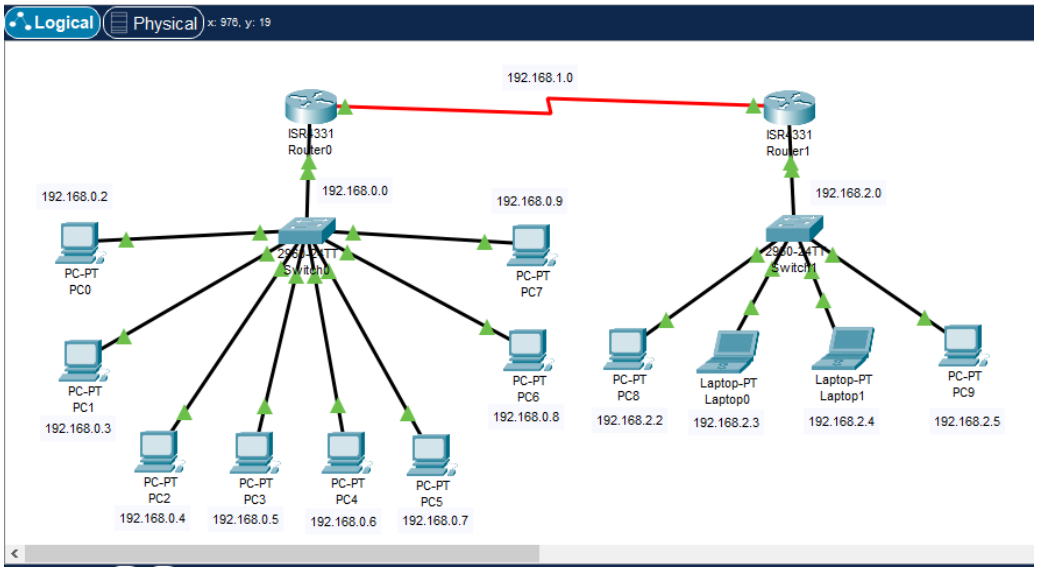
NAME:BOGGAVARAPU CH N V SHIVANI

REG NO:20BCE0563

Implement Dynamic routing to connect 2 different networks

- Network1 with 8 Desktops
- Network 2 with 2 Desktops and 2 Laptop

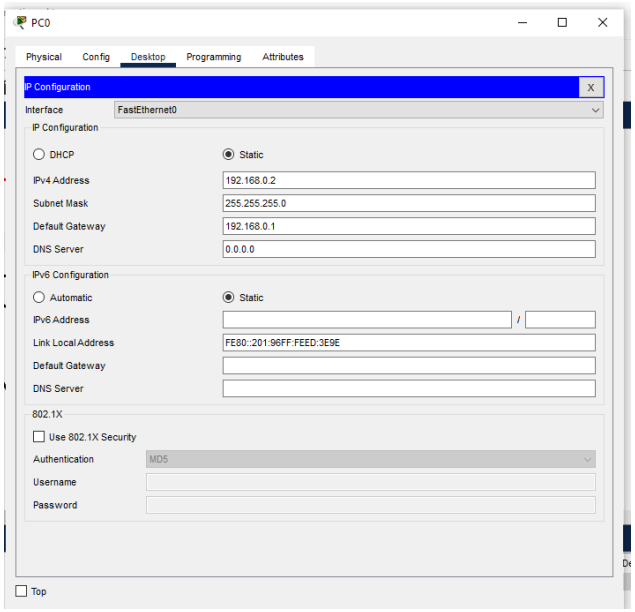
Step 1:Building of networks using switches,routers,wires desktops and laptops according to the requirement.



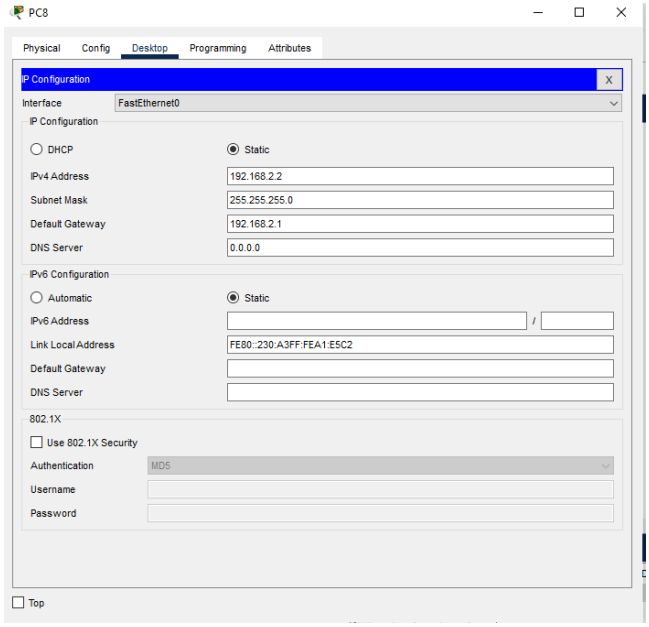
Step 2:

Configuring ip addresses for each desktop and add labels.

Network 1 system

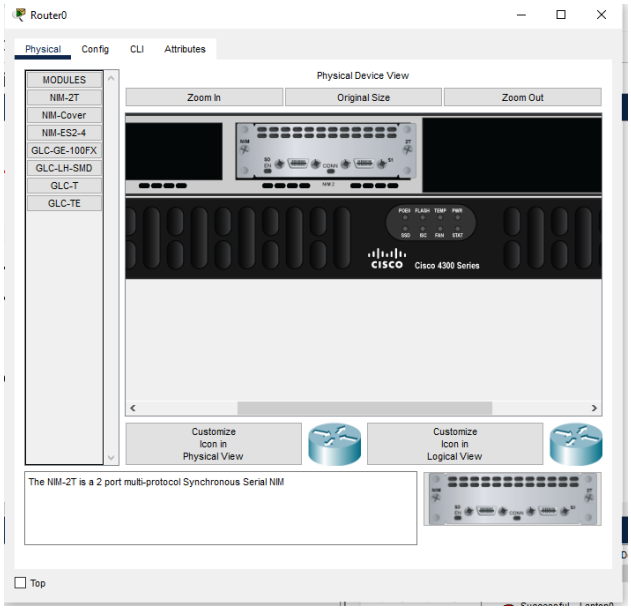


Network 2 system:



Step 3:

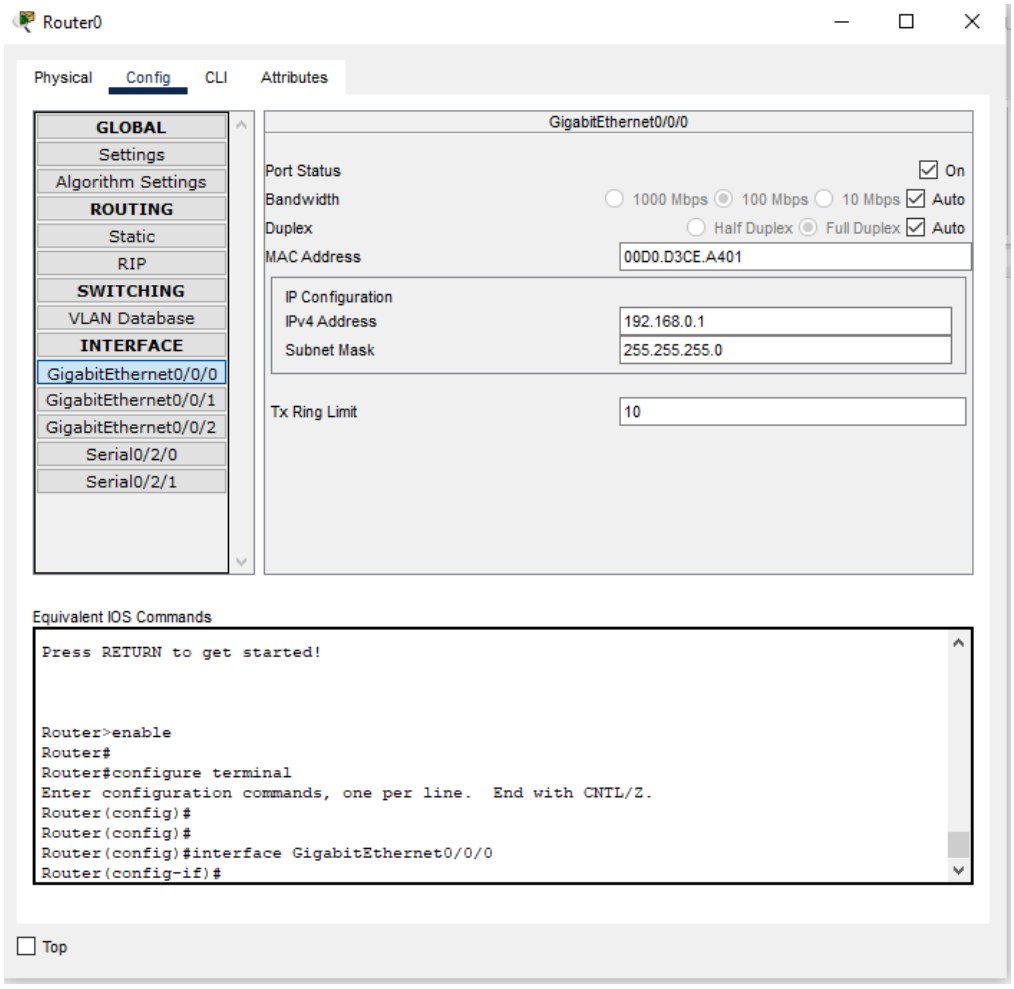
Add extra port for router 0 and 1.While adding extra ports we need to turn off the switch and turn in on after adding the port.Then connect them using the wires.

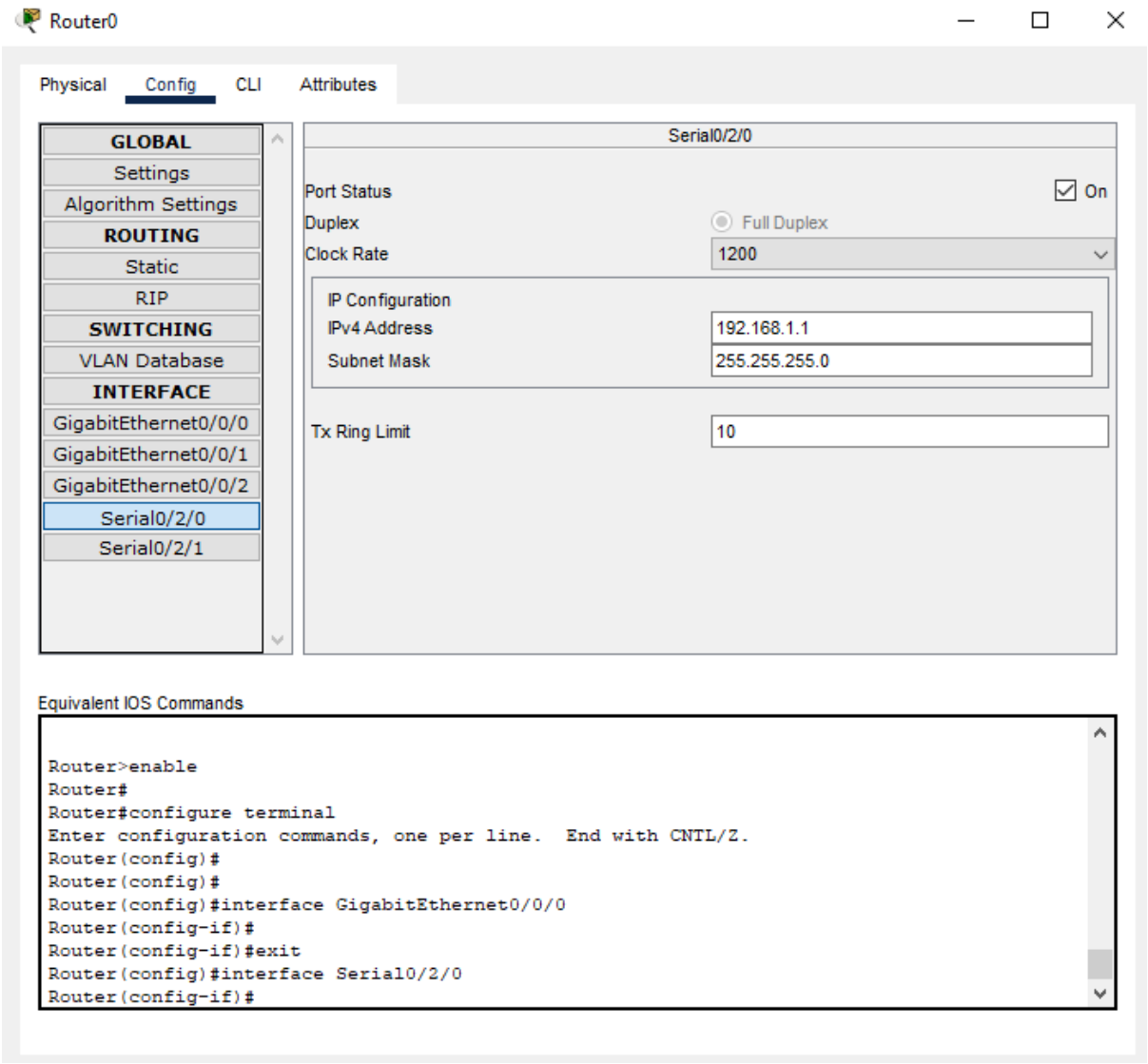


Step 4:

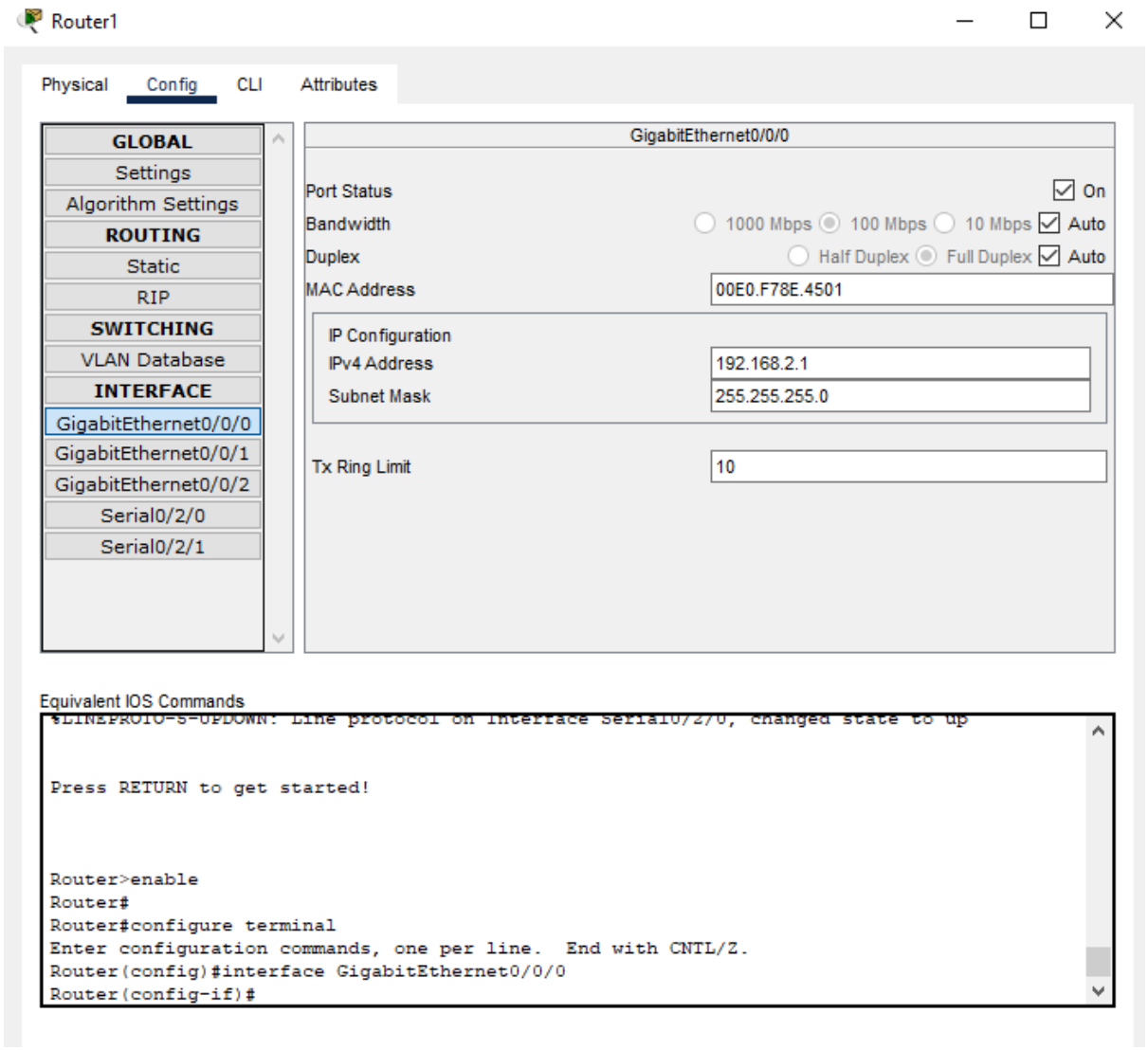
Then add ip addresses router ports accordingly.

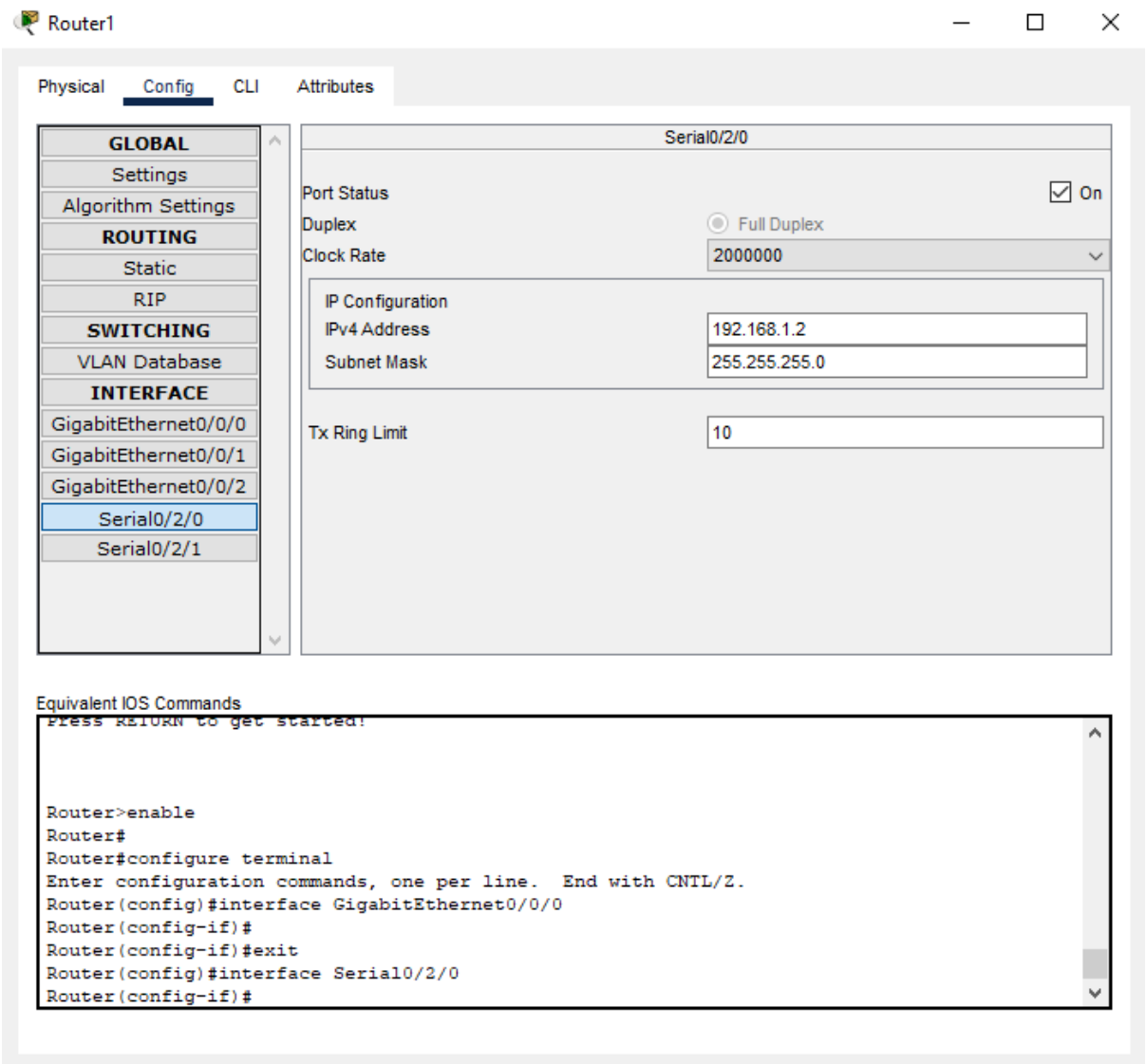
For router 0:




Router0
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/0/2
Serial0/2/0
Serial0/2/1
Serial0/2/0
Port Status
On
Duplex
Full Duplex
Clock Rate
1200
IP Configuration
IPv4 Address
192.168.1.1
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)#
Router(config)#
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/2/0
Router(config-if)#

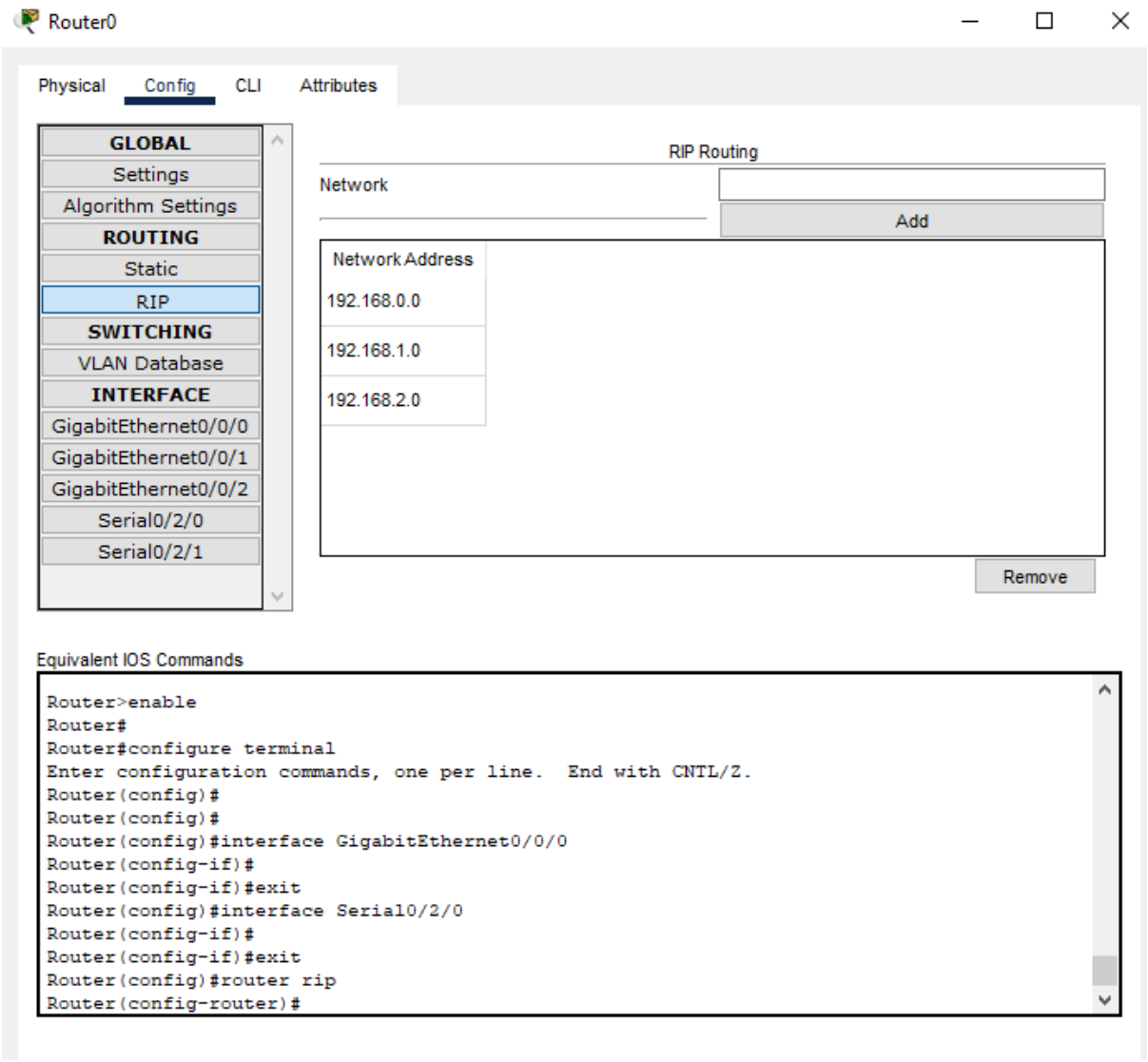
For router 1:


Router1
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/0/2
Serial0/2/0
Serial0/2/1
GigabitEthernet0/0/0
Port Status
On
Bandwidth
1000 Mbps
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
00E0.F78E.4501
IP Configuration
IPv4 Address
192.168.2.1
Subnet Mask
255.255.255.0
Tx Ring Limit
10
Equivalent IOS Commands
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/2/0, changed state to up
Press RETURN to get started!
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#

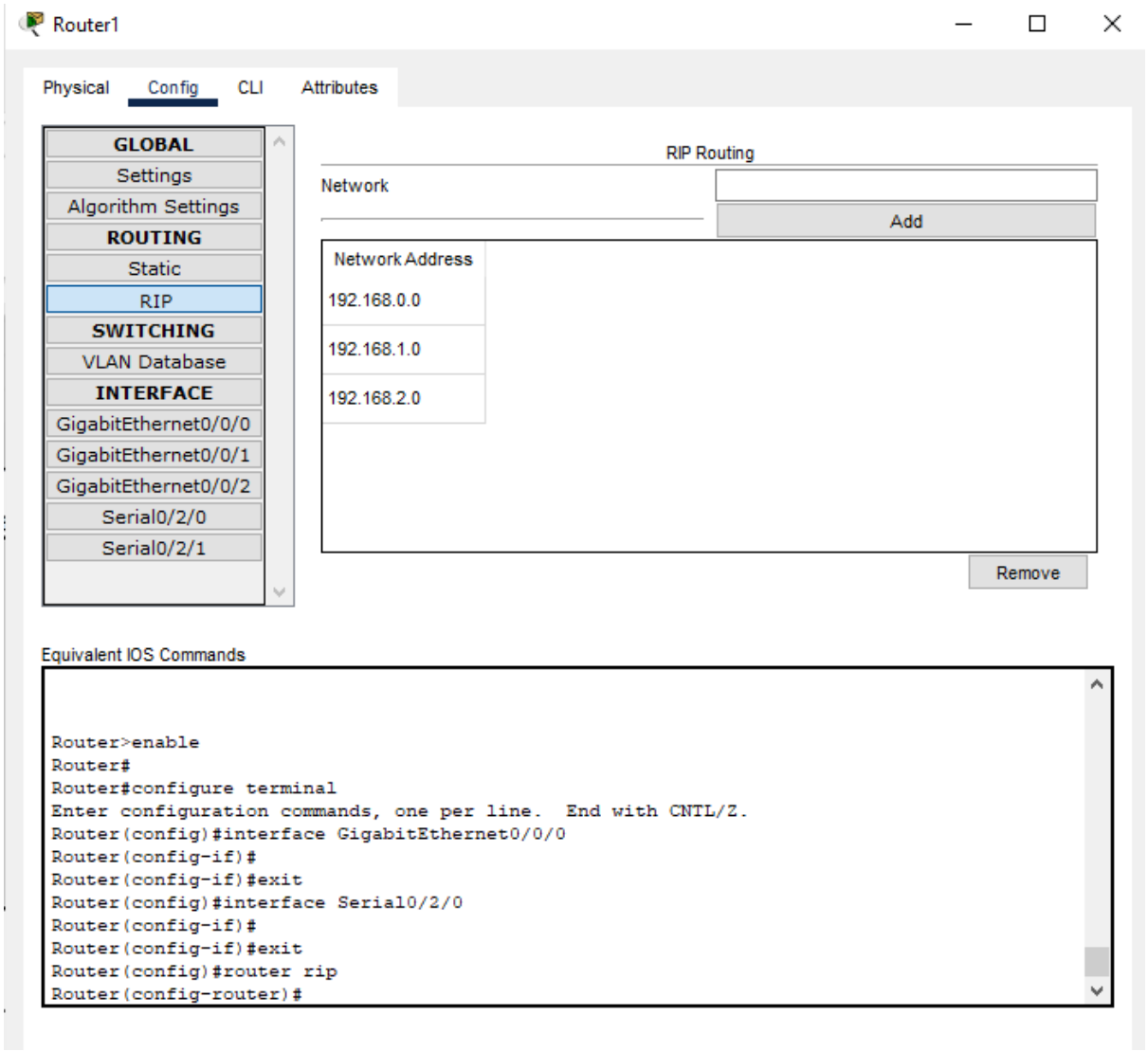


Step 5:Perform Dynamic routing for each router.In configuration of each router add the ip address of all networks.

Router 0:

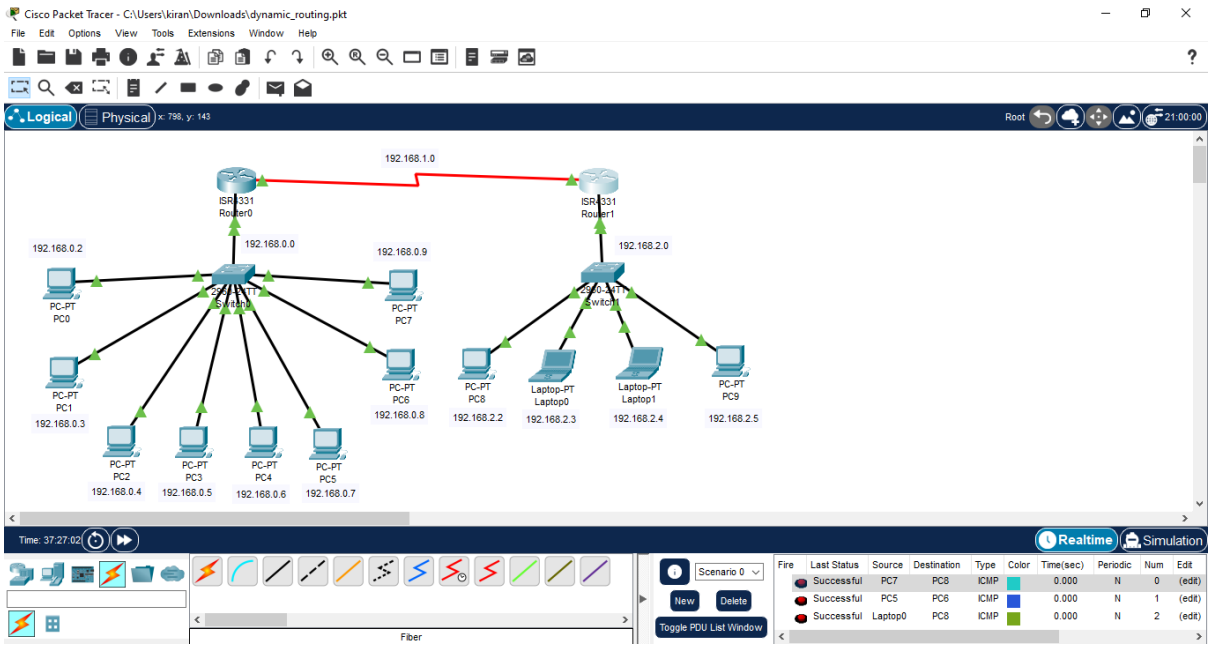

Router0
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
GigabitEthernet0/0/0
GigabitEthernet0/0/1
GigabitEthernet0/0/2
Serial0/2/0
Serial0/2/1
RIP Routing
Network
Add
Network Address
192.168.0.0
192.168.1.0
192.168.2.0
Remove
Equivalent IOS Commands
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#
Router(config)#interface GigabitEthernet0/0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/2/0
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#

Router 1:



Step 6:

Add packets and check stimulation . Sometimes at starting the trasmission shows failed but it gets successful after sometime or by doing it again as it takes some time for the stimulation of the network.


Cisco Packet Tracer - C:\Users\kiran\Downloads\dynamic_routing.pkt
File Edit Options View Tools Extensions Window Help
Logical
Physical
Root
192.168.1.0
ISR4331 Router0
ISR4331 Router1
192.168.0.0
192.168.2.0
192.168.0.2
192.168.0.9
PC-PT PC0
PC-PT PC7
PC-PT PC1
192.168.0.3
PC-PT PC6
192.168.0.8
PC-PT PC8
192.168.2.2
Laptop-PT Laptop0
192.168.2.3
Laptop-PT Laptop1
192.168.2.4
PC-PT PC9
192.168.2.5
PC-PT PC2
192.168.0.4
PC-PT PC3
192.168.0.5
PC-PT PC4
192.168.0.6
PC-PT PC5
192.168.0.7
Realtime
Simulation
Fiber
Scenario 0
New
Delete
Toggle PDU List Window
Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit
Successful PC7 PC8 ICMP 0.000 N 0 (edit)
Successful PC5 PC6 ICMP 0.000 N 1 (edit)
Successful Laptop0 PC8 ICMP 0.000 N 2 (edit)