VIT®

Vellore Institute of Technology

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Course Code: BCSE353E

Course Name: Information Security Analysis and Audit

Assessment – 1

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Experiment 1: -

Designing a Network with 3 Desktop, 3 switches (2960) and 3 Routers (2811) as shown below and do the Network Trouble shooting using Packet Tracer Tool. Use the Network Commands using CLI options of the Cisco Packet Tracer.

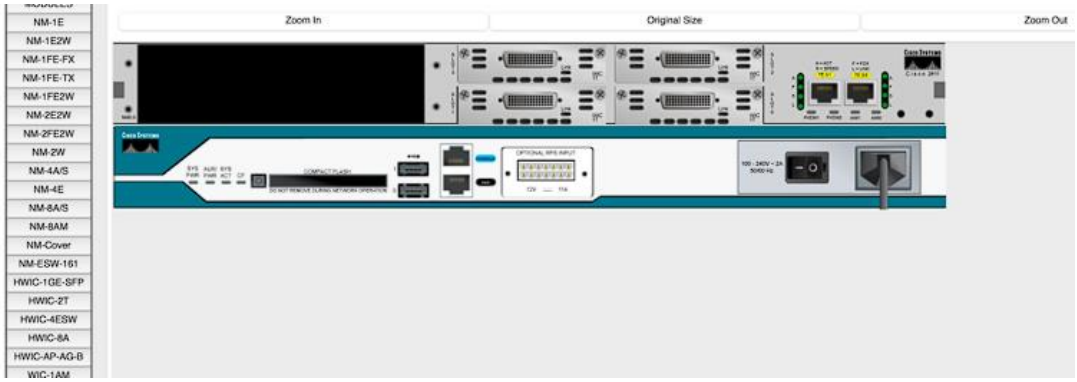
Steps:

1) First, we set up 3 PC PT 3 2811 and 2 2960-24TT routers as shown below

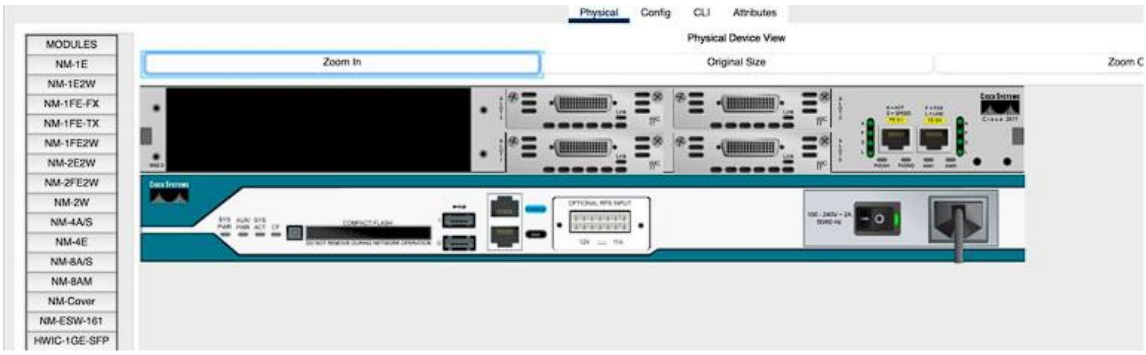
2) We connect with 2 network device Switches(Switch Number 2960)

3) We place 3 routers (Router number 2811)

4) We need to make sure to add serial port interface to the given routers. It involves the following steps:
   a. Turn off the router to add serial port

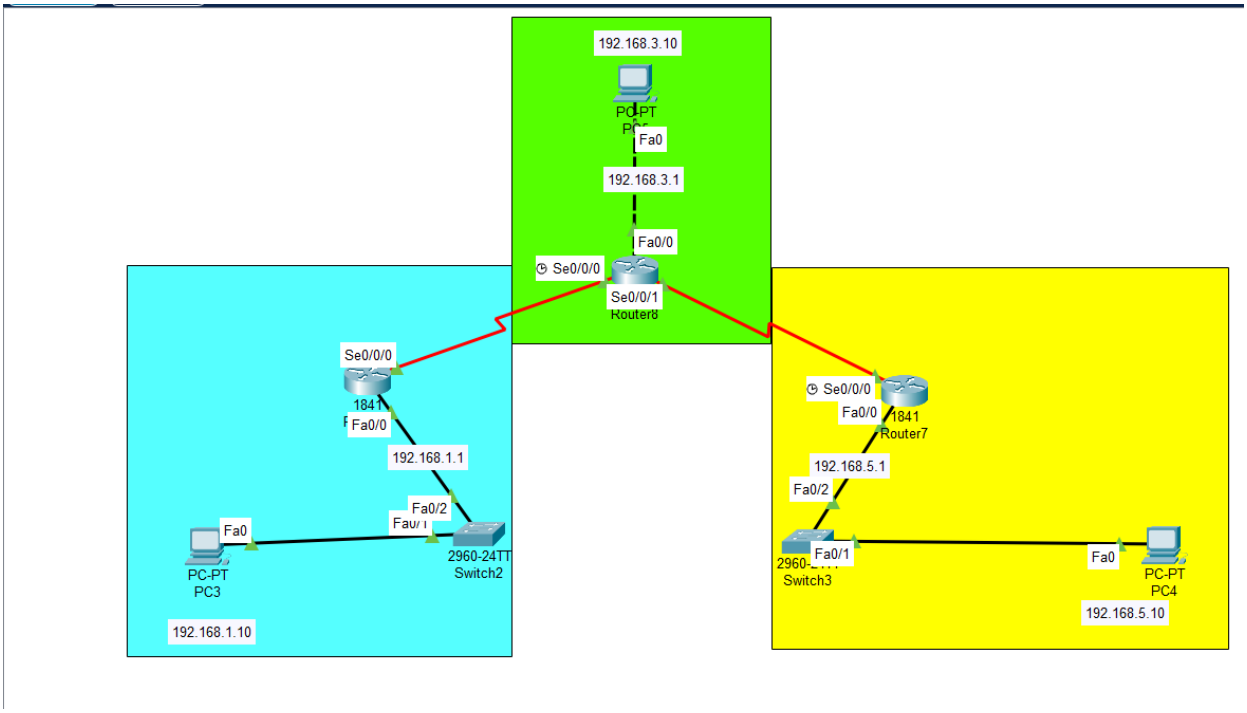


   b. Turn on the router again.



5) Make correct wire connections with each end device, network device and router as shown.

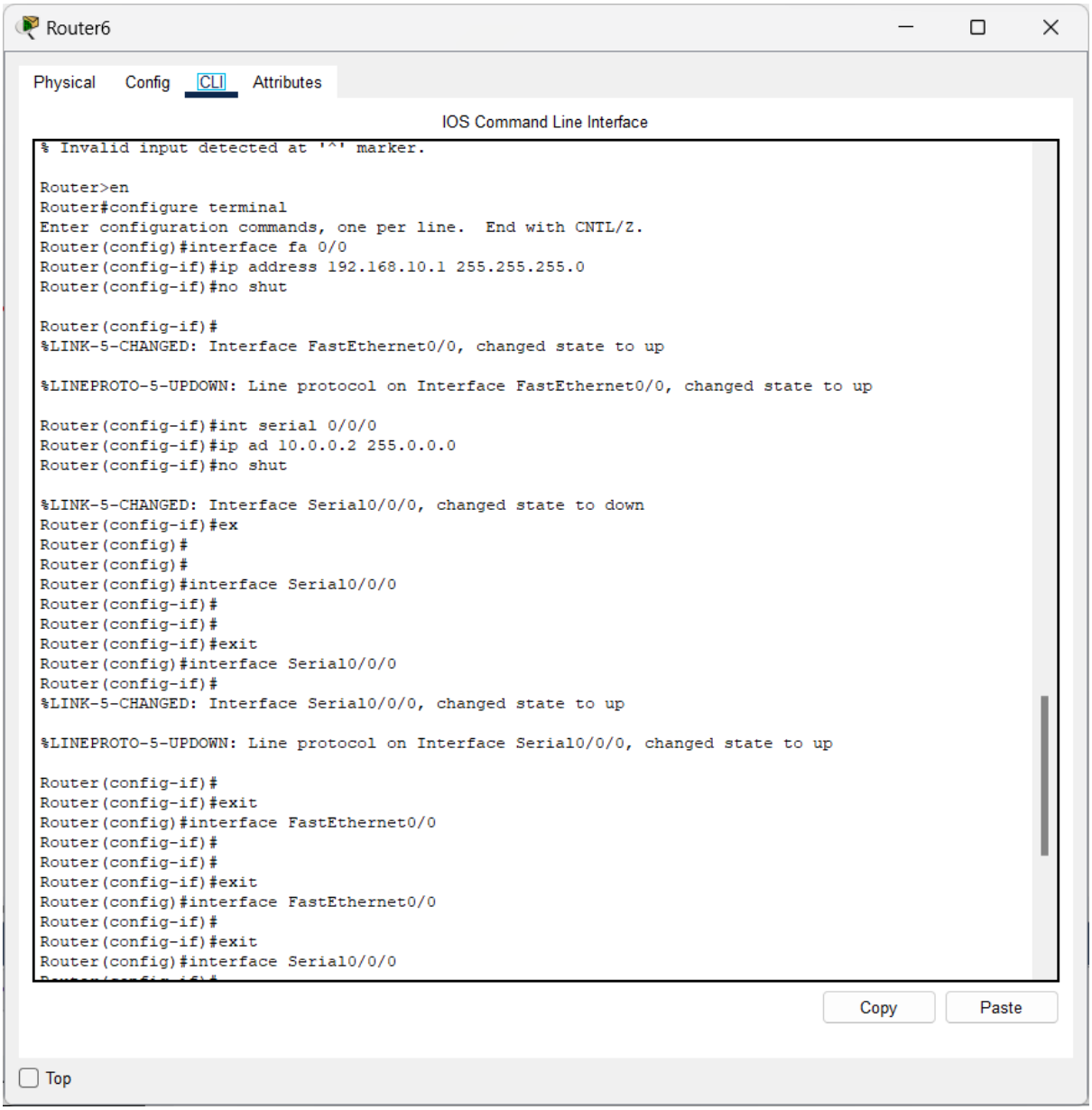
6) We finally create our circuit as follows:



7) We configure the IP addresses of each PC

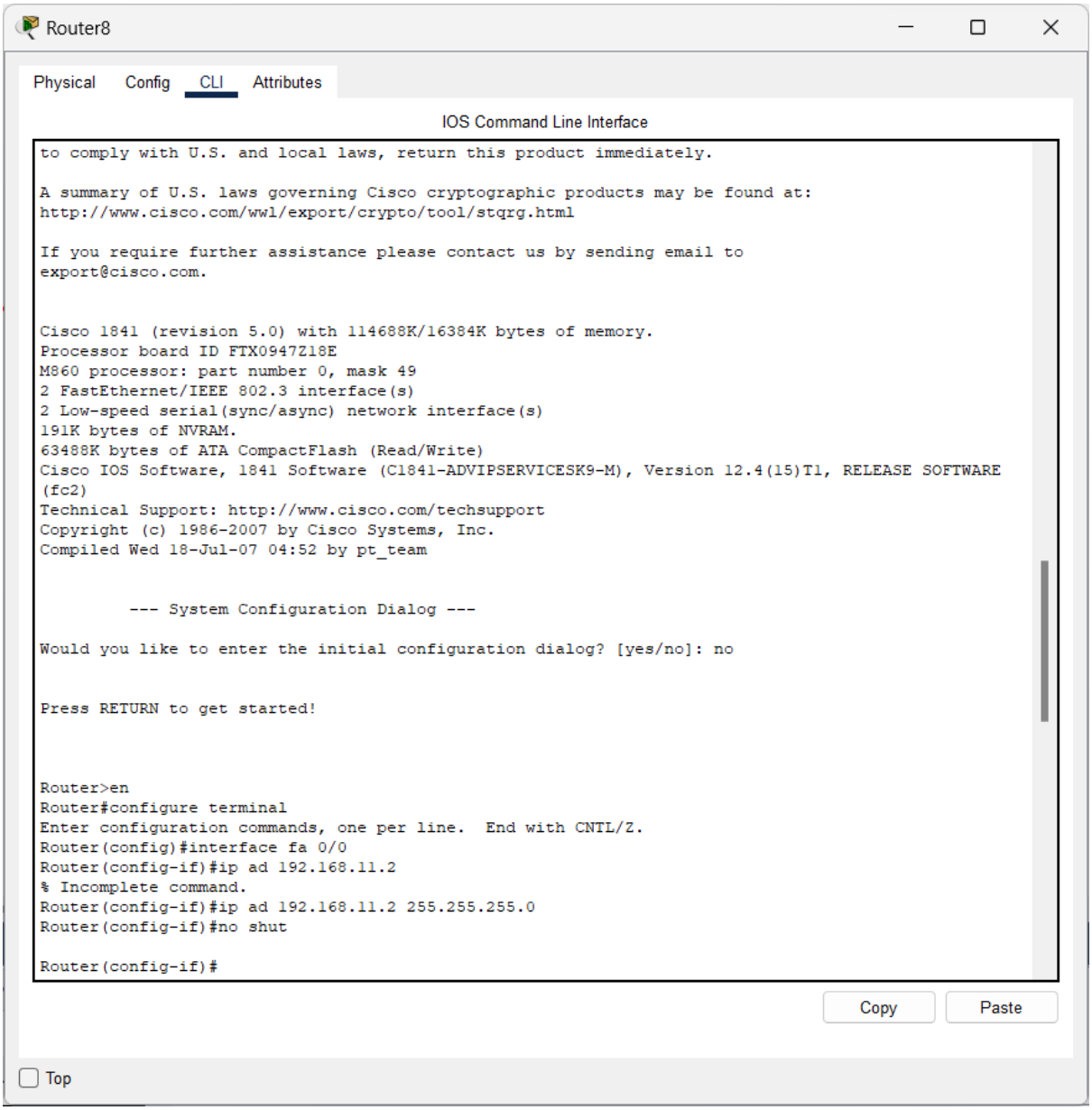
For Router 1:

CLI commands are as follows:



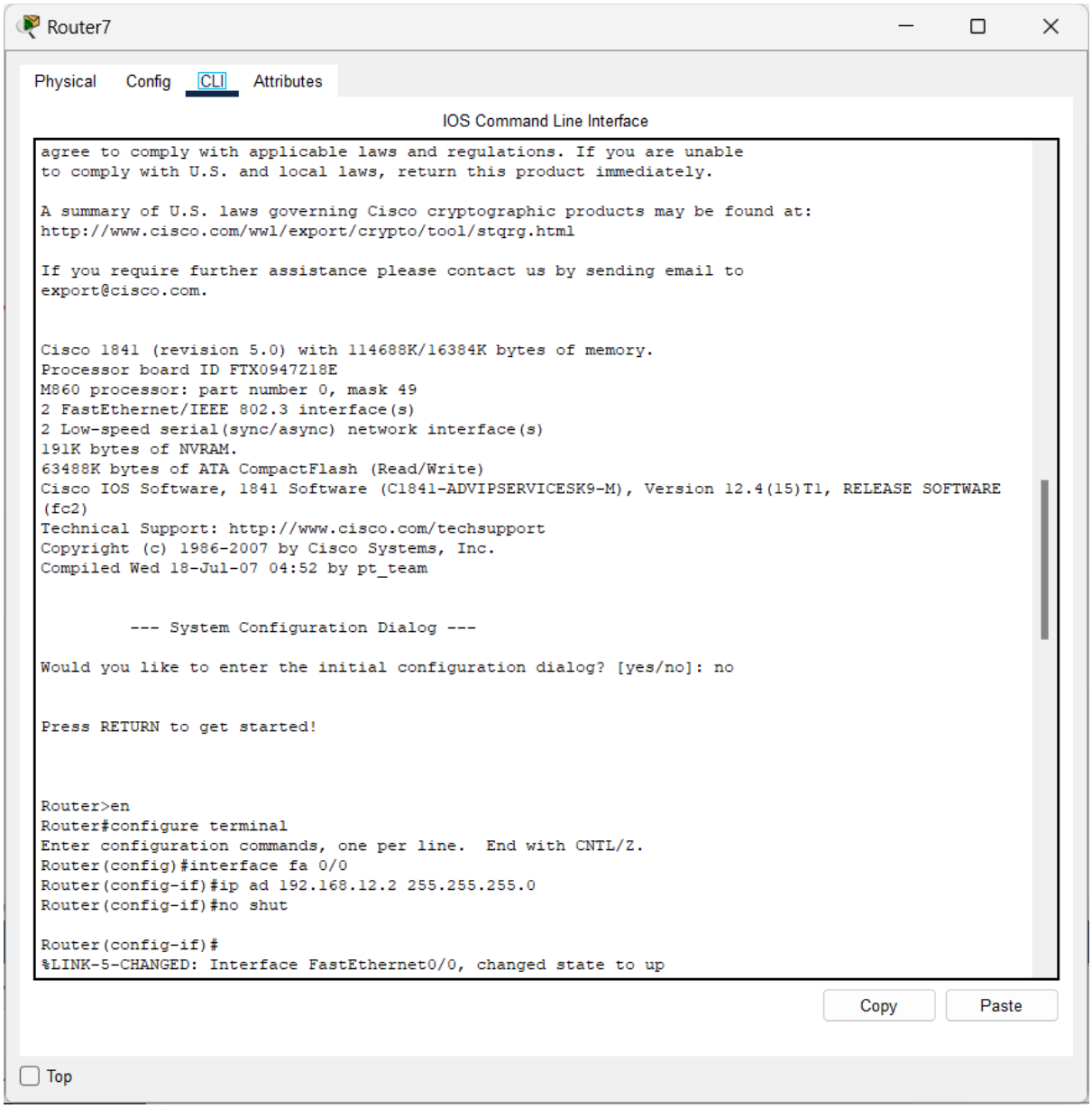
For router 2:

CLI commands are as follows:



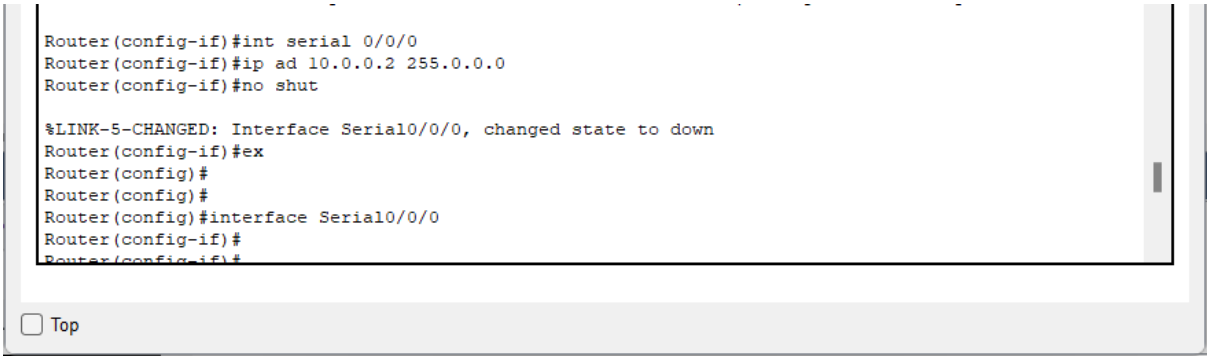
For Router 3:

IP V.4 Address is set as 13.10.10.10 for the PC-3 and default Gateway is set as 13.10.10.1

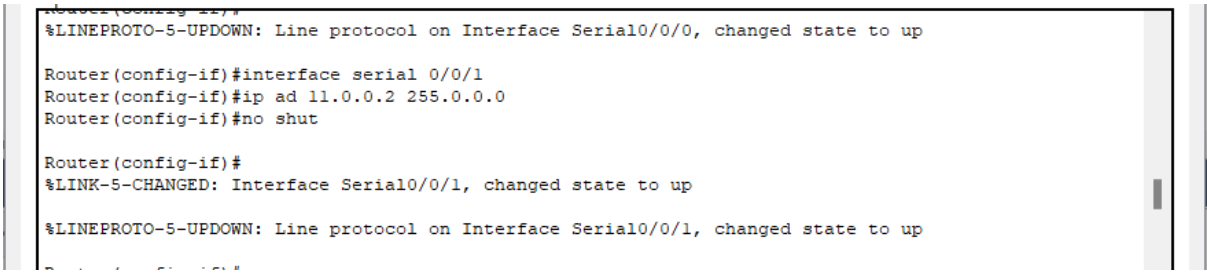


8) We configure the IP V.4 address of each router as follows:

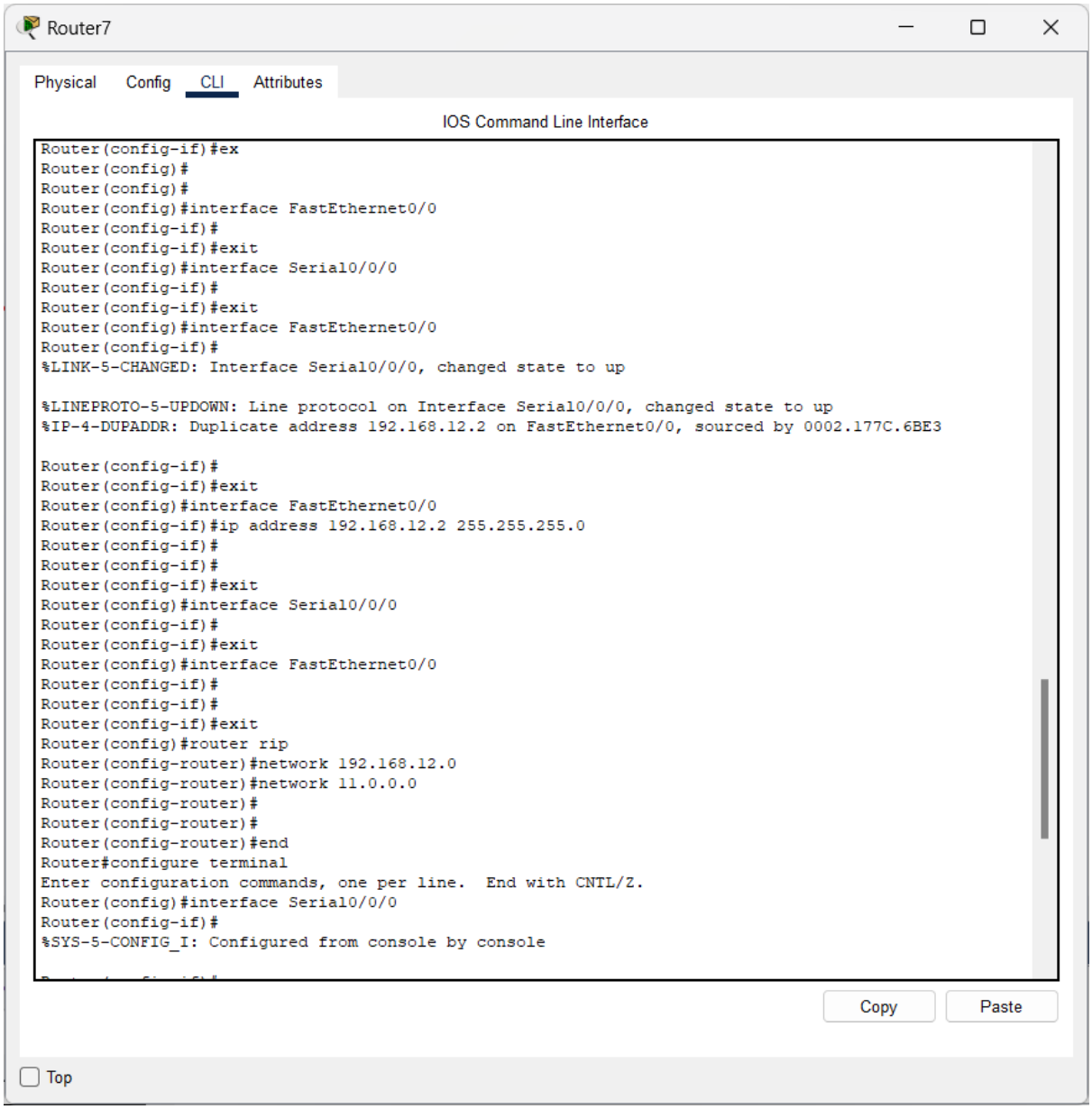
Router 1:



Router 2:



Router 3:


Router7
Physical
Config
CLI
Attributes
IOS Command Line Interface
Router(config-if)#ex
Router(config)#
Router(config)#
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up
%IP-4-DUPADDR: Duplicate address 192.168.12.2 on FastEthernet0/0, sourced by 0002.177C.6BE3
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.12.2 255.255.255.0
Router(config-if)#
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial0/0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 192.168.12.0
Router(config-router)#network 11.0.0.0
Router(config-router)#
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface Serial0/0/0
Router(config-if)#
%SYS-5-CONFIG_I: Configured from console by console
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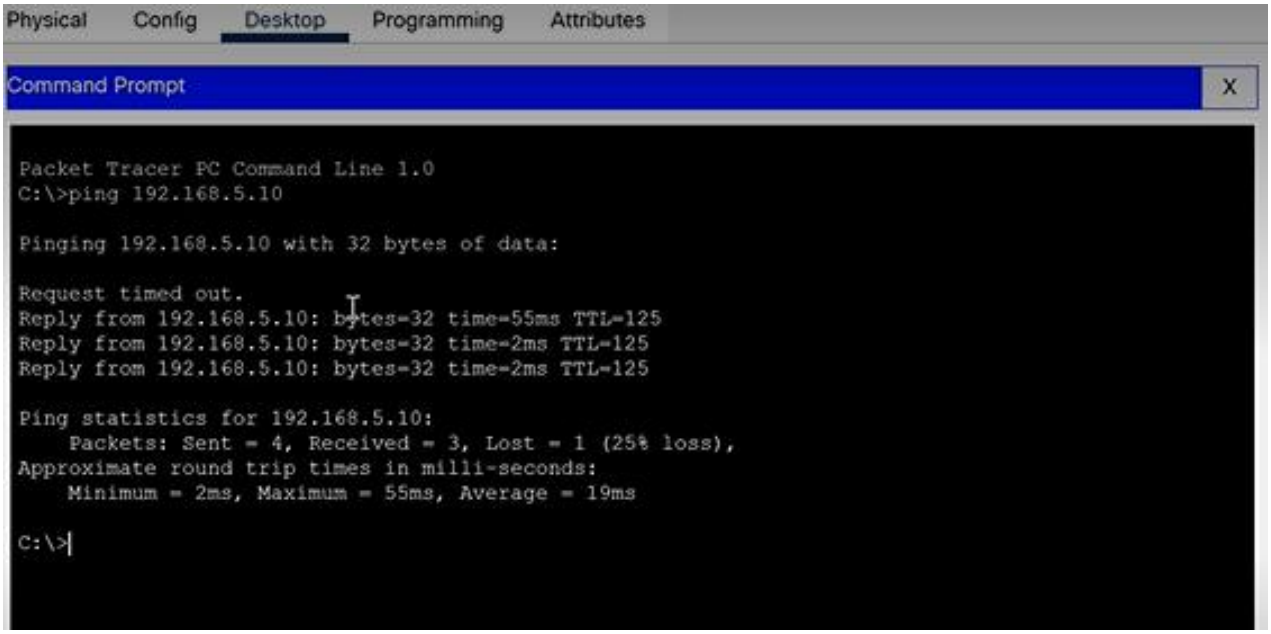
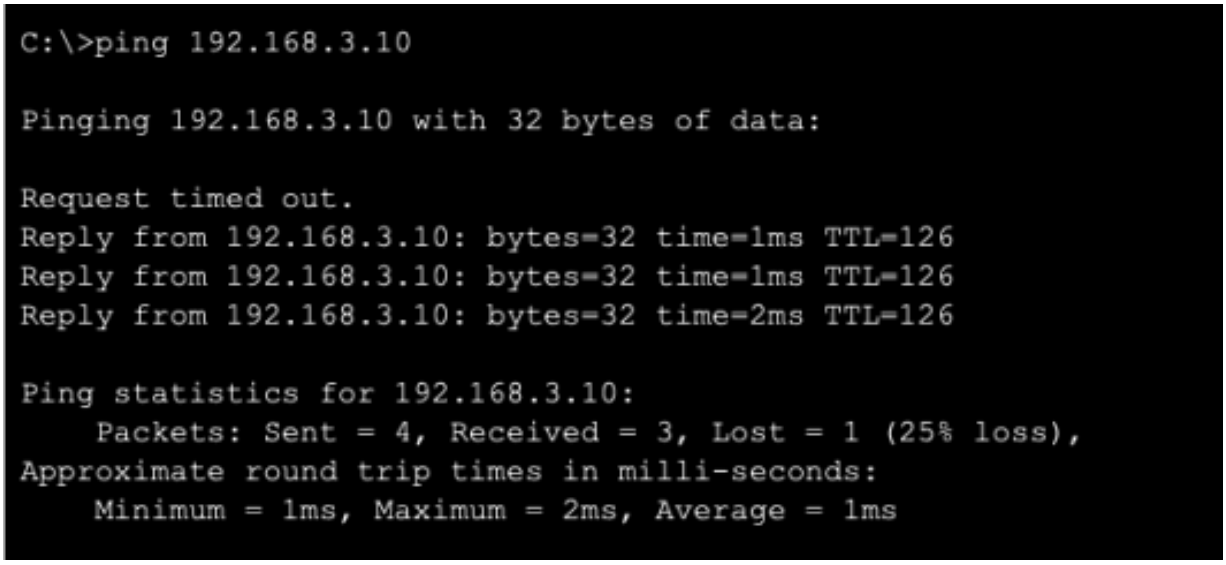
Observation and results:

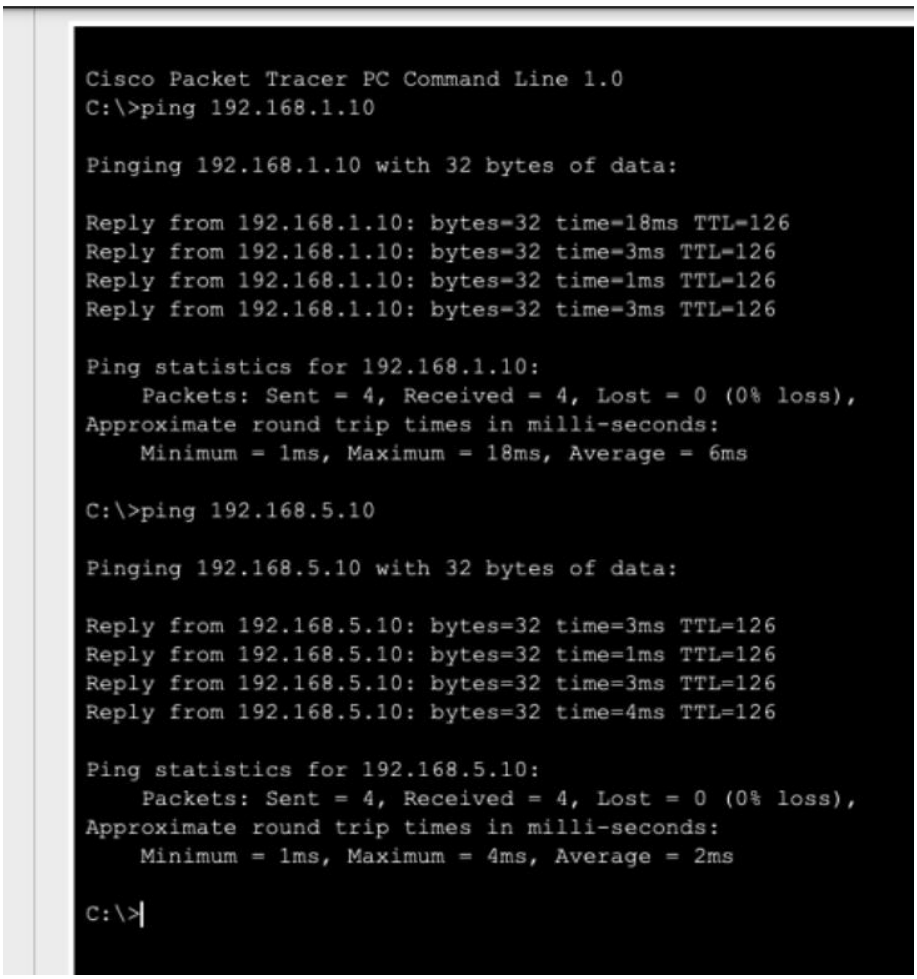
Finally, after configuring everything. We use the Ping command to transmit data in form of Packets.

a) From PC0 to PC1 & PC2





b) From PC1 to PC0 and PC2



c) From PC2 to PC1 & PC0

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.3.10

Pinging 192.168.3.10 with 32 bytes of data:

Reply from 192.168.3.10: bytes=32 time=1ms TTL=126
Reply from 192.168.3.10: bytes=32 time=2ms TTL=126
Reply from 192.168.3.10: bytes=32 time=1ms TTL=126
Reply from 192.168.3.10: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.3.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 2ms, Average = 1ms

C:\>ping 192.168.1.10

Pinging 192.168.1.10 with 32 bytes of data:

Reply from 192.168.1.10: bytes=32 time=4ms TTL=125
Reply from 192.168.1.10: bytes=32 time=2ms TTL=125
Reply from 192.168.1.10: bytes=32 time=2ms TTL=125
Reply from 192.168.1.10: bytes=32 time=2ms TTL=125

Ping statistics for 192.168.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 4ms, Average = 2ms

C:\>
```