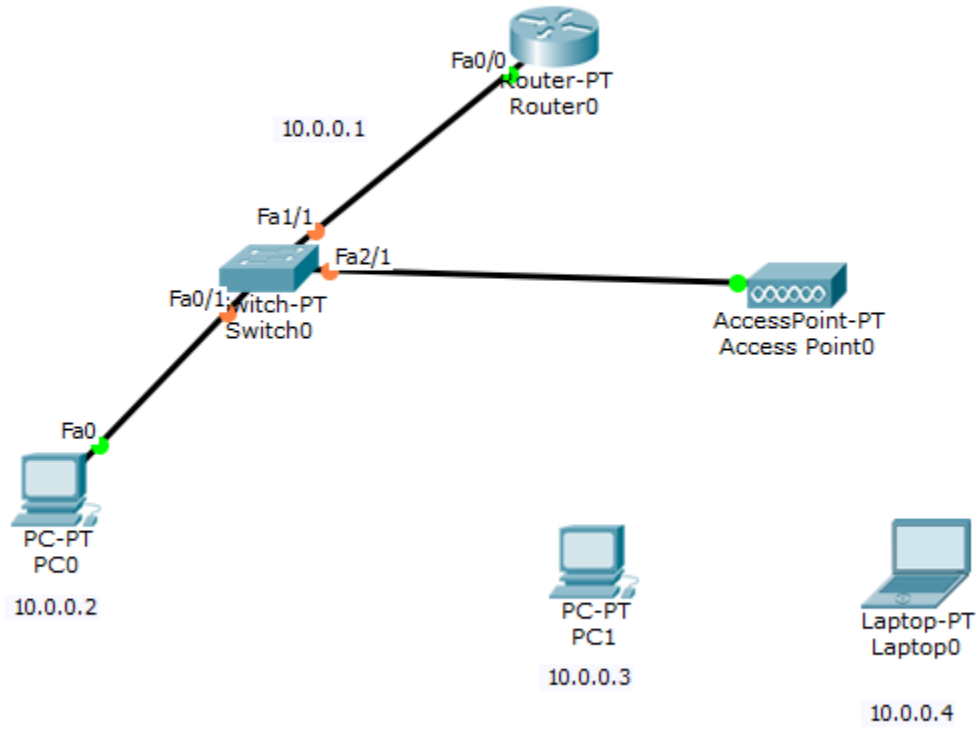
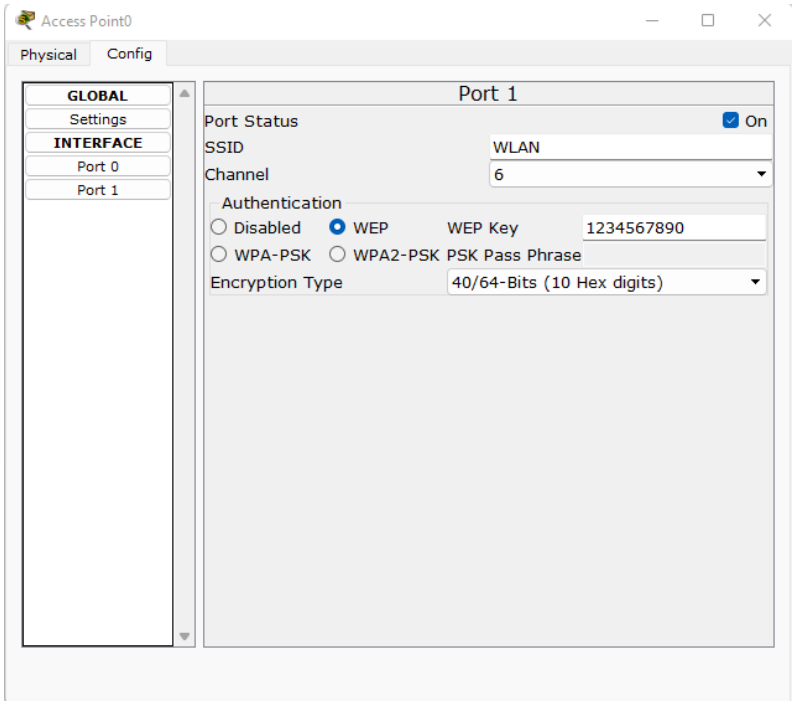
LAB 11:
Aim : To construct a WLAN and make the nodes communicate wirelessly

Topology:

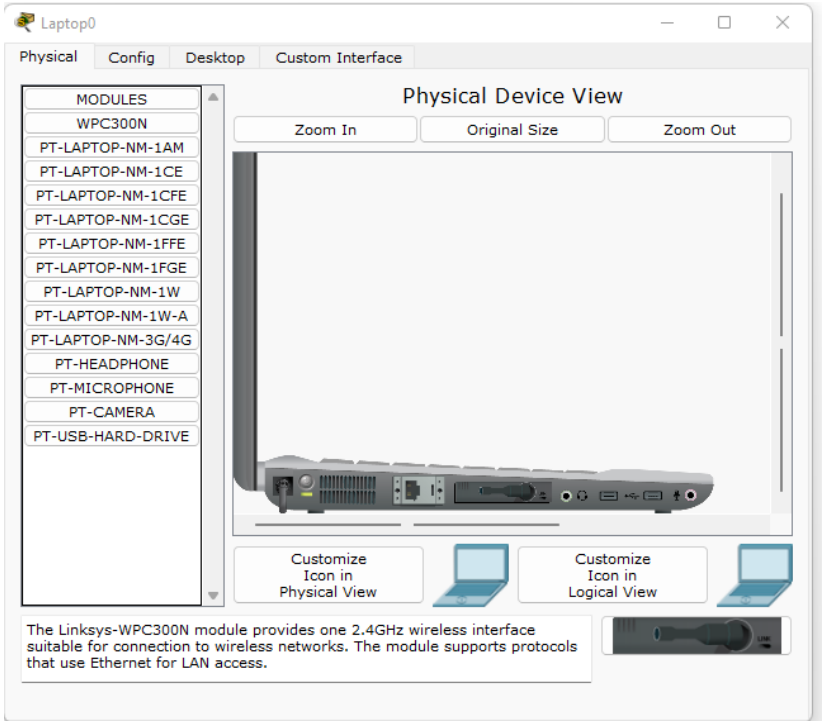


Configurations:

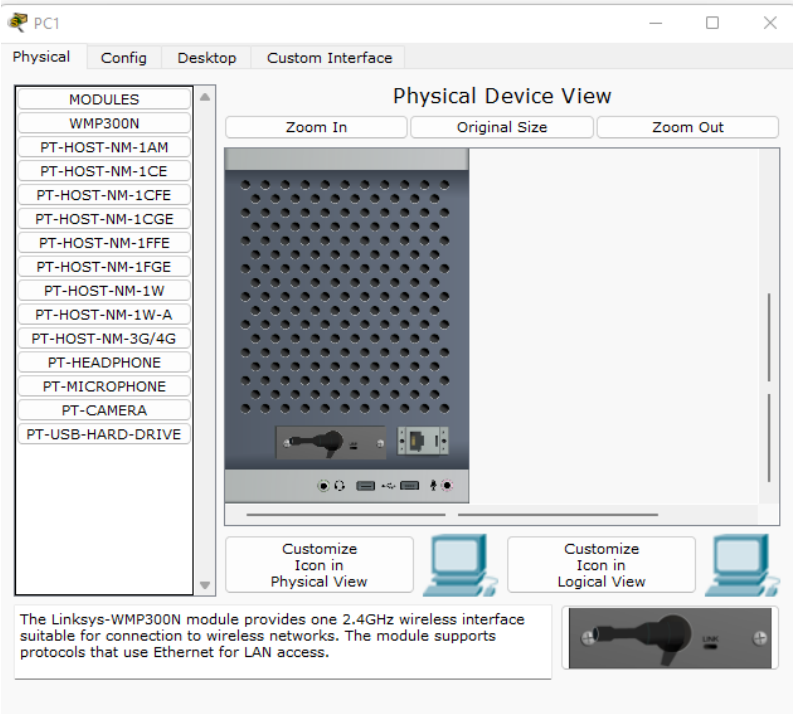
Access Point0:



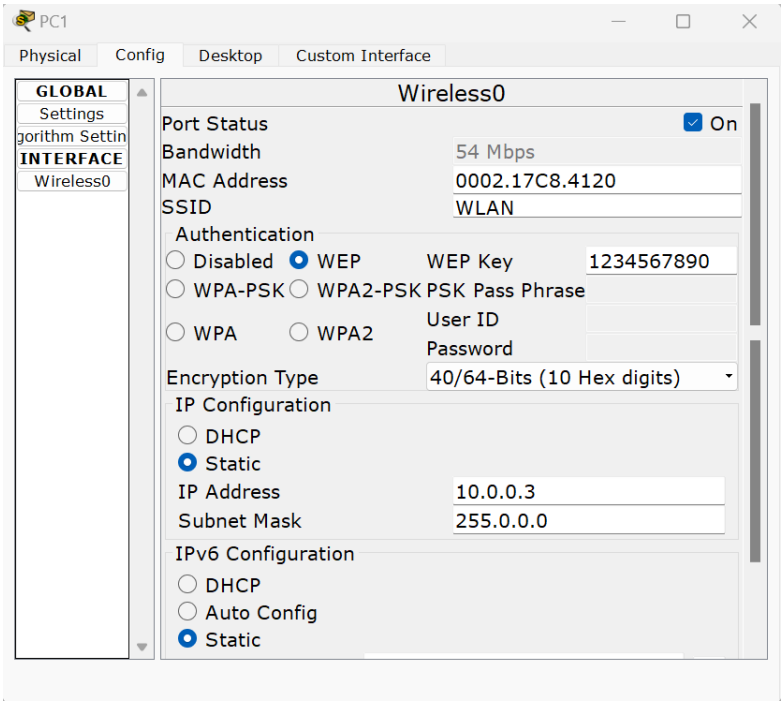
Laptop0 Physical port change:



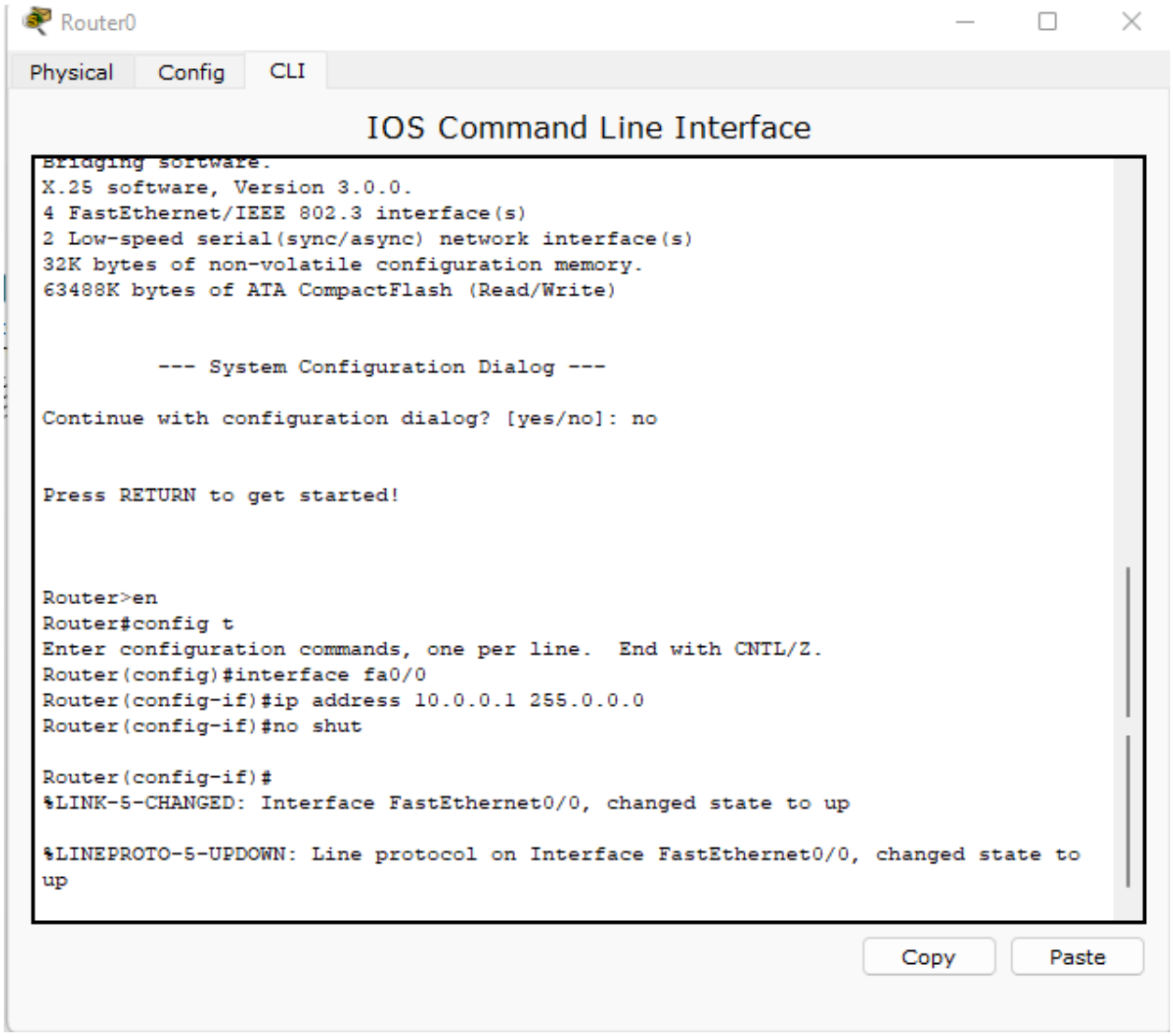
PC0 Physical port change:



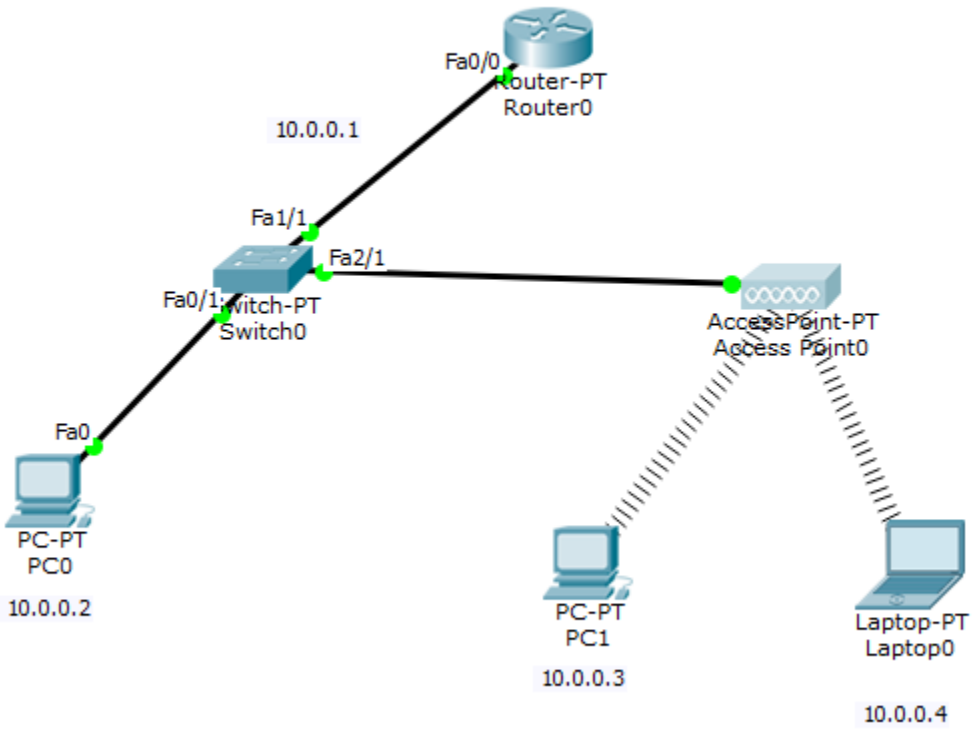
PC0 and Laptop0 Wireless configuration:



Router 0 CLI:

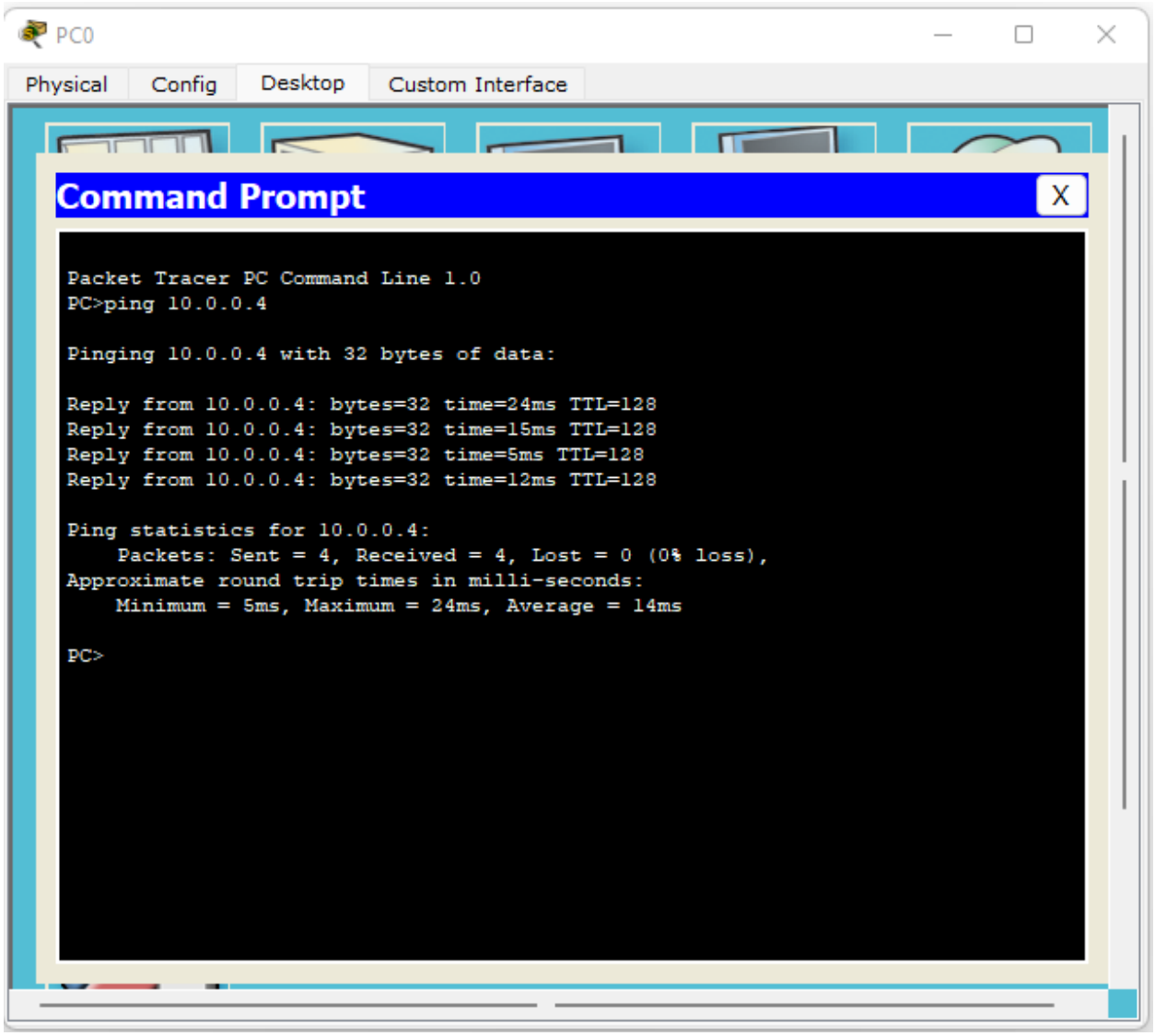

Router0
Physical
Config
CLI
IOS Command Line Interface
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)
--- System Configuration Dialog ---
Continue with configuration dialog? [yes/no]: no
Press RETURN to get started!
Router>en
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface fa0/0
Router(config-if)#ip address 10.0.0.1 255.0.0.0
Router(config-if)#no shut
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
Copy
Paste

Final Topology:

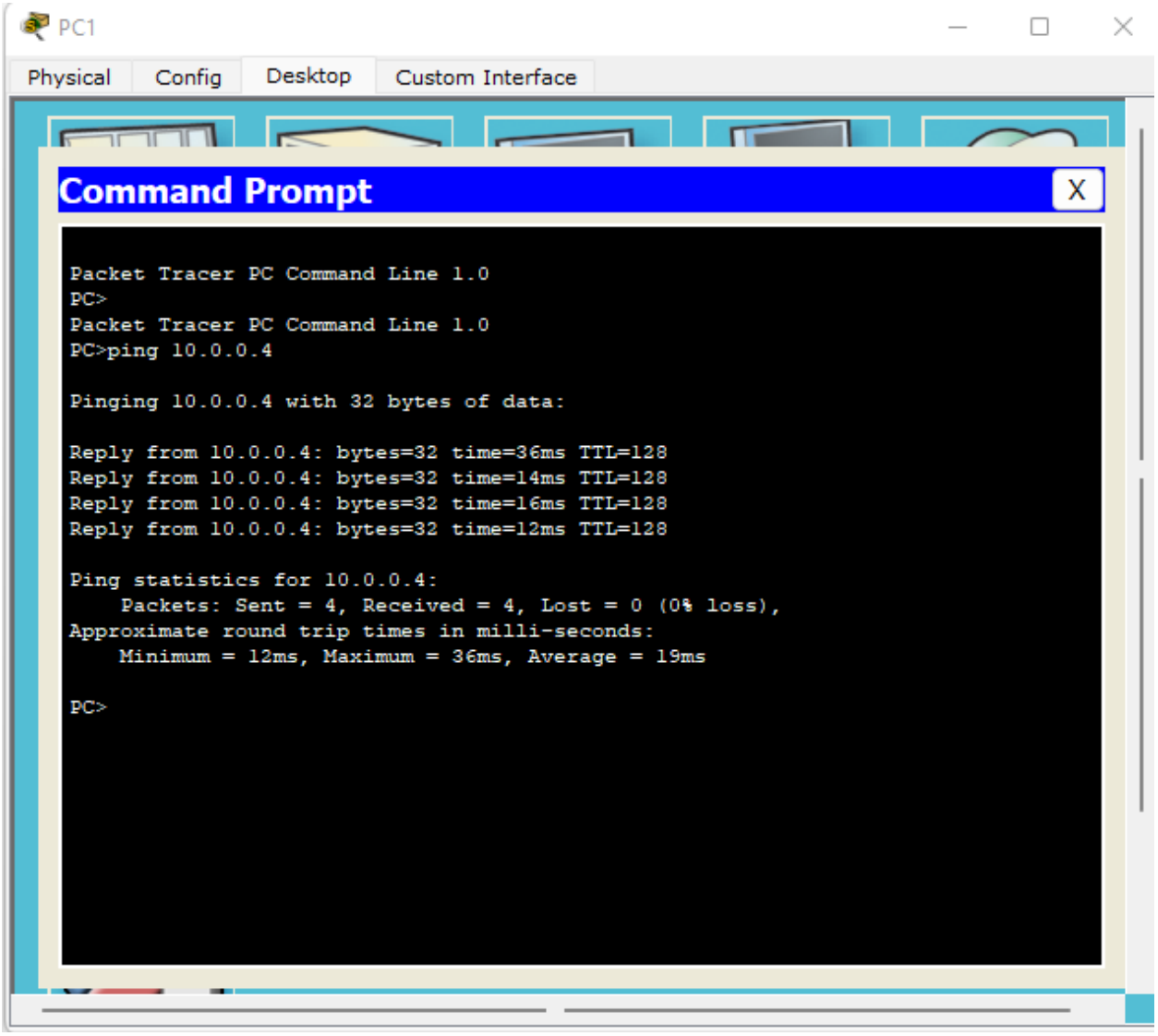


Command Prompt:

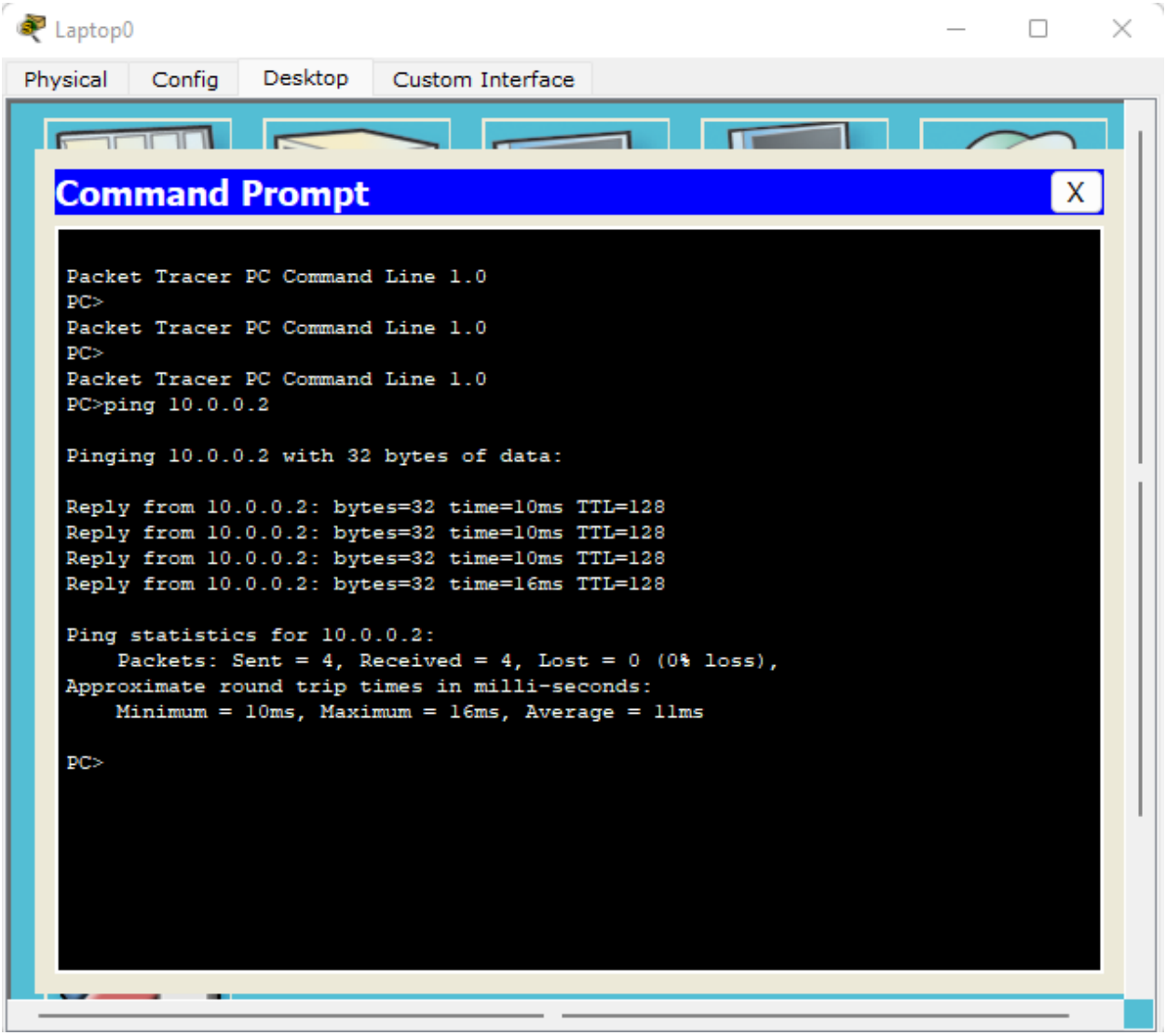
PC0 to Laptop0 :



PC1 to Laptop0 :



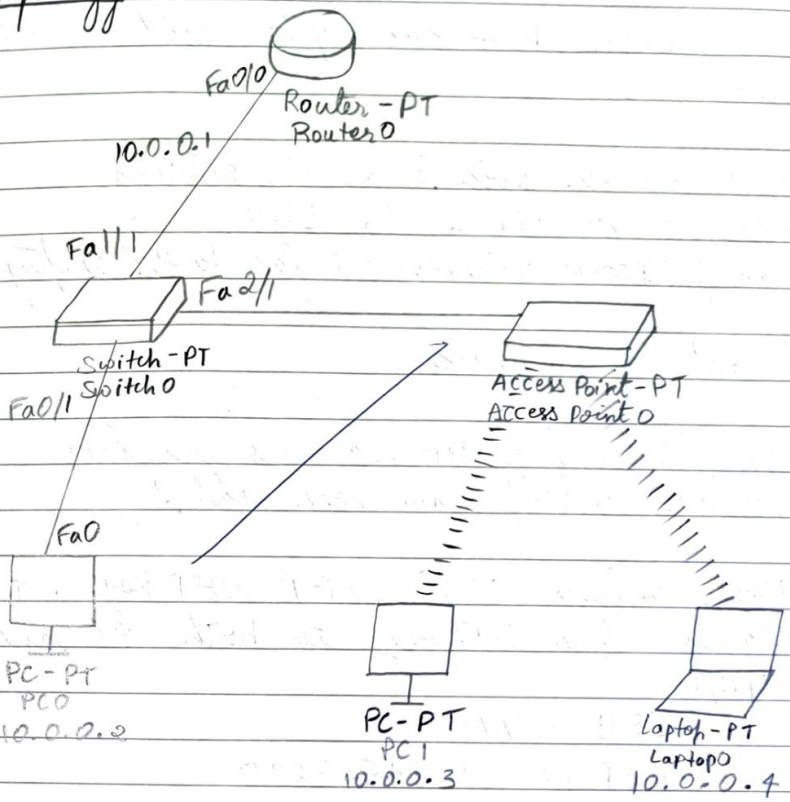
Laptop0 to PC0:



Lab 11

Aim: To construct a WLAN and make the nodes communicate wirelessly.

Topology:



Procedure:-

1) Create the topology as shown above

2) Configure PC 3
   IP address : 10.0.0.2
   G

3) Configure Router 0. Set fastethernet 0/0 as 10.0.0.1 in usual method.

4) Configure the Access Point 1 → Port 1 in Config
→ SSID = WLAN
Select WEP and give any 10 digit hex
= 1234567890

5) To Configure PC4 and Laptop with Wireless standards.

- Switch off the device. Drag the existing PT-HOST-NM-1AM to the LHS.
- Drag WMP300N wireless interface to the empty port.
- Switch On the device.

6) In the config tab, a new wireless interface would have been added.

7) Now, configure SSID, WEP, WEP Key, IP address and Gateway to both PC and Laptop

SSID = WLAN

WEP key = 1234567890

Gateway = 10.0.0.1

Ping Output: (In PC0)

PC> ping 10.0.0.4

Pinging 10.0.0.4 with 32 bytes of data:

Reply from 10.0.0.4: bytes=32 time=2ms TTL=128

Reply from 10.0.0.4 : bytes = 32 time = 15ms TTL = 128
Reply from 10.0.0.4 : bytes = 32 time = 5ms TTL = 128
Reply from 10.0.0.4 : bytes = 32 time = 12ms TTL = 128

Ping statistics for 10.0.0.4:
Packets : Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 5ms, Maximum = 24ms, Average = 14ms.

Observation :-

→ We can ping from every device to every other device successfully.

→ Thus we observe that the wireless connection is successfull.

→ In the final topology, we observe stripped lines from access point to PC4 and Laptop0 indicating the establishment of wireless connection.

10/8/2023