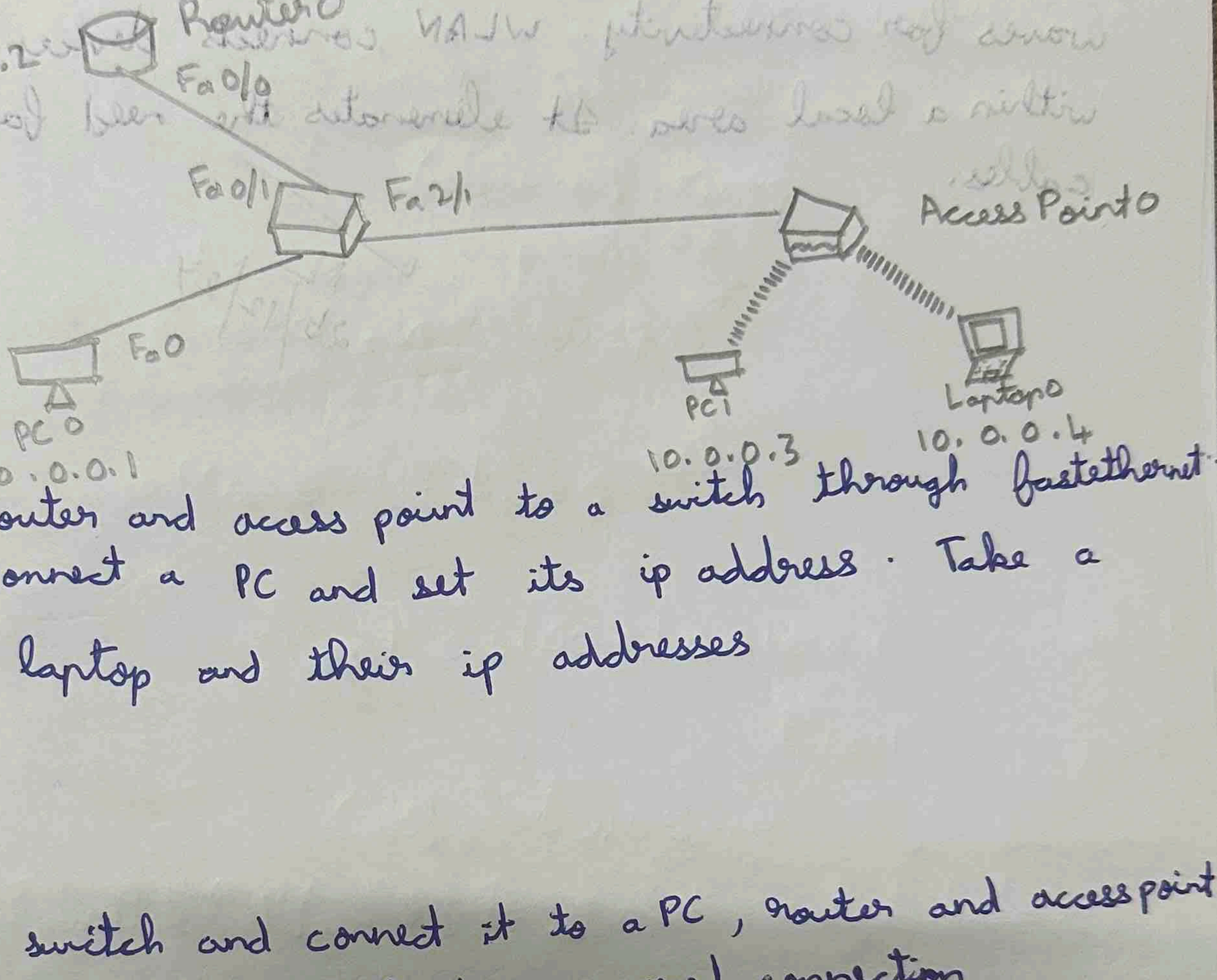
Exp-12: Construct a WLAN and Make the Nodes communicate wirelessly

Aim: To construct WLAN and nodes communicate wirelessly

Topology:



Connect a router and access point to a switch through fastethernet interface. Connect a PC and set its ip address. Take a PC and a laptop and their ip addresses

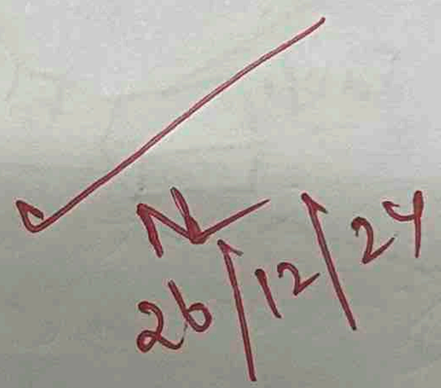
Procedure:

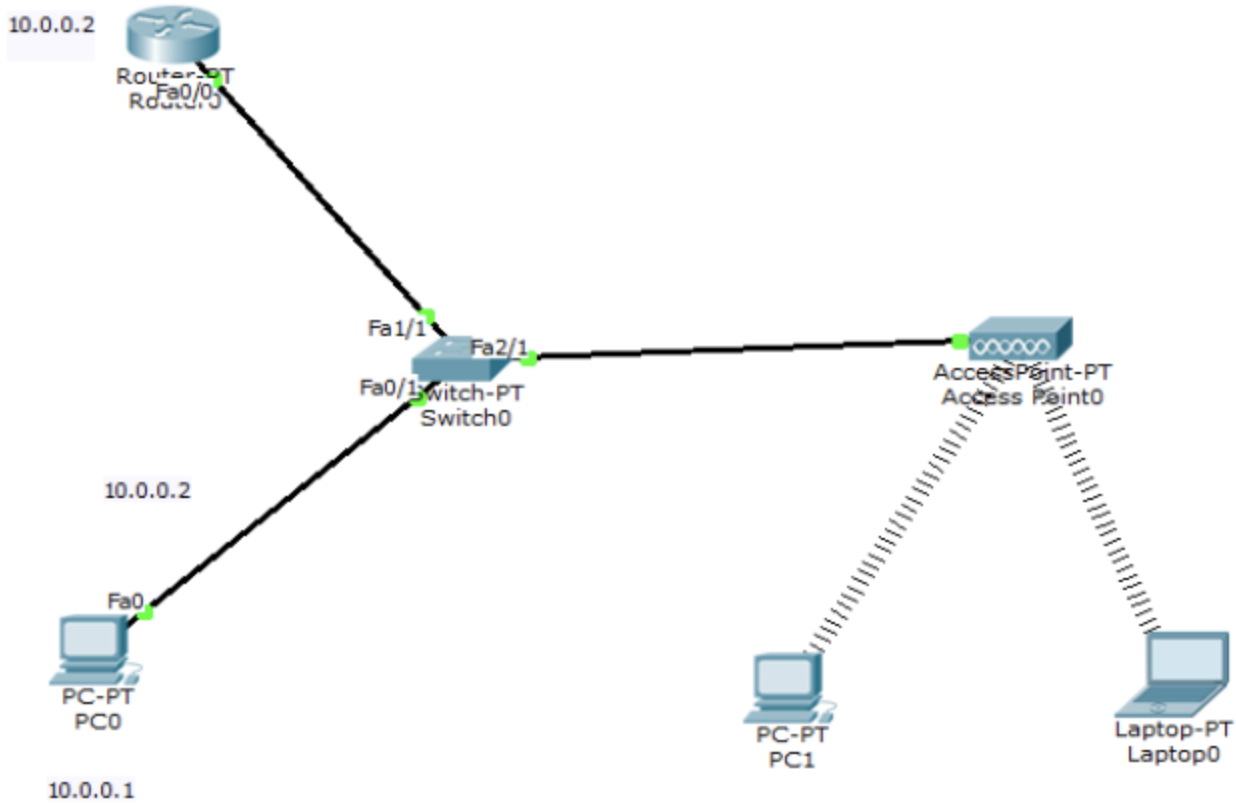
1. Drag a switch and connect it to a PC, router and access point
2. Place a PC and laptop without any wired connection
3. Configure PC0 with IP address 10.0.0.1 and router0
4. Configure Access Point:
   Port1 → SSID Name → Enter any name → select WEP and give any 10 digit hex key - 1234567890
5. Configure PC1 and laptop with wireless standards
6. Switch off the device. Drag the existing PT-HOST-NM-1AM to the component listed in the LHS. Drag WMP300N wireless interface to the empty port. Switch on the device.
7. In the config tab, a new wireless interface would have been added. Now, Configure SSID, WEP, WEP Key, IP address and gateway to the device.

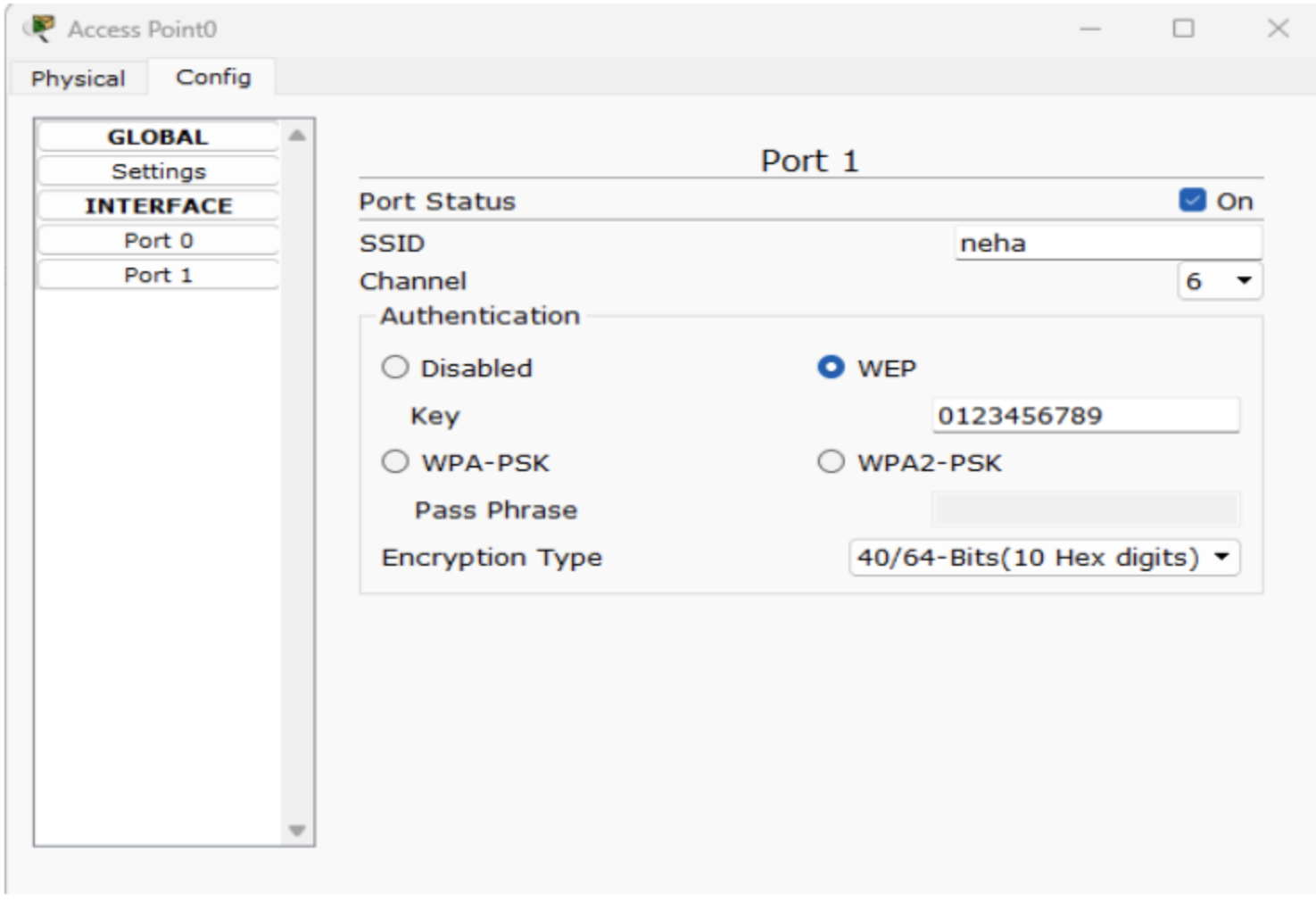
8. Ping from every device to every other device and see the results

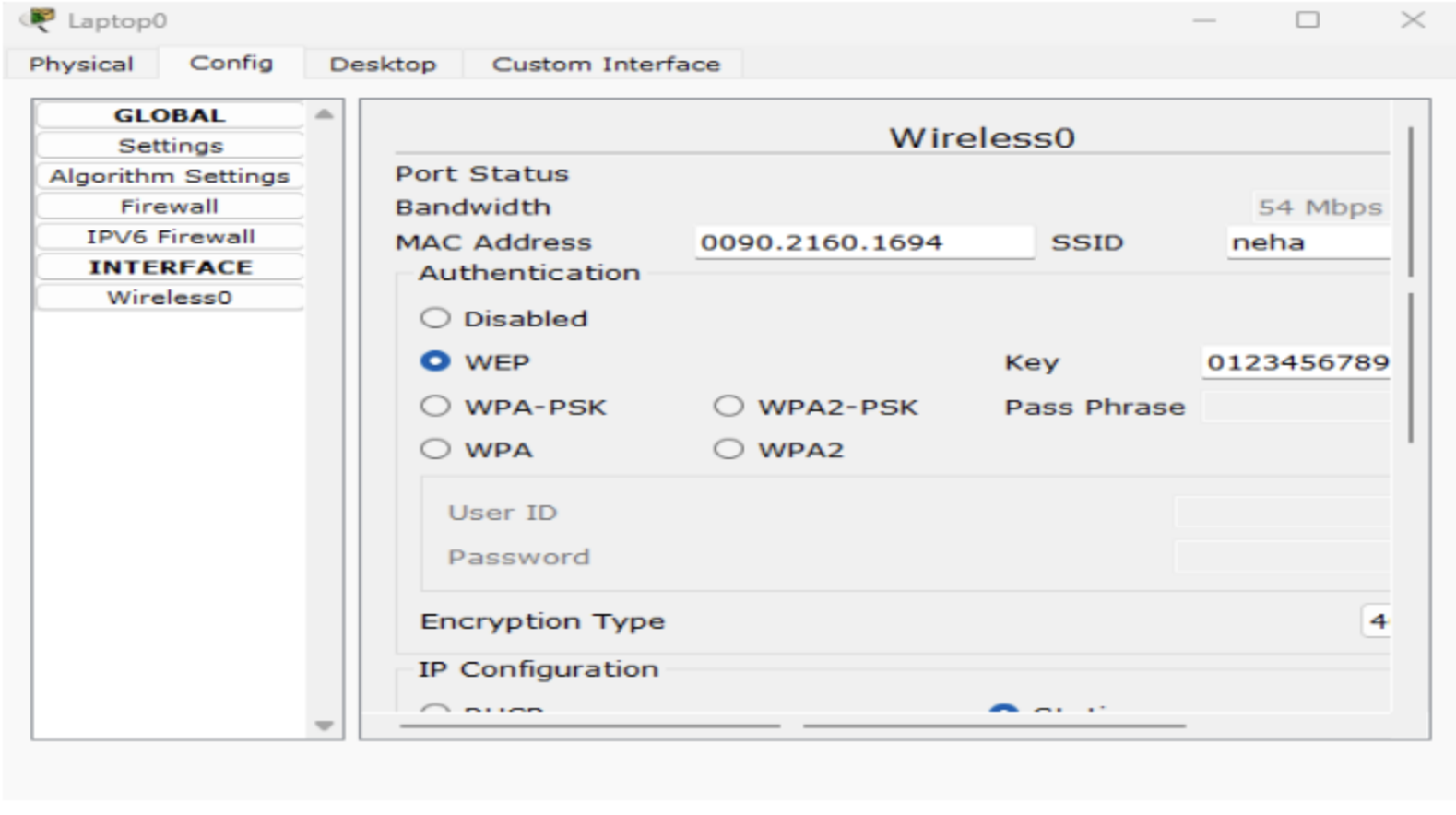
Observations:

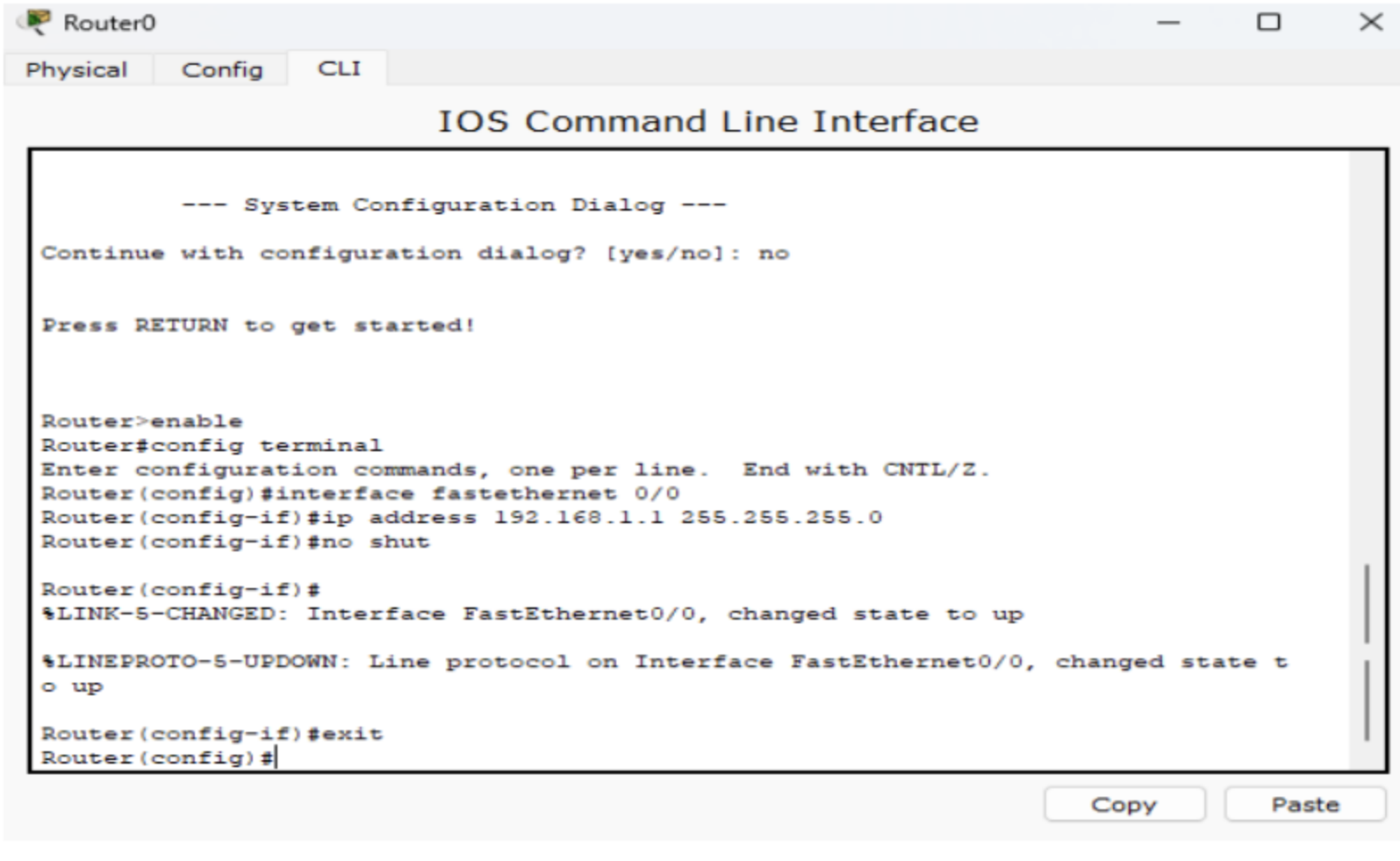
WLAN enables wireless n/w communication. It uses radio waves for connectivity. WLAN connects devices wirelessly within a local area. It eliminates the need for physical cables.




10.0.0.2
Fa0/0
Fa1/1
Fa2/1
Fa0/1
Switch-PT
Switch0
Access Point-PT
Access Point0
10.0.0.2
Fa0
PC-PT
PC0
10.0.0.1
PC-PT
PC1
Laptop-PT
Laptop0


Access Point0
Physical
Config
GLOBAL
Settings
INTERFACE
Port 0
Port 1
Port 1
Port Status
On
SSID
neha
Channel
6
Authentication
Disabled
WEP
Key
0123456789
WPA-PSK
WPA2-PSK
Pass Phrase
Encryption Type
40/64-Bits(10 Hex digits)


Laptop0
Physical
Config
Desktop
Custom Interface
GLOBAL
Settings
Algorithm Settings
Firewall
IPV6 Firewall
INTERFACE
Wireless0
Wireless0
Port Status
Bandwidth
54 Mbps
MAC Address
0090.2160.1694
SSID
neha
Authentication
Disabled
WEP
Key
0123456789
WPA-PSK
WPA2-PSK
Pass Phrase
WPA
WPA2
User ID
Password
Encryption Type
IP Configuration


Router0
Physical
Config
CLI
IOS Command Line Interface
--- System Configuration Dialog ---
Continue with configuration dialog? [yes/no]: no
Press RETURN to get started!
Router>enable
Router#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface fastethernet 0/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
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 t
o up
Router(config-if)#exit
Router(config)#
Copy
Paste