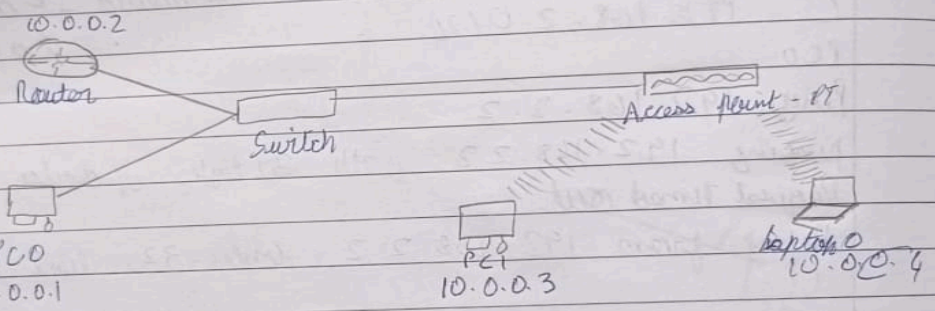
8/12/24

Exp-12

Q) To construct a WLAN & make the nodes communicate wirelessly.

Aim: To show how WLAN is effective for wireless communications

Topology:



Procedure:

1) Open Cisco Packet Tracer
2) Construct the above topology
3) Configure Access point Port 1 -> SSID name - any Name (WLAN here)
   SSID -> Code select WEP = 10 digits (0123456789)
4) Configure PC1 & laptop with wireless standards
5) Switch off the device. Drag the existing PT-Host-NM-1AM to the component listed in LHS. Drag the WMP300N wireless interface to the empty port. Switch on the device.
6) In the config tab a new wireless interface would have been added. Now configure SSID -> code select WEP -> 10 digits WEP Key, IP address & gateway to the device.
7) Ping from either devices.
8) (Set up PC0 & Router as normally done)

Result

PC0
ping 10.0.0.3

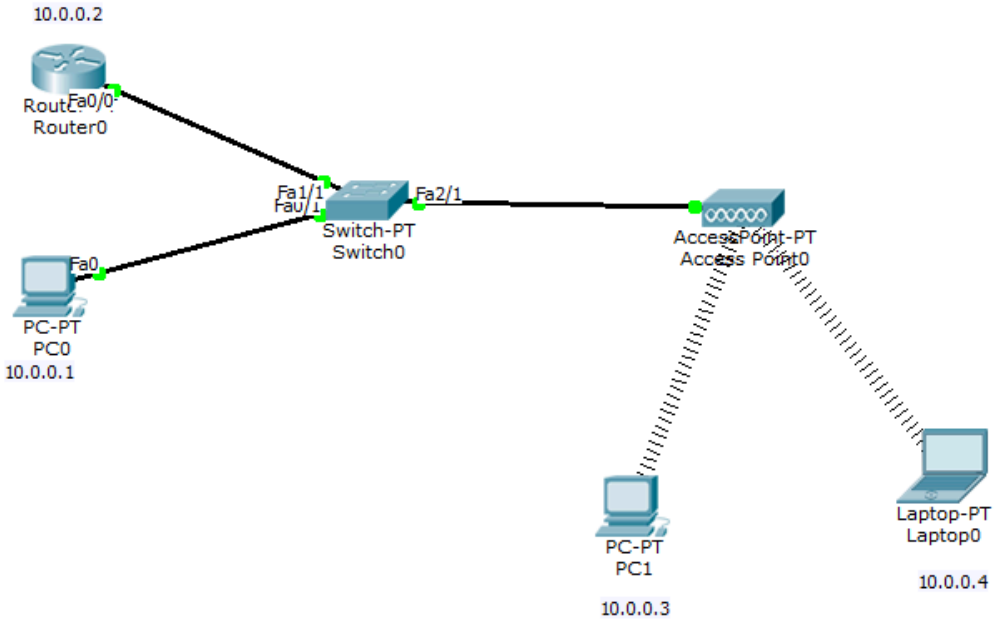
pinging 10.0.0.3 with 32 bytes of data:
Reply from 10.0.0.3 : bytes = 32, time = 14ms TTL = 128

Ping Statistics

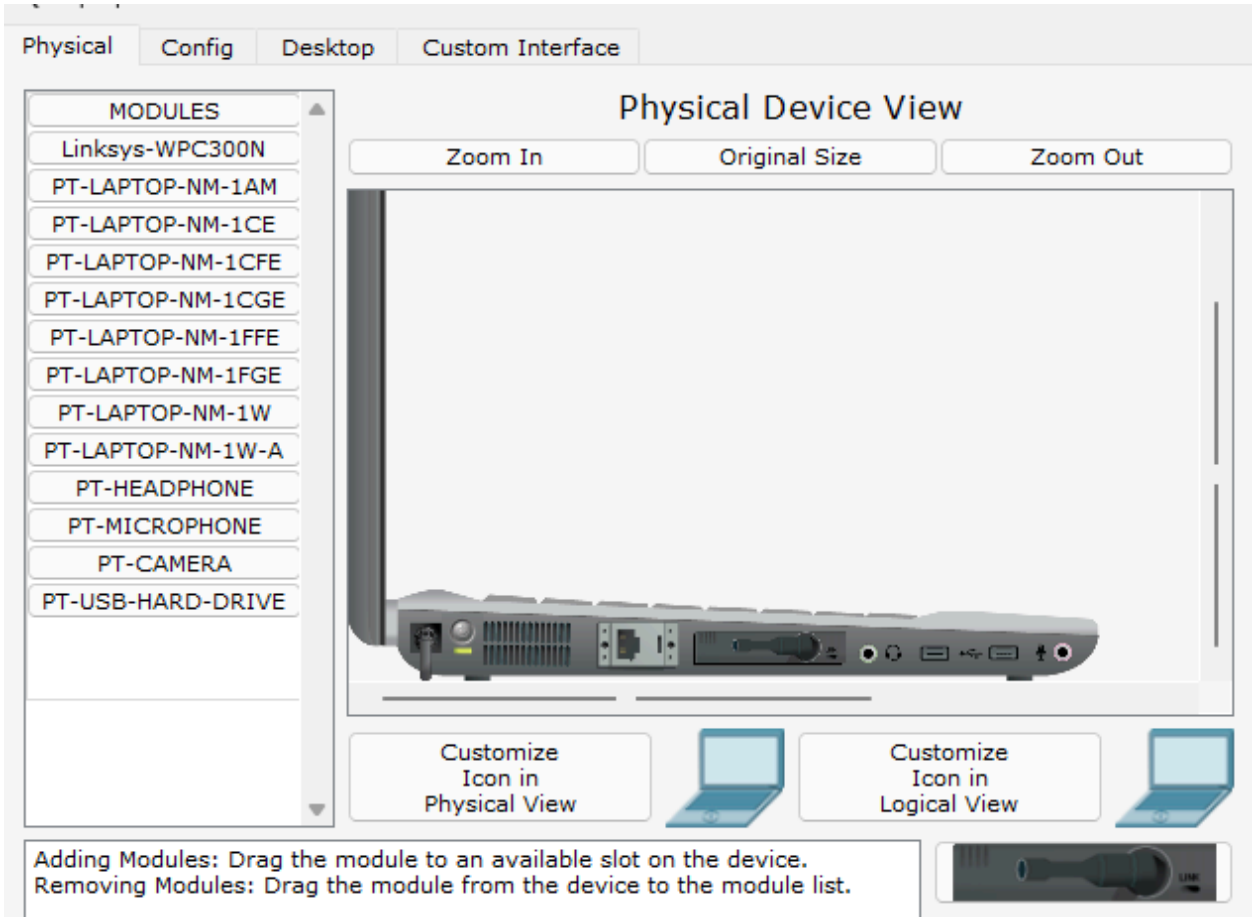
Same for other device.

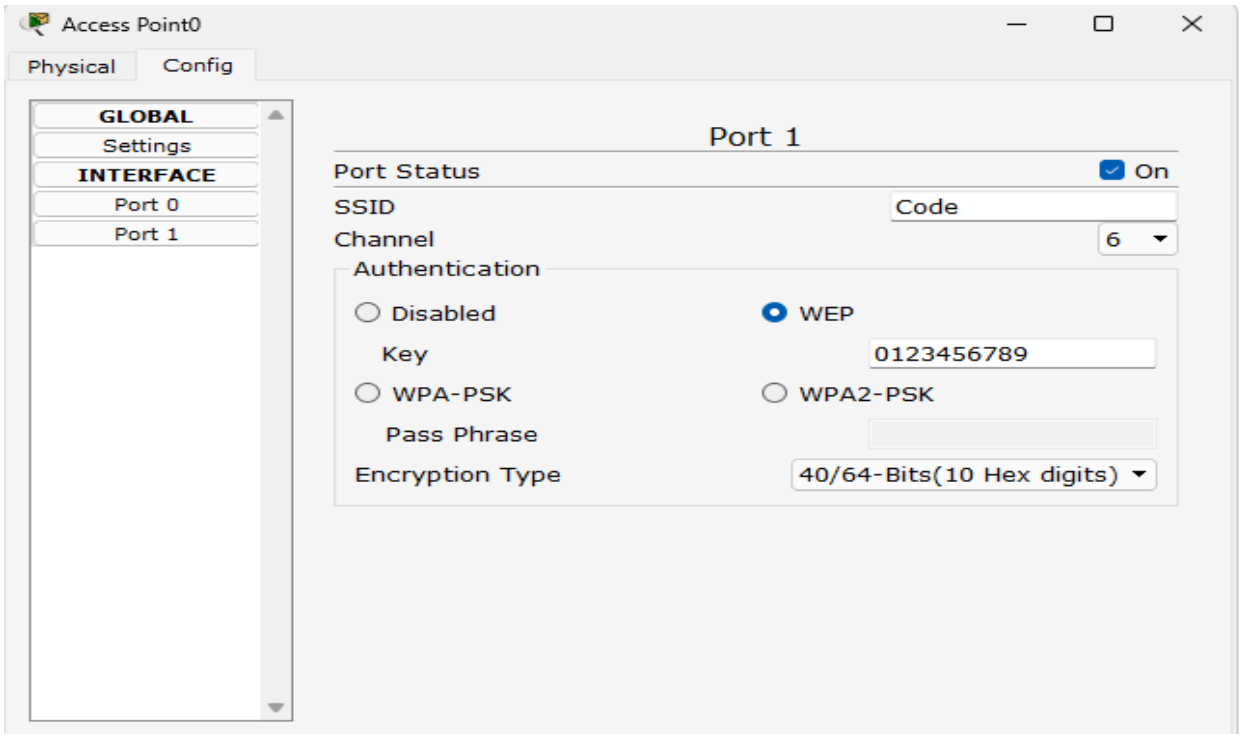
Observation:
The Experiment demonstrates the creation of a wireless network using an access point configured with an SSID, WEP encryption & a 10 digit key. Devices like PC's & laptops were configured with wireless adapters, IP addresses & gateways to enable communication. The success of ping tests b/w devices verify the setup, highlighting the simplicity & efficiency of WLAN connections for wireless communication.

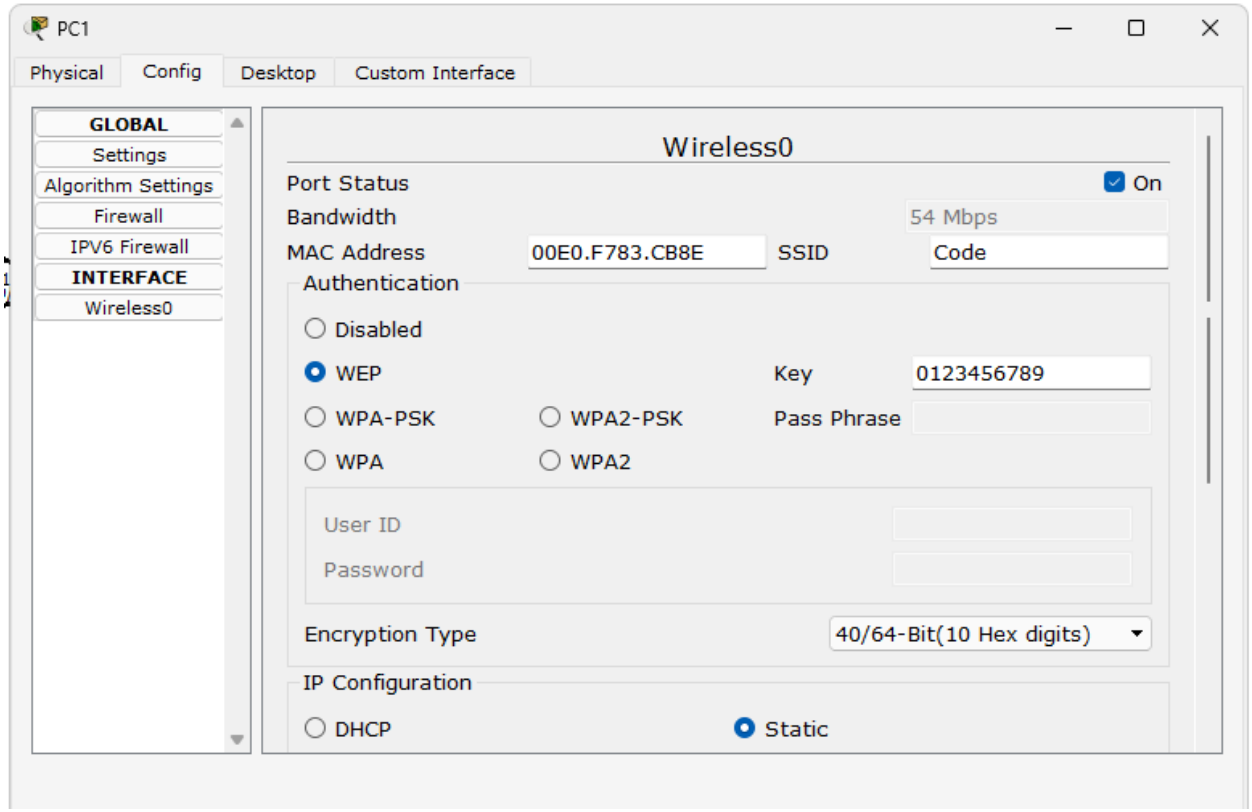
28/12/24

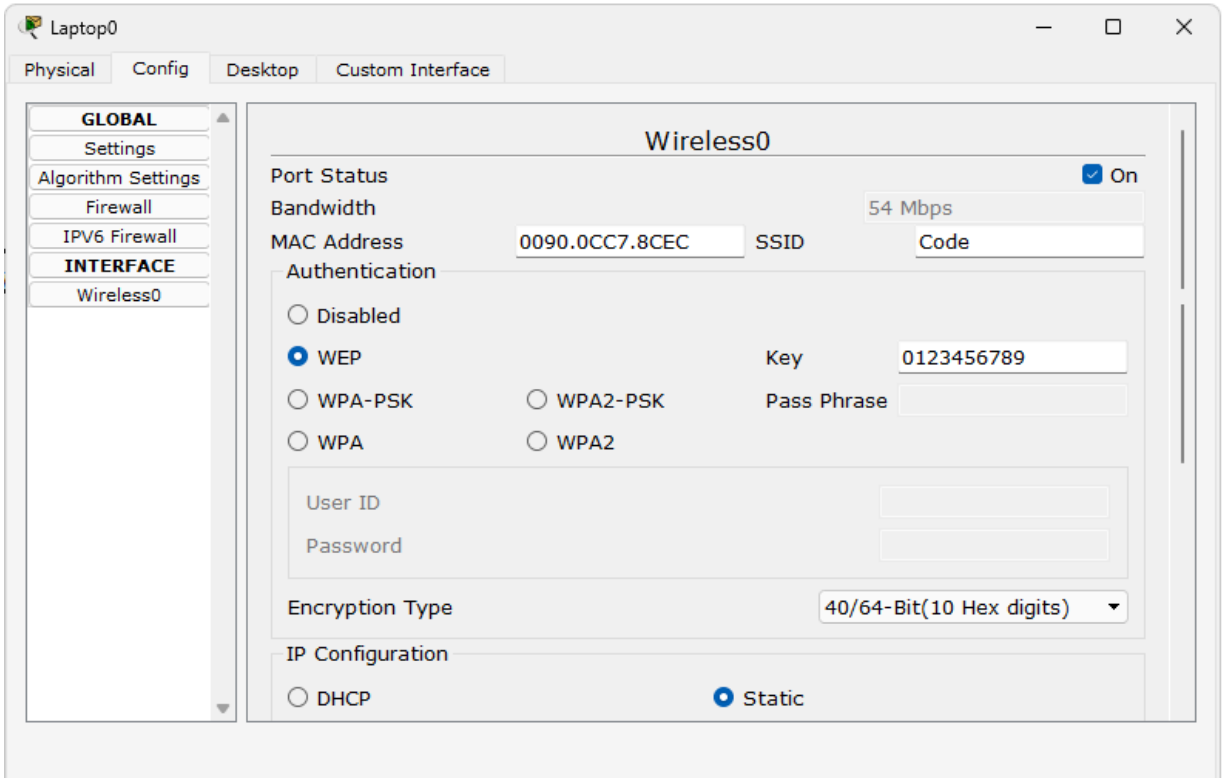


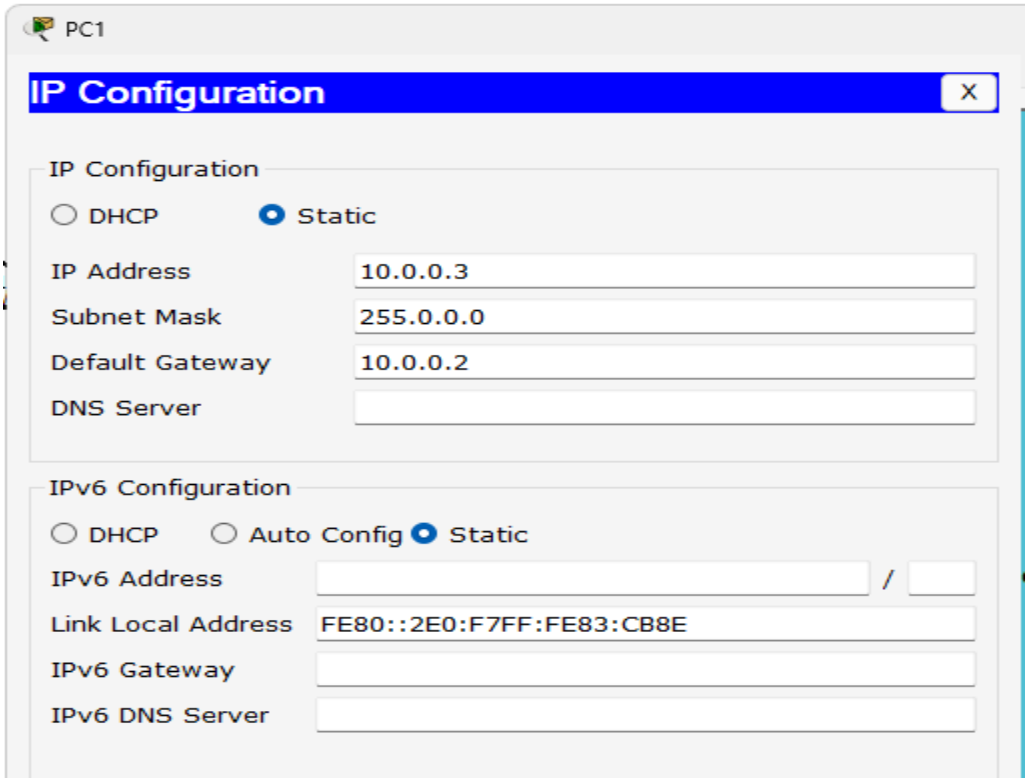

```
         --- System Configuration Dialog ---

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 fa0/0
Router(config-if)#ip address 10.0.0.2 255.0.0.0
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 t
o up

Router(config-if)#exit
Router(config)#
```

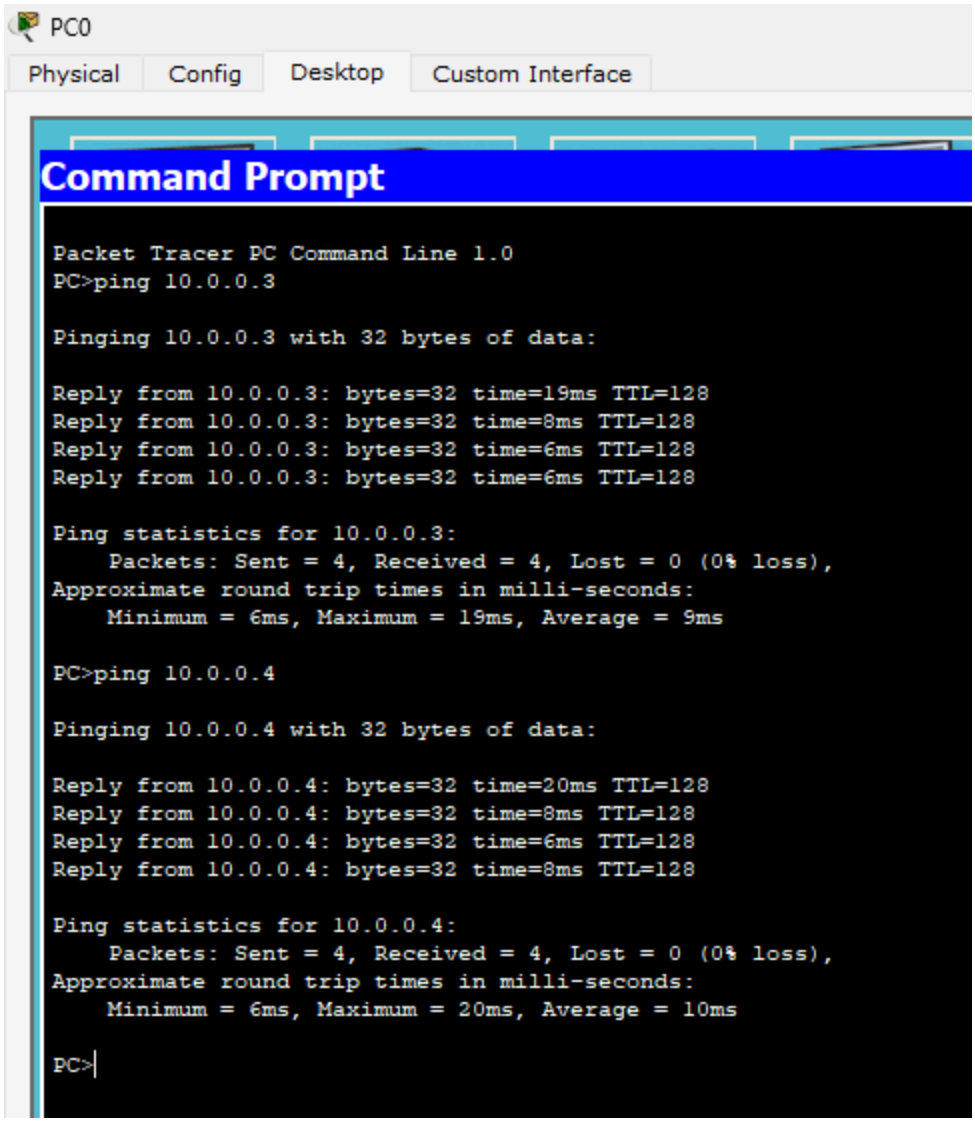

Physical
Config
Desktop
Custom Interface
MODULES
Linksys-WPC300N
PT-LAPTOP-NM-1AM
PT-LAPTOP-NM-1CE
PT-LAPTOP-NM-1CFE
PT-LAPTOP-NM-1CGE
PT-LAPTOP-NM-1FFE
PT-LAPTOP-NM-1FGE
PT-LAPTOP-NM-1W
PT-LAPTOP-NM-1W-A
PT-HEADPHONE
PT-MICROPHONE
PT-CAMERA
PT-USB-HARD-DRIVE
Physical Device View
Zoom In
Original Size
Zoom Out
Customize Icon in Physical View
Customize Icon in Logical View
Adding Modules: Drag the module to an available slot on the device.
Removing Modules: Drag the module from the device to the module list.


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


PC1
Physical
Config
Desktop
Custom Interface
GLOBAL
Settings
Algorithm Settings
Firewall
IPV6 Firewall
INTERFACE
Wireless0
Wireless0
Port Status
On
Bandwidth
54 Mbps
MAC Address
00E0.F783.CB8E
SSID
Code
Authentication
Disabled
WEP
Key
0123456789
WPA-PSK
WPA2-PSK
Pass Phrase
WPA
WPA2
User ID
Password
Encryption Type
40/64-Bit(10 Hex digits)
IP Configuration
DHCP
Static


Laptop0
Physical
Config
Desktop
Custom Interface
GLOBAL
Settings
Algorithm Settings
Firewall
IPV6 Firewall
INTERFACE
Wireless0
Wireless0
Port Status
On
Bandwidth
54 Mbps
MAC Address
0090.0CC7.8CEC
SSID
Code
Authentication
Disabled
WEP
Key
0123456789
WPA-PSK
WPA2-PSK
Pass Phrase
WPA
WPA2
User ID
Password
Encryption Type
40/64-Bit(10 Hex digits)
IP Configuration
DHCP
Static


PC1
IP Configuration
IP Configuration
DHCP
Static
IP Address
10.0.0.3
Subnet Mask
255.0.0.0
Default Gateway
10.0.0.2
DNS Server
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::2E0:F7FF:FE83:CB8E
IPv6 Gateway
IPv6 DNS Server


PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.3
Pinging 10.0.0.3 with 32 bytes of data:
Reply from 10.0.0.3: bytes=32 time=19ms TTL=128
Reply from 10.0.0.3: bytes=32 time=8ms TTL=128
Reply from 10.0.0.3: bytes=32 time=6ms TTL=128
Reply from 10.0.0.3: bytes=32 time=6ms TTL=128
Ping statistics for 10.0.0.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 6ms, Maximum = 19ms, Average = 9ms
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=20ms TTL=128
Reply from 10.0.0.4: bytes=32 time=8ms TTL=128
Reply from 10.0.0.4: bytes=32 time=6ms TTL=128
Reply from 10.0.0.4: bytes=32 time=8ms 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 = 6ms, Maximum = 20ms, Average = 10ms
PC>