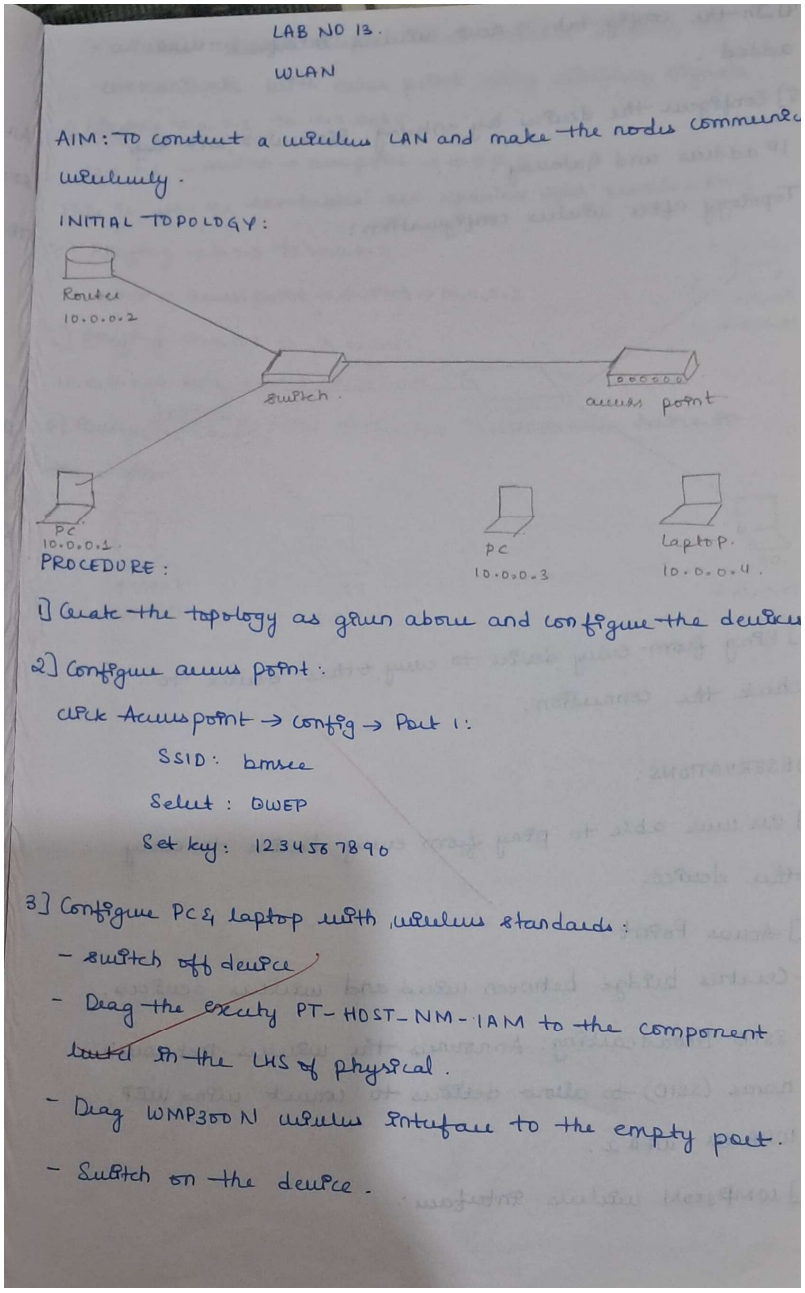
Program-13

To construct a WLAN and make the nodes communicate wirelessly

Topology, Procedure and Observation:



LAB NO 13.

WLAN

AIM: To construct a wireless LAN and make the nodes communicate wirelessly.

INITIAL TOPOLOGY:

PROCEDURE:

1] Create the topology as given above and configure the devices

2] Configure access point:

click Accesspoint → config → Port 1:

SSID: bmsce

Select: WEP

Set key: 1234567890

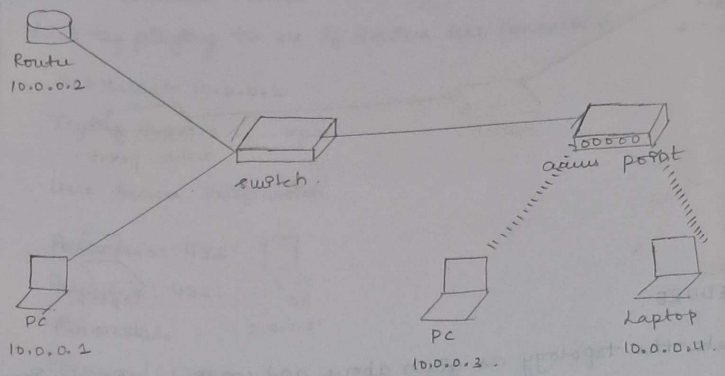
3] Configure PC & laptop with wireless standards:

- switch off device
- Drag the empty PT-HOST-NM-1AM to the component listed in the LHS of physical.
- Drag WMP300N wireless interface to the empty port.
- Switch on the device.

4] In the config tab, a new wireless interface was added.

5] Configure the device by entering SSID, WEP, WEP key, IP address and Gateway.

Topology after wireless configuration:



6] Ping from every device to every other device to check the connection.

OBSERVATIONS:

1] We were able to ping from every device to every other device.

2] Access Point:

- Creates bridge between wired and wireless devices.
- SSID Broadcasting: Announces the wireless network's name (SSID) to allow devices to connect using WEP, WPA or WPA 2.

3] WMP300N wireless interface.

- wireless network adapter that enables devices to communicate with access point using wireless signals.

4] Pinging 10.0.0.1 to 10.0.0.3:

10.0.0.1 → switch → accesspoint → 10.0.0.3

This is after the ARP tables are updated after broadcasting.

5] Pinging 10.0.0.3 to 10.0.0.1

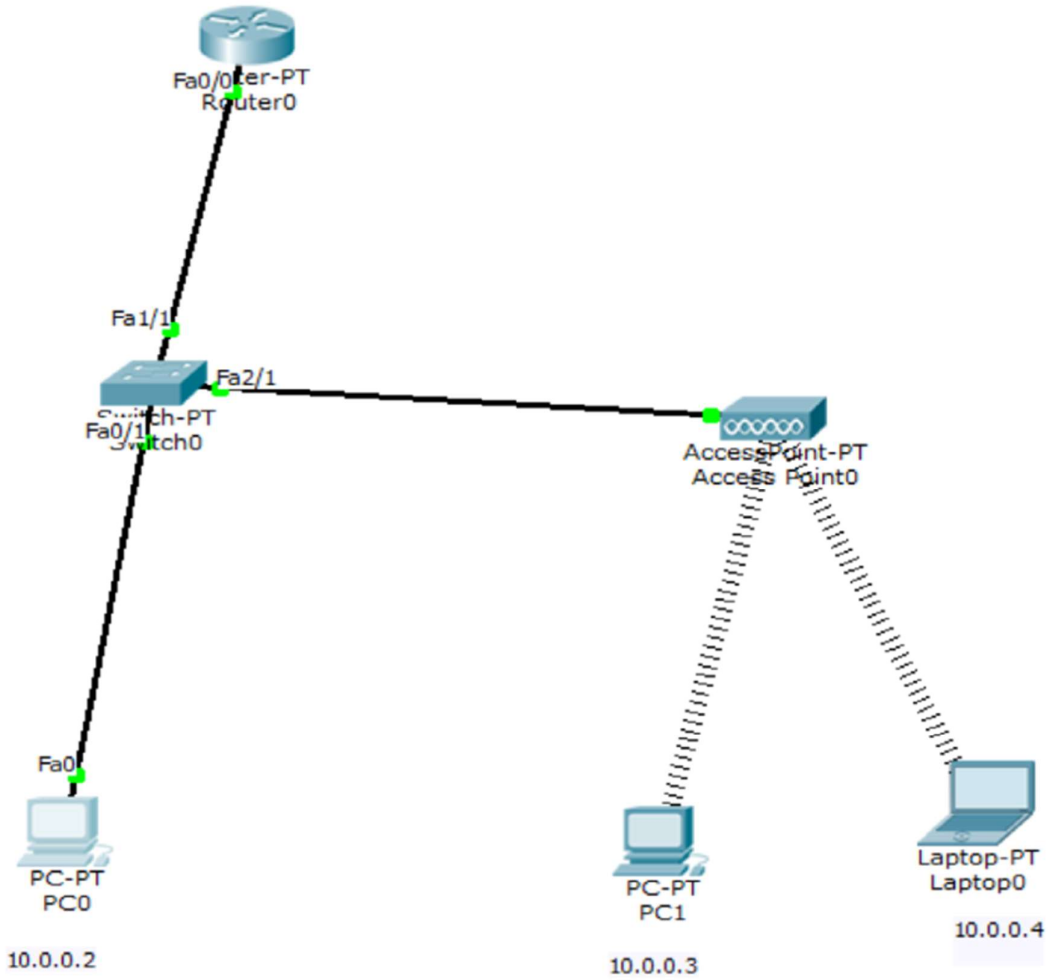
10.0.0.3 → access point → switch → 10.0.0.1

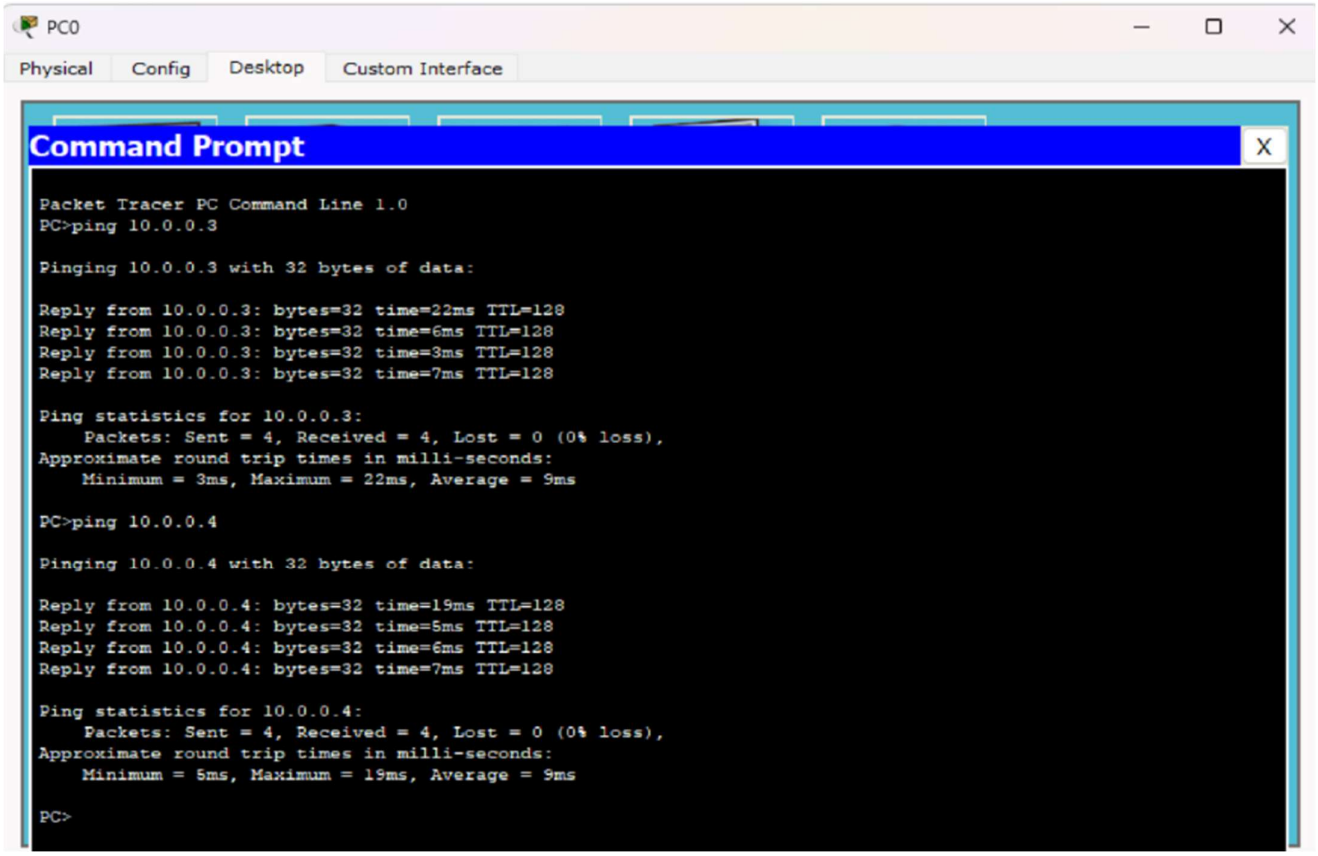
6] Pinging 10.0.0.3 to 10.0.0.4:

10.0.0.3 → accesspoint → 10.0.0.4

7] Every device is now connected to every other device on the WLAN.

Screenshots:




PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
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=22ms TTL=128
Reply from 10.0.0.3: bytes=32 time=6ms TTL=128
Reply from 10.0.0.3: bytes=32 time=3ms TTL=128
Reply from 10.0.0.3: bytes=32 time=7ms 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 = 3ms, Maximum = 22ms, 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=19ms TTL=128
Reply from 10.0.0.4: bytes=32 time=5ms TTL=128
Reply from 10.0.0.4: bytes=32 time=6ms TTL=128
Reply from 10.0.0.4: bytes=32 time=7ms 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 = 19ms, Average = 9ms
PC>