LABORATORY PROGRAM – 12

To construct a WLAN and make the nodes communicate wirelessly

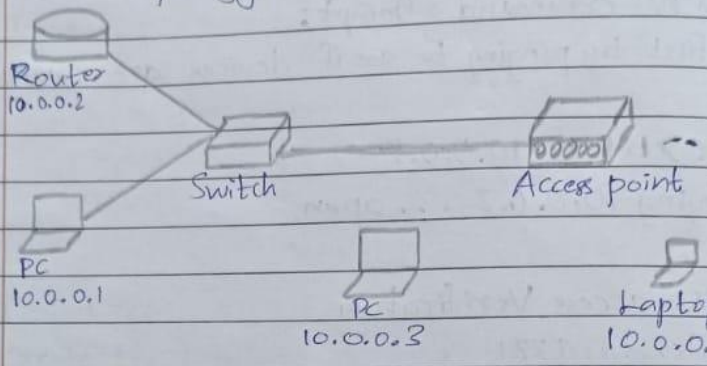
18/12/24

Lab No 13

WLAN (Wireless LAN)

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 → Port1:

SSID: bmsce

Select ⊙ WEP

Set key: 1234567890

③ Configure PC & Laptop with wireless standards.

→ Switch off Device

→ Drag the existing PT-HOST-NM-1AM to the component listed in the LHS of Physical

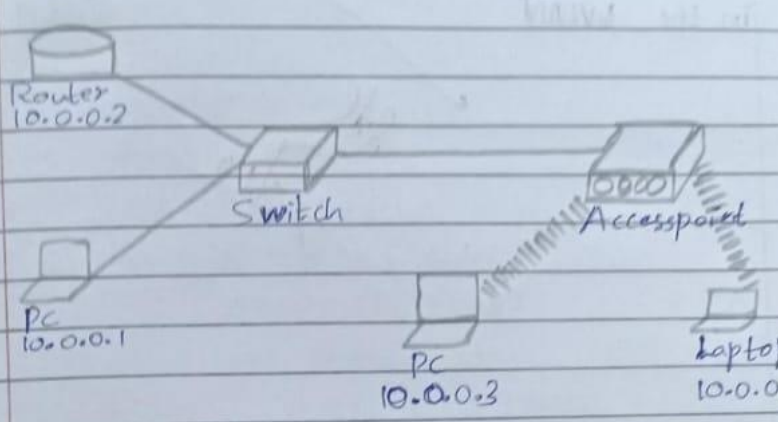
→ Drag WMP300N wireless interface to the empty pot

→ 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 for connection.

Observation:-

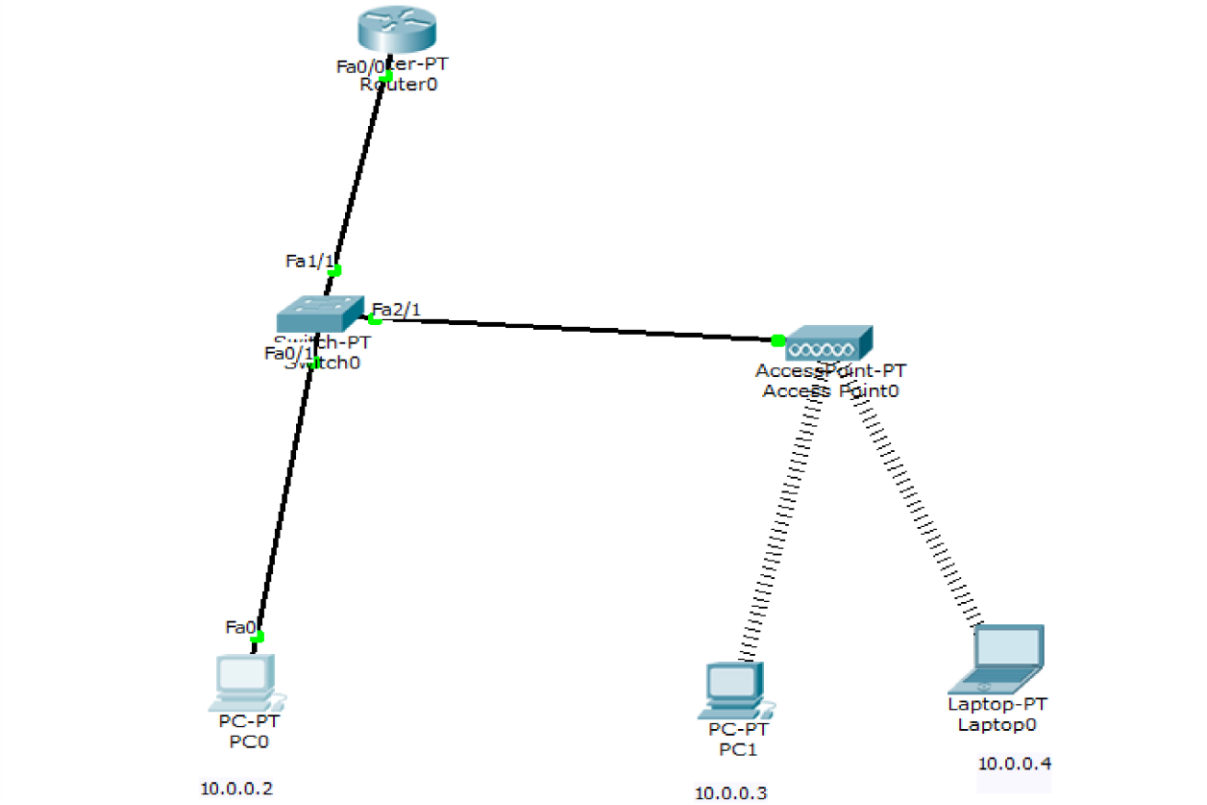
① We were able to ping from every device to every other device

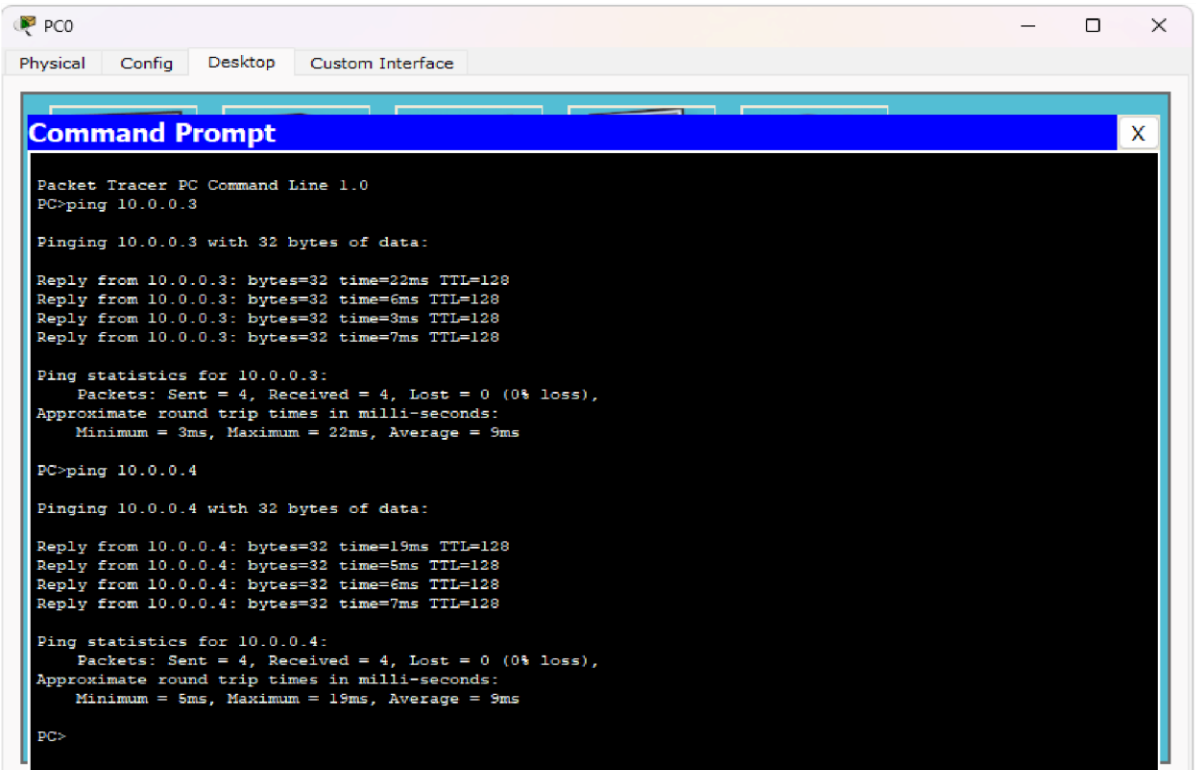
② #Access point:
→ Creates bridge between wired and wireless devices
SSID broadcasting → announces the wireless network's name (SSID) to allow devices to connect using WEP, WPA or WPA2

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 → Accesspoint → Switch → 10.0.0.1


Fa0/0er-PT
Router0
Fa1/1
Fa2/1
Fa0/1
Switch0
Access Point-PT
Access Point0
Fa0
PC-PT
PC0
10.0.0.2
PC-PT
PC1
10.0.0.3
Laptop-PT
Laptop0
10.0.0.4


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>

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