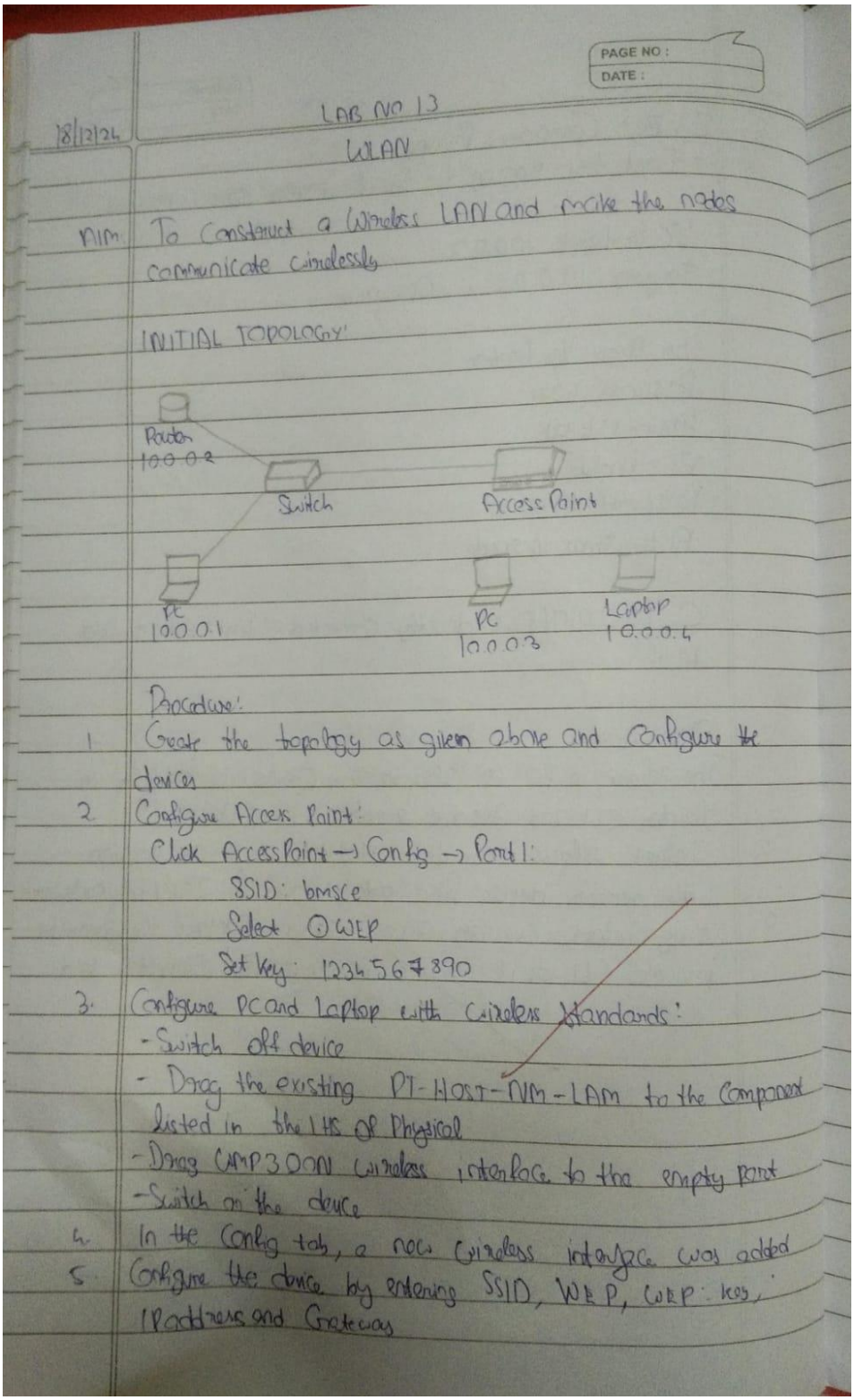
## LABORATORY PROGRAM – 12

**To construct a WLAN and make the nodes communicate wirelessly**



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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 → Port1:
   SSID: bmsce
   Select ⊙ WEP
   Set key: 1234567890
3. Configure PC and Laptop with Wireless Standards:
   - Switch off device
   - Drag the existing PT-HOST-NM-1AM to the Component listed in the LHS of Physical
   - Drag CMP300N 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, IPaddress and Gateway

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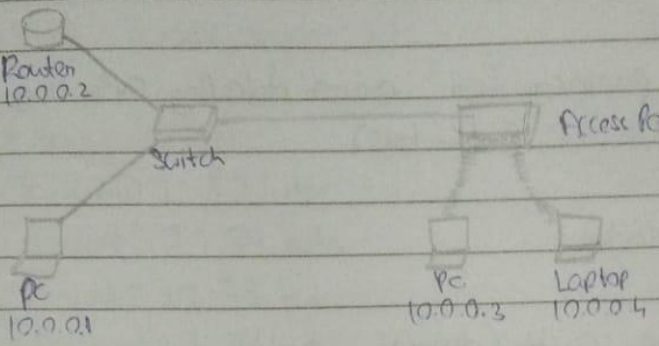
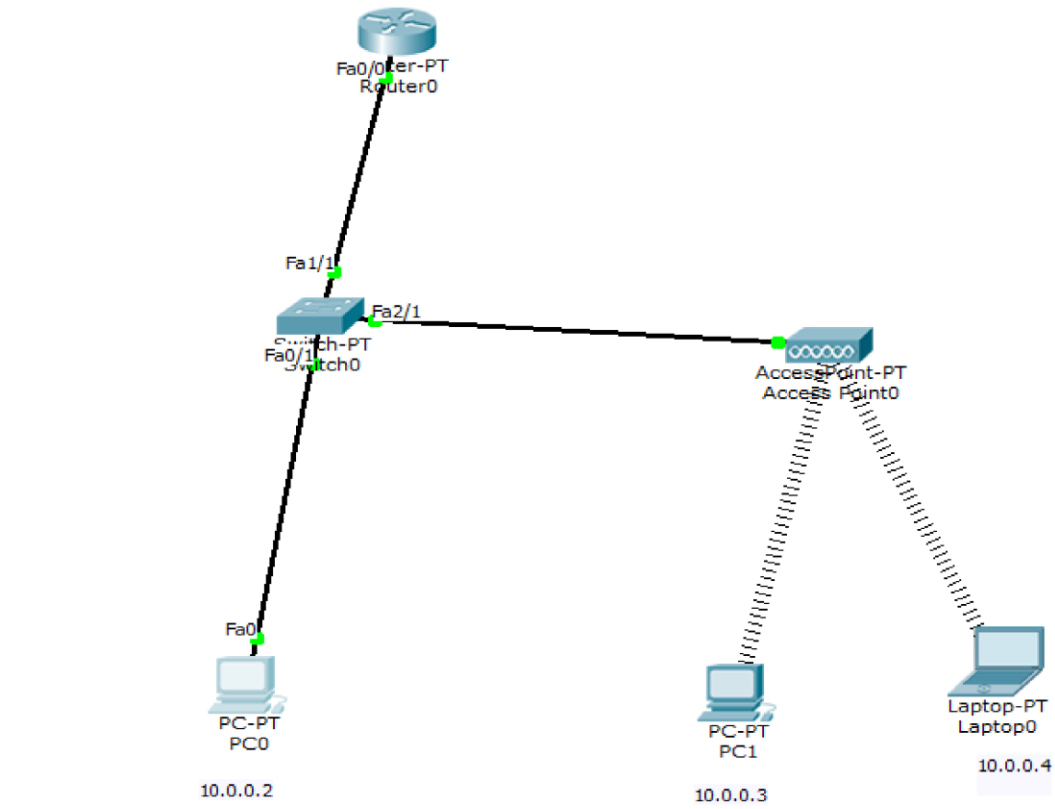
Topology after Wireless Configuration:

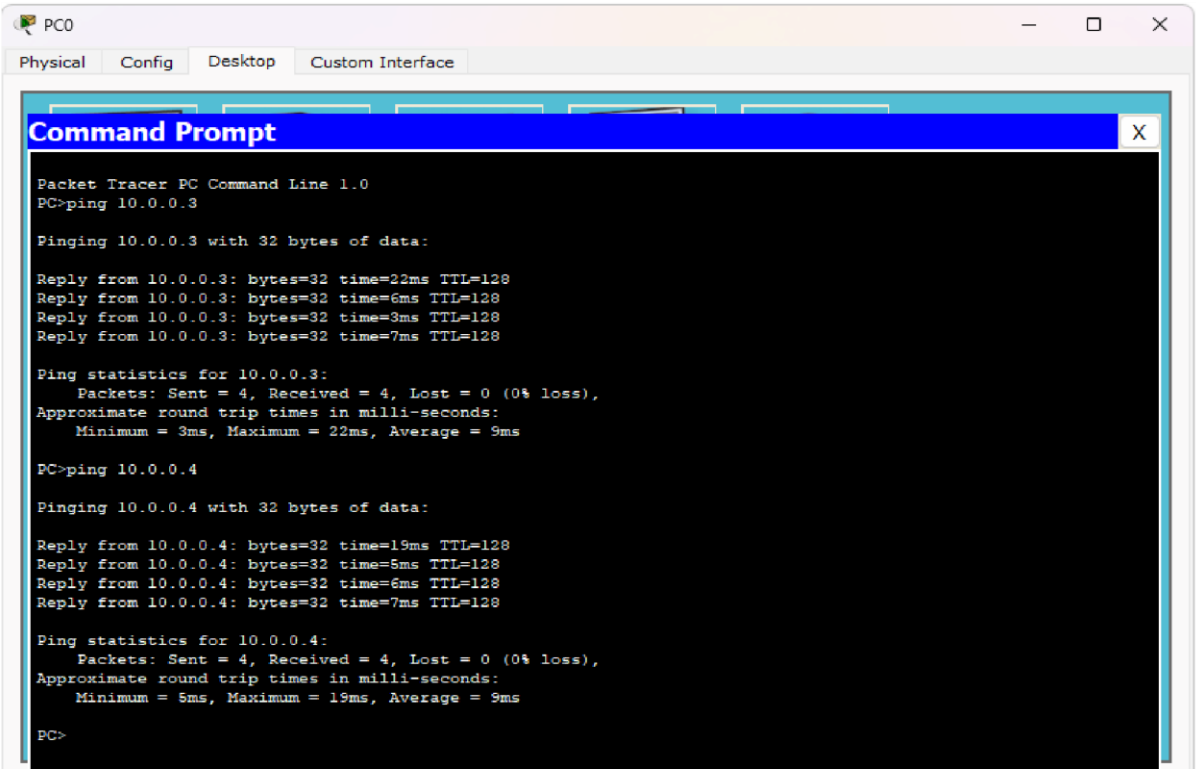



6) Ping from every device to every other device to check for Connection

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 WPA2
3. WMP 300N 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 → Access Point → 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 → Access Point → 10.0.0.4
7. Every device is now connected to every other device in the WLAN.


Router0
Fa1/1
Fa2/1
Fa0/1
Switch0
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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