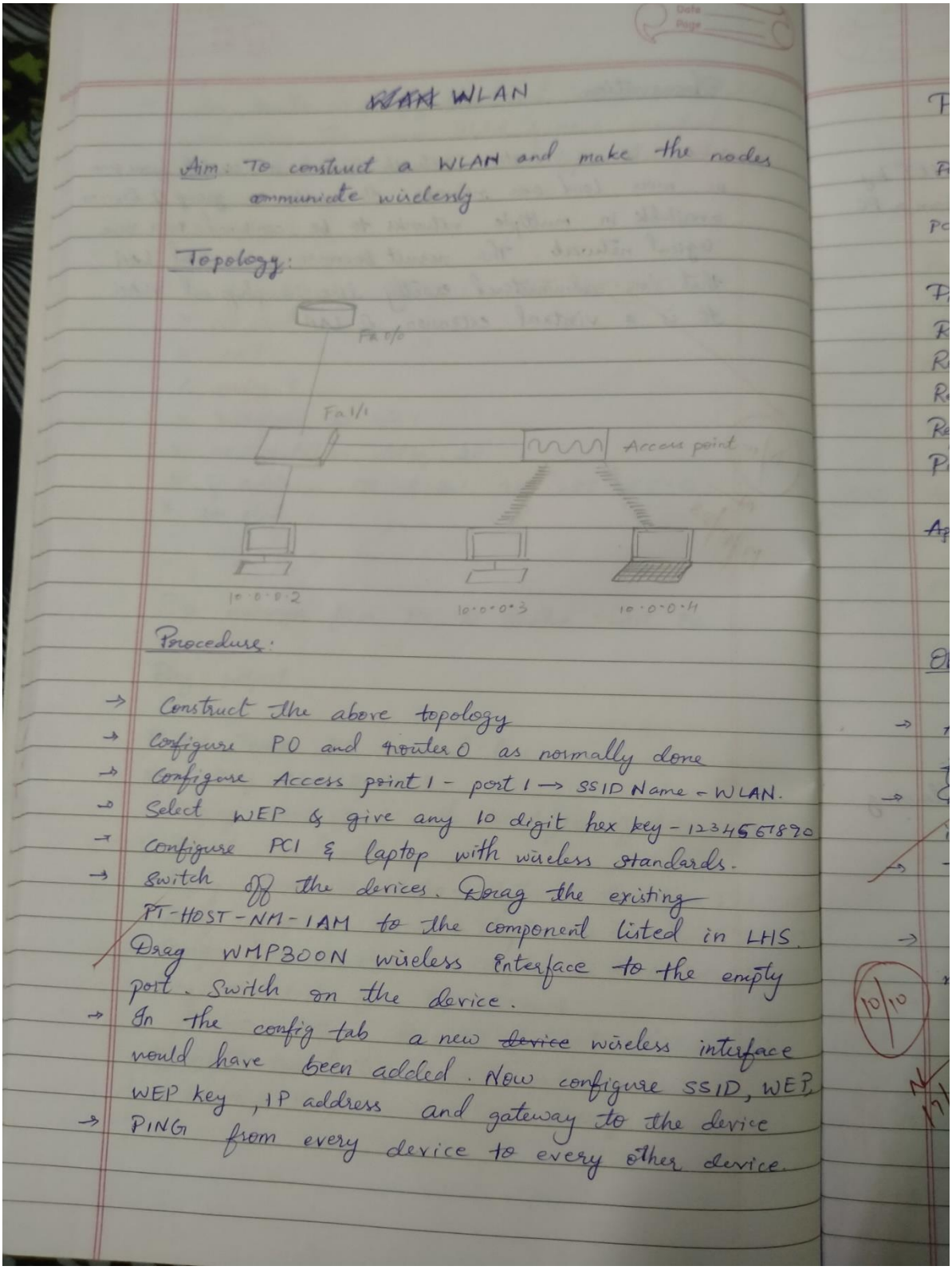
Experiment 12:

To construct a WLAN and make the nodes communicate wirelessly



WLAN

Aim: To construct a WLAN and make the nodes communicate wirelessly

Topology:

Procedure:

→ Construct the above topology
→ Configure PO and Router 0 as normally done
→ Configure Access point 1 - port 1 → SSID Name - WLAN.
→ Select WEP & give any 10 digit hex key - 1234567890
→ Configure PC1 & laptop with wireless standards.
→ Switch off the devices. Drag the existing PT-HOST-NM-1AM to the component listed in LHS. Drag WMP300N wireless Enterface to the empty port. Switch on the device.
→ In the config tab a new ~~device~~ wireless interface would have been added. Now configure SSID, WEP, WEP key, IP address and gateway to the device
→ PING from every device to every other device.

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PING OUTPUT:

Packet Tracer PC Command line

PC> ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:
Request timed out
Reply from 10.0.0.3 : bytes = 32 time = 0ms TTL = 127
Reply from 10.0.0.3 : bytes = 32 time = 0ms TTL = 127
Reply from 10.0.0.3 : bytes = 32 time = 2ms TTL = 127
Ping statistics for 10.0.0.3
Packets : sent = 4, Received = 3, Lost = 1 (25% loss).
Approximate round trip times in milliseconds:
minimum = 0ms, Maximum = 1ms, Average = 0ms.

Observation:

→ A WLAN is a group of colocated devices that form a network based on radio transmissions.
→ Data sent in packets contain layers with labels & instructions, MAC addresses to endpoints for routing.
→ The access point is the base station that serves as a hub to which other devices connect.
→ With one access point we can connect to multiple devices wirelessly & transmit data.

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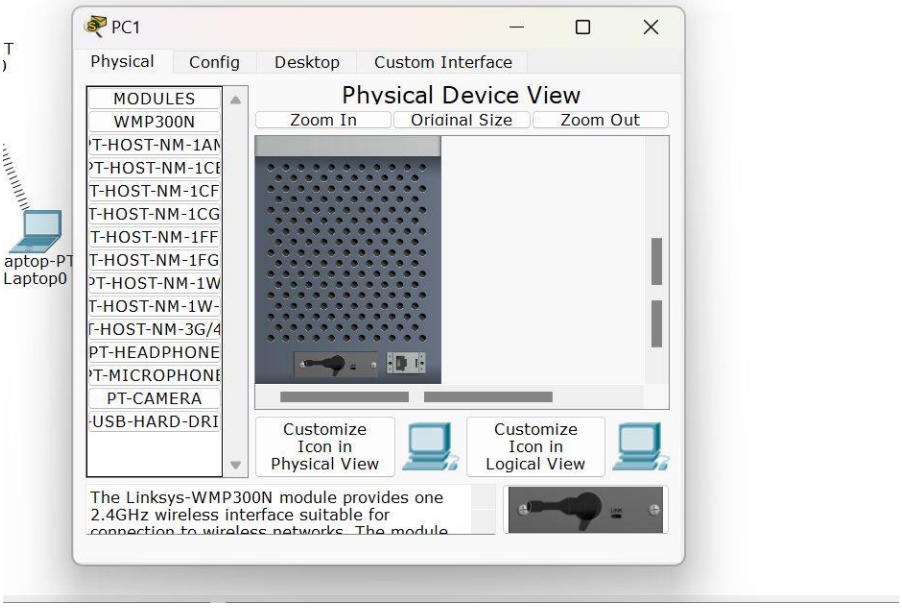
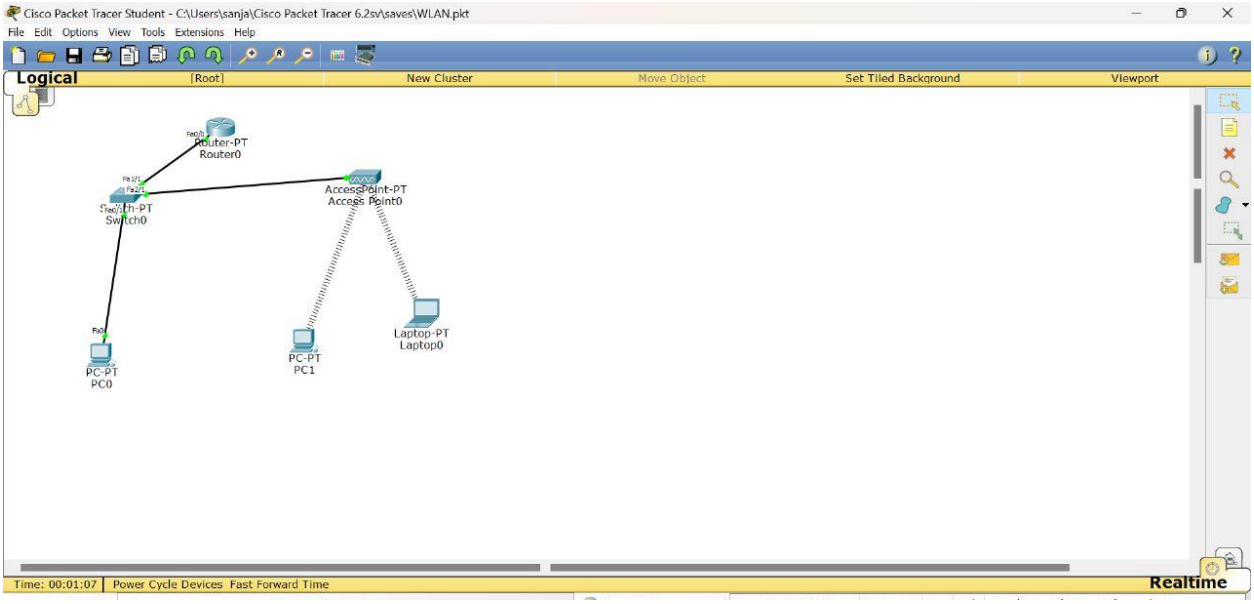
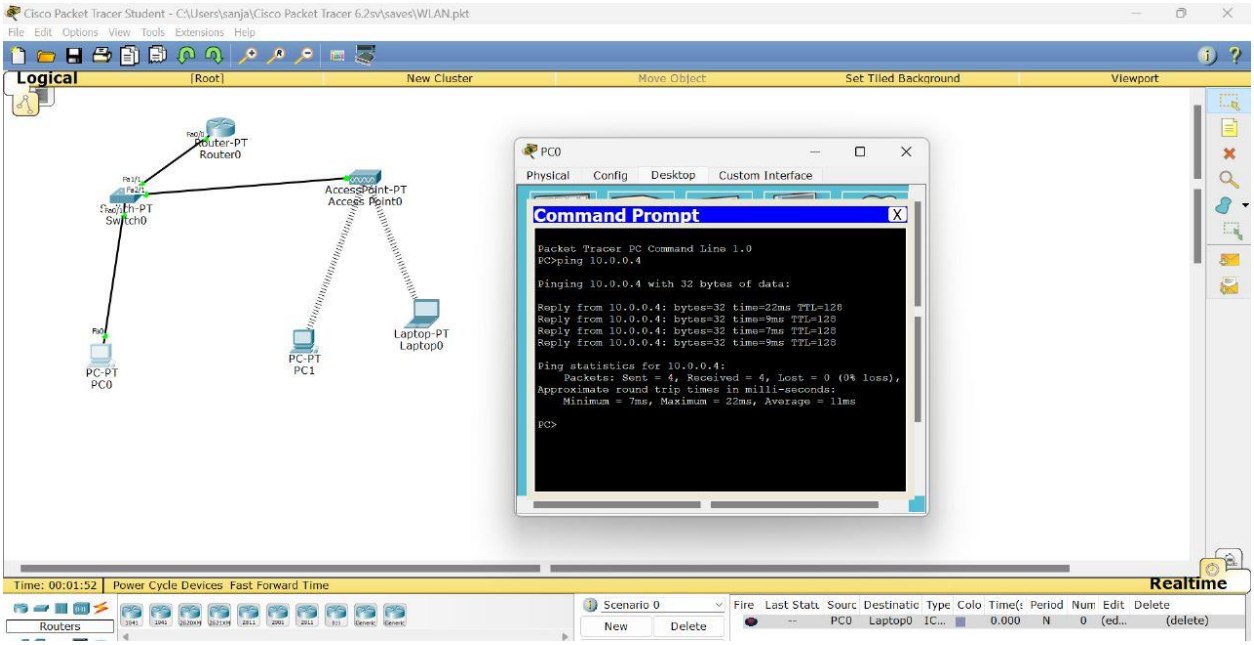
Topology and output screenshots:




Cisco Packet Tracer Student - C:\Users\sanja\Cisco Packet Tracer 6.2sv\saves\WLAN.pkt
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Router-PT
Router0
Switch-PT
Switch0
Access Point-PT
Access Point0
PC-PT
PC0
PC-PT
PC1
Laptop-PT
Laptop0
Time: 00:01:07
Power Cycle Devices
Fast Forward Time
Realtime


Cisco Packet Tracer Student - C:\Users\sanja\Cisco Packet Tracer 6.2sv\saves\WLAN.pkt
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Router-PT
Router0
Switch-PT
Switch0
Access Point-PT
Access Point0
PC-PT
PC0
PC-PT
PC1
Laptop-PT
Laptop0
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
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=22ms TTL=128
Reply from 10.0.0.4: bytes=32 time=9ms TTL=128
Reply from 10.0.0.4: bytes=32 time=7ms TTL=128
Reply from 10.0.0.4: bytes=32 time=9ms 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 = 7ms, Maximum = 22ms, Average = 11ms
PC>
Time: 00:01:52
Power Cycle Devices
Fast Forward Time
Realtime
Routers
Scenario 0
New
Delete
Fire
Last Statu
Sourc
Destinatio
Type
Colo
Time(s
Period
Num
Edit
Delete
PC0
Laptop0
0.000
N
0
(ed...
(delete)