WEEK 10

To construct a WLAN and make the nodes communicate wirelessly

OBSERVATION:

Experiment-10

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Aim: To construct a WLAN and make the modes communicate wirelessly.

Topology:

Router

10.0.0.1 / Fa0/0.

Fa4/1

Switch | Access point

Fa0/0

Fa0/0 | end device | end device

end device | 10.0.0.3 | 10.0.0.4

10.0.0.2 | PC1 | Laptop0

PC0

Procedure:

+ construct the above topology.

- configure end devices and routers as normally done.

+ configure access points 1 - port 1 → SSID name - WLAN.

+ Select WEP and give any 10 digit hex key - 1234567890.

+ configure PC1 and laptop with wireless standards.

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

device.

* In the config-tab a new 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.

Result:

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

Ray ping statistics for 10.0.0.3

    packets : sent=4, Received=3, lost=1 (25% loss)
Approximate round trip time 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 contains layers which labels and instructions. MAC address to endpoints for routing.

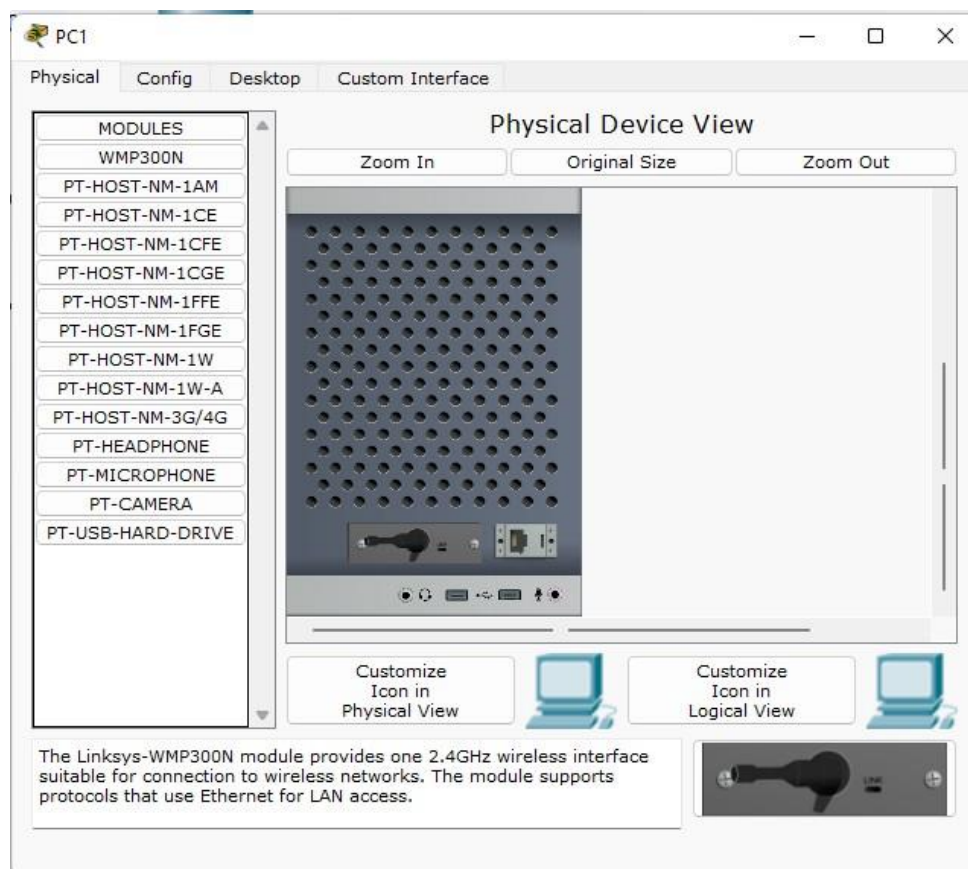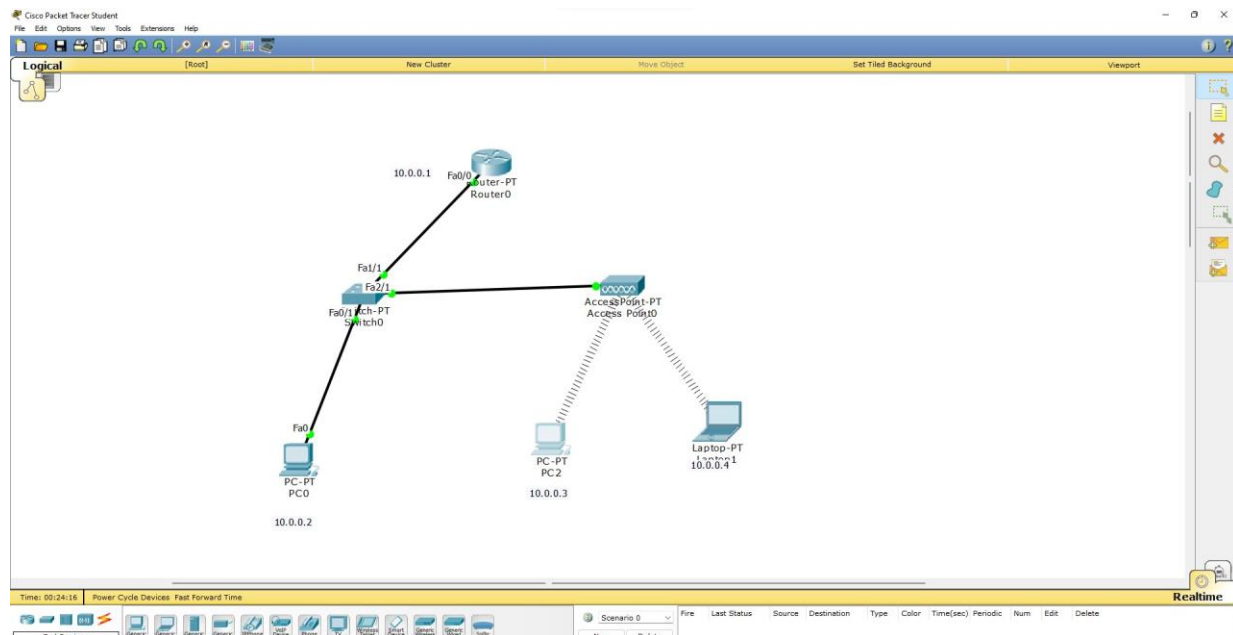* The access point is the base station that serves as a hub to which other stations can connect.

* with one access point we can connect multiple devices.
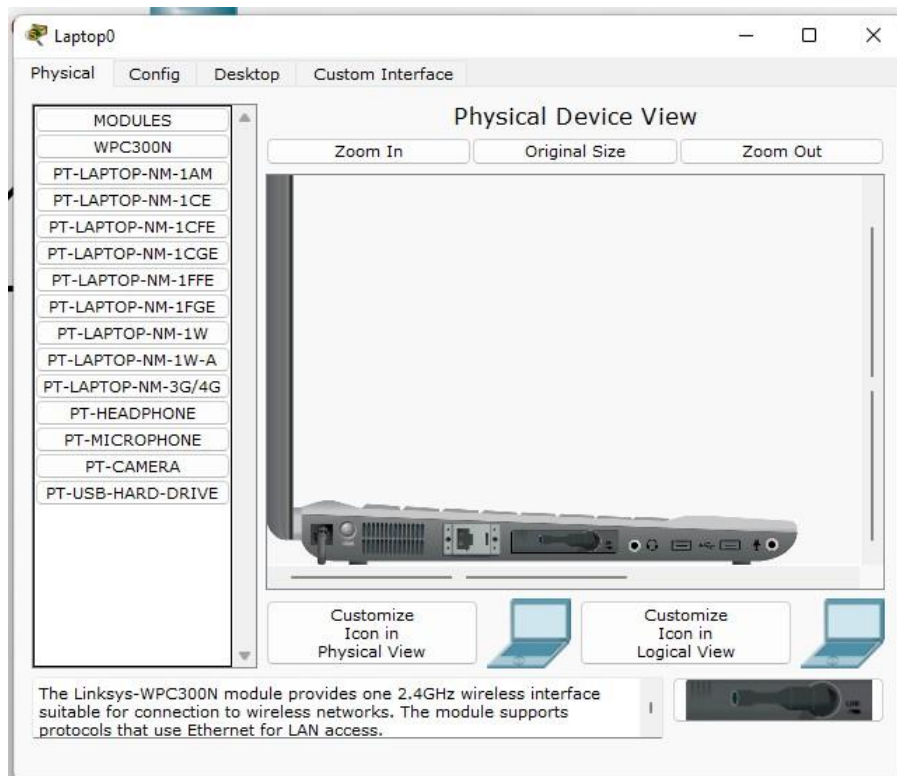
TOPOLOGY:

OUTPUT:


```
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 10.0.0.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

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=21ms TTL=128
Reply from 10.0.0.3: bytes=32 time=7ms TTL=128
Reply from 10.0.0.3: bytes=32 time=9ms TTL=128
Reply from 10.0.0.3: bytes=32 time=10ms 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 = 7ms, Maximum = 21ms, Average = 11ms

PC>
```