WLAN

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

Topology:

Fa 0/0

10.0.0.1

Fa 1/1

Access Point PT

PT-PC

10.0.0.2

10.0.0.3

laptop - PT

10.0.0.4
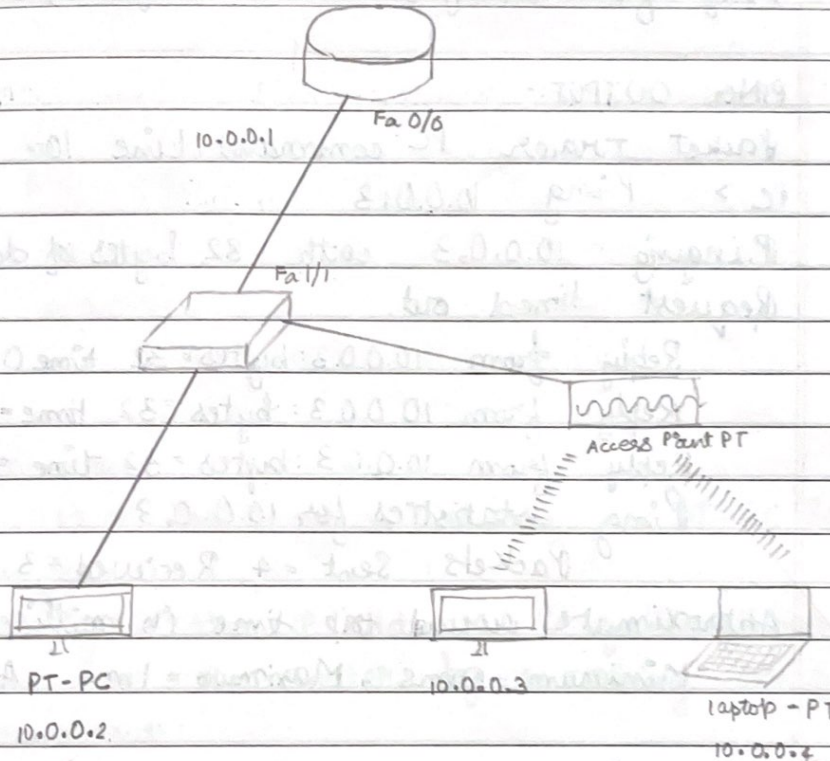
Procedure:

- construct a topology with a router, switch, an access point, and two PT-PC's and a laptop PT
- configure P0 & router 0 as done normally
- configure Access point 1 - Port 1 → SSID Name - WLAN.
- Select WEP & give any 10 digit hexadecimal key - 1234567890
- configure PT-PC & laptop with wireless standards
- switch off the device. Drag that existing

PT- HOST -NM-IAM to the component listed in the left hand side. Drag WMP 300N wireless interface to the empty port. Switch on the device

o 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

o Ping from every device to every other device

PING OUTPUT:-

Packet Tracer PC command line 10

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=12

Reply from 10.0.0.3: bytes =32 time =0ms TTl =

Reply from 10.0.0.3: bytes =32 time =2ms TTl =

Ping statistics for 10.0.0.3

Packets: Sent = 4, Recieved = 3, lost = 1 25
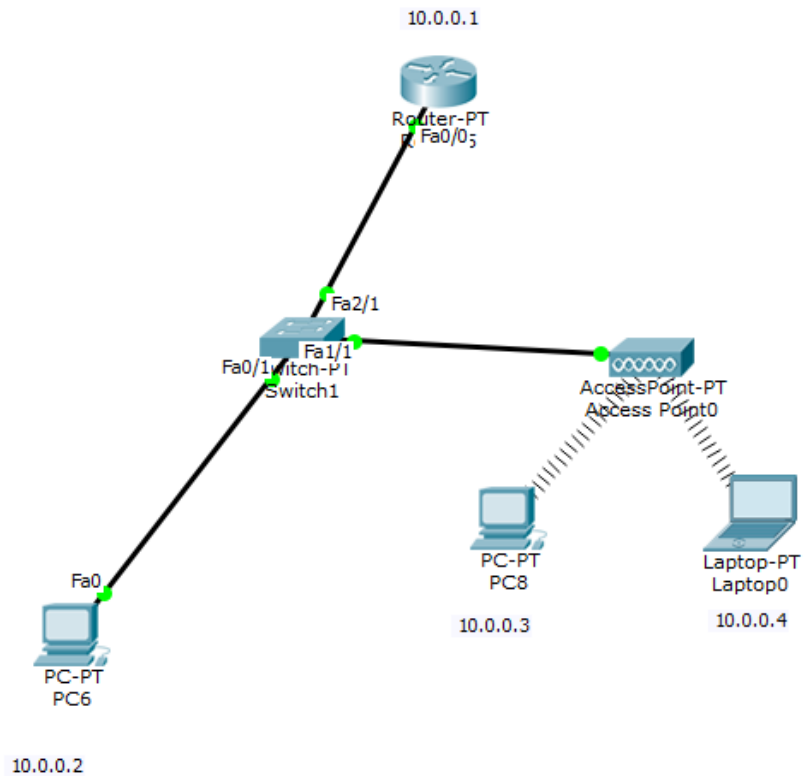
Approximate around trip time in milliseconds:

Minimum = 0ms, Maximum = 1ms, Average = 0m

Observation:

→ A NLAN is a group of devices that form a network based on radio transmissions.

→ Data sent in packets contain layers with labels & instructions, MAC address to end pts. 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.

10.0.0.1

Router-PT
Fa0/0
Fa0/0

Fa2/1

Fa1/1
Fa0/1 Switch-PT
Switch1

AccessPoint-PT
Access Point0

PC-PT
PC8

Laptop-PT
Laptop0

10.0.0.3

10.0.0.4

Fa0

PC-PT
PC6

10.0.0.2

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=21ms TTL=128
Reply from 10.0.0.3: bytes=32 time=9ms TTL=128
Reply from 10.0.0.3: bytes=32 time=13ms TTL=128
Reply from 10.0.0.3: bytes=32 time=12ms 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 = 9ms, Maximum = 21ms, Average = 13ms

PC>
```

Command Prompt   X

```
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=18ms TTL=128
Reply from 10.0.0.4: bytes=32 time=9ms TTL=128
Reply from 10.0.0.4: bytes=32 time=5ms TTL=128
Reply from 10.0.0.4: bytes=32 time=12ms 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 = 18ms, Average = 11ms

PC>
```