Name:- Tanmay Mane **Roll no:- 228654**

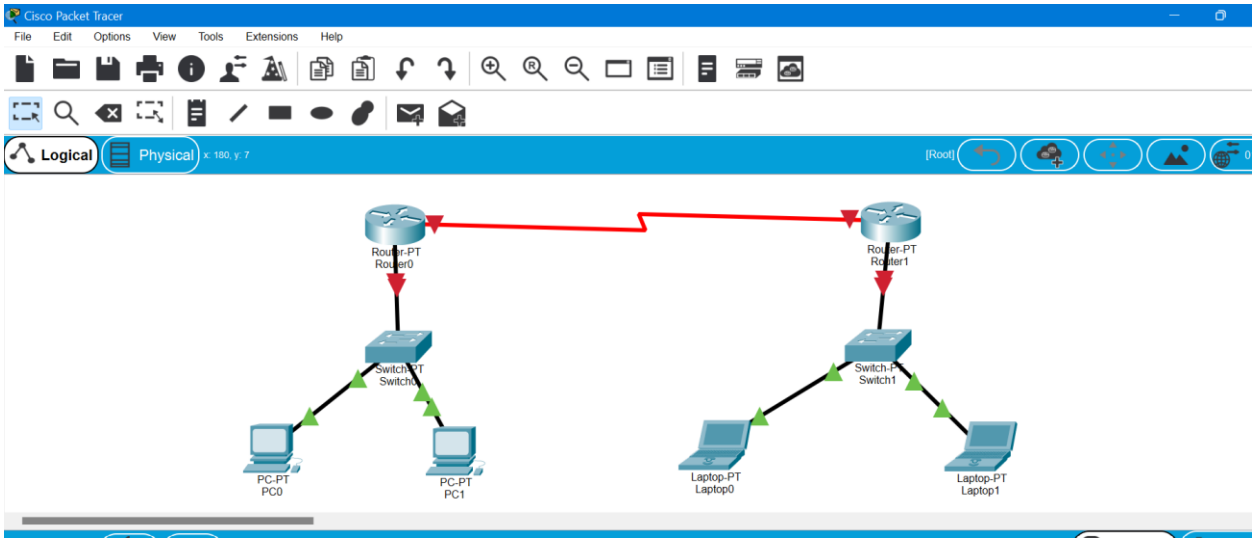
WSN Practical 6

Aim: Implement a Wireless sensor network simulation.

Steps:-

A) Router Configuration through CLI commands:-

1. Take 2 PC's, 2 Laptop & 2 Routers (Router-PT) & Switch -PT & arrange them.



Configuration of Router0:-

CLI commands for Router0:-

```
Router>enable
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int Fa0/0
Router(config-if)#ip address 10.0.0.1 255.0.0.0
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#int Fa1/0
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

Router(config-if)#exit
Router(config)#int Se2/0
Router(config-if)#ip address 30.0.0.1 255.0.0.0
Router(config-if)#no shut

%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 10.0.0.0
Router(config-router)#network 20.0.0.0
Router(config-router)#network 30.0.0.0
Router(config-router)#network 40.0.0.0
Router(config-router)#network 50.0.0.0
```

Configuration of Router1:-

CLI commands for Router1:-

```
Router(config-if)#ip address 40.0.0.1 255.0.0.0
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#int Fa1/0
Router(config-if)#ip address 50.0.0.1 255.0.0.0
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

Router(config-if)#exit
Router(config)#int Se2/0
Router(config-if)#ip address 30.0.0.2 255.0.0.0
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

Router(config-if)#exit
Router(config)#router
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

% Incomplete command.
Router(config)#router rip
Router(config-router)#network 10.0.0.0
Router(config-router)#network 20.0.0.0
Router(config-router)#network 30.0.0.0
Router(config-router)#network 40.0.0.0
Router(config-router)#network 50.0.0.0
```

2.Click on PC0 and click on physical tab.

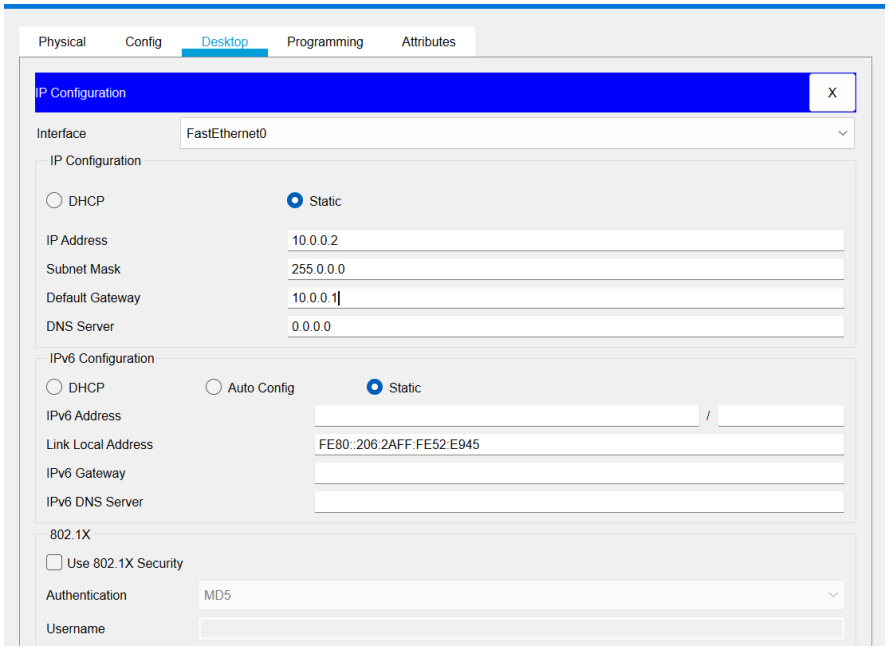
3.Turn off the CPU and Remove the fastethernet module and install PT-HOST-NM-1W-A and turn on the CPU.

4.A connection will be made between AccessPoint and PC0.

5.Click on PC1 and click on physical tab.

6.Repeat step3 and see if the connection is done between PC1 and AccessPoint.

7.Click on PC0 and set the IP config.



8.Click on PC1 and set the IP config.

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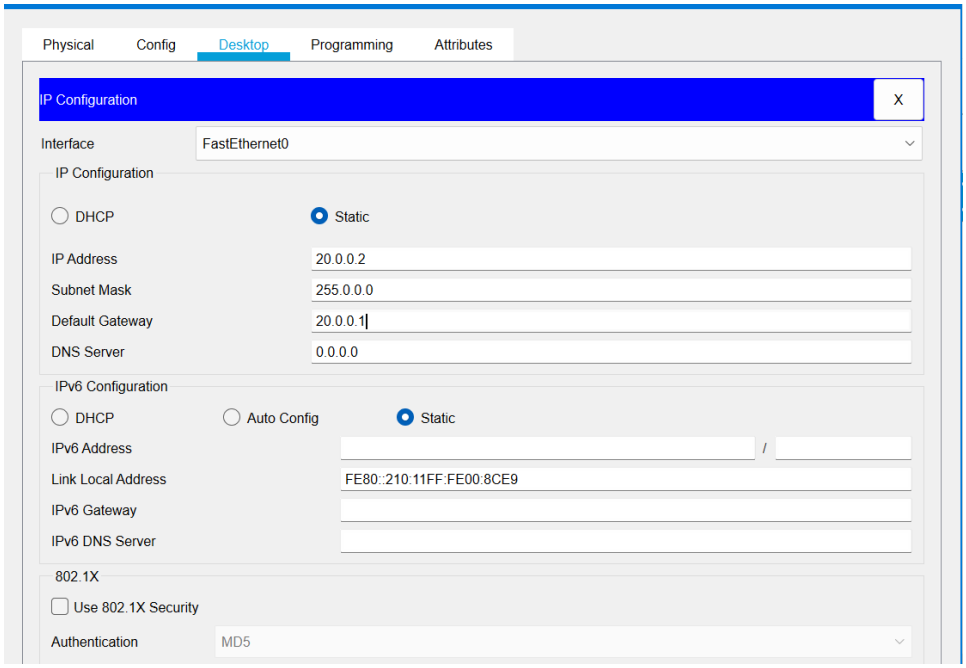
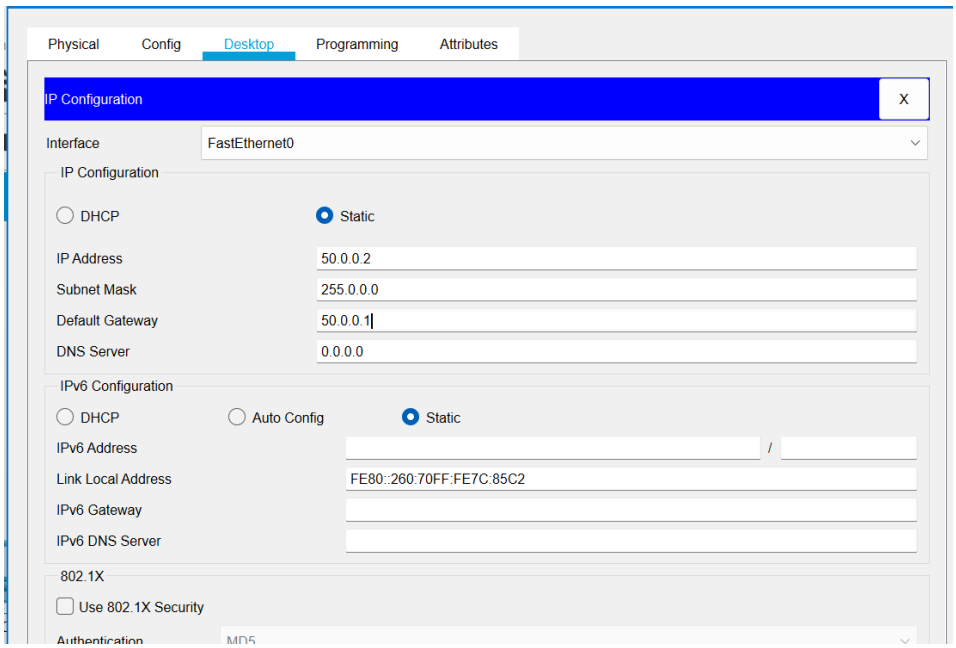


9.Click on Laptop0 and set the IP config.



10.Click on Laptop1 and set the IP config.

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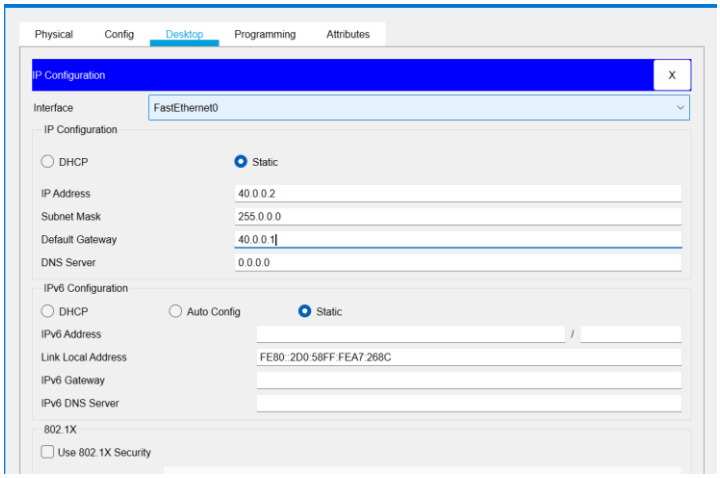
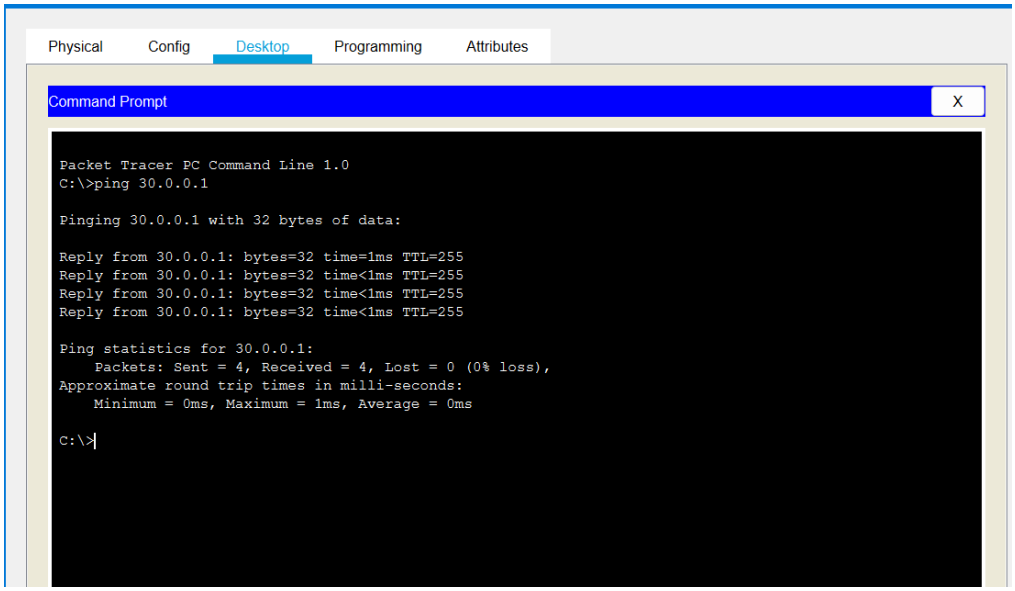
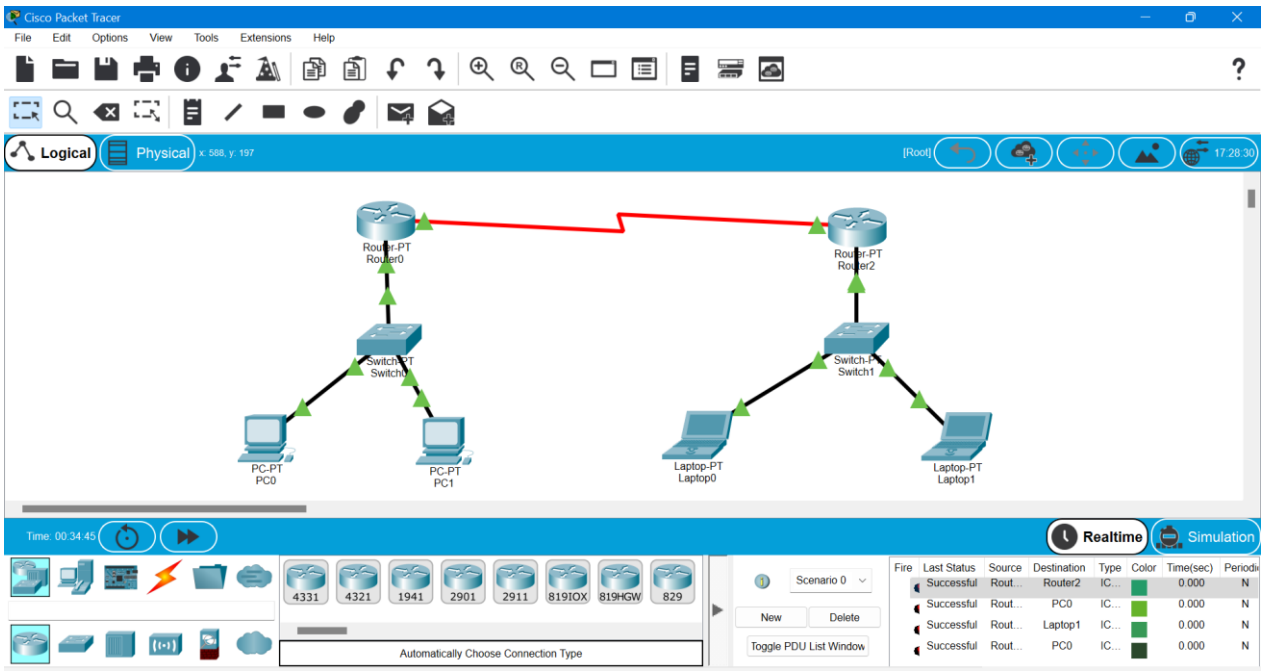


Ping Command & Via Message:-





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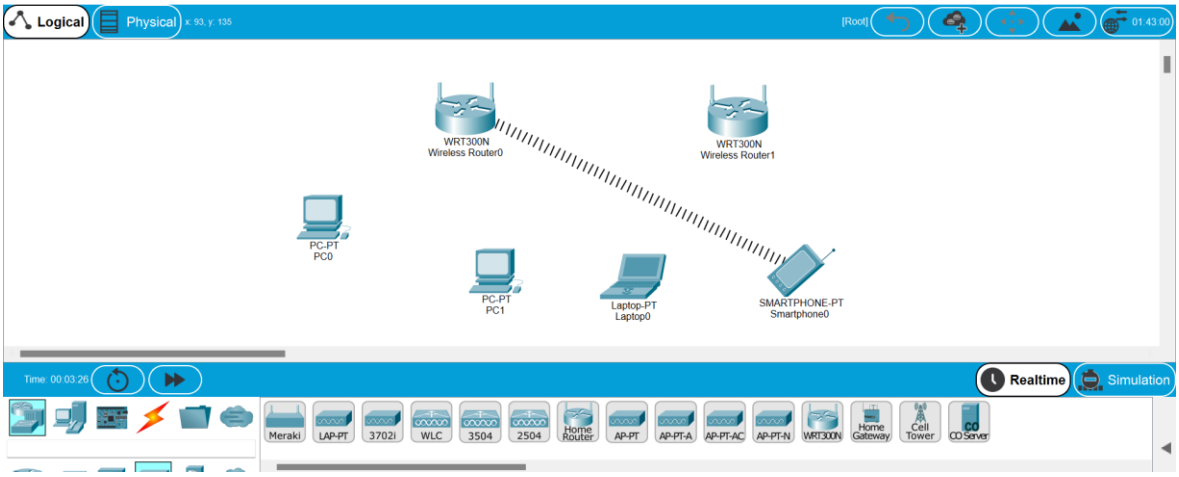
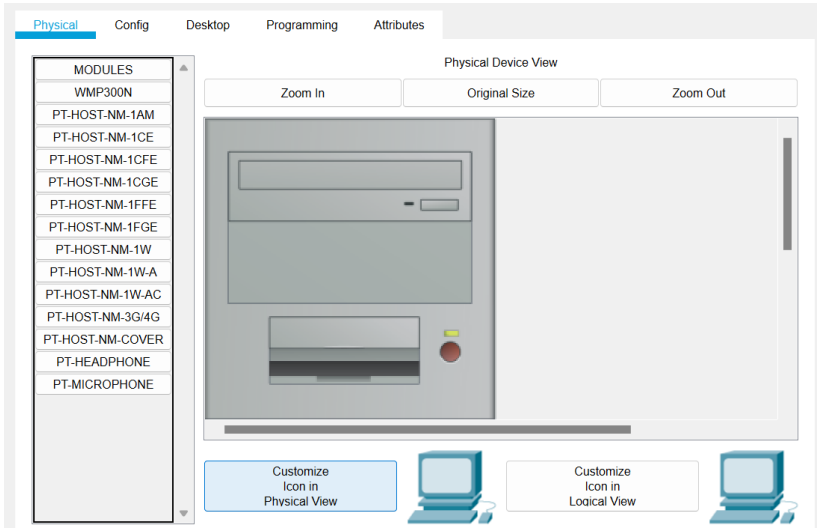
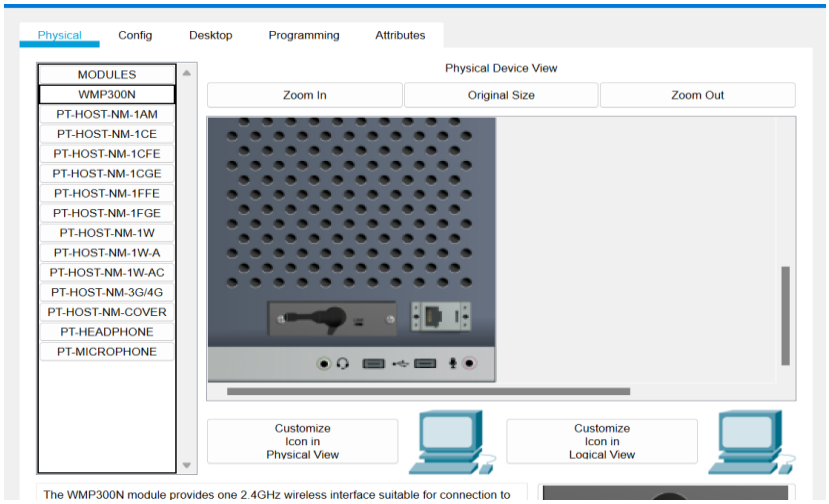
B) Wireless Connection:-

1. Drag & Drop 2 PC's,1 Laptop ,1 Smartphone & 2 wireless Routers(WRT300N) & arrange them.



2. Now click on PC0-> Physical turn off CPU & then remove existing module from that CPU & then Drag & WMP 300N Module in place of it.





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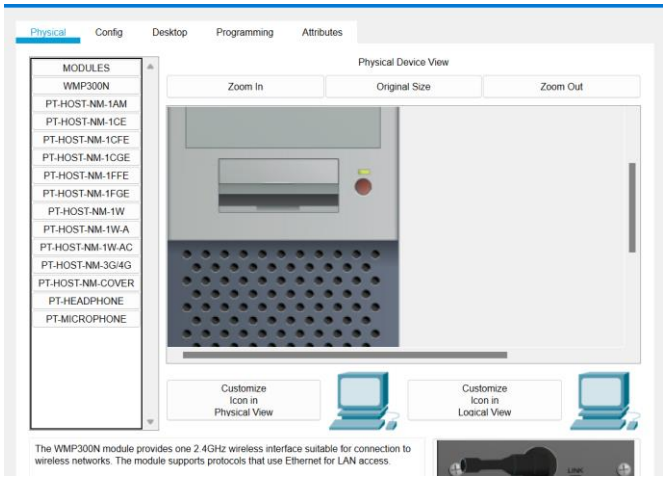
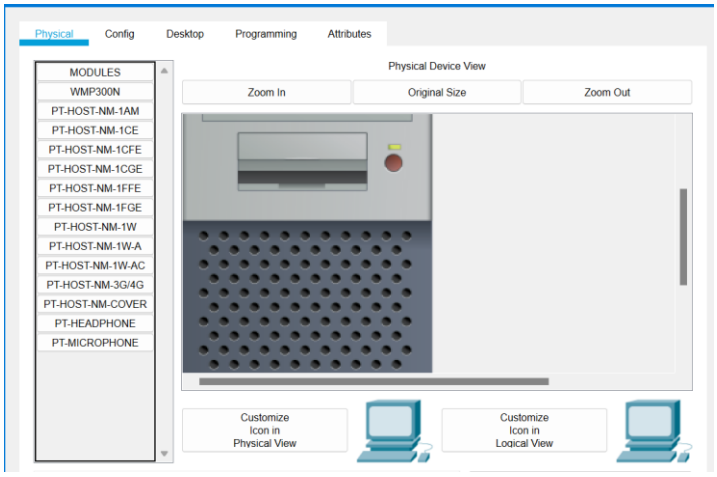
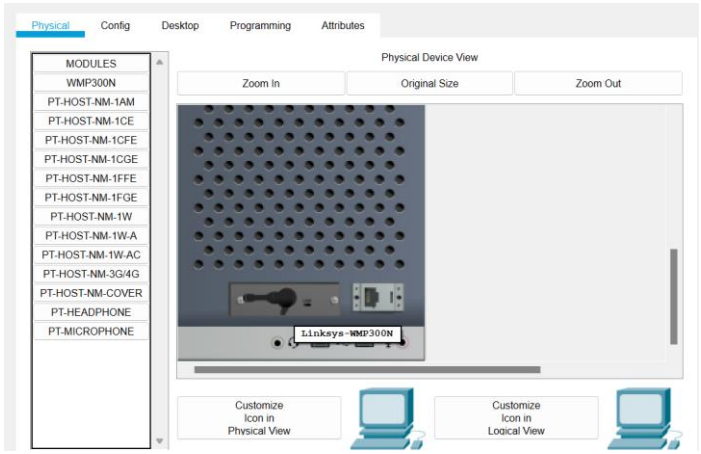


3.Follow same steps For Laptop0,PC1.





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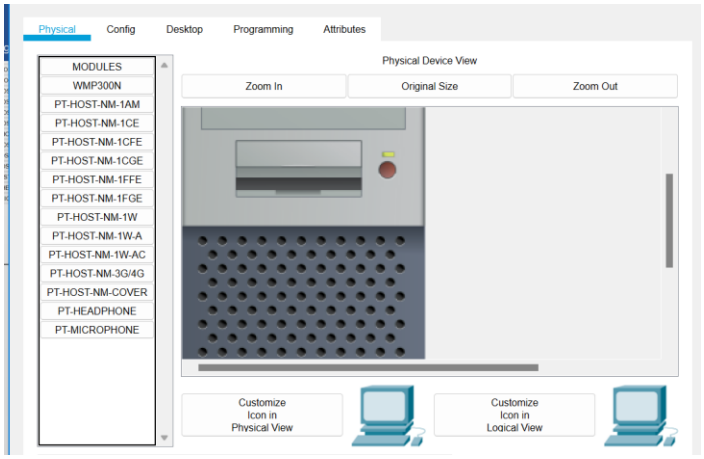

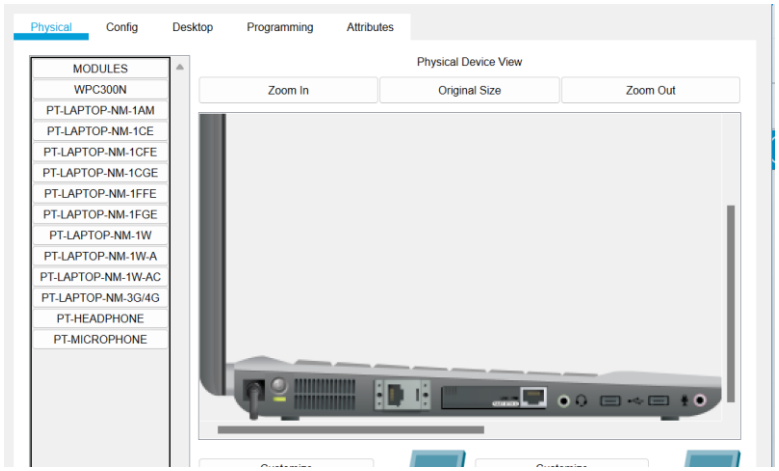

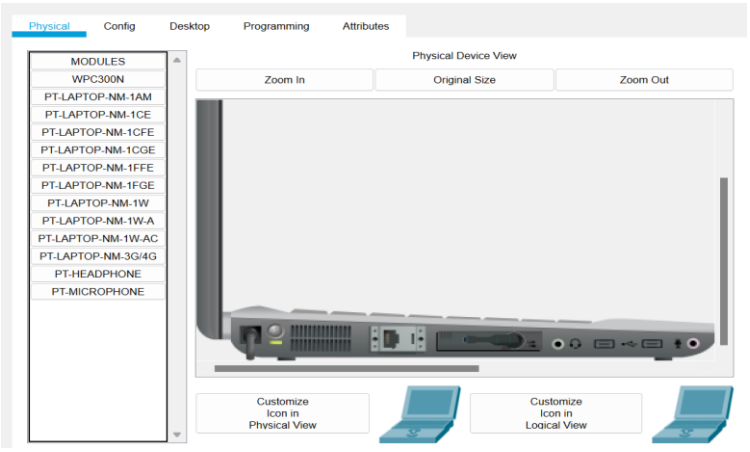

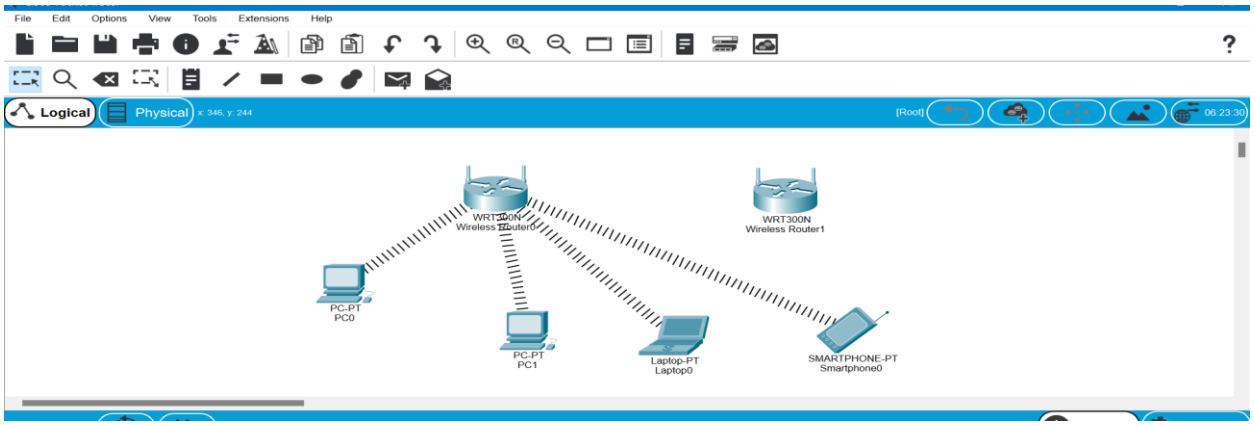

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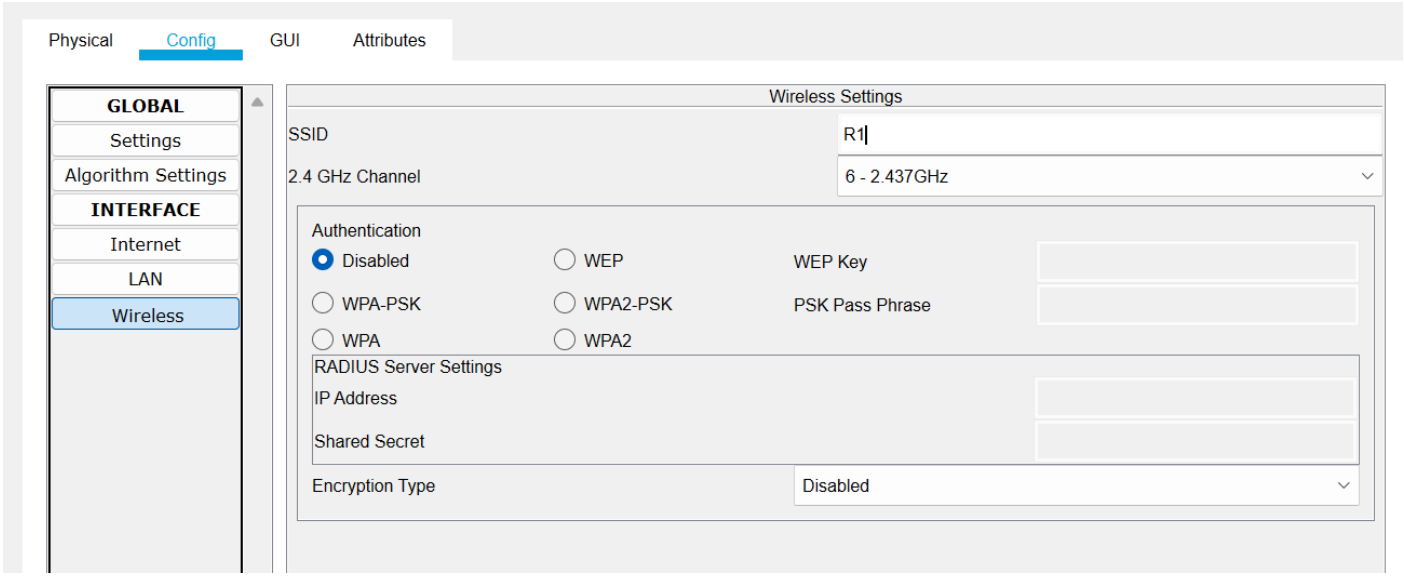
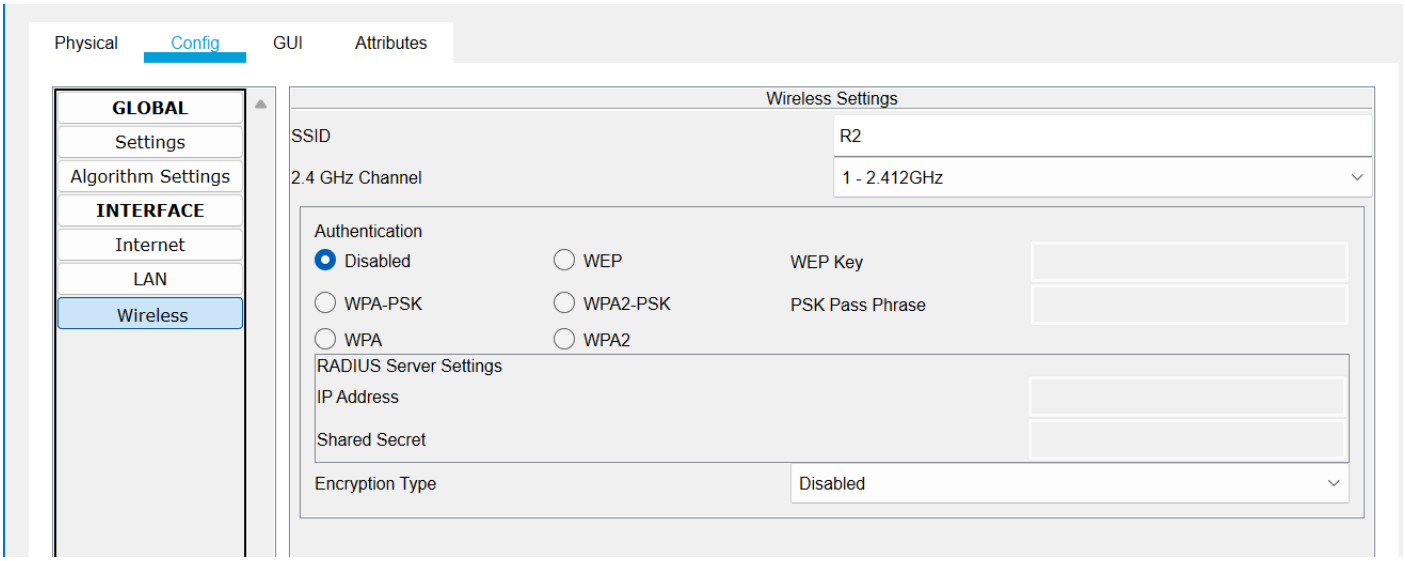
4.Click on Wireless Router0->Config-> Wireless. Give SSID as R1.

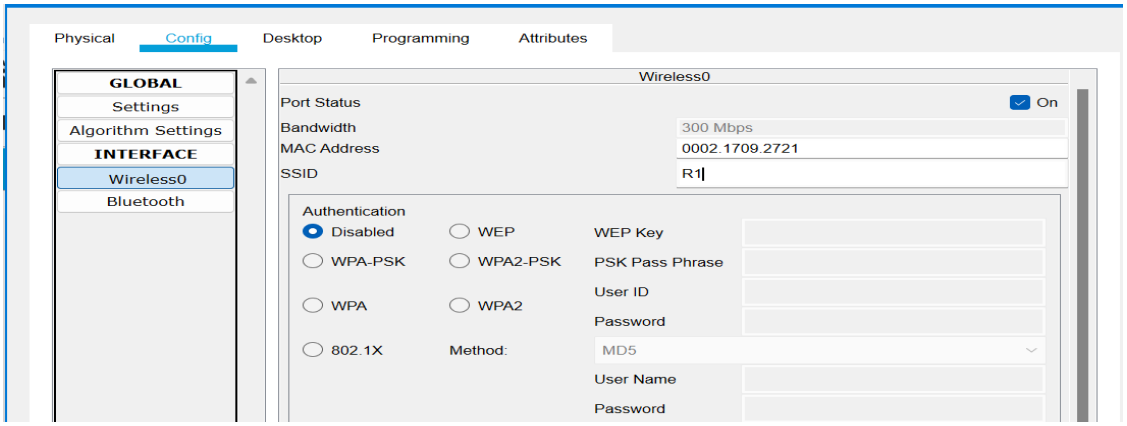
Wireless Router1->Config-> Wireless. Give SSID as R2.

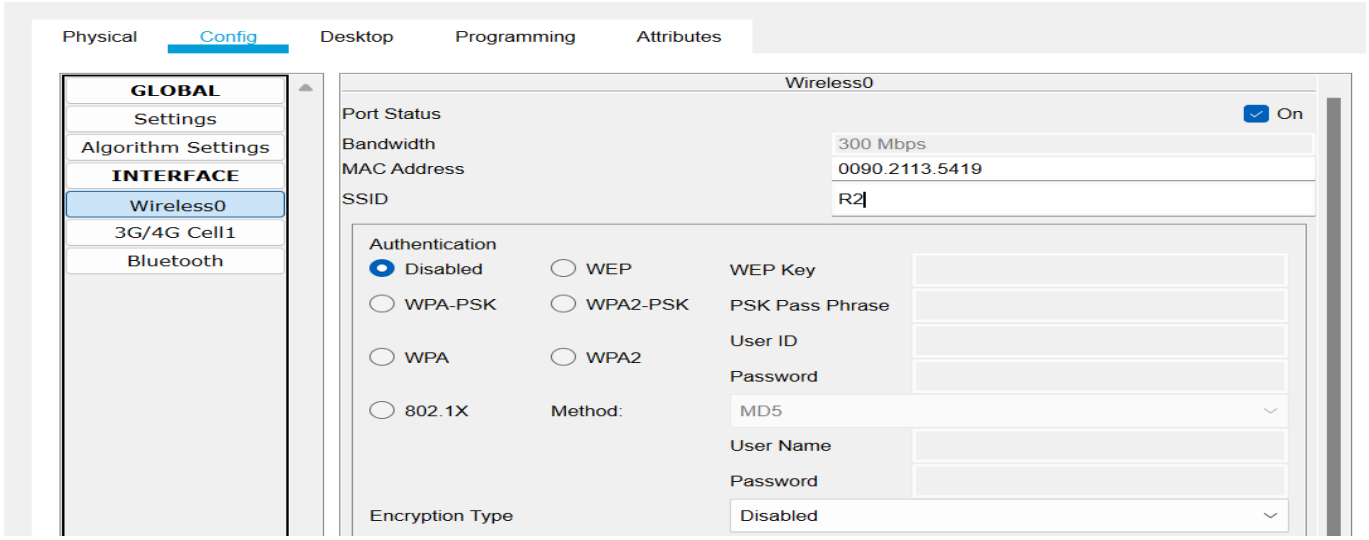


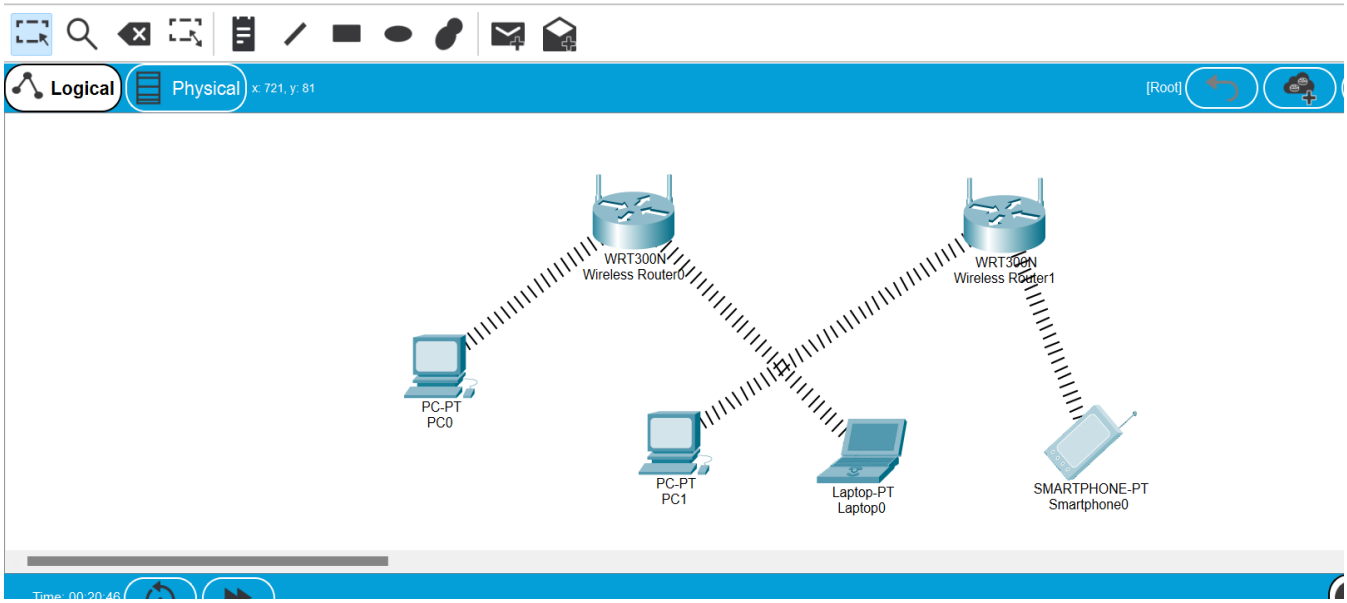


5. Click on PC0-> Config->Wireless0 &SSID give as SSID as R1.Same FOR Laptop0.

. Click on PC1-> Config->Wireless0 &SSID give as SSID as R1.Same FOR Smartphone0.

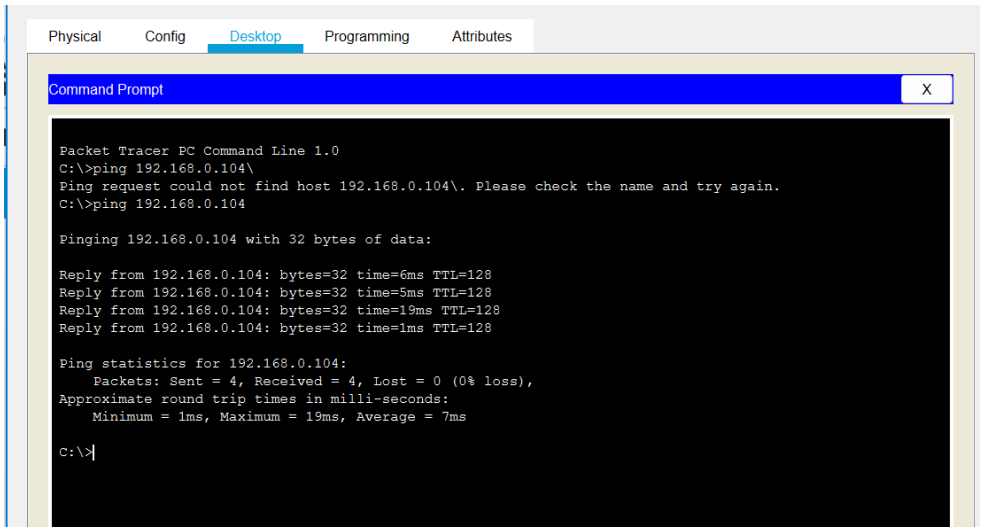






6. Give IPv4 Address, Subnet Mask & SSID to used devices.

Ping Command & Via Message:-



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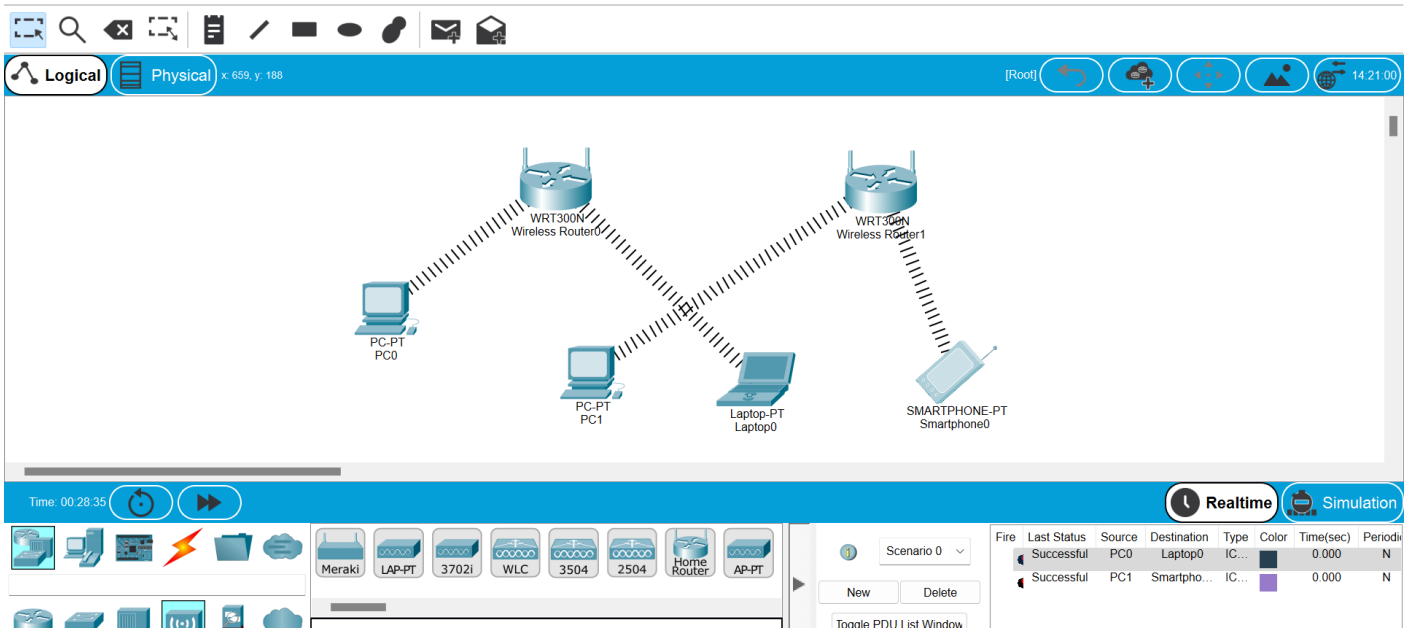

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