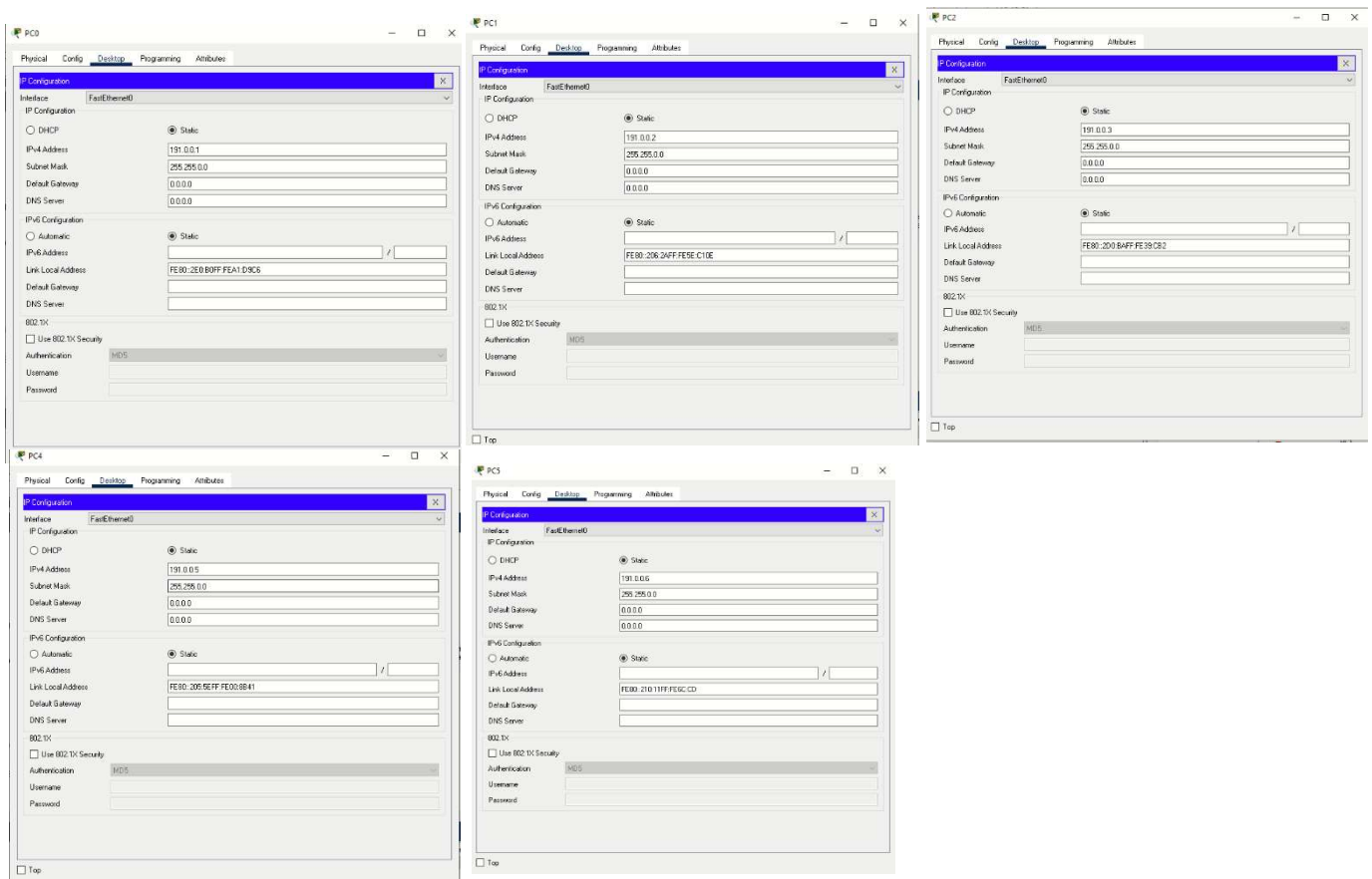Parul™
University

PRACTICAL:5

AIM : Create a VLAN on CISCO PACKET TRACER.

Theory:

A VLAN (virtual LAN) is a subnetwork which can virtually group together collections of devices on separate physical local area networks (LANs).

Steps:

1. First make a network as in the photo, and give IP address from same class to all the PCs.


2. Then click on switch 1 and go to CLI and take following steps
enable > config > vlan 5 > name vlan5 > exit > vlan 6
 **> name vlan6>exit**
3. Do the same for switch 2.
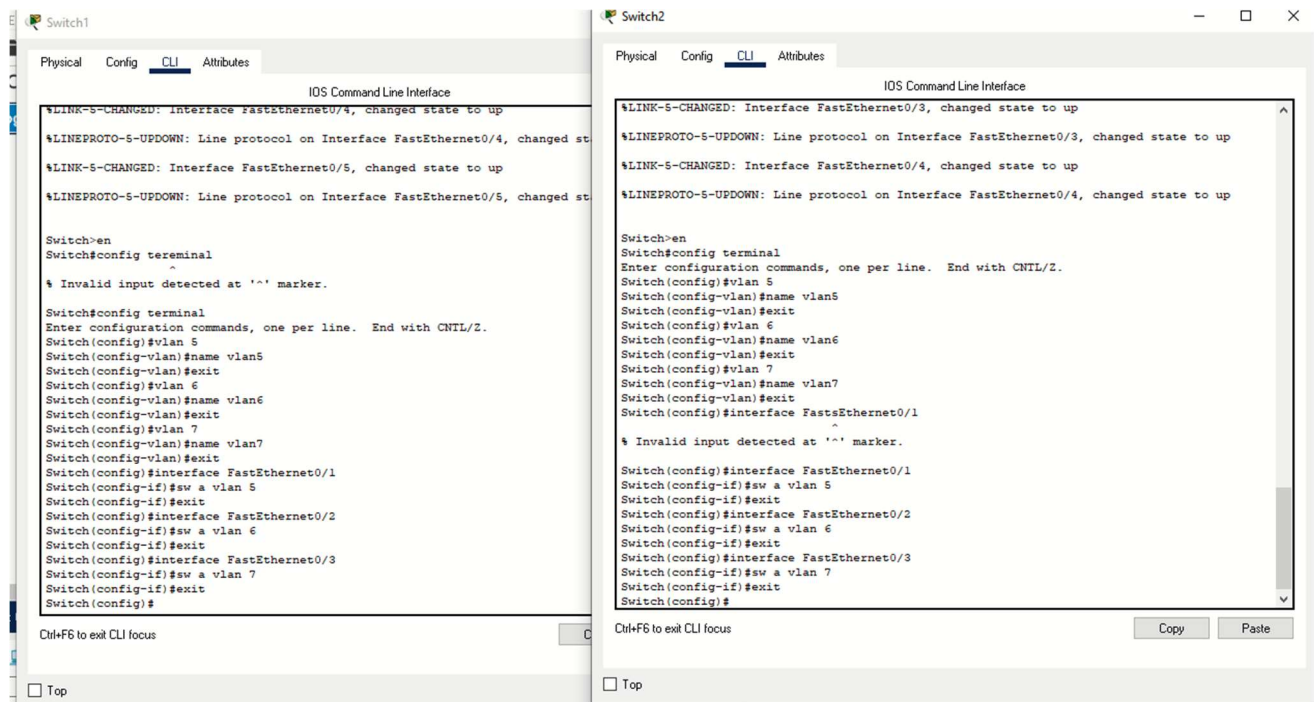
4. Click on switch 1 and go to CLI and set every PC to the VLAN from vlan 5 or vlan 6. i.e. **enable> configure terminal > interface fastethernet 0/1 > sw a vlan 6 > exit.**

5. To successfully connect two switches take following steps in CLI of both switches.i.e. **en > config terminal > interface fastethernet 0/5 > sw m t > sw non>exit.**
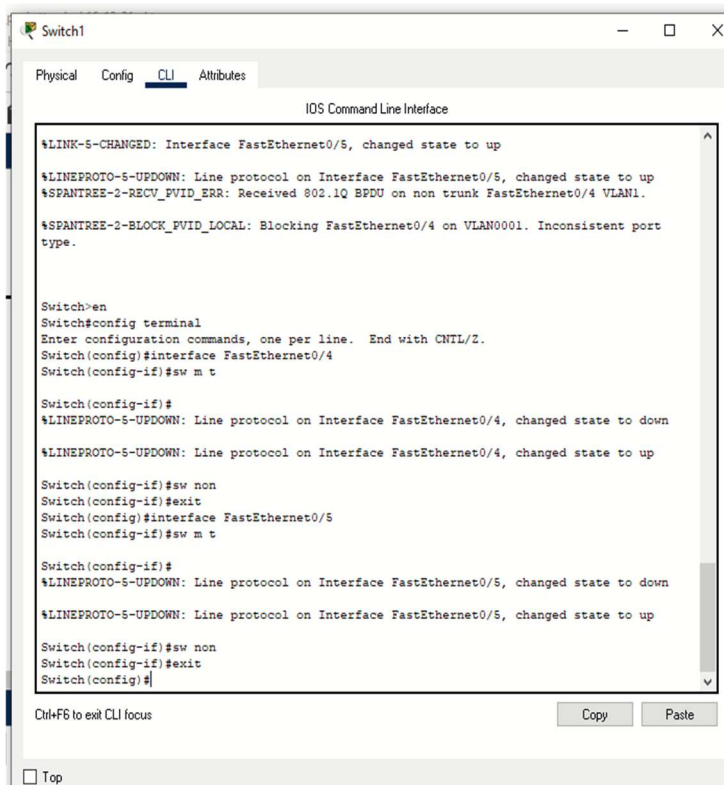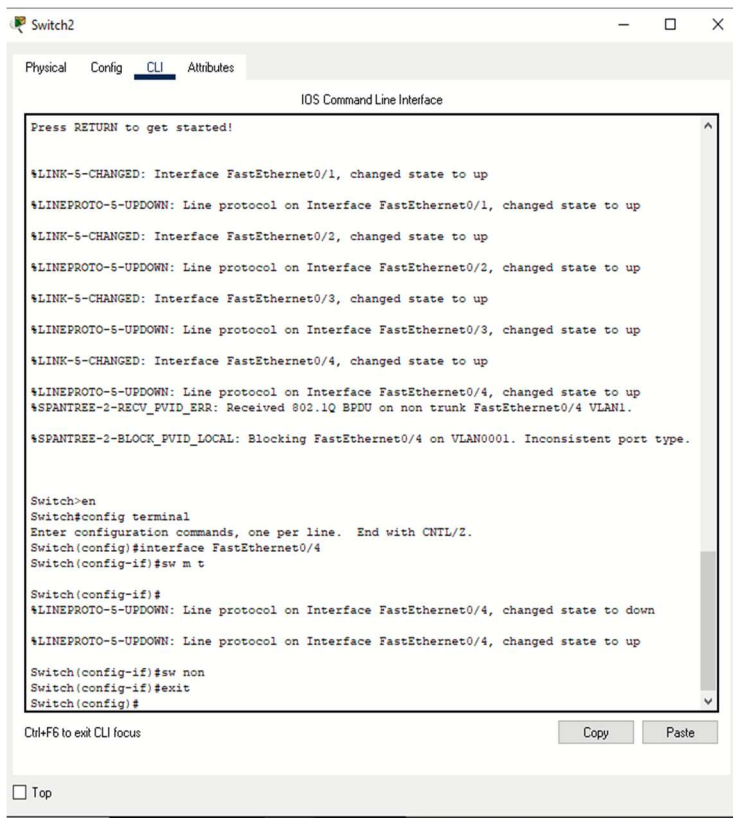
After this process even if PCs are in physical connection they won't be able to transfer packet.

Implementation:
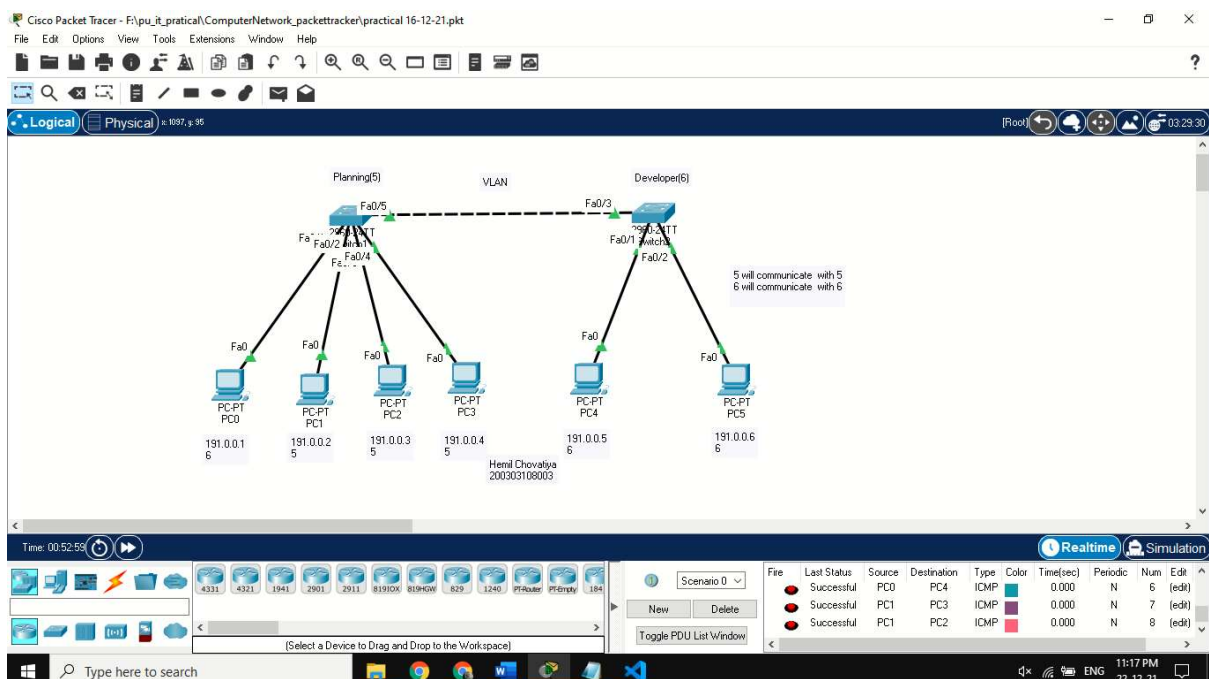
PRACTICAL:6

AIM: Wireless LAN.
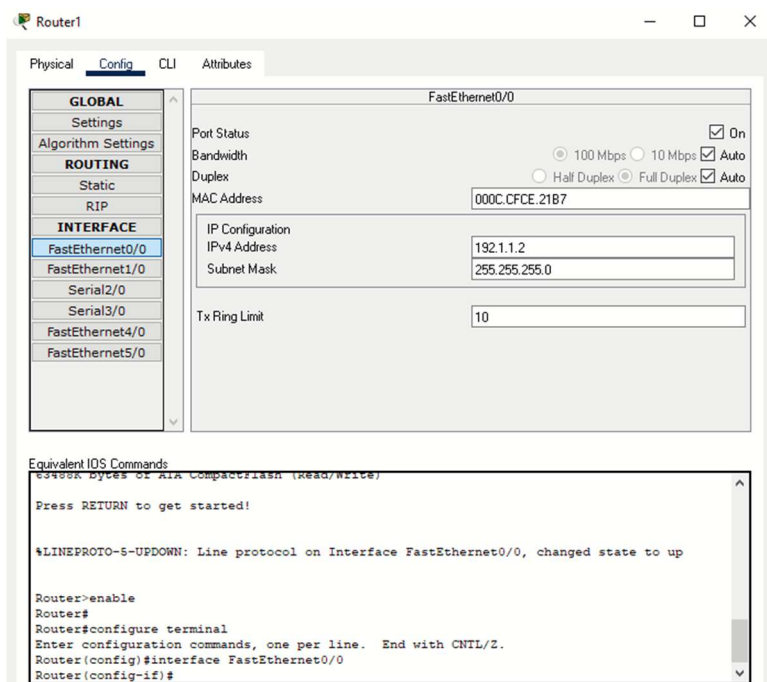
Theory:

Procedure

Step 1: Take 1 Switch ,1 Router, 2 Pc,1 access point.

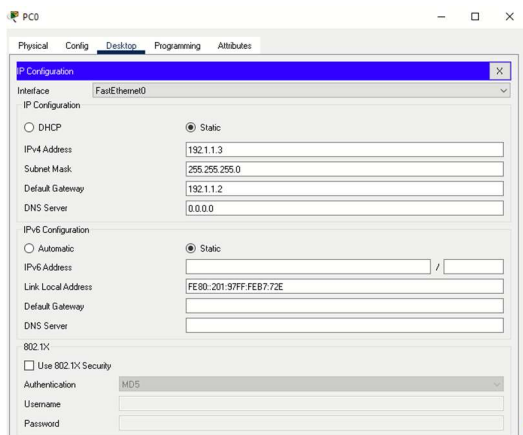**Step 2:** Connect to each other with copper straight-through wire.

Step 3: Take 1 access point-PT and it connect with switch with straight-through wire.

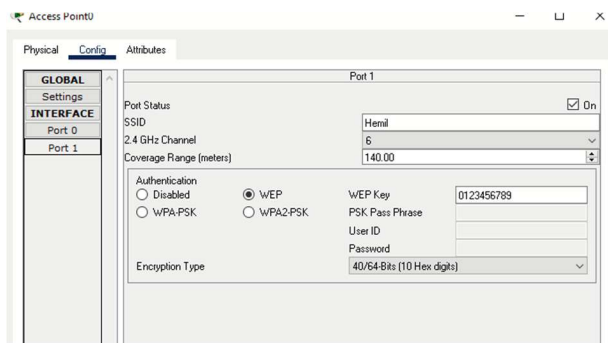**Step 4**: Take wireless components like 1 pc,1 laptop,1 tablet,1 smartphone,1 printer.

**Step 5:** Assign IP Address to router (192.1.1.2) and port status is on

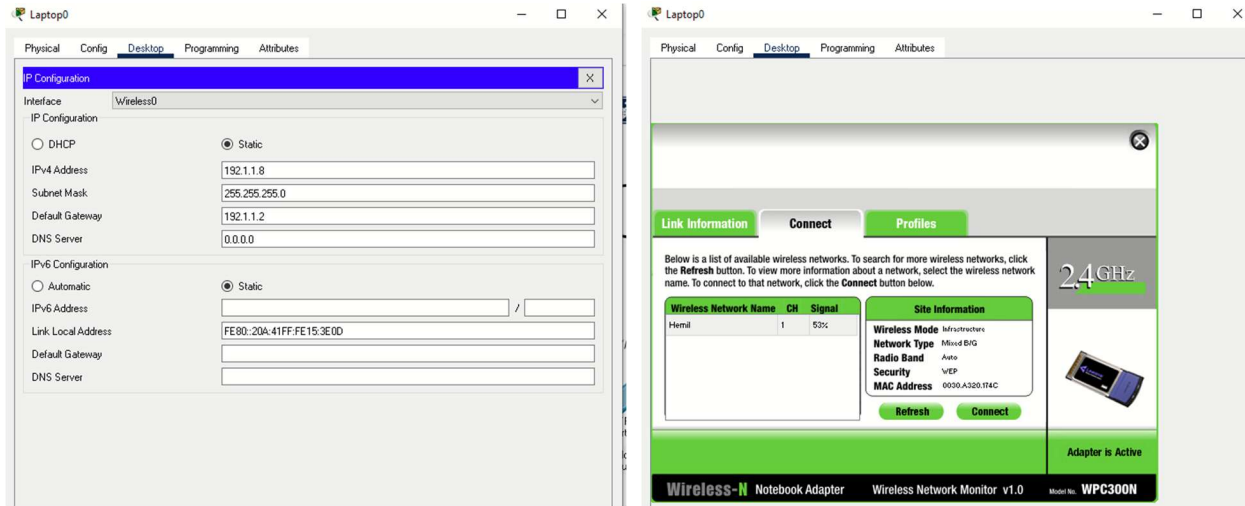**Step 6:** Assign IP Address to Pc and default gateway to them.

Step 7: In the access point config > port 1 select WEP, WEP Key is (0123456789) and SSID change default to name.
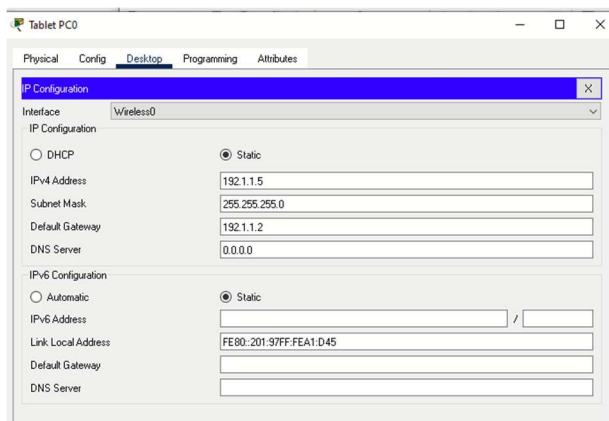

Step 8: In wireless component pc in physical section switch off and remove the port and provide WMP300N and switch on. Assign IP Address and also provide default gateway. In pc wireless section connect given wireless network.
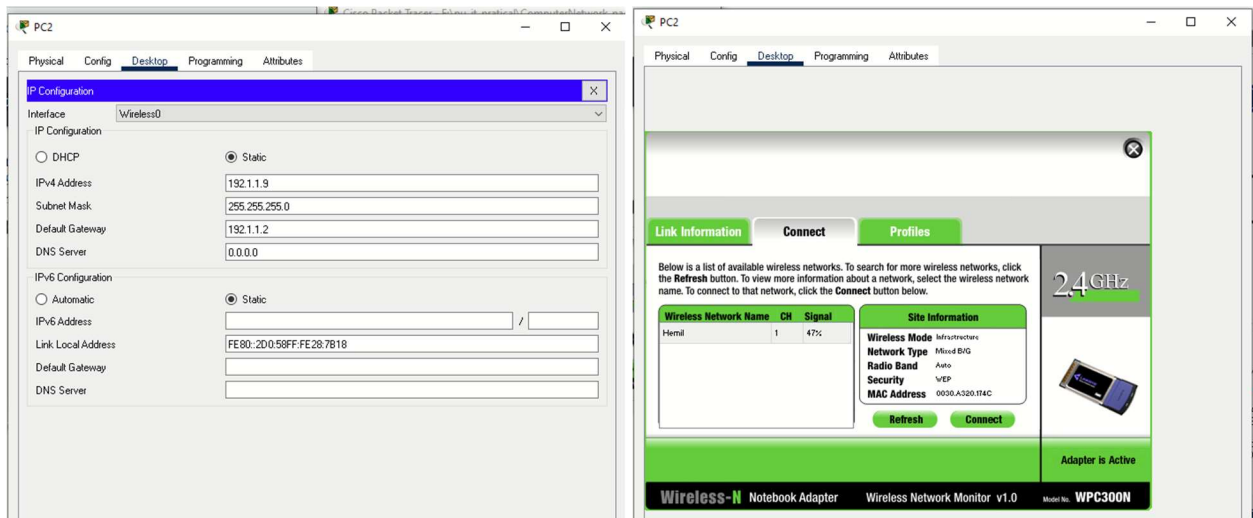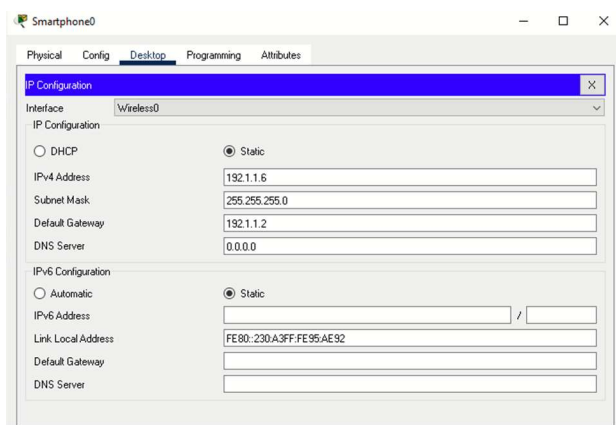
Step 9: In wireless component laptop in physical section switch off and remove the port and provide WPC300N and switch on. Assign IP Address it and also provide default gateway. In pc wireless section connect given wireless network.

Step 10: In wireless component tablet in Assign IP Address and also provide default gateway.

**Step 11:** In wireless component Smartphone in Assign IP Address and also provide default gateway.

Step 12: In wireless component printer config section select WEP, write WEP Key (1234567890) and change SSID default to name. In physical section >switch off and remove the port and provide WPC300N and switch on.
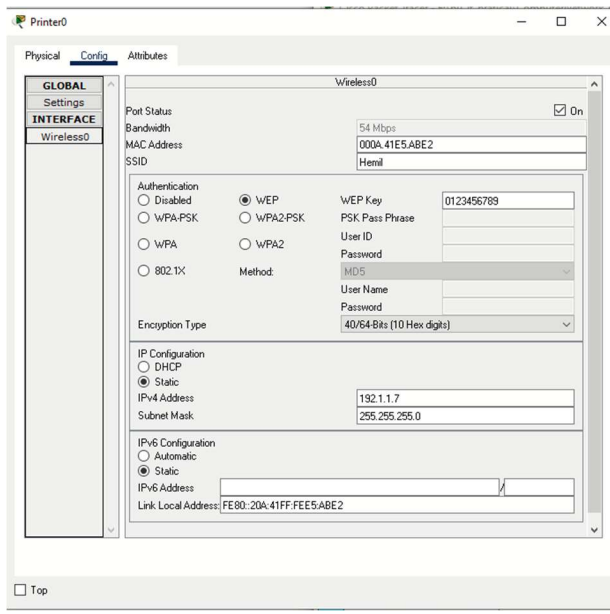
Step 13: send the packet wireless devices to pc or router.

Output:
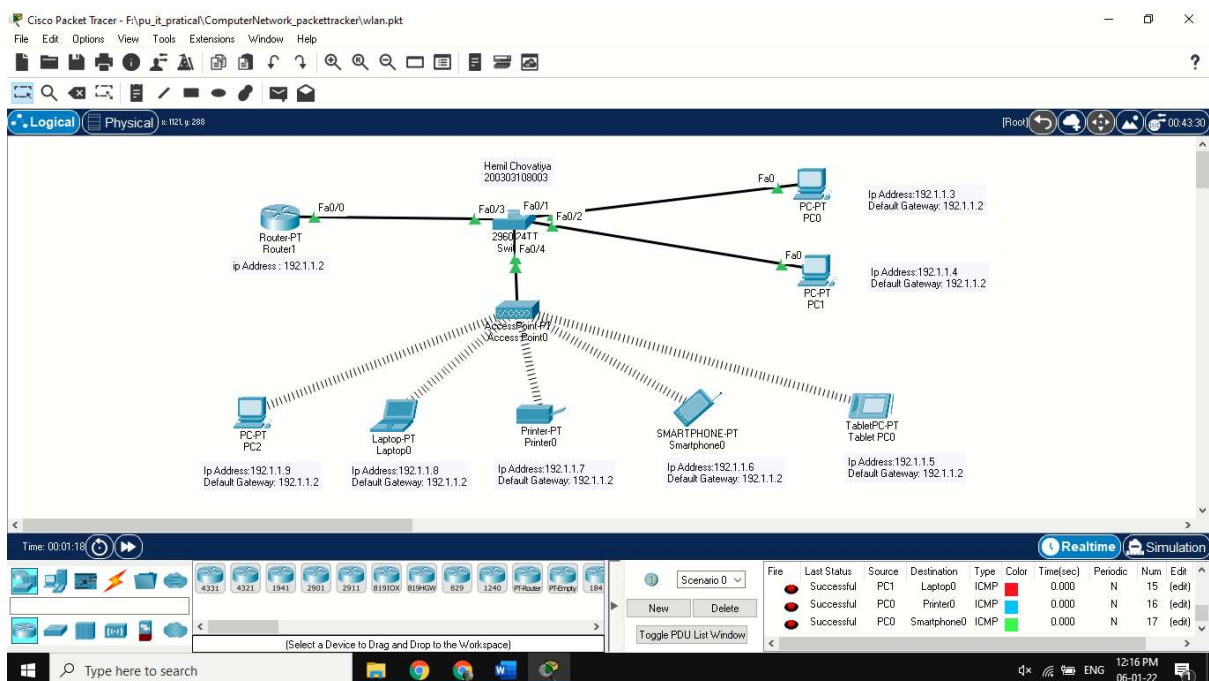
# PRACTICAL:7

AIM: Internetworking with routers.

1. Experiment on same Subnet. 2. Perform Experiment across the subnet and observe functioning of Router via selecting suitable pair of Source and destination.

Theory:

Perform Experiment across the subnet and observe functioning of Router via selecting suitable pair of Source and destination.

Step 1: take 2 router,2 switch,(2960-40),4 pc and

Create 3 subnet assign ip address to all pc and outer.

Step 2: assign IP Address according to subnet to PC and router.also assign subnet mask and default gateway.
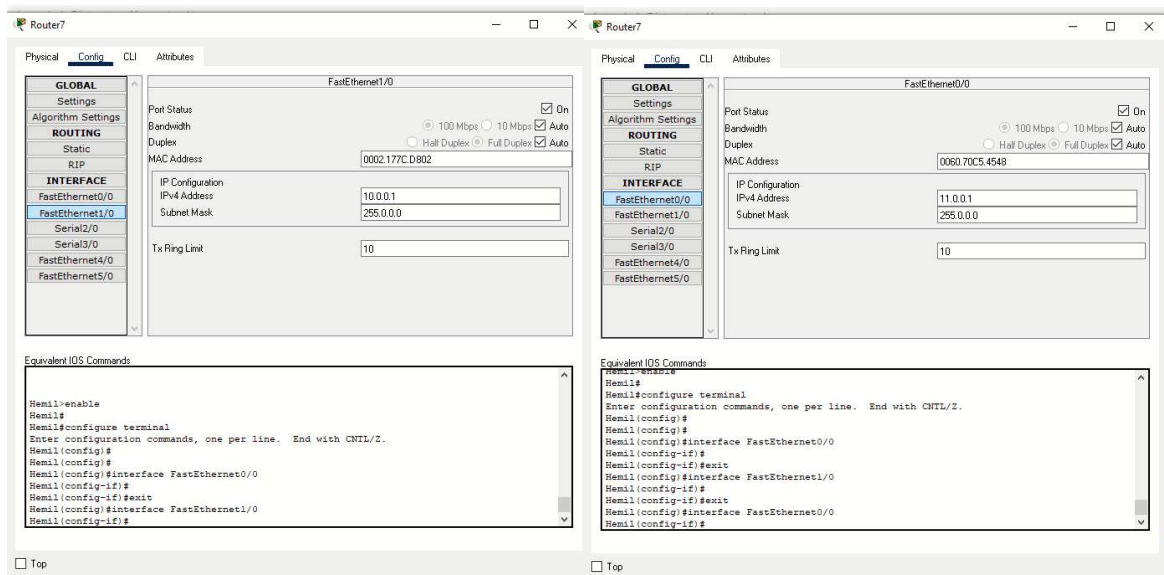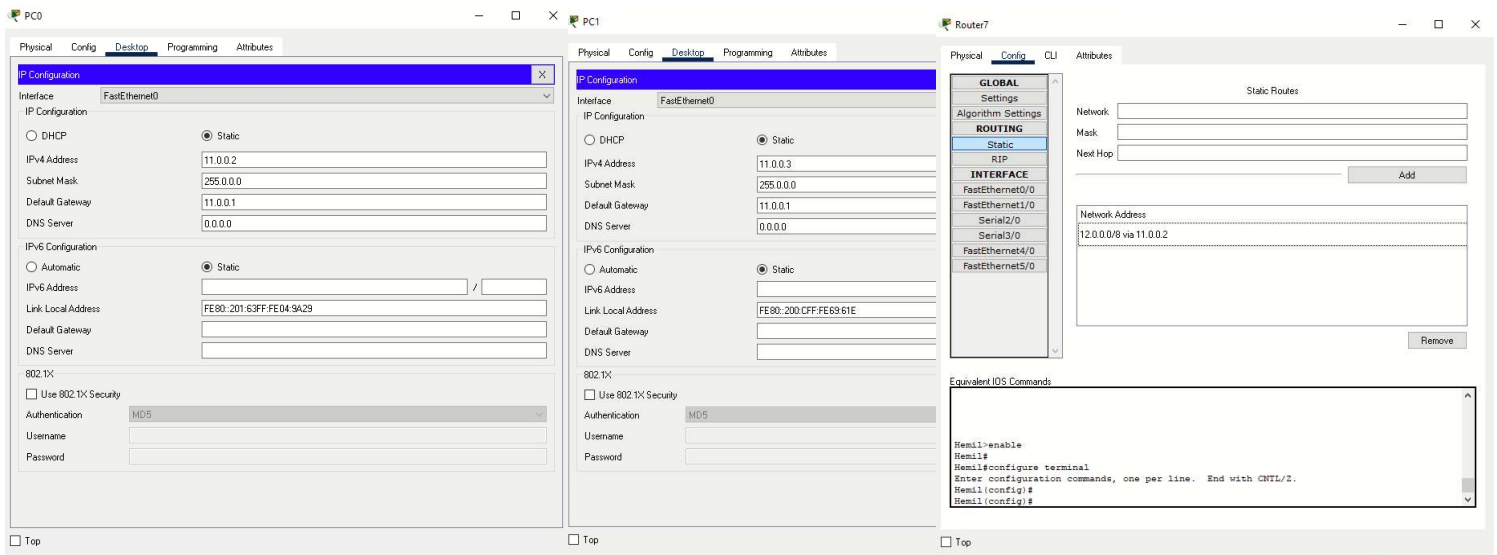
Step 3: for router0, **enable> configure terminal > interface fastethernet 0/0 > ip address 11.0.0.1 255.255.192.0 > exit.**

for router0, **enable> configure terminal > interface fastethernet 1/0 > ip address 10.0.0.1 255.255.192.0 > no shut>exit.**
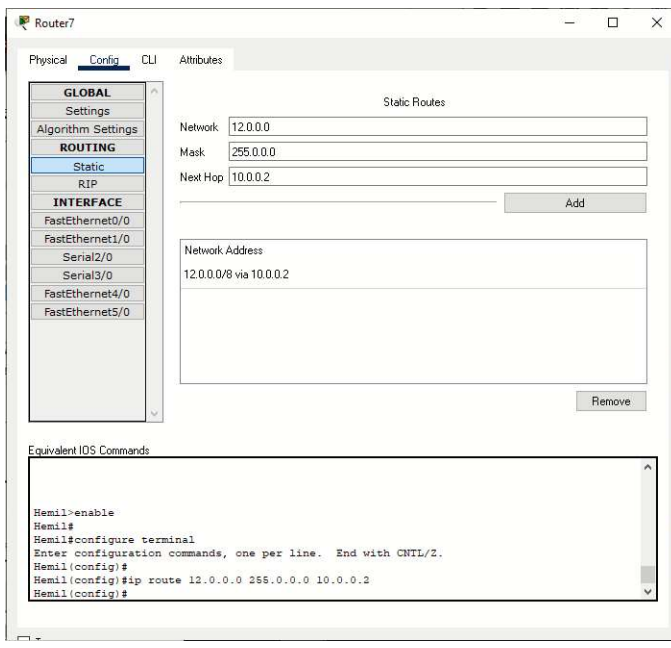
for router1, **enable> configure terminal > interface fastethernet 1/0 > ip address 10.0.0.2 255.255.192.0 > exit.**

for router1, **enable> configure terminal > interface fastethernet 0/0 > ip address 12.0.0.1 255.255.192.0 > no shut >exit. And also ip route**
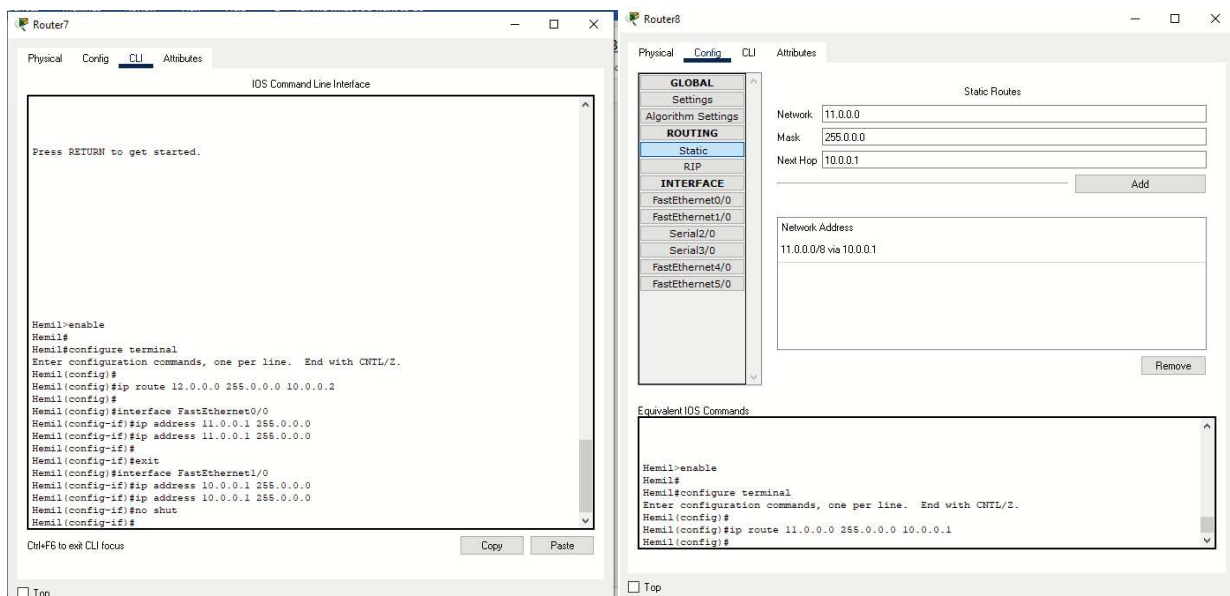
Cli command For Router 8> Hemil(config)#**ip route 11.0.0.0 255.0.0.0 10.0.0.1**

Cli command For Router 7 >Hemil(config)#**ip route 12.0.0.0 255.0.0.0 10.0.0.2**
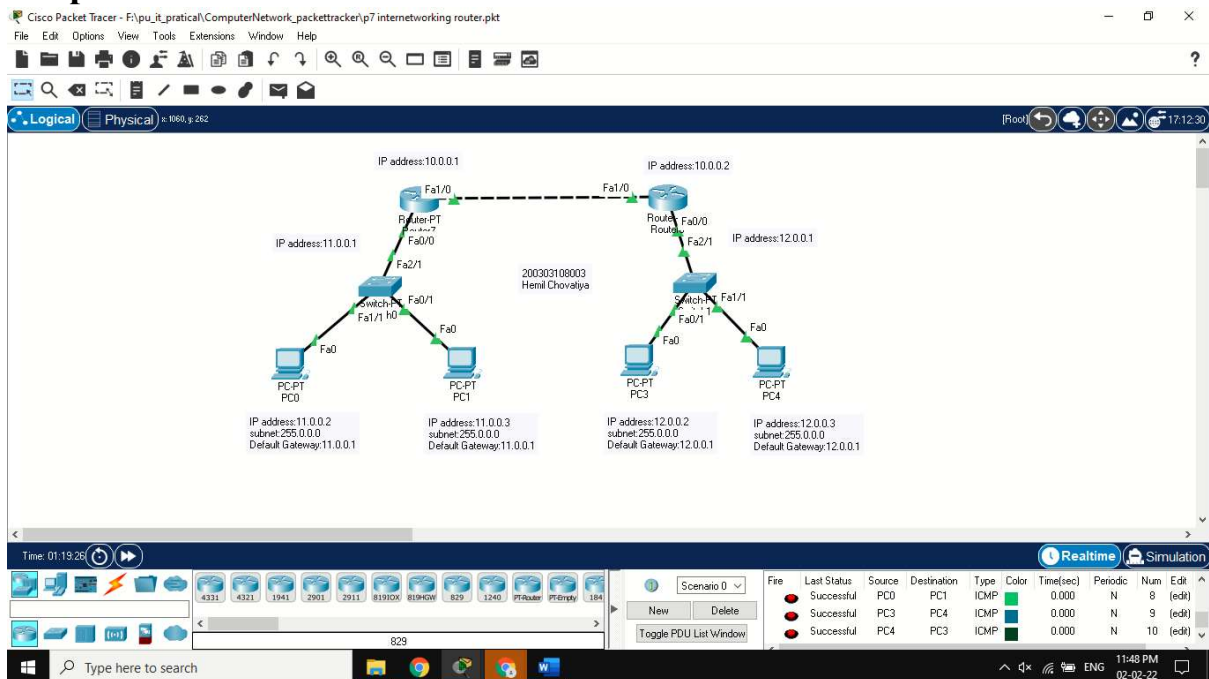
PRACTICAL:8

AIM: Implementation of SUBNETTING.

Theory:

SUBNETTING:

Procedure:

Step 1: Take 2 switch(2950-24TT), 2 router and 4 pc.

Step 2: 2 pc connected to 1st switch and remaining 2 pc connected to 2nd switch with copper straight-through wire.

Step 3: Assign ip address, default gateway and subnet mask to each pc.

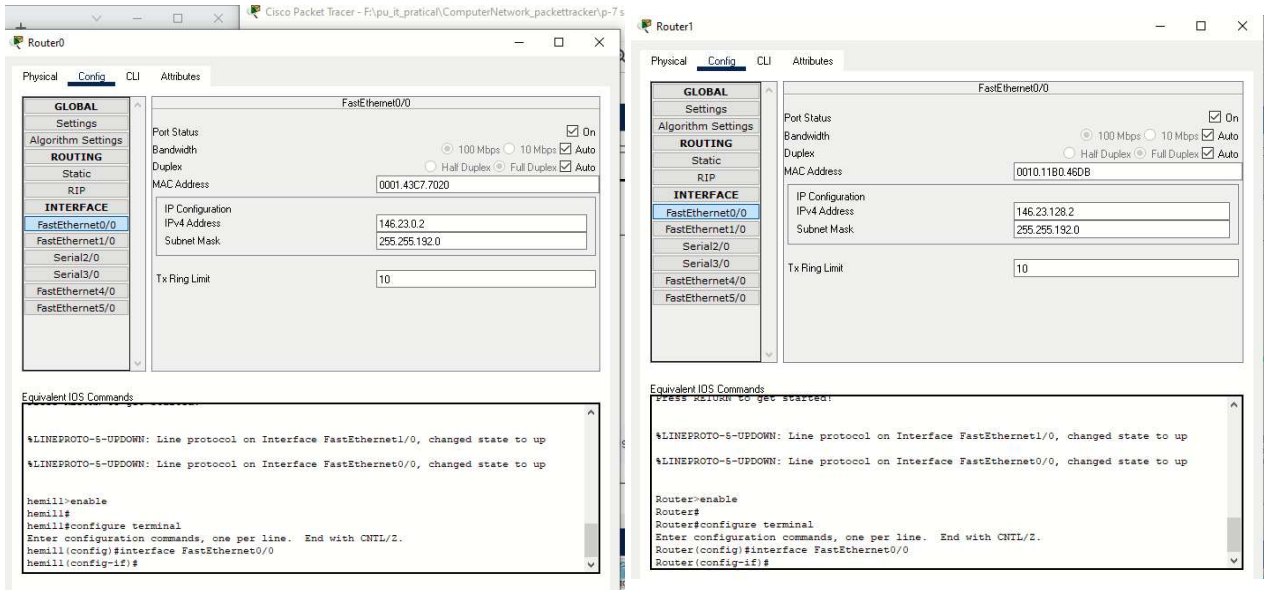**Step 4:** Take 2 routers and it connects with switch through copper straight wire.

Step 5: For 1st router config section assign ip address and subnet mask of fast ethernet0/0.and port status is also on.

Step 6: For 2nd router config section assign ip address and subnet mask of fast ethernet0/0.and port status is also on.
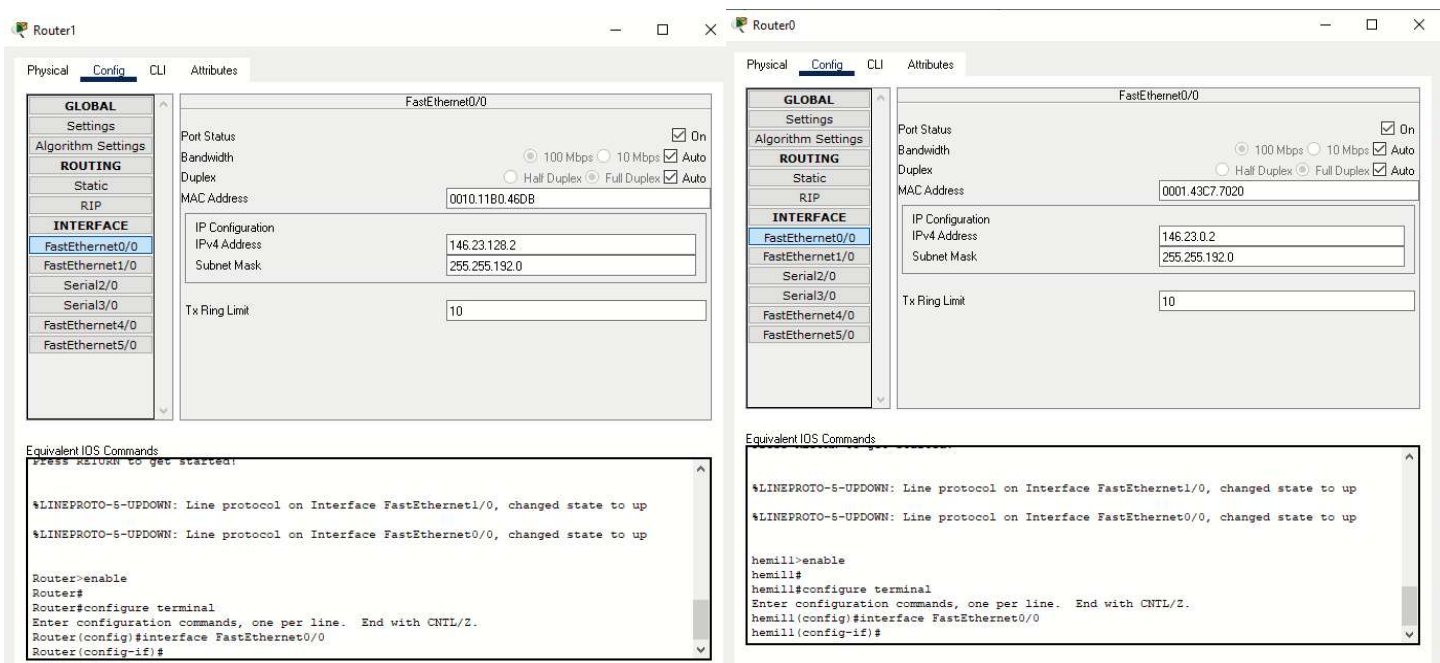
Step 7: Connect routers with Serial DTE cable.

Step 8: In routers config section assign ip address and subnet mask of serial 0/3/0 and serial 0/3/1 and port status is also on.

Step 9: Go to static section and add the network address.

Step 10: Go to setting and save the added network address.

Step 11: Send the packet between different subnetting.