# PRACTICAL NO 1

AIM: Using Packer Tracer Perform the following Practicals.

A. Create a basic network of two computer using appropriate network wire.

1. Open cisco packet tracer and then click on End Devices and drag pc icon, drop on the screen.(twice)

2. Now to 2 pcs devices comes on screen then connect 2 pcs by automatically choose connection type wire by clicking on connection box.
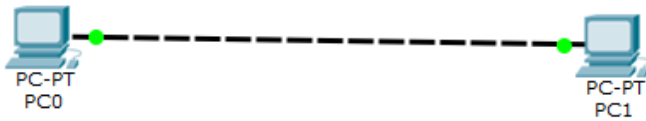
3. Now click or double click on pc, the other window comes up click desktop select IP configuration and give IP address to pc, do same with the second pc.
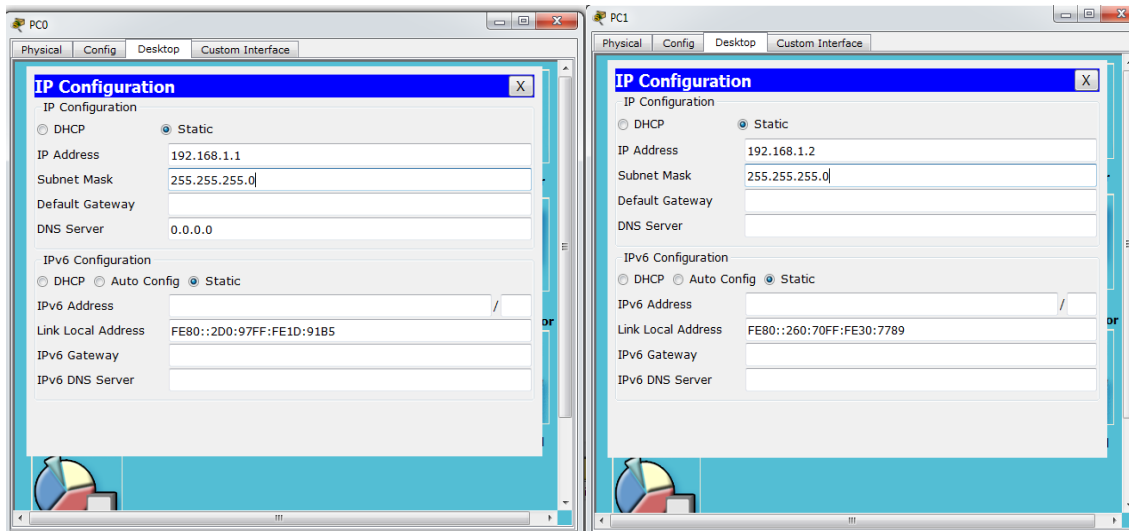
4. The Output
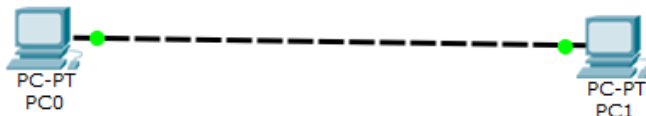
5. After that click on message box icon and click on pc and then on another pc. Done successful message comes that is message is send to pc from another pc.
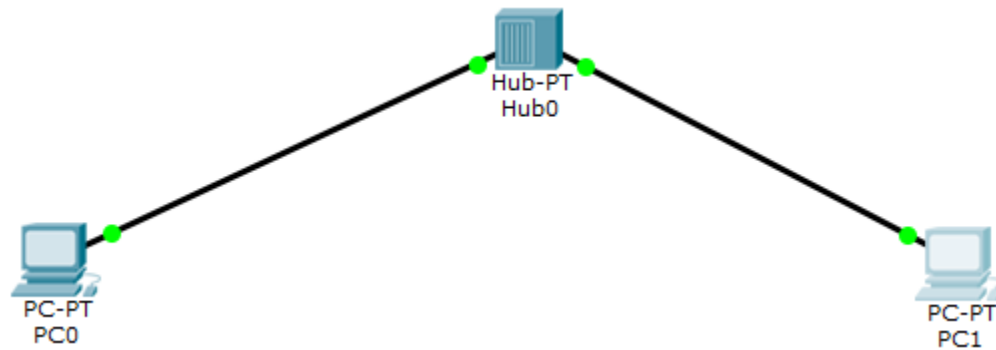
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num
●	Successful	PC0	PC1	ICMP		0.000	N	0
●	Successful	PC1	PC0	ICMP		0.000	N	1

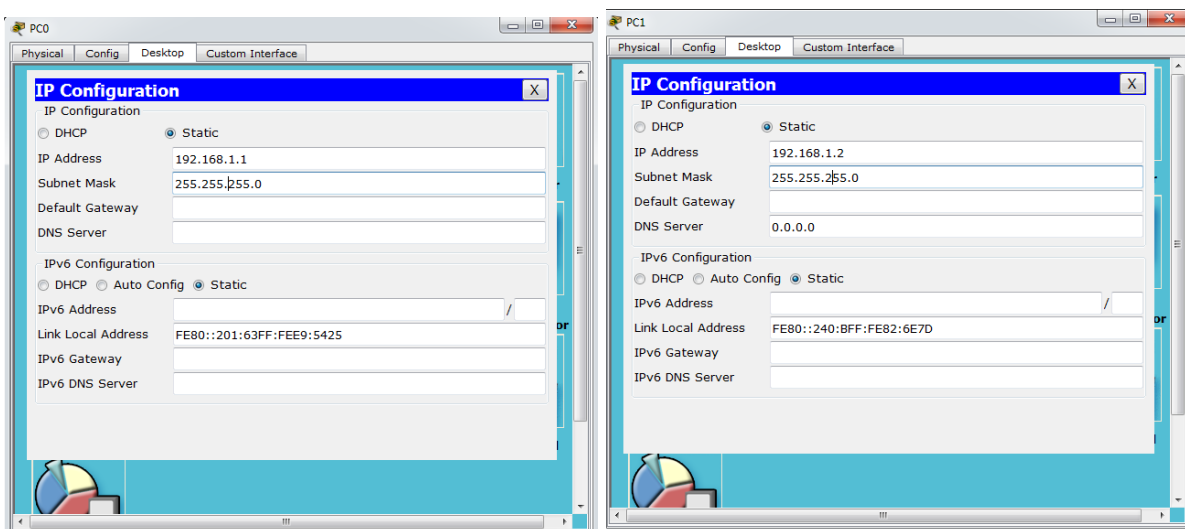**B. Create a basic network of two computer using hub.**

1. Drag a generic hub from hub section.

2. Now drag 2 pcs devices comes on screen then connect 2 pcs to the hub automatically choose connection type wire by clicking on connection box.

Hub-PT
Hub0

PC-PT
PC0

PC-PT
PC1

3. Now click or double click on pc, the other window comes up click desktop select IP configuration and give IP address to pc, do same with the second pc.

PC0 — Physical | Config | Desktop | Custom Interface

IP Configuration
- IP Configuration
  - ○ DHCP   ⦿ Static
  - IP Address: 192.168.1.1
  - Subnet Mask: 255.255.255.0
  - Default Gateway:
  - DNS Server:
- IPv6 Configuration
  - ○ DHCP ○ Auto Config ⦿ Static
  - IPv6 Address: /
  - Link Local Address: FE80::201:63FF:FEE9:5425
  - IPv6 Gateway:
  - IPv6 DNS Server:

PC1 — Physical | Config | Desktop | Custom Interface

IP Configuration
- IP Configuration
  - ○ DHCP   ⦿ Static
  - IP Address: 192.168.1.2
  - Subnet Mask: 255.255.255.0
  - Default Gateway:
  - DNS Server: 0.0.0.0
- IPv6 Configuration
  - ○ DHCP ○ Auto Config ⦿ Static
  - IPv6 Address: /
  - Link Local Address: FE80::240:BFF:FE82:6E7D
  - IPv6 Gateway:
  - IPv6 DNS Server:

4. After that click on message box icon and click on pc and then on another pc. Done successful message comes that is message is send to pc from another pc.

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num
●	Successful	PC0	PC1	ICMP	■	0.000	N	0
●	Successful	PC1	PC0	ICMP	■	0.000	N	1

C. Create a basic network of multiple computer using hub.

1. Drag a generic hub from hub section.

2. A hub has 2 ports to increase the number of ports we drag and place it on empty slot you get by double clicking on hub in physical view.

3. Then drag 6 pc and connect 6 pcs to the hub automatically choose connection type wire by clicking on connection box.

4. Now click or double click on pc, the other window comes up click desktop select IP configuration and give IP address to pc, do same with the six pc.

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5. After that click on message box icon and click on pc and then on another pc. Done successful message comes that is message is send to pc from another pc.
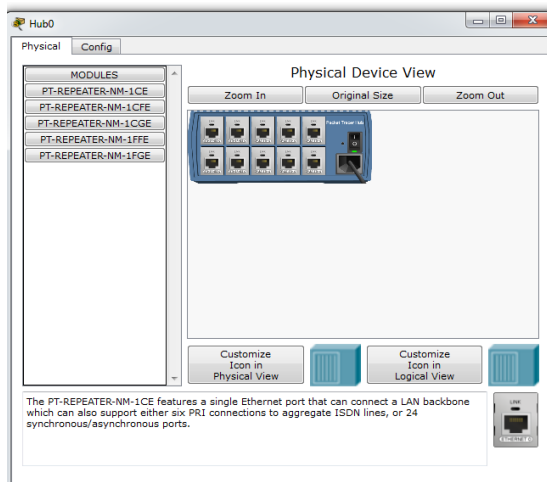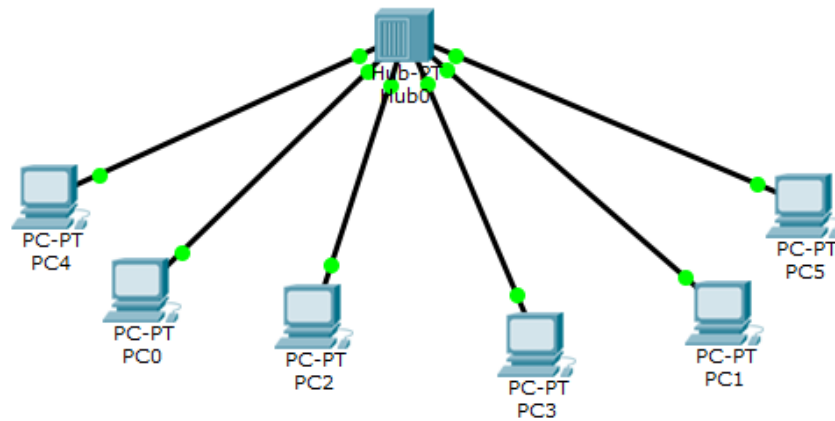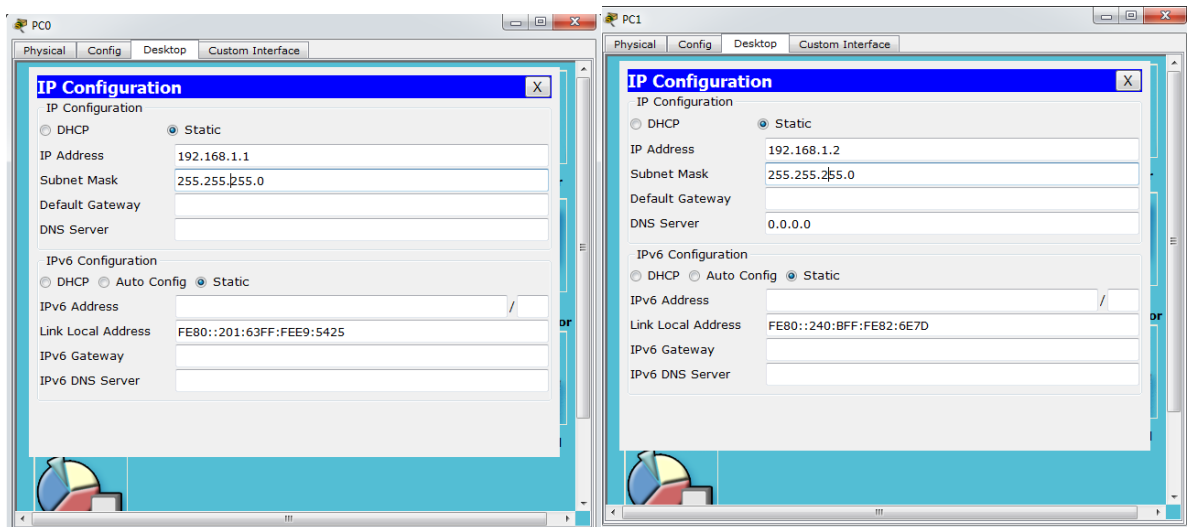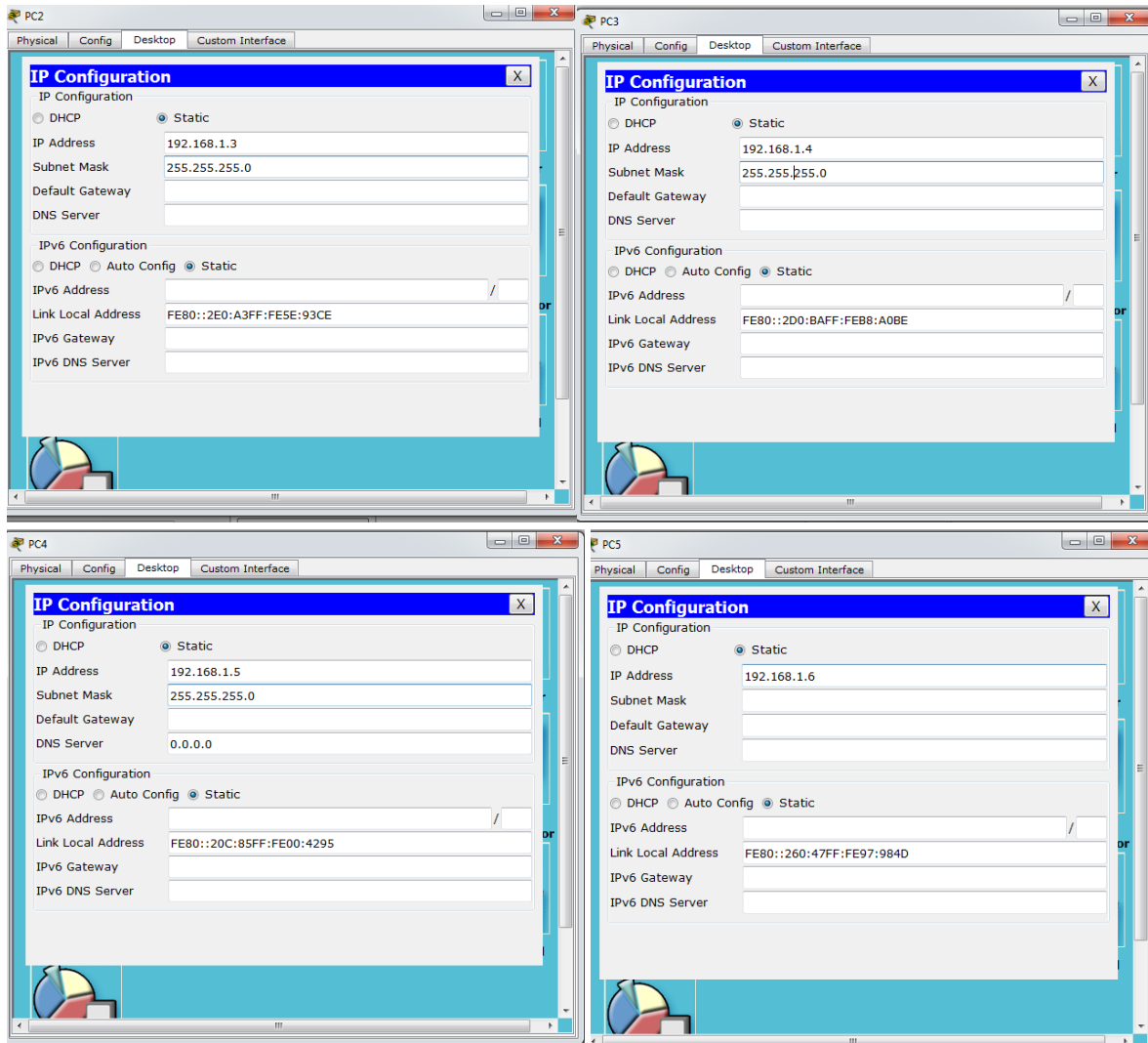

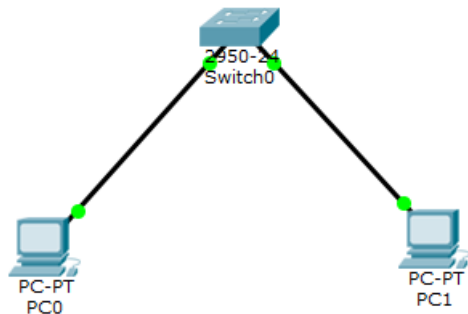| Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num
●	Successful	PC2	PC3	ICMP		0.000	N	4
●	Successful	PC1	PC5	ICMP		0.000	N	5
●	Successful	PC5	PC1	ICMP		0.000	N	6

PRACTICAL NO 1

D. Create a basic network of two computers using switch.

1. Drag a 2950-24 switch from the switch section

2. Now drag 2 pcs devices comes on screen then connect 2 pcs to the hub automatically choose connection type wire by clicking on connection box.

3. Now click or double click on pc, the other window comes up click desktop select IP configuration and give IP address to pc, do same with the second pc.
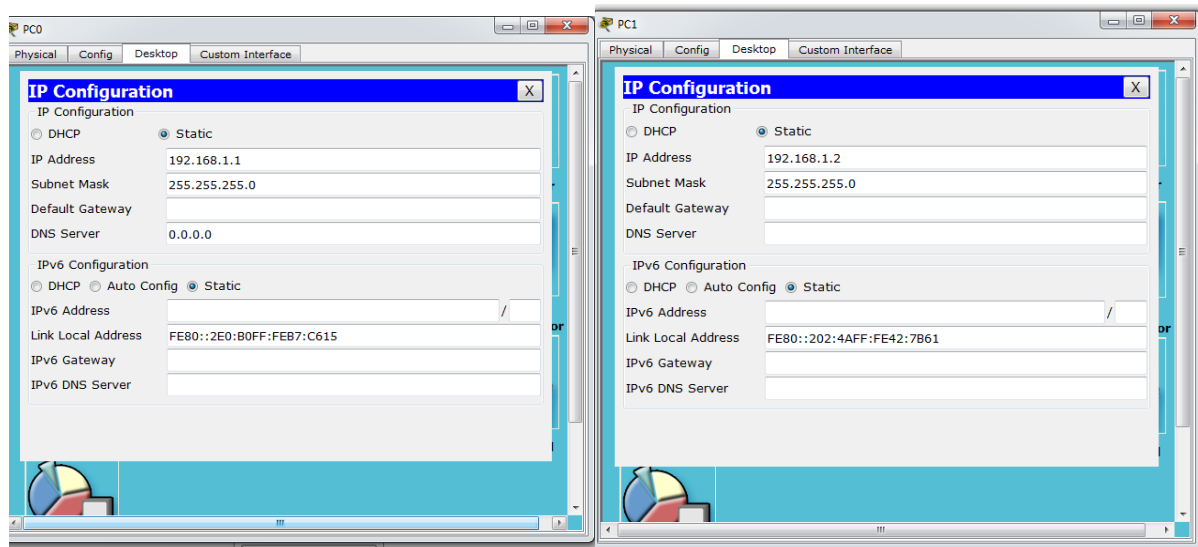
4. After that click on message box icon and click on pc and then on another pc. Done successful message comes that is message is send to pc from another pc.

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num
●	Successful	PC0	PC1	ICMP		0.000	N	0
●	Successful	PC1	PC0	ICMP		0.000	N	1

PRACTICAL NO 1

E. Create a basic network of multiple computers using switch.(layer two switch)

1. Drag a 2950-24 switch from the switch section

2. Now drag 6 pcs devices comes on screen then connect 6 pcs to the hub automatically choose connection type wire by clicking on connection box.
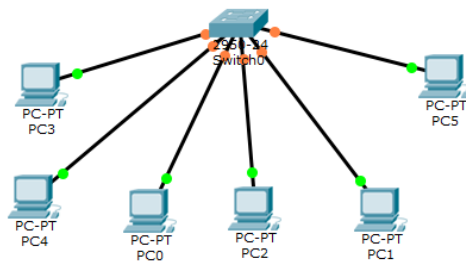
3. Now click or double click on pc, the other window comes up click desktop select IP configuration and give IP address to pc, do same with the six pc.
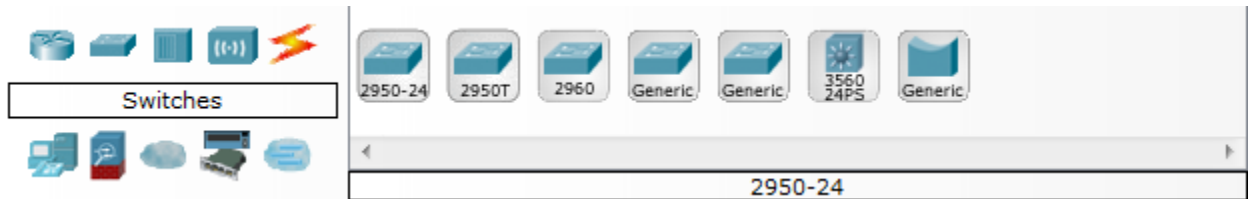
PRACTICAL NO 1

4. The Output
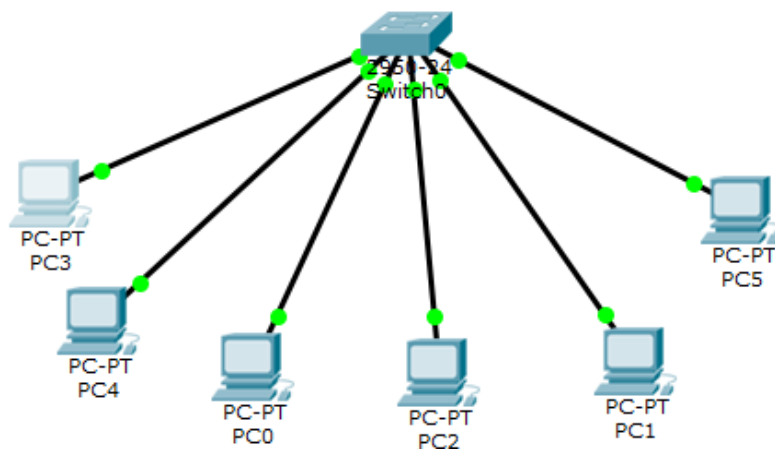
5. After that click on message box icon and click on pc and then on another pc. Done successful message comes that is message is send to pc from another pc.

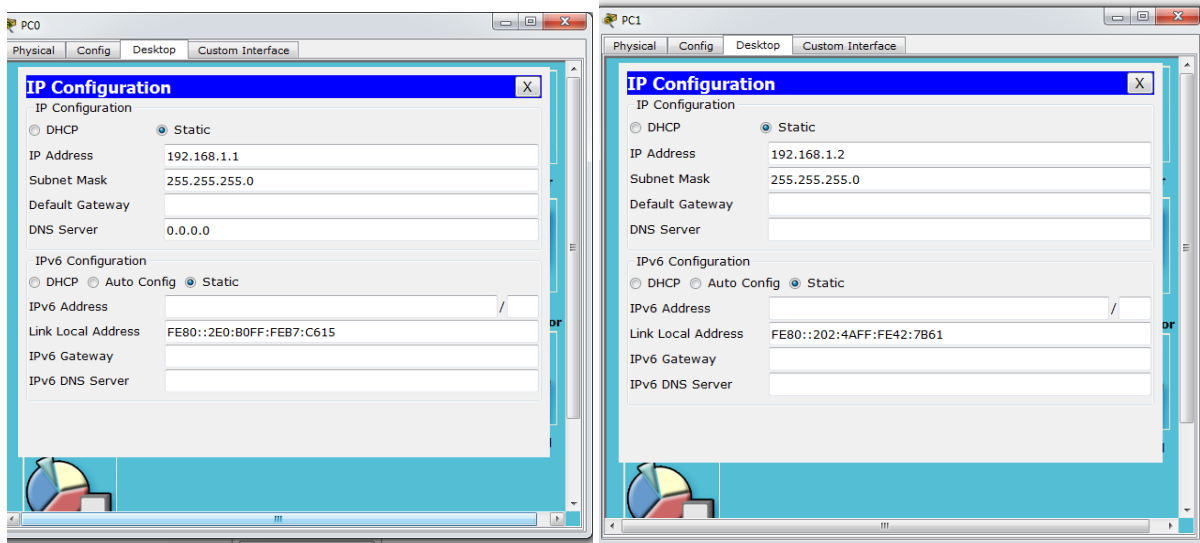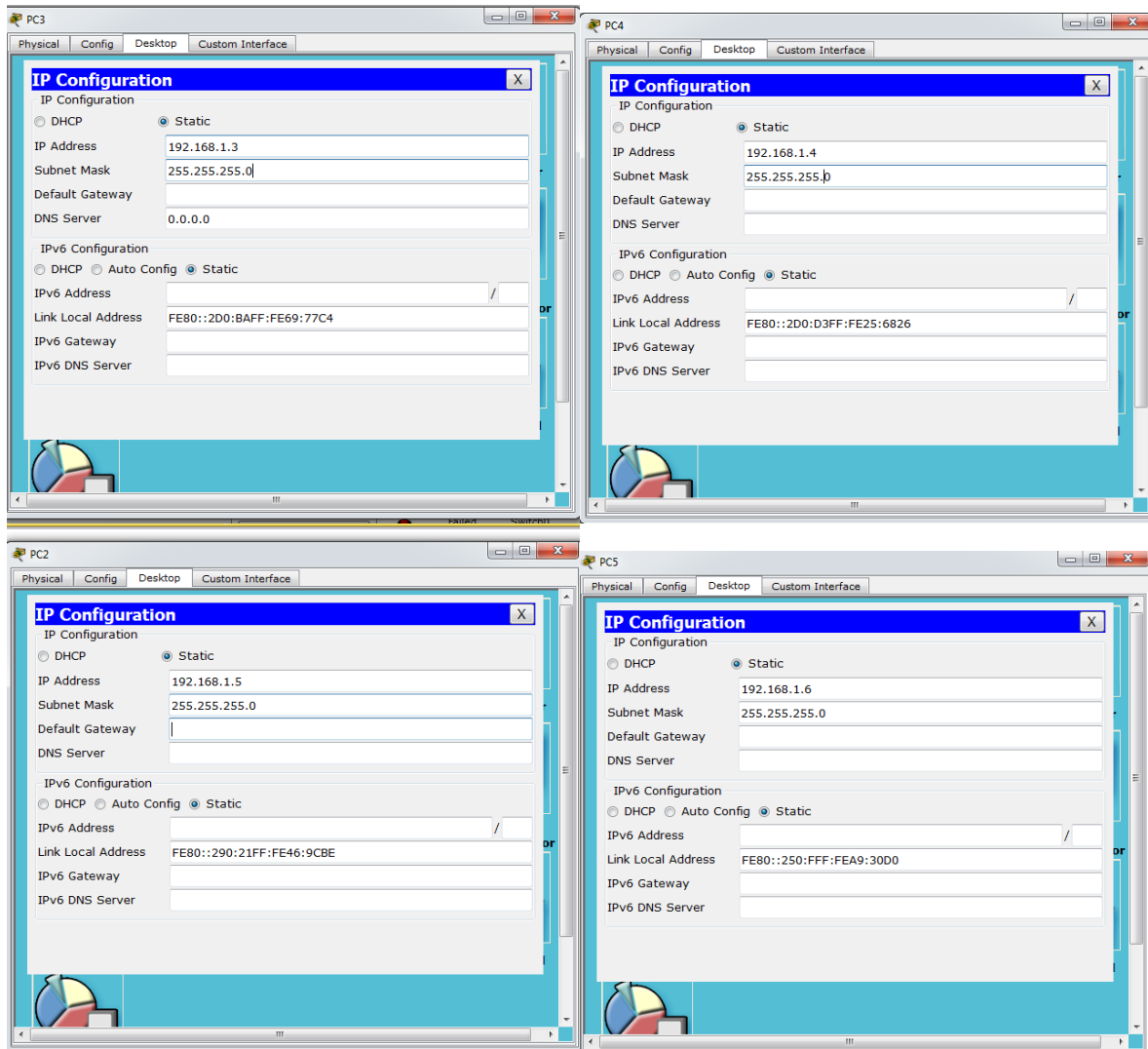| Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num
●	Successful	PC2	PC1	ICMP		0.000	N	5
●	Successful	PC3	PC4	ICMP		0.000	N	6
●	Successful	PC2	PC0	ICMP		0.000	N	7

F. Create a basic network of two computers using routers.

1. Drag a 1841 router from the router section
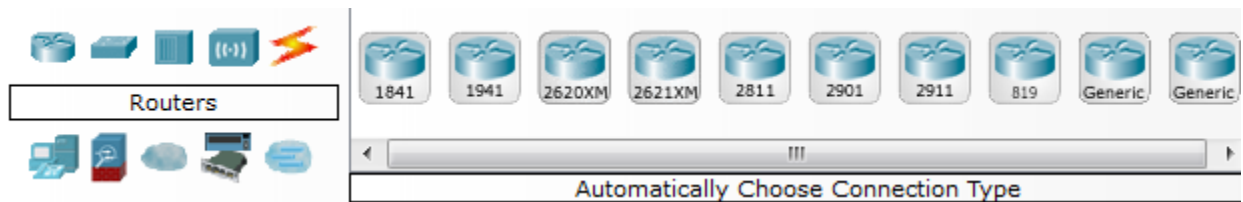
2. Now drag and drop two pc and connect them to the router automatically choose connection type wire by clicking on connection box.
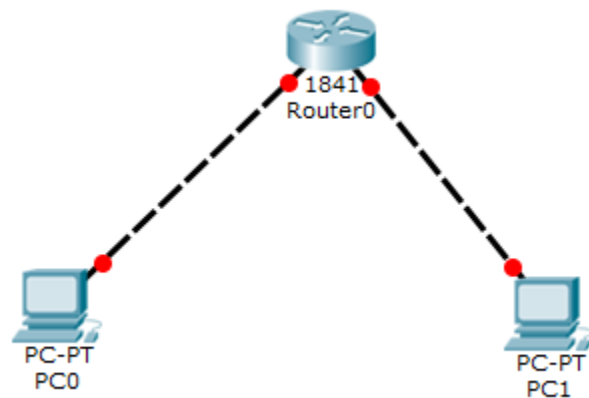


3. Now click or double click on pc, the other window comes up click desktop select IP configuration and give IP address to pc, do same with the second pc.

PRACTICAL NO 1
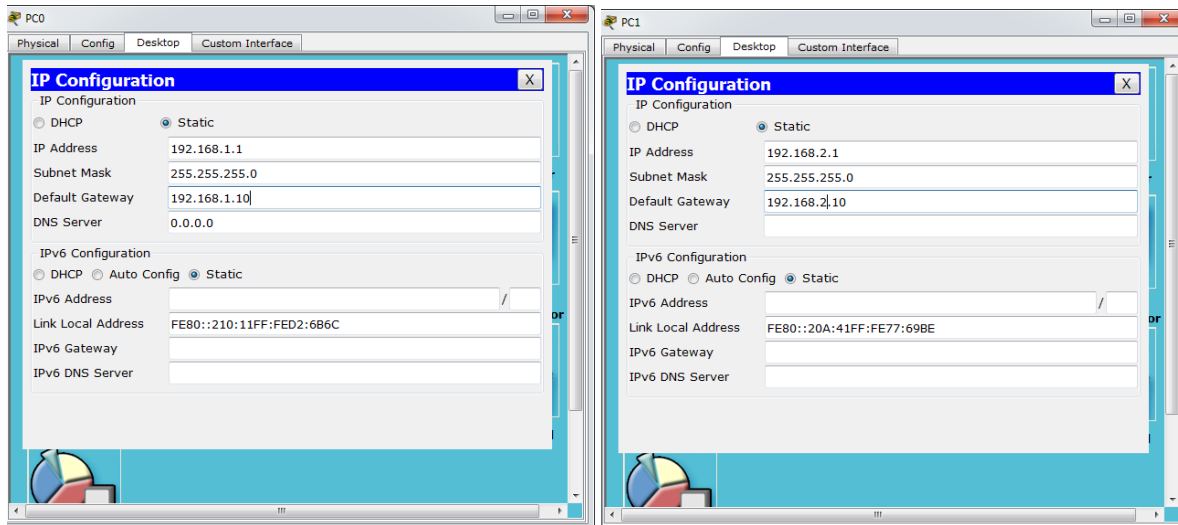
4. Double click on router and then on FastEthernet0/0 from Interface. Set the IP address of the first pc and set the port status on.
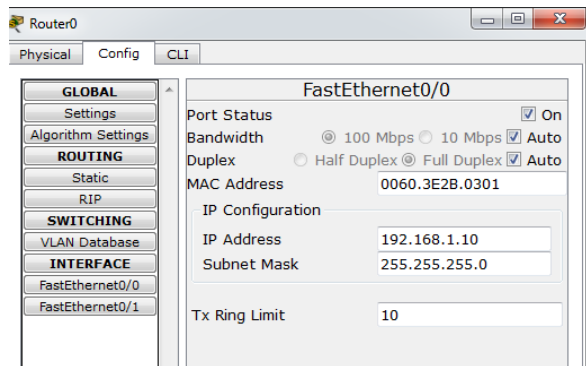
5. Double click on router and then on FastEthernet0/1 from Interface. Set the IP address of the second pc and set the port status on.
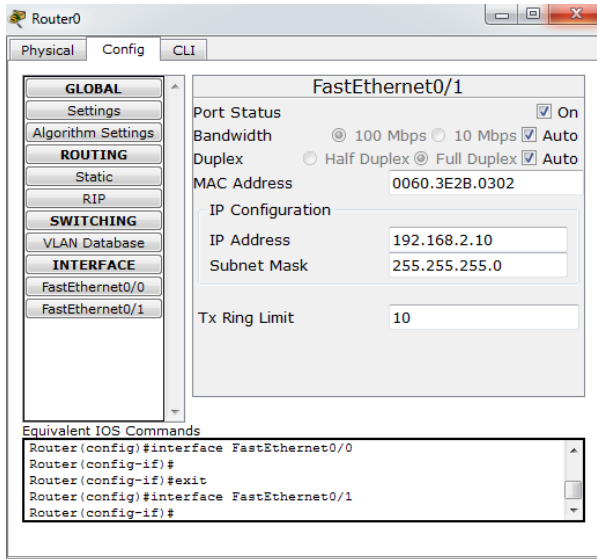
6.   The Output
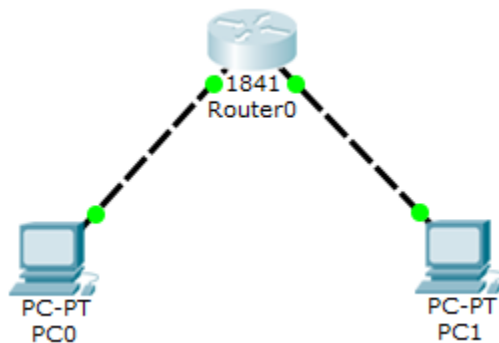

7.   After that click on message box icon and click on pc and then on another pc. Done successful message comes that is message is send to pc from another pc and pc to router


G.   Create a basic network of multiple computers using routers.

1.   Drag a 1841 router from the router section

PRACTICAL NO 1

2. Now drag and drop six pc and connect them to the router automatically choose connection type wire by clicking on connection box.
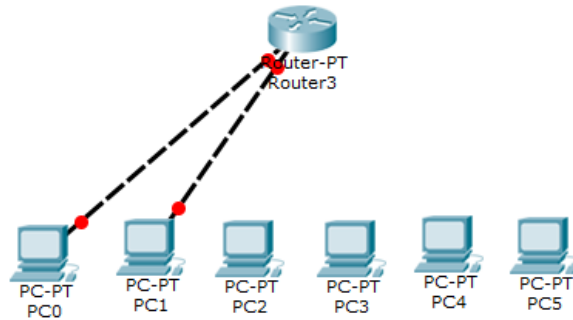
3. Since there are only 2 ports we add more by double clicking on router, turn off the power button then take the PT-ROUTER-NM-1CFE port and add in empty slot and switch on the power button
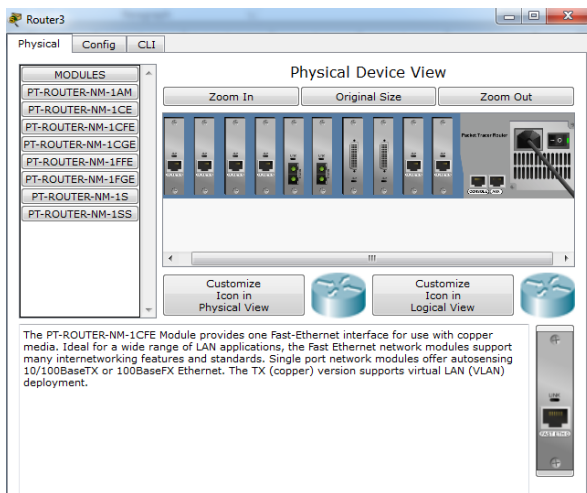
4. Then attach the rest of the pcs to the router since the ports are now available.
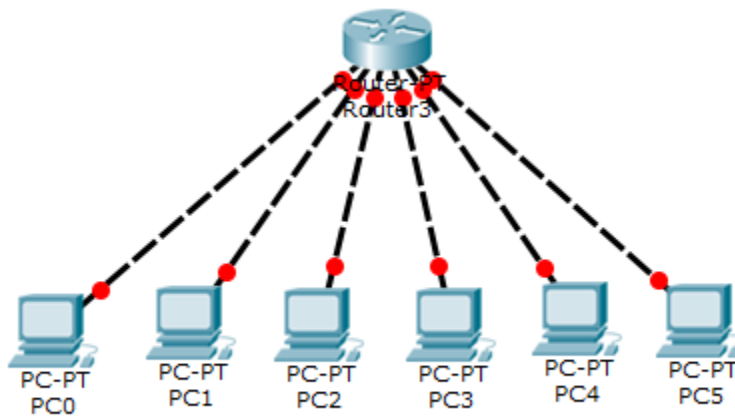
5. Now click or double click on pc, the other window comes up click desktop select IP configuration and give IP address to pc, do same with the six pc.

8) Connect a network in triangular shape with three switches and every switch will have four computers. Verify their connectivity with each other.

a) setup connection according to image given below
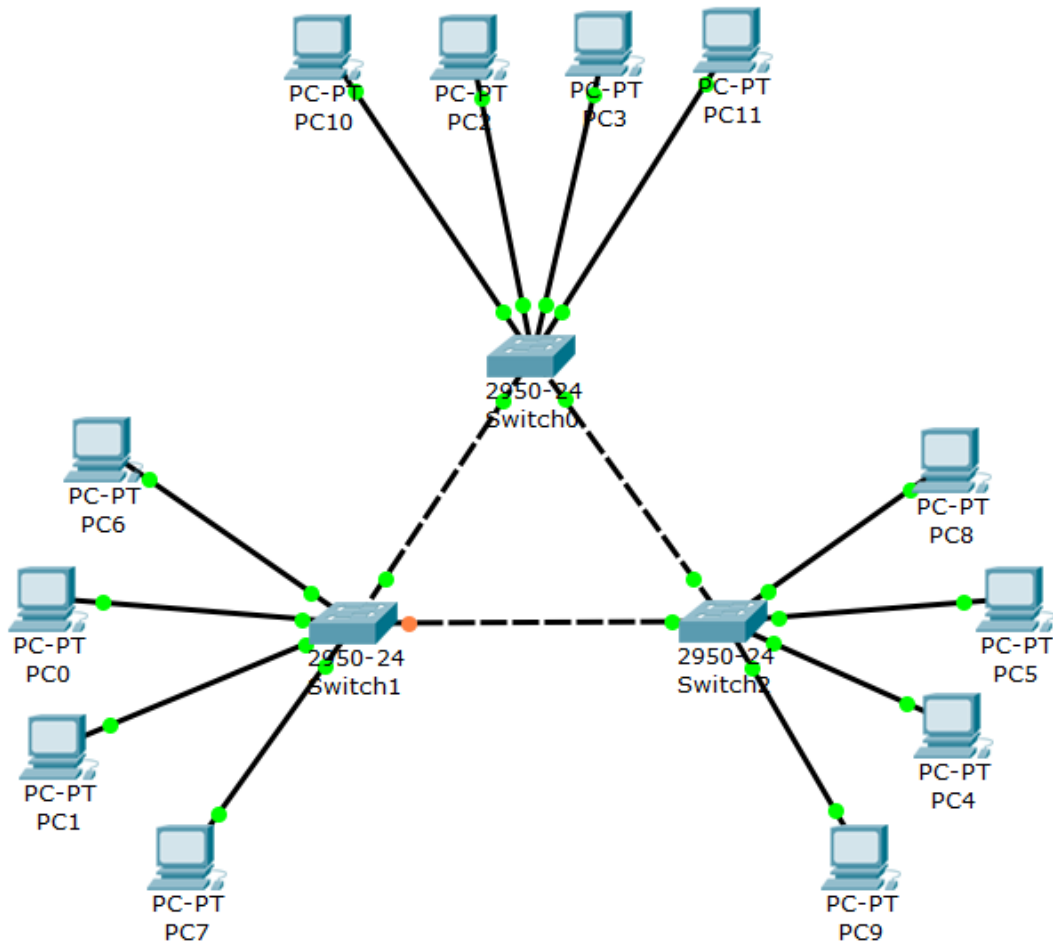
b) Set the IP configuration of each and every computers of the system from DESKTOP >IP CONFIGURATION

PRACTICAL NO 1

PC7

IP Configuration

IP Configuration
- ○ DHCP ● Static

IP Address: 192.187.1.3
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server:

IPv6 Configuration
- ○ DHCP ○ Auto Config ● Static

IPv6 Address: /
Link Local Address: FE80::20A:F3FF:FED5:E08A
IPv6 Gateway:
IPv6 DNS Server:

PC1

IP Configuration

IP Configuration
- ○ DHCP ● Static

IP Address: 192.186.1.2
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server:

IPv6 Configuration
- ○ DHCP ○ Auto Config ● Static

IPv6 Address: /
Link Local Address: FE80::260:70FF:FE2D:29D1
IPv6 Gateway:
IPv6 DNS Server:

PC0

IP Configuration

IP Configuration
- ○ DHCP ● Static

IP Address: 192.186.1.1
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server:

IPv6 Configuration
- ○ DHCP ○ Auto Config ● Static

IPv6 Address: /
Link Local Address: FE80::201:96FF:FE3D:8EBD
IPv6 Gateway:
IPv6 DNS Server:

PC6

IP Configuration

IP Configuration
- ○ DHCP ● Static

IP Address: 197.183.1.2
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server: 0.0.0.0

IPv6 Configuration
- ○ DHCP ○ Auto Config ● Static

IPv6 Address: /
Link Local Address: FE80::250:FFF:FE95:9201
IPv6 Gateway:
IPv6 DNS Server:

PC2

IP Configuration

IP Configuration
- ○ DHCP ● Static

IP Address: 192.186.1.3
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server:

IPv6 Configuration
- ○ DHCP ○ Auto Config ● Static

IPv6 Address: /
Link Local Address: FE80::2D0:BCFF:FE84:6835
IPv6 Gateway:
IPv6 DNS Server:

PC10

IP Configuration

IP Configuration
- ○ DHCP ● Static

IP Address: 192.187.1.4
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server:

IPv6 Configuration
- ○ DHCP ○ Auto Config ● Static

IPv6 Address: /
Link Local Address: FE80::201:97FF:FE3B:83C
IPv6 Gateway:
IPv6 DNS Server:

PRACTICAL NO 1

PC11

Physical | Config | Desktop | Custom Interface

IP Configuration

IP Configuration
○ DHCP ● Static
IP Address: 192.187.1.5
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server:

IPv6 Configuration
○ DHCP ○ Auto Config ● Static
IPv6 Address: /
Link Local Address: FE80::201:C7FF:FE87:80A7
IPv6 Gateway:
IPv6 DNS Server:

PC3

Physical | Config | Desktop | Custom Interface

IP Configuration

IP Configuration
○ DHCP ● Static
IP Address: 192.186.1.4
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server:

IPv6 Configuration
○ DHCP ○ Auto Config ● Static
IPv6 Address: /
Link Local Address: FE80::204:9AFF:FEB8:5A0B
IPv6 Gateway:
IPv6 DNS Server:

PC8

Physical | Config | Desktop | Custom Interface

IP Configuration

IP Configuration
○ DHCP ● Static
IP Address: 192.187.1.6
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server:

IPv6 Configuration
○ DHCP ○ Auto Config ● Static
IPv6 Address: /
Link Local Address: FE80::20A:F3FF:FE95:30E2
IPv6 Gateway:
IPv6 DNS Server:

PC5

Physical | Config | Desktop | Custom Interface

IP Configuration

IP Configuration
○ DHCP ● Static
IP Address: 192.186.1.5
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server:

IPv6 Configuration
○ DHCP ○ Auto Config ● Static
IPv6 Address: /
Link Local Address: FE80::203:E4FF:FE1B:3480
IPv6 Gateway:
IPv6 DNS Server:

PC4

Physical | Config | Desktop | Custom Interface

IP Configuration

IP Configuration
○ DHCP ● Static
IP Address: 192.186.1.6
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server:

IPv6 Configuration
○ DHCP ○ Auto Config ● Static
IPv6 Address: /
Link Local Address: FE80::2E0:8FFF:FEC2:8487
IPv6 Gateway:
IPv6 DNS Server:

PC9

Physical | Config | Desktop | Custom Interface

IP Configuration

IP Configuration
○ DHCP ● Static
IP Address: 192.187.1.7
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server:

IPv6 Configuration
○ DHCP ○ Auto Config ● Static
IPv6 Address: /
Link Local Address: FE80::20B:BEFF:FEC2:780D
IPv6 Gateway:
IPv6 DNS Server:

PRACTICAL NO 1

C) Use the system to ping the system to check if the system is working or not . We can choose any computer to ping any computer in the system.
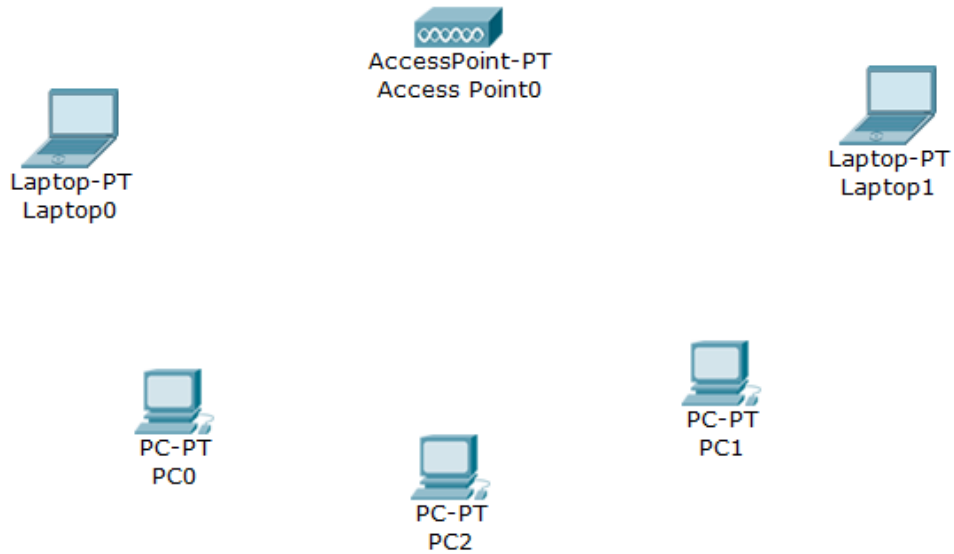

If the created system is working properly it will show the succassfull in the status .

Fire	Last Status	Source	Destination
●	Successful	PC5	PC4
●	Successful	PC8	PC11

PRACTICAL NO 1

9) Create a Wireless network of multiple PC's using appropriate access point.
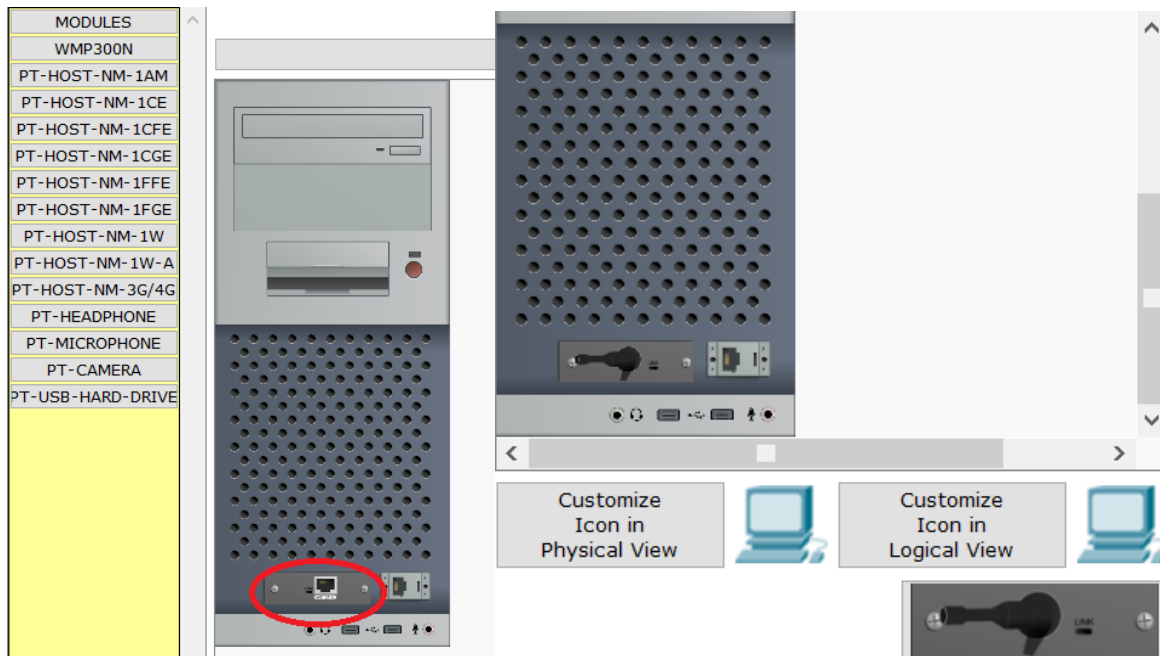
a) setup connection according to image given below

b) Now remove The PT-HOST-NM-1CFE Module (provides 1 Fast-Ethernet interface for use with copper media) and replace it with PT-HOST-NM-1CFE Module (wireless adapter)
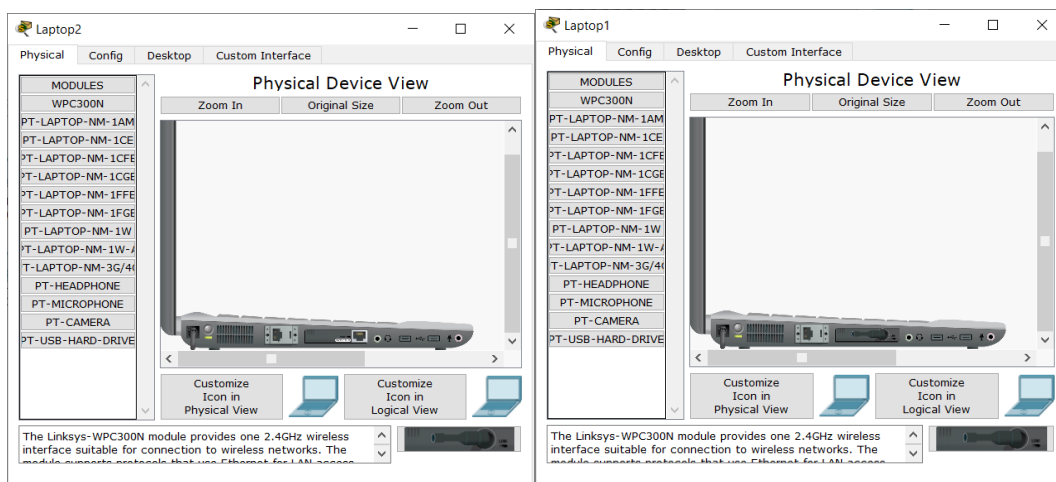
1)turn off the PCs
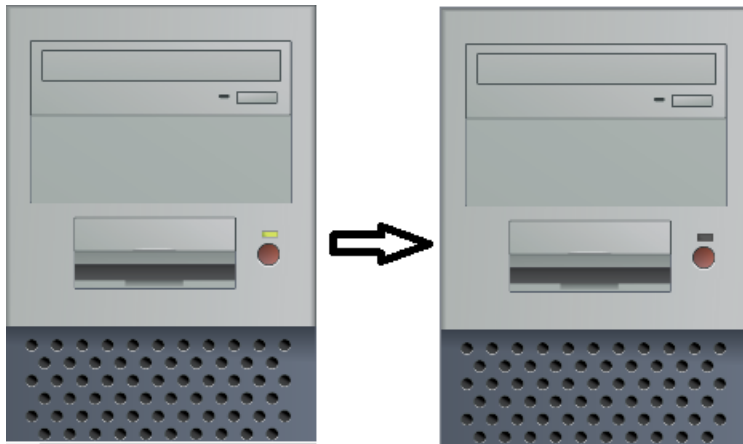
PRACTICAL NO 1

2) Place PT-HOST-NM-1CFE Module in Modules and put PT-HOST-NM-1CFE at vacant place. turn on the device in the end .
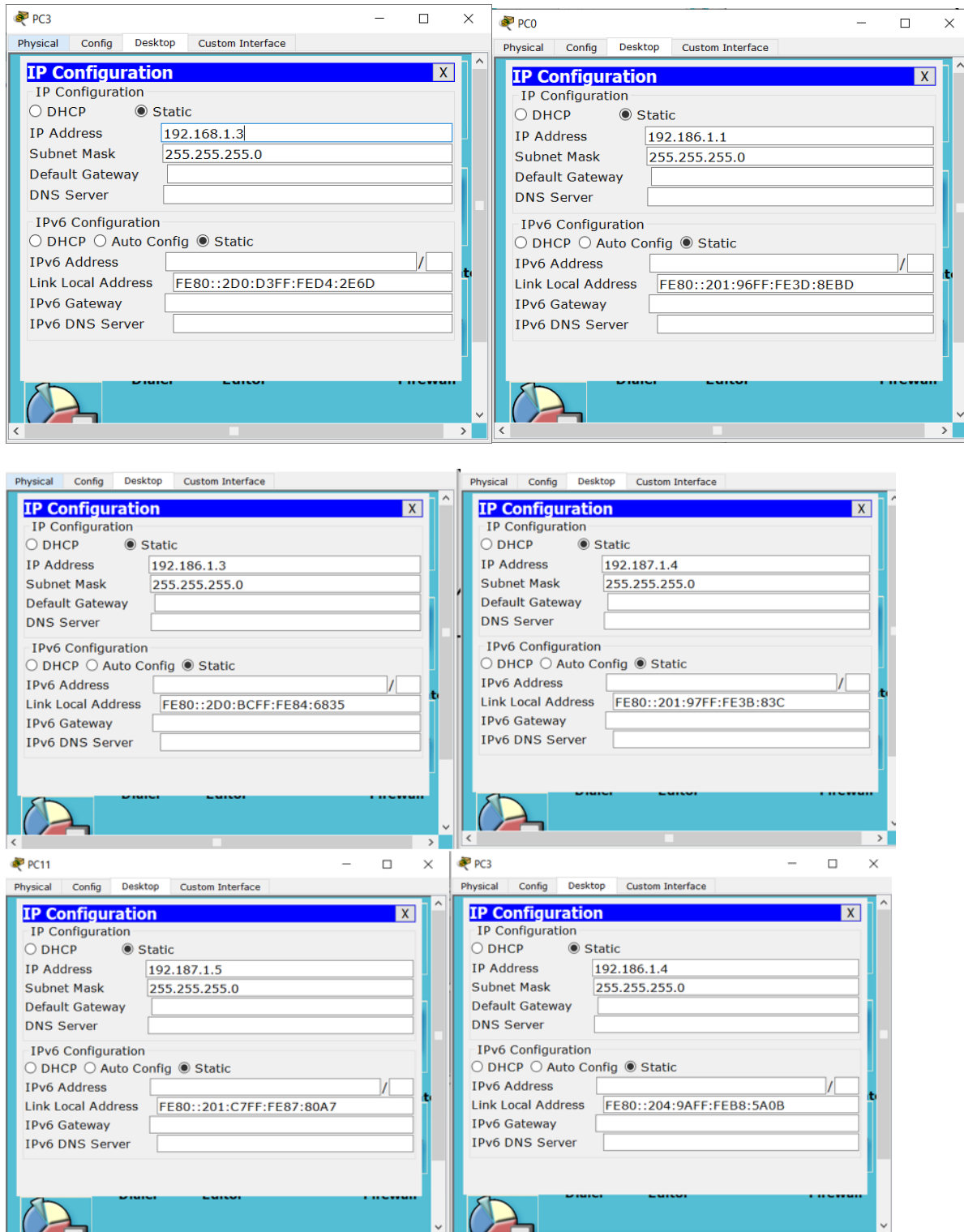

3) do the same procedure with the laptops.remove PT-LAPTOP-NM-1CFE and place Linksys-WPC300N instead.turm on the device in the end.
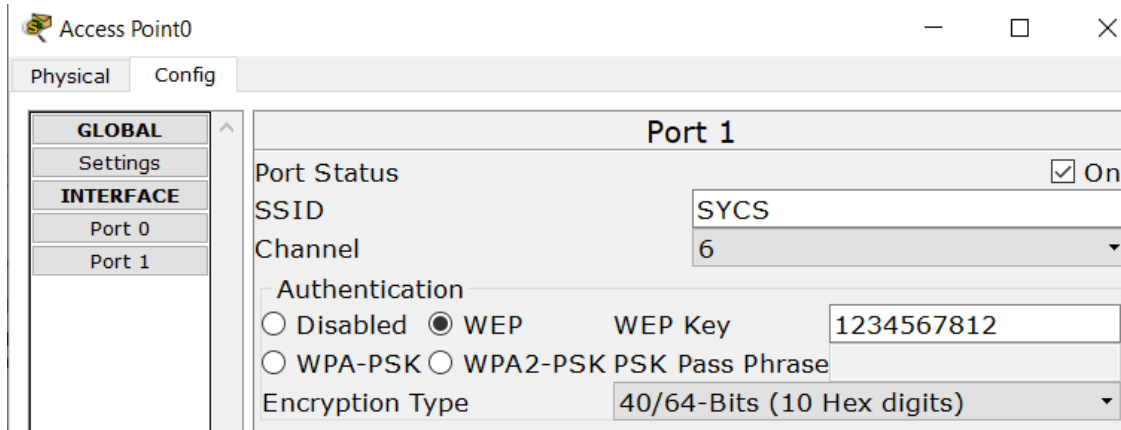
c)Provide ip address to every device. It should be auto allocated under DHCP but we need static so we choose static and type down the ip address we want after putting ip click on subnet mask itll be auti generated.
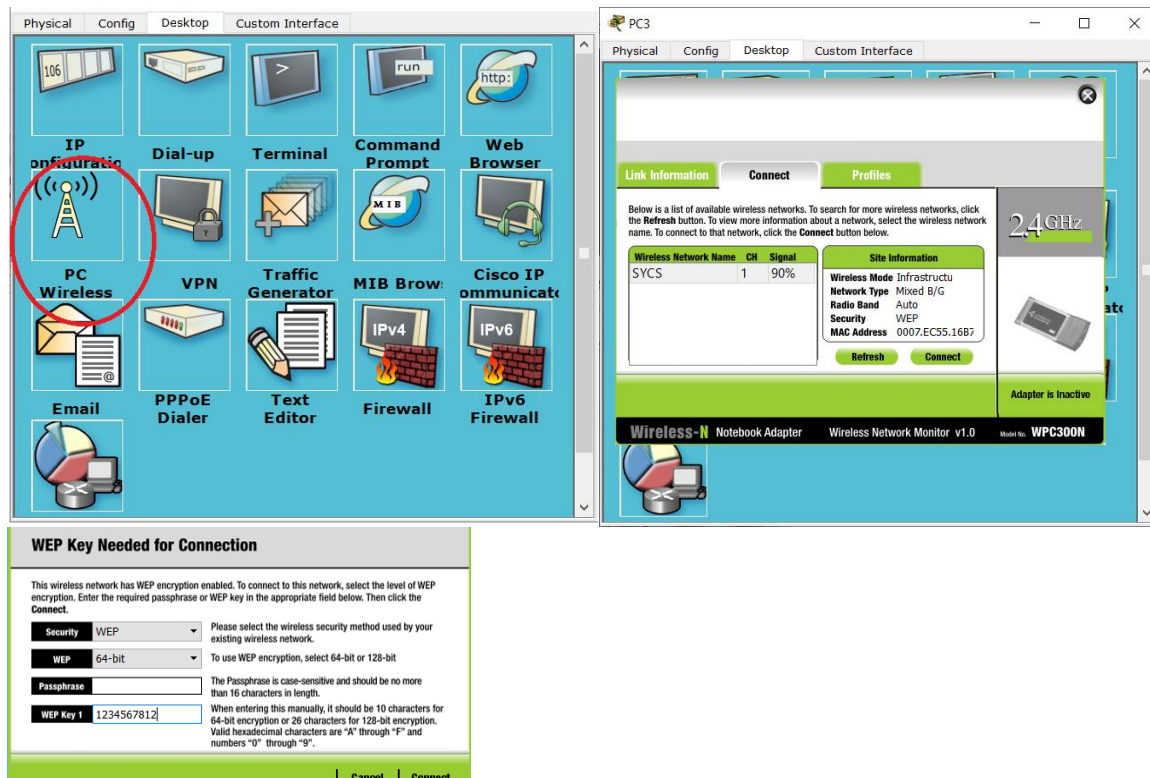
PRACTICAL NO 1

d)configure the access point goto config and select port 1 in that.Under port one provide SSID and select WEP. Provide the WEP password which should be atleast 10 digit long.

E) Now the access point has a password so we need to connect each device with this point using the password we provided for that go to PC WIRELESS in the Desktop tab. Refresh multiple time and the required access point will eventually appear click on connect and enter the credentials to connect.

F) C) Use the system to ping the system to check if the system is working or not . We can choose any computer to ping any computer in the system. If the created system is working properly it will show the succassfull in the status .
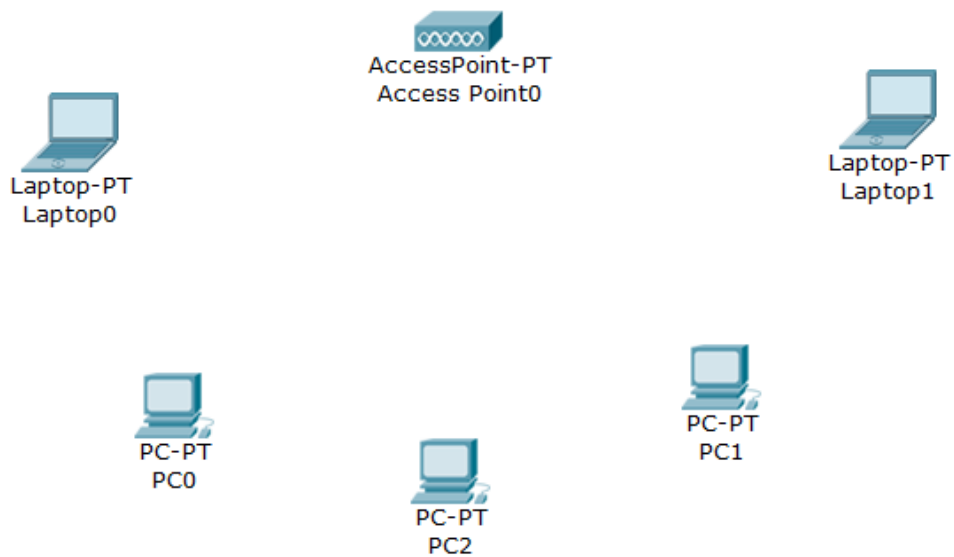
Fire	Last Status	Source	Destination	Type	Color	Time(se	Periodic	Num	Edit	Delete
●	Successful	PC3	Laptop1	ICMP		0.000	N	3	(edit)	(delete)
●	Successful	PC3	Laptop1	ICMP		0.000	N	4	(edit)	(delete)
●	Failed	Lapto...	PC0	ICMP		0.000	N	5	(edit)	(delete)

10) Create a Wireless network of multiple PC's using wireless router.

a) setup connection according to image given below

AccessPoint-PT
Access Point0

Laptop-PT
Laptop0

Laptop-PT
Laptop1

PC-PT
PC0

PC-PT
PC2

PC-PT
PC1

b) Now remove The PT-HOST-NM-1CFE Module (provides 1 Fast-Ethernet interface for use with copper media) and replace it with PT-HOST-NM-1CFE Module (wireless adapter)
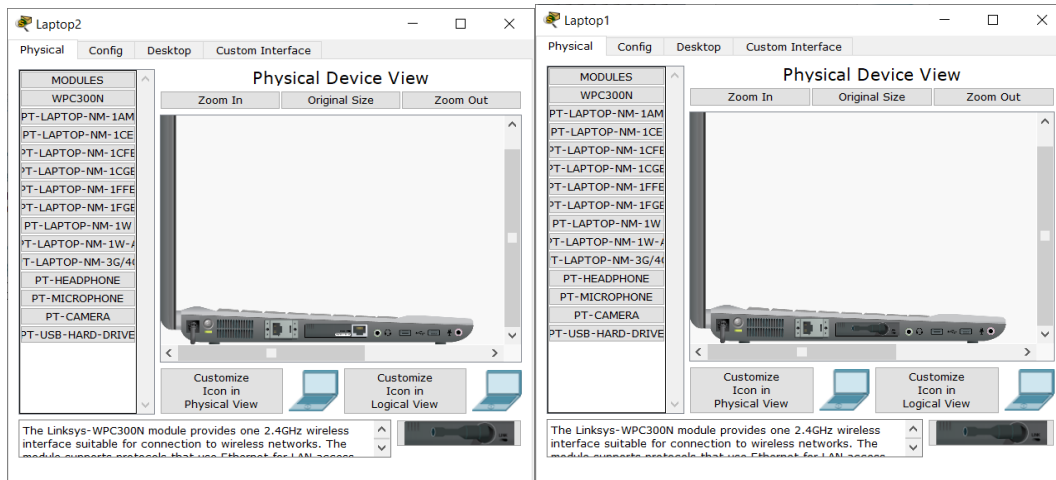
1)turn off the PCs

2) Place PT-HOST-NM-1CFE Module in Modules and put PT-HOST-NM-1CFE at vacant place. turn on the device in the end .
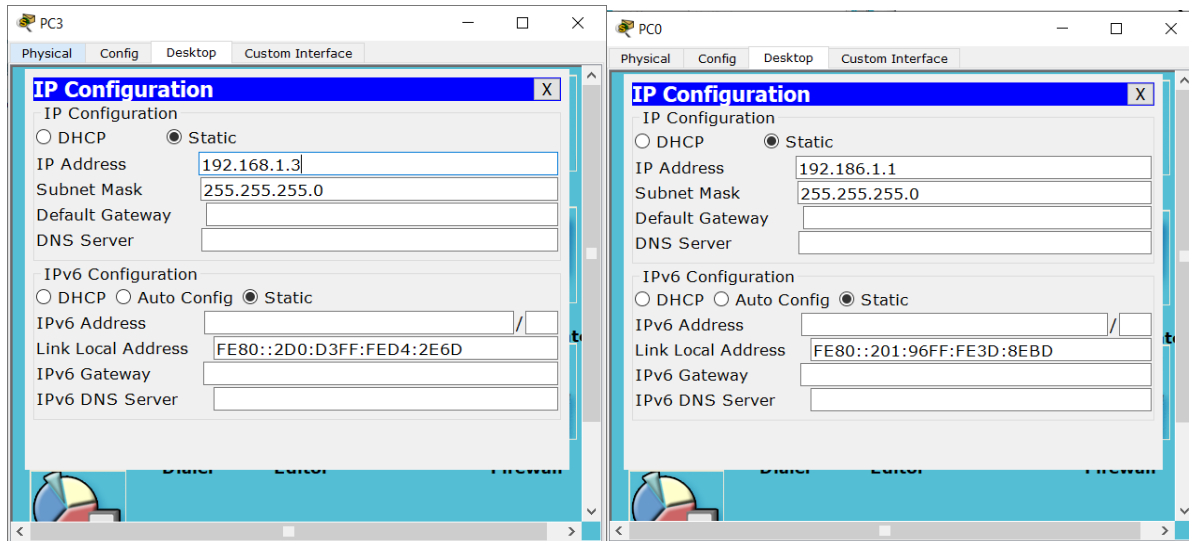
PRACTICAL NO 1

3) do the same procedure with the laptops.remove PT-LAPTOP-NM-1CFE and place Linksys-WPC300N instead.turm on the device in the end.
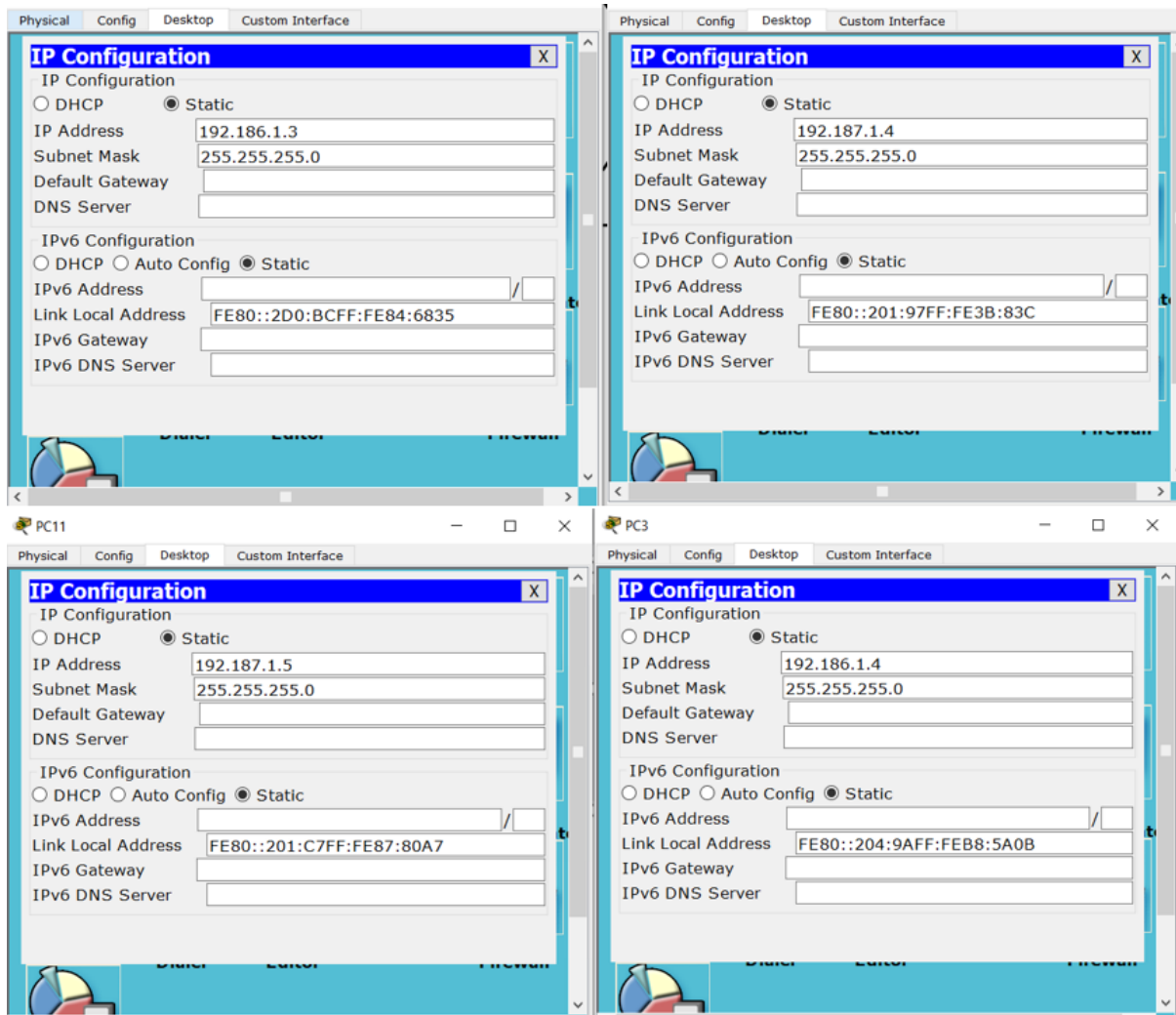
PRACTICAL NO 1

c)Provide ip address to every device. It should be auto allocated under DHCP but we need static so we choose static and type down the ip address we want after putting ip click on subnet mask itll be auti generated.
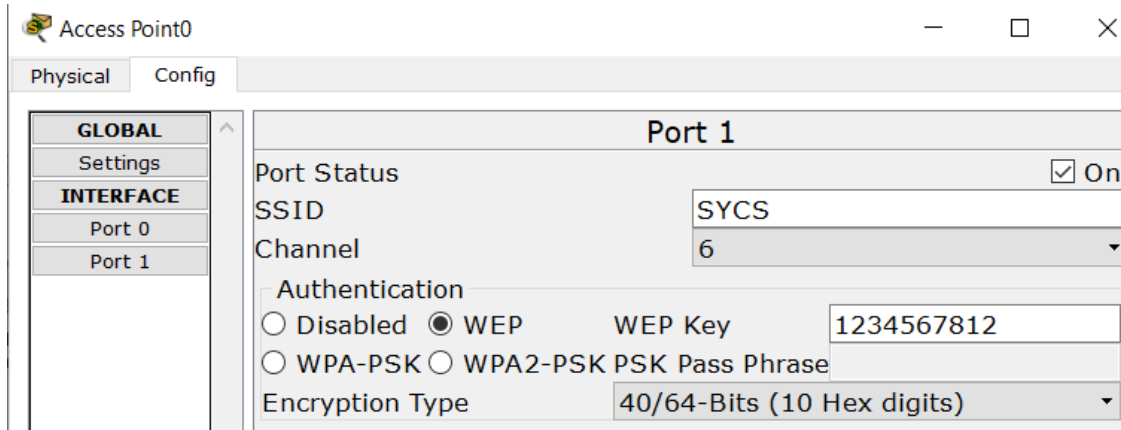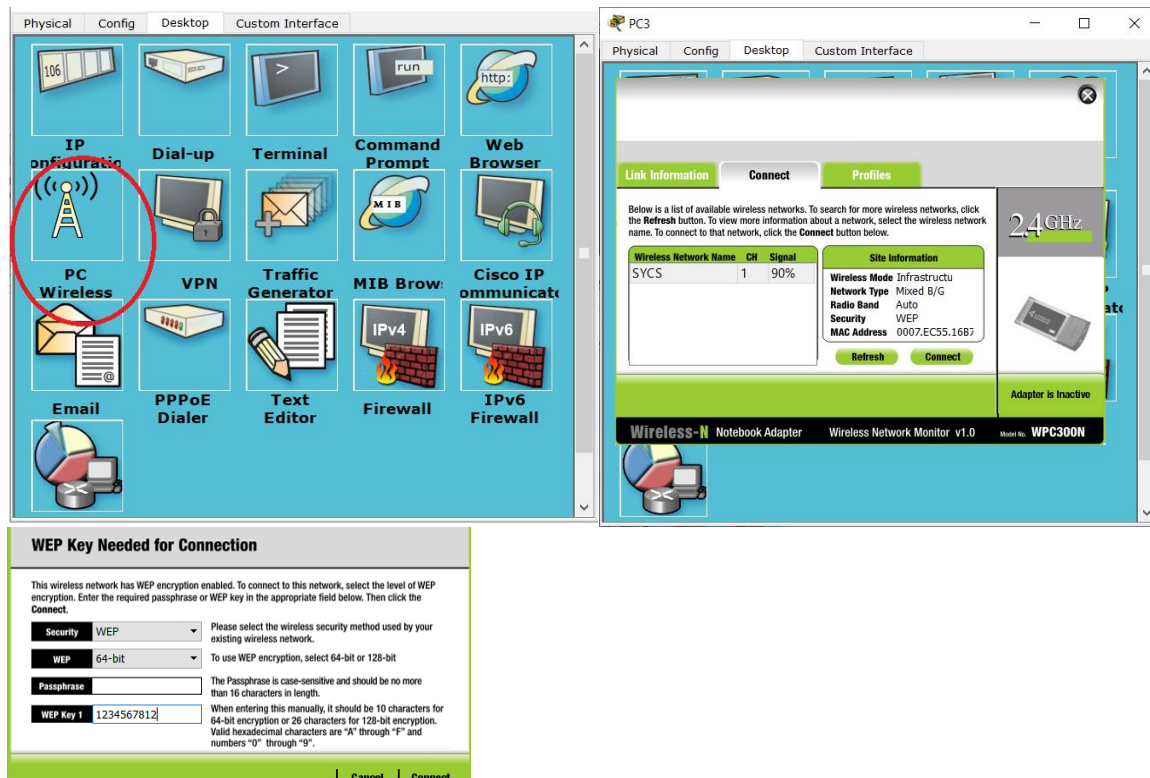
PRACTICAL NO 1

IP Configuration

IP Configuration
- ○ DHCP   ● Static
- IP Address: 192.186.1.3
- Subnet Mask: 255.255.255.0
- Default Gateway:
- DNS Server:

IPv6 Configuration
- ○ DHCP ○ Auto Config ● Static
- IPv6 Address: /
- Link Local Address: FE80::2D0:BCFF:FE84:6835
- IPv6 Gateway:
- IPv6 DNS Server:

IP Configuration

IP Configuration
- ○ DHCP   ● Static
- IP Address: 192.187.1.4
- Subnet Mask: 255.255.255.0
- Default Gateway:
- DNS Server:

IPv6 Configuration
- ○ DHCP ○ Auto Config ● Static
- IPv6 Address: /
- Link Local Address: FE80::201:97FF:FE3B:83C
- IPv6 Gateway:
- IPv6 DNS Server:

PC11

IP Configuration

IP Configuration
- ○ DHCP   ● Static
- IP Address: 192.187.1.5
- Subnet Mask: 255.255.255.0
- Default Gateway:
- DNS Server:

IPv6 Configuration
- ○ DHCP ○ Auto Config ● Static
- IPv6 Address: /
- Link Local Address: FE80::201:C7FF:FE87:80A7
- IPv6 Gateway:
- IPv6 DNS Server:

PC3

IP Configuration

IP Configuration
- ○ DHCP   ● Static
- IP Address: 192.186.1.4
- Subnet Mask: 255.255.255.0
- Default Gateway:
- DNS Server:

IPv6 Configuration
- ○ DHCP ○ Auto Config ● Static
- IPv6 Address: /
- Link Local Address: FE80::204:9AFF:FEB8:5A0B
- IPv6 Gateway:
- IPv6 DNS Server:

d)configure the access point goto config and select port 1 in that.Under port one provide SSID and select WEP. Provide the WEP password which should be atleast 10 digit long.

E) Now the access point has a password so we need to connect each device with this point using the password we provided for that go to PC WIRELESS in the Desktop tab. Refresh multiple time and the required access point will eventually appear click on connect and enter the credentials to connect.

F) C) Use the system to ping the system to check if the system is working or not . We can choose any computer to ping any computer in the system. If the created system is working properly it will show the succassfull in the status .
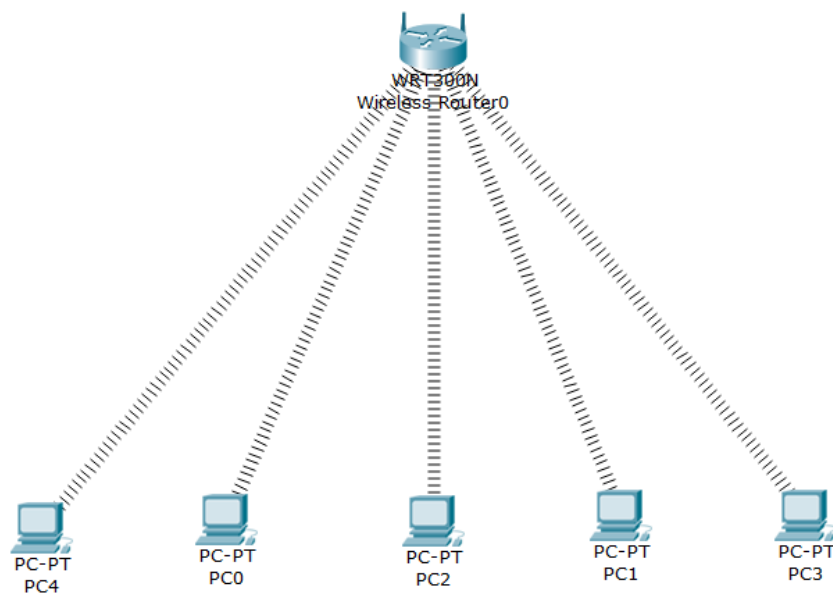
PRACTICAL NO 1

Fire	Last Status	Source	Destination	Type	Color	Time(se	Periodic	Num	Edit	Delete
●	Successful	PC3	Laptop1	ICMP		0.000	N	3	(edit)	(delete)
●	Successful	PC3	Laptop1	ICMP		0.000	N	4	(edit)	(delete)
●	Failed	Lapto...	PC0	ICMP		0.000	N	5	(edit)	(delete)

Create a Wireless network of multiple PC's using wireless router.

a) assamble all the divices according to the diagram

WRT300N
Wireless_Router0

PC-PT
PC4

PC-PT
PC0

PC-PT
PC2

PC-PT
PC1

PC-PT
PC3

b) Now remove The PT-HOST-NM-1CFE Module (provides 1 Fast-Ethernet interface for use with copper media) and replace it with PT-HOST-NM-1CFE Module (wireless adapter)

1)turn off the PCs
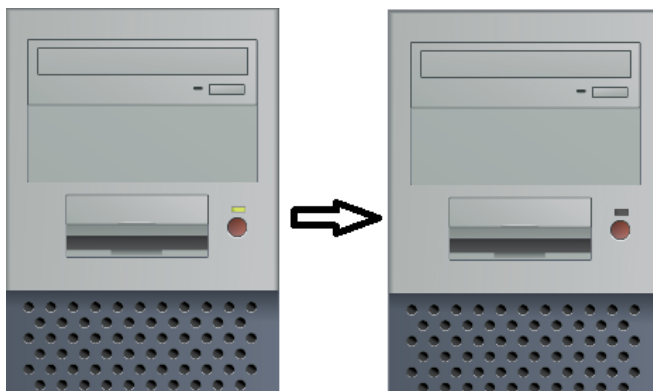
PRACTICAL NO 1

2) Place PT-HOST-NM-1CFE Module in Modules and put PT-HOST-NM-1CFE at vacant place. turn on the device in the end .
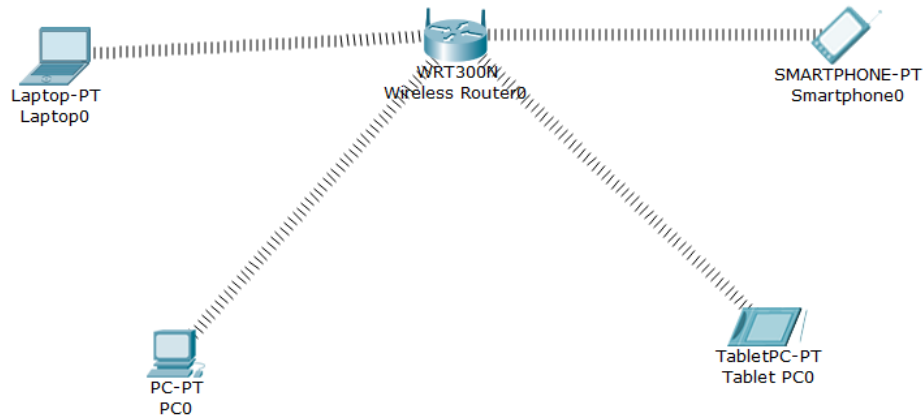

c)configure the access point goto config and select port 1 in that.Under port one provide SSID and select WEP. Provide the WEP password which should be atleast 10 digit long.

PRACTICAL NO 1

11)Create a Wireless network of 4 different wireless devices using wireless router.

a) set up the system according to following diagram

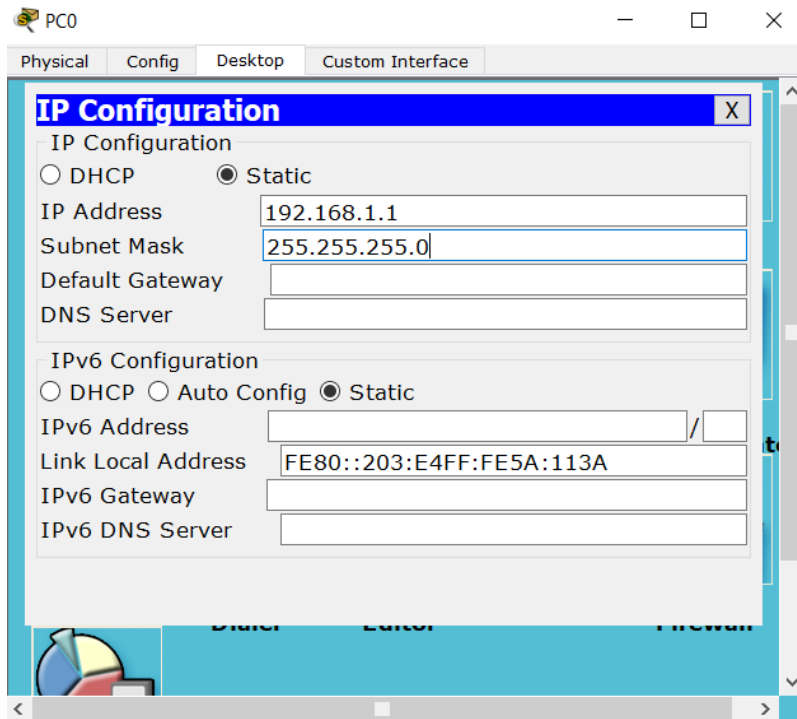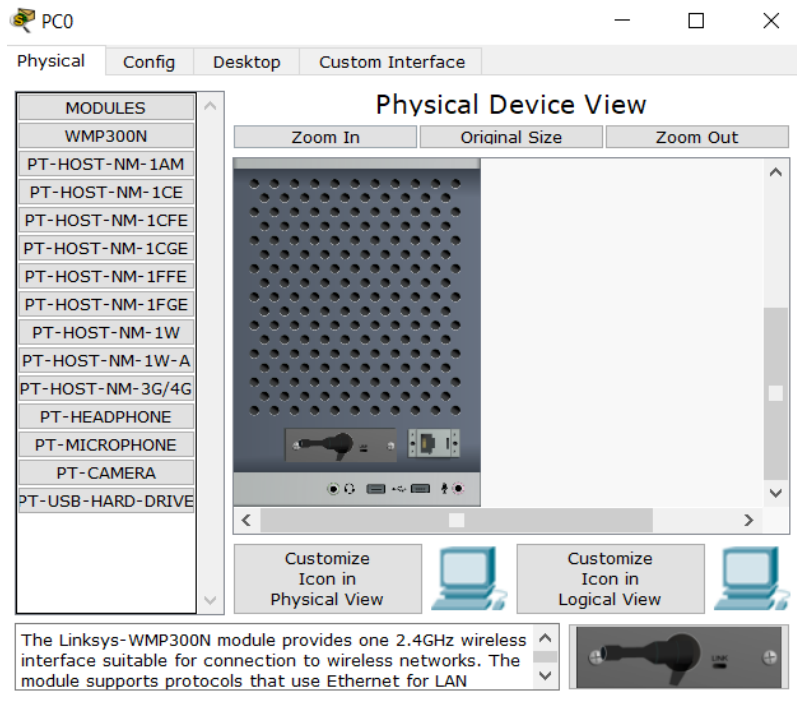b)take a router and configure according to given photo. Provide the password ssid and select WEP.

c)configure all the devices and provide ip address

PRACTICAL NO 1

For wireless devices just provide the ip address and password

Tablet PC0 — □ ✕

| Physical | Config | Desktop | Custom Interface |

IP Configuration [X]

Interface: Wireless0

IP Configuration
○ DHCP ● Static
IP Address: 192.168.0.6
Subnet Mask: 255.255.255.0
Default Gateway:
DNS Server:

IPv6 Configuration
● DHCP ○ Auto Config ○ Static
IPv6 Address: /
Link Local Address: FE80::20A:F3FF:FEED:CB81
IPv6 Gateway:
IPv6 DNS Server:

Smartphone0 — □ ✕

| Physical | Config | Desktop | Custom Interface |

GLOBAL
Settings
Algorithm Settings
INTERFACE
Wireless0
3G/4G Cell1

Wireless0

Port Status ☑ On
Bandwidth: 300 Mbps
MAC Address: 0005.5EC5.8304
SSID: SSYCS

Authentication
○ Disabled ● WEP WEP Key 1234567812
○ WPA-PSK ○ WPA2-PSK PSK Pass Phrase
                        User ID
○ WPA ○ WPA2 Password
Encryption Type: 40/64-Bits (10 Hex digits)

IP Configuration
○ DHCP
● Static
IP Address: 192.168.1.2
Subnet Mask: 255.255.255.0

IPv6 Configuration

Smartphone0 — □ ✕

| Physical | Config | Desktop | Custom Interface |

GLOBAL
Settings
Algorithm Settings
INTERFACE
Wireless0
3G/4G Cell1

Wireless0

Port Status ☑ On
Bandwidth: 300 Mbps
MAC Address: 0005.5EC5.8304
SSID: SSYCS

Authentication
○ Disabled ● WEP WEP Key 1234567812
○ WPA-PSK ○ WPA2-PSK PSK Pass Phrase
                        User ID
○ WPA ○ WPA2 Password
Encryption Type: 40/64-Bits (10 Hex digits)

IP Configuration
○ DHCP
● Static
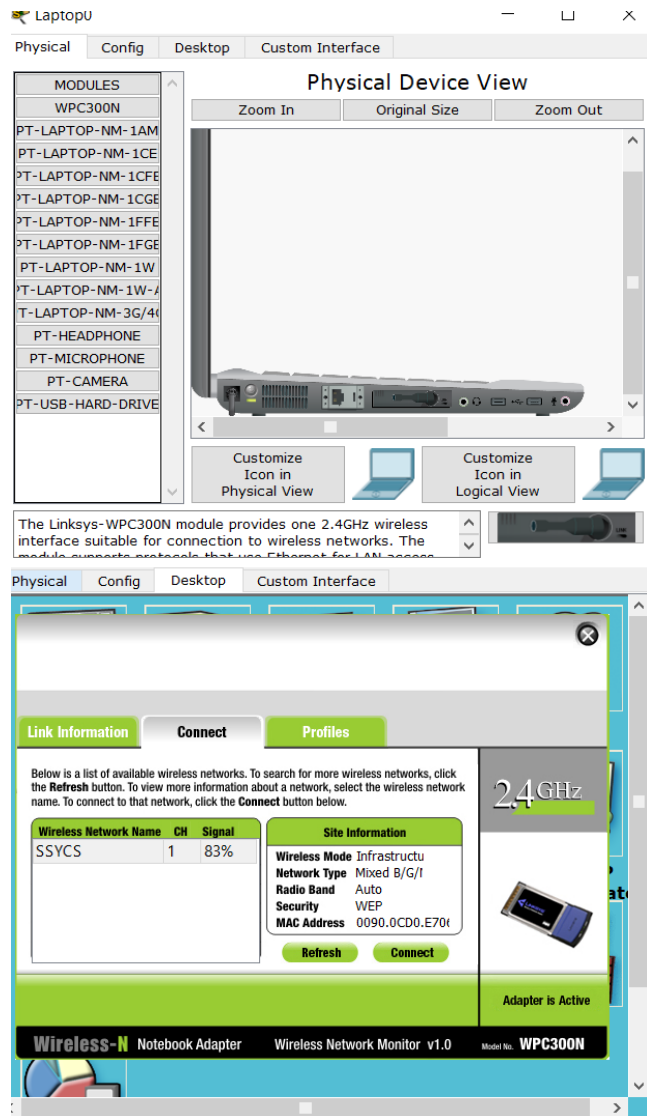IP Address: 192.168.1.2
Subnet Mask: 255.255.255.0

IPv6 Configuration

d)send data packets to find the connections is working or not

Fire	Last Status	Source	Destination	Type	Color	Time(se	Periodic	Num	Edit	Delete
●	Successful	Smar...	PC0	ICMP		0.000	N	4	(edit)	(delete)
●	Successful	Smar...	Tablet PC0	ICMP		0.000	N	5	(edit)	(delete)
●	Successful	Smar...	Laptop0	ICMP		0.000	N	6	(edit)	(delete)