

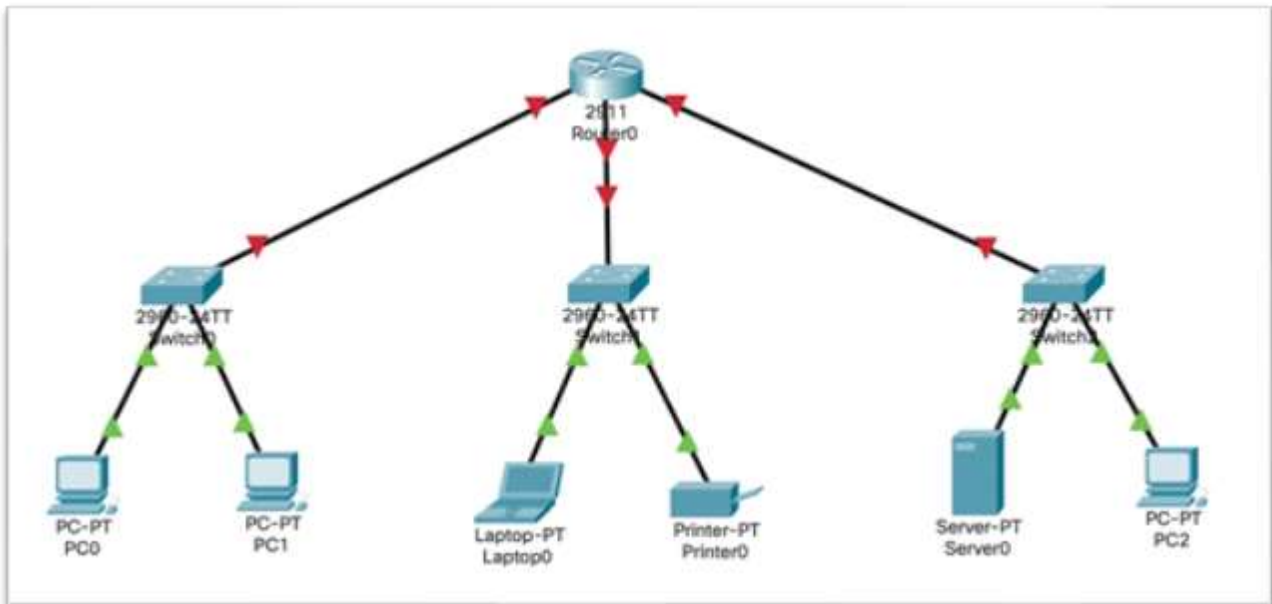
# CN Assignment - 10

**NAME : SOURABH PATEL**

**ADMISSION NO : U19CS082**

Manual:

Firstly, we made the following circuit.



We have used 5 PCs, 1 laptop, 1 server, 3 2960 switches, and 1 ISRA4331 router.

Configure the routers' interfaces including all the default gateways and IPv4s by clicking on the router icon -> Config -> GigaBitEthernet 0/0/0 (left menu) -> type in the following...

Router0

PhysicalConfigCLIAttributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

GigabitEthernet0/0

GigabitEthernet0/1

GigabitEthernet0/2

GigabitEthernet0/0

Port Status

☒ On

Bandwidth

☐ 1000 Mbps

☒ 100 Mbps

☐ 10 Mbps

☒ Auto

Duplex

☐ Half Duplex

☒ Full Duplex

☒ Auto

MAC Address

0006.2A33.D001

IP Configuration

IPv4 Address

192.168.0.1

Subnet Mask

255.255.255.0

Tx Ring Limit

10

Router0

PhysicalConfigCLIAttributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

GigabitEthernet0/0

GigabitEthernet0/1

GigabitEthernet0/2

GigabitEthernet0/1

Port Status

☒ On

Bandwidth

☐ 1000 Mbps

☒ 100 Mbps

☐ 10 Mbps

☒ Auto

Duplex

☐ Half Duplex

☒ Full Duplex

☒ Auto

MAC Address0006.2A33.D002

IP Configuration

IPv4 Address10.11.0.1

Subnet Mask255.0.0.0

Tx Ring Limit10

Router0

PhysicalConfigCLIAttributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

GigabitEthernet0/0

GigabitEthernet0/1

GigabitEthernet0/2

GigabitEthernet0/2

Port Status

☒ On

Bandwidth

☐ 1000 Mbps

☒ 100 Mbps

☐ 10 Mbps

☒ Auto

Duplex

☐ Half Duplex

☒ Full Duplex

☒ Auto

MAC Address0006.2A33.D003

IP Configuration

IPv4 Address128.0.0.1

Subnet Mask255.255.0.0

Tx Ring Limit10

Configure the Server.

Change the name of the server to DHCP by clicking on the icon -> Config -> change it to DHCP, then go to fastethernet0 in interfaces (from the left menu) to add default gateway and IPv4 for it as follows.

The screenshot shows a configuration window titled "DHCP" with a sidebar on the left and a main configuration area on the right. The sidebar has a "GLOBAL" section with "Settings" and "Algorithm Settings", and an "INTERFACE" section with "FastEthernet0". The main area has tabs for "Physical", "Config", "Services", "Desktop", "Programming", and "Attributes", with "Config" selected. The "FastEthernet0" interface is configured with the following settings:

- Port Status:** ☒ On
- Bandwidth:** ☒ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex:** ☐ Half Duplex ☒ Full Duplex ☒ Auto
- MAC Address:** 00E0.F7A9.B393
- IP Configuration:** ☐ DHCP ☒ Static
  - IPv4 Address:** 128.0.0.2
  - Subnet Mask:** 255.255.0.0
- IPv6 Configuration:** ☐ Automatic ☒ Static
  - IPv6 Address:** /
  - Link Local Address:** FE80::2E0:F7FF:FEA9:B393

Configure the DHCP services and add three different pools for three different networks by clicking on the icon -> Services -> DHCP (from the left menu) Start adding pools now.

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
beta	10.11.0.1	128.0.0.2	10.11.0.5	255.0.0.0	251	0.0.0.0	0.0.0.0
alpha	192.16...	128.0.0.2	192.16...	255.25...	251	0.0.0.0	0.0.0.0
gama	128.0.0.1	128.0.0.2	128.0.0.5	255.25...	512	0.0.0.0	0.0.0.0
serverPool	0.0.0.0	0.0.0.0	128.0.0.0	255.25...	512	0.0.0.0	0.0.0.0

Assign IP helper-address for all gigabit Ethernet ports in the router by clicking the router icon -> CLI.

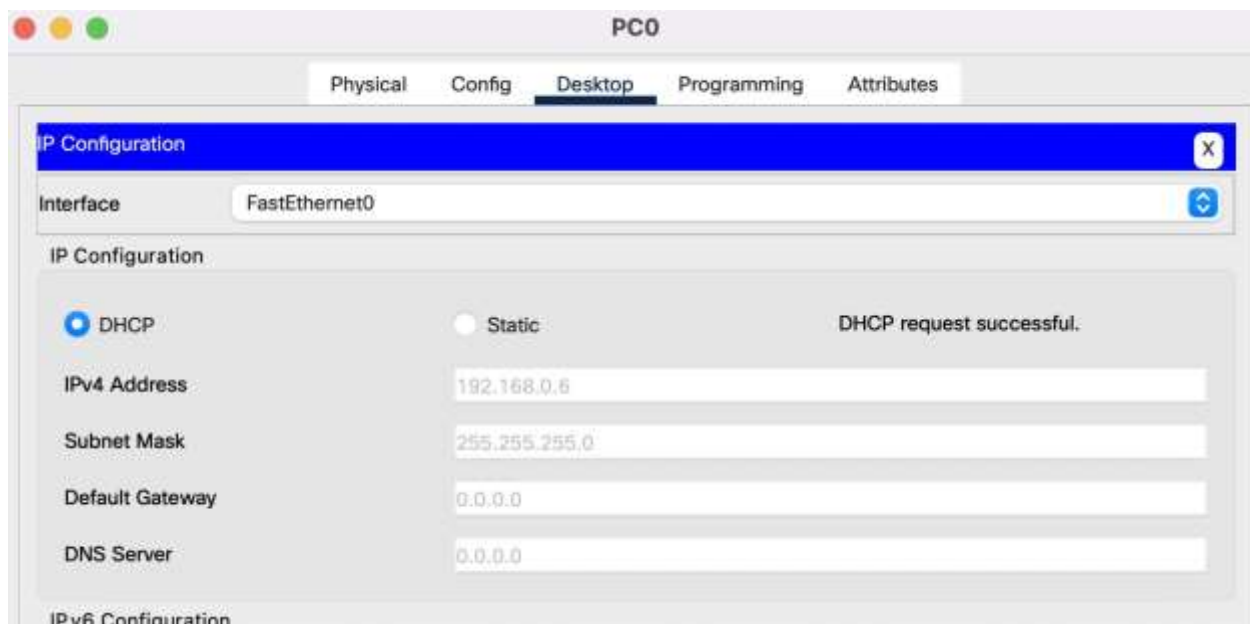
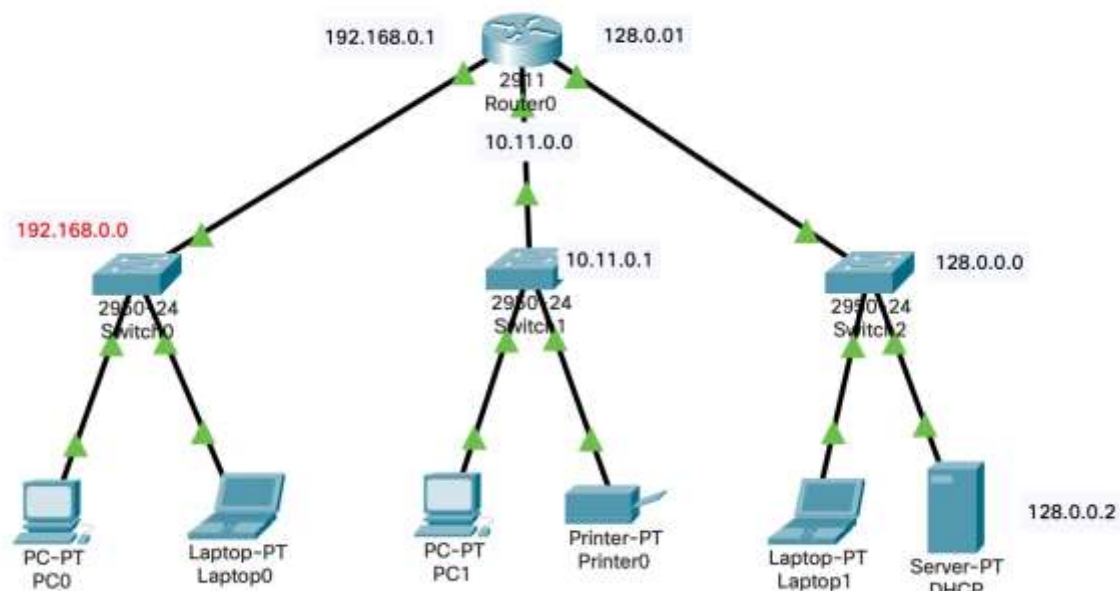
```
Router#
Router#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface gigabitethernet 0/0
Router(config-if)#ip helper-address 128.0.0.2
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface gigabitethernet 0/1
Router(config-if)#ip helper-address 128.0.0.2
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface gigabitethernet 0/2
Router(config-if)#ip helper-address 128.0.0.2
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#
```

Command+F6 to exit CLI focus

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All the connections and configuration of the network are now complete. It is ready to be used.



Similarly, other devices get IP addresses.

