Steps to Configure and Verify DHCP Server in Cisco Packet Tracer:
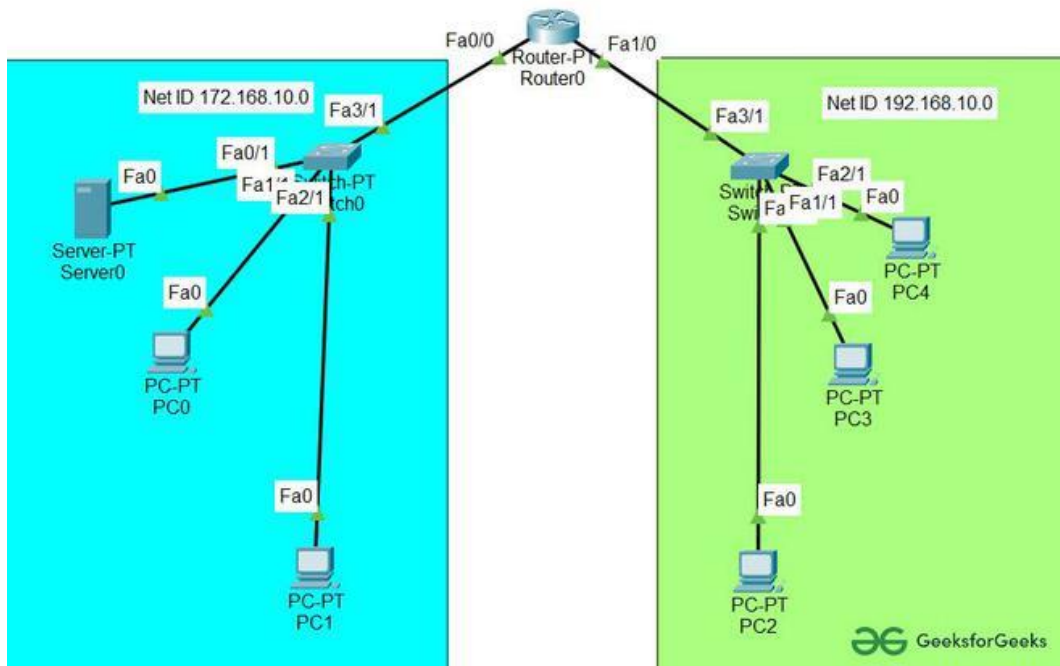
Step 1: First, open the cisco packet tracer desktop and select the devices given below:

| S.NO	Device	Model-Name	Unit
1.	PC	PC	5
2.	Switch	PT-Switch	2
3.	Router	PT-Router	1
4.	Server	Server-PT	1

- Now create a network topology as shown below the image.

- Use an Automatic connecting cable to connect the devices with others.

Step 2: Configure the Server with IPv4 address and Subnet Mask according to the Data given above.

- To assign an IP address in Server, click on Server-PT.

- Then, go to desktop and IP configuration and there you will find IPv4 configuration.

- Add IPv4 address, subnet mask, and Default Gateway.

| Parameters	Address value
IPv4 Address	172.168.10.2
Subnet Mask	255.255.255.0
Default-Gateway	172.168.10.1
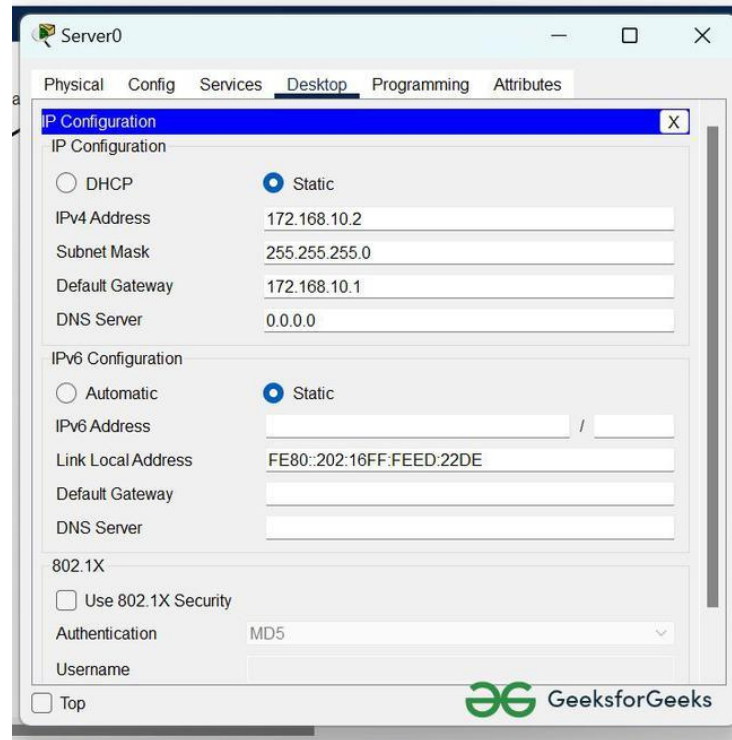
Ignore the option below if you have completed the configuration above.

Option 2. Assigning IP address using the ipconfig command.

- We can also assign an IP address with the help of a command.

- Go to the command prompt of the server

- Then, type ipconfig <IPv4 address><subnet mask><default gateway>(if needed)

example: ipconfig 172.168.10.2 255.255.255.0 172.168.10.1
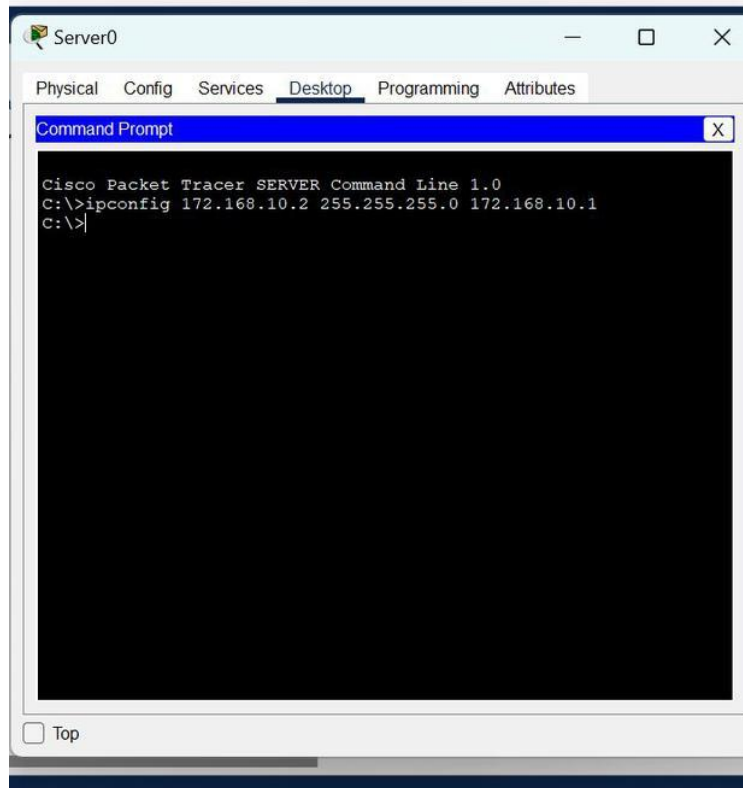
Step 3: Configuring the DHCP server.

To configure the DHCP server first,

- Click on Server then, Go to services.
- Click on DHCP and turn on the services and configure the DHCP server with the help of the data given below.
  - Delete the default values of Start IP Address and subnet Mask then save the info.
  - Create two new pools.

POOL1 and POOL2 and fill in the data as shown in the images below.

Server0

Physical | Config | Services | Desktop | Programming | Attributes

SERVICES
- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DHCP

Interface	FastEthernet0 ∨ Service ● On ○ Off
Pool Name	Pool2
Default Gateway	192.168.10.1
DNS Server	0.0.0.0

Start IP Addr 192 | 168 | 10 | 11
Subnet Mask 255 | 255 | 255 | 0

Maximum Number of Users :	255
TFTP Server:	0.0.0.0
WLC Address:	0.0.0.0

[Add]   [Save]   [Remove]

Step 4: Configuring Router with IPv4 Address and Subnet Mask.

IP Addressing Table for Router:

S.NO	Device	Interface	IPv4 Address	Subnet Mask
1.	router0	FastEthernet0/0	172.168.10.1	255.255.255.0
		FastEthernet0/1	192.168.10.1	255.255.255.0

- To assign an IP address in router0, click on router0.

- Then, go to config and then Interfaces, and make sure to turn on the ports.

- Then, configure the IP address in FastEthernet according to IP addressing Table.

- Fill IPv4 address and subnet mask.

Step 5: Configuring the PCs and changing the IP configuration.

- To assign an IP address in PC0, click on PC0.

- Then, go to desktop and IP configuration and there you will find IPv4 configuration.

- Change its state from static to DHCP.

- It will automatically fetch the data and configure itself.
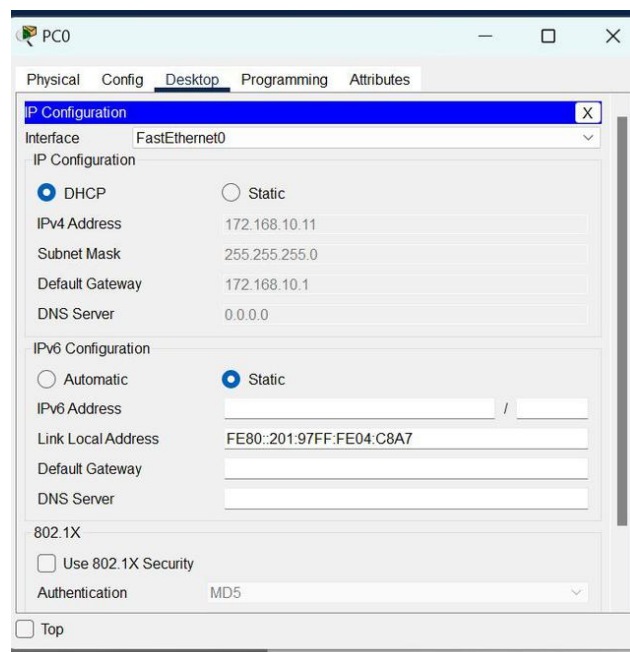
- Repeat the same procedure with other PCs to configure them thoroughly.