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Class/Section:	S24 / Slot 2
Ex.No:	9
Date of Submission	
Name of the Experiment	DHCP Configuration
Google Drive link of the packet tracer file (give view permission):	https://drive.google.com/drive/folders/1aqbZJwY2Y9Uc7ZUyxEjfnNqepe9LegrC?usp=drive_link

Objective(s):

To design and implement DHCP configuration using packet tracer

Introduction:

Dynamic Host Configuration Protocol or DHCP is a networking protocol that allows for the automatic assignment of IP addresses to devices in a network. You have probably seen DHCP in action at the most basic level when you connect your laptop to an ISP router (like MTN-HynetFlex) or your phone's hotspot. Every new device that joins the Wifi network will get a local IP address, usually in the range 192.168.0.* or 172.16.*.* where * is a number between 0 and 255.

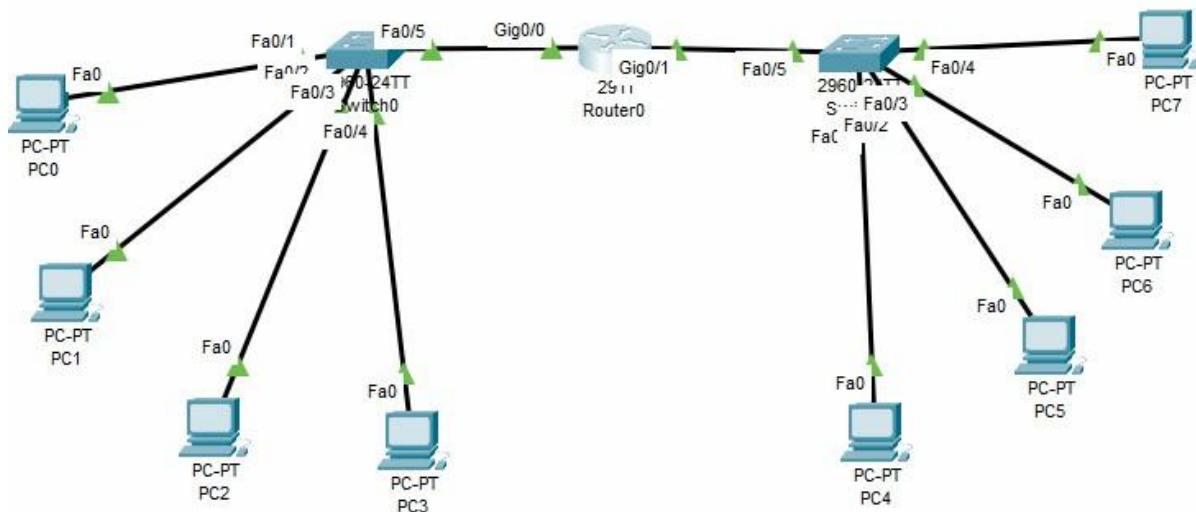
Without DHCP, these massive networks will require physical agents in call centers to manage who gets what IP address. While this is not only a hassle, it will be a huge cost to the service provider.

One easy way to practice a DHCP setup is in a local network simulation environment like Cisco Packet Tracer. This lab will discuss how to configure DHCP on a router for a simple 4-computer, two-switch network. The router will assign the IP addresses to the computers in each network so that inter-network communication can happen.

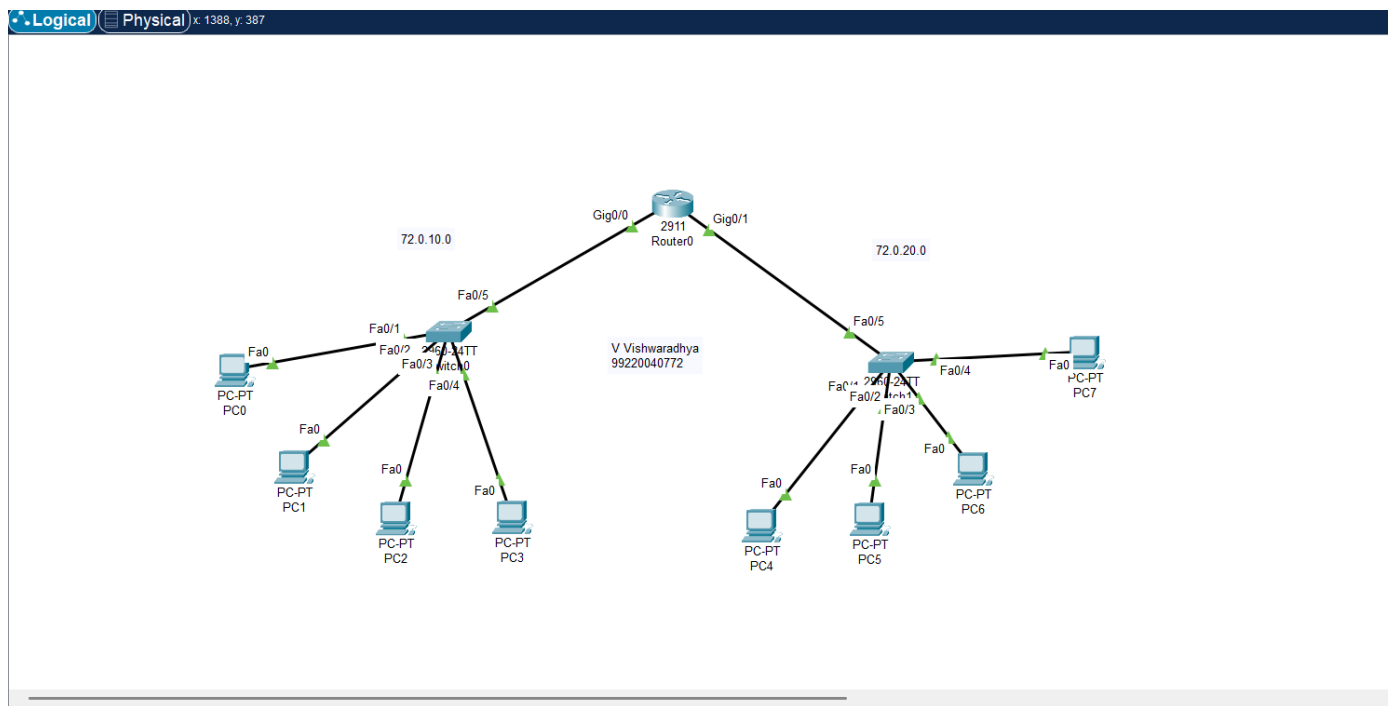
1. Device Requirements:

1. PC'S
2. Switches
3. Routers
4. Cables

2. Network Diagram for your experiment (draw the diagram either hand drawing/ms paint or any other drawing tools)



3. Network Diagram (Packet tracer diagram before configuration):



4. Configuration details:

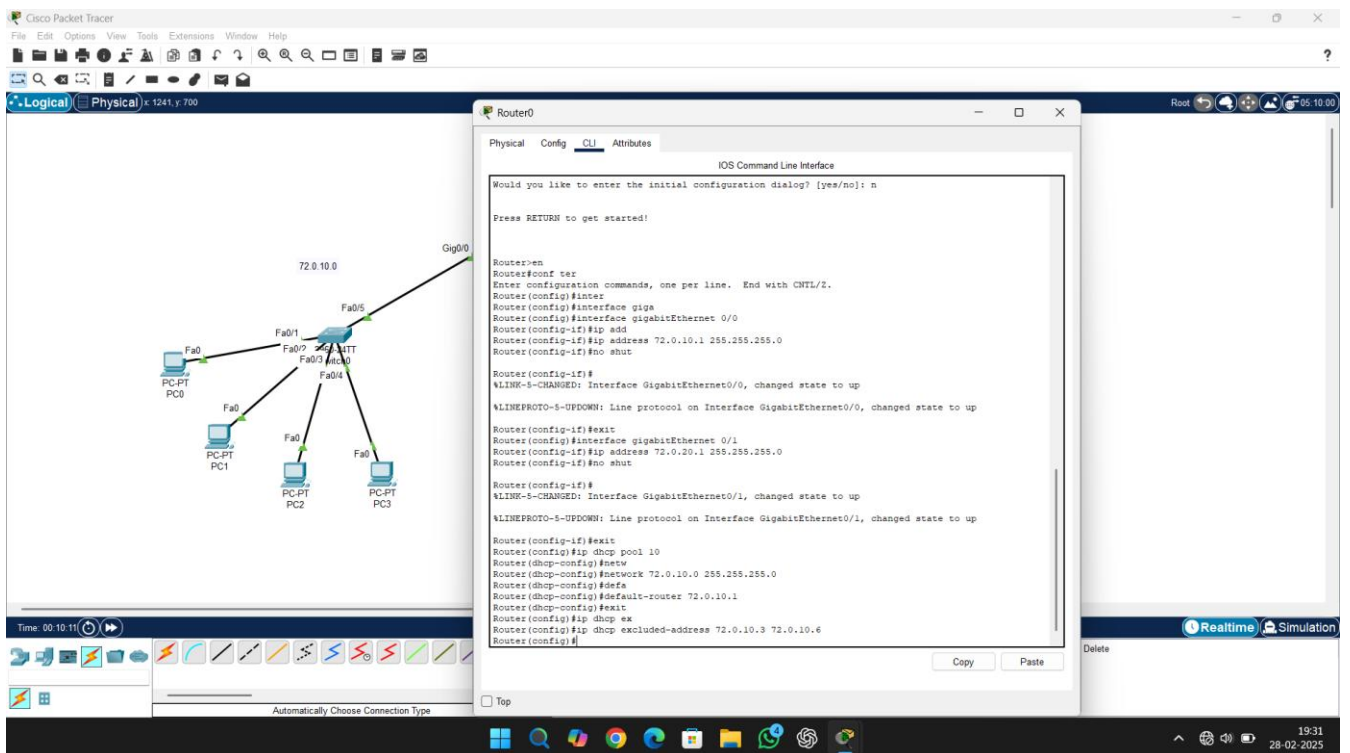
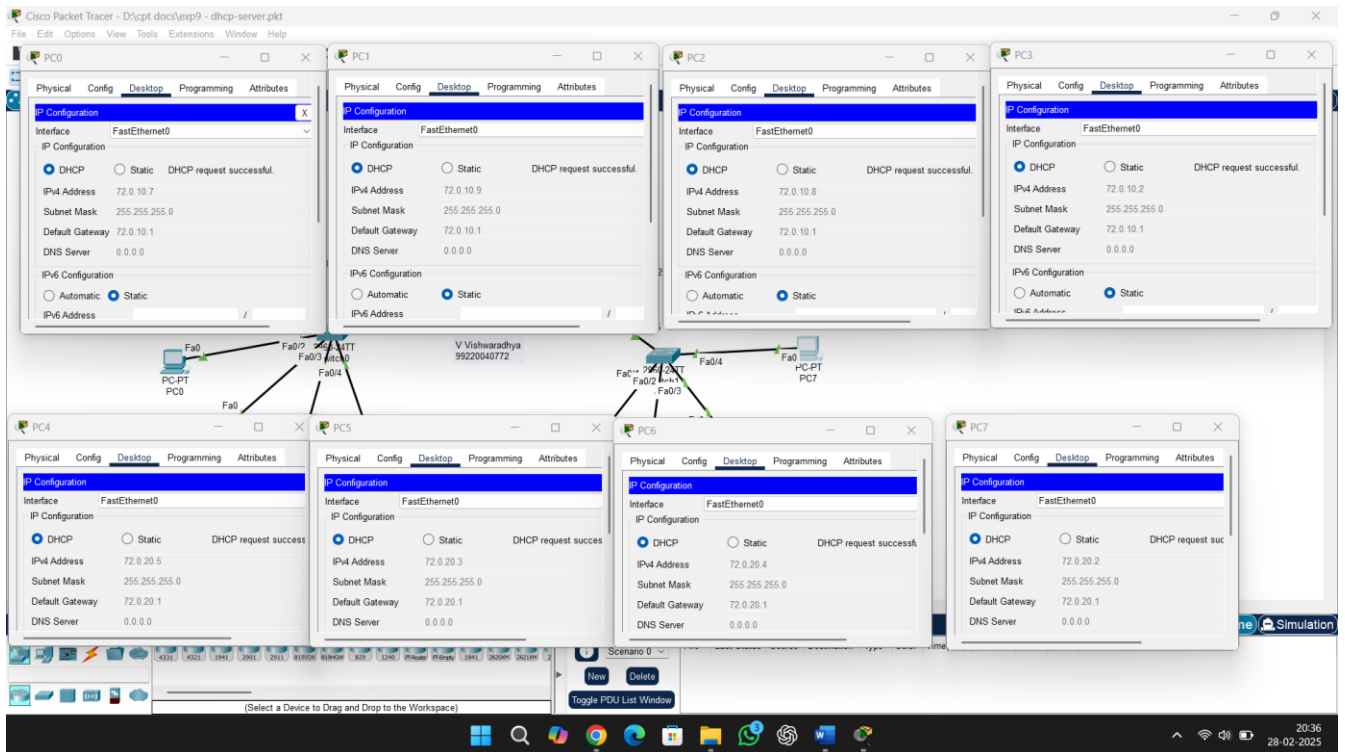
Device Name	Interface Name	IP Address	Subnet mask	Default Gateway
PC0	Interface Fa0/1	72.0.10.7	255.255.255.0	72.0.10.1
PC1	Interface Fa0/2	72.0.10.9	255.255.255.0	72.0.10.1
PC2	Interface Fa0/3	72.0.10.8	255.255.255.0	72.0.10.1
PC3	Interface Fa0/4	72.0.10.2	255.255.255.0	72.0.10.1
PC4	Interface Fa0/1	72.0.20.5	255.255.255.0	72.0.20.1
PC5	Interface Fa0/2	72.0.20.3	255.255.255.0	72.0.20.1
PC6	Interface Fa0/3	72.0.20.4	255.255.255.0	72.0.20.1
PC7	Interface Fa0/4	72.0.20.2	255.255.255.0	72.0.20.1

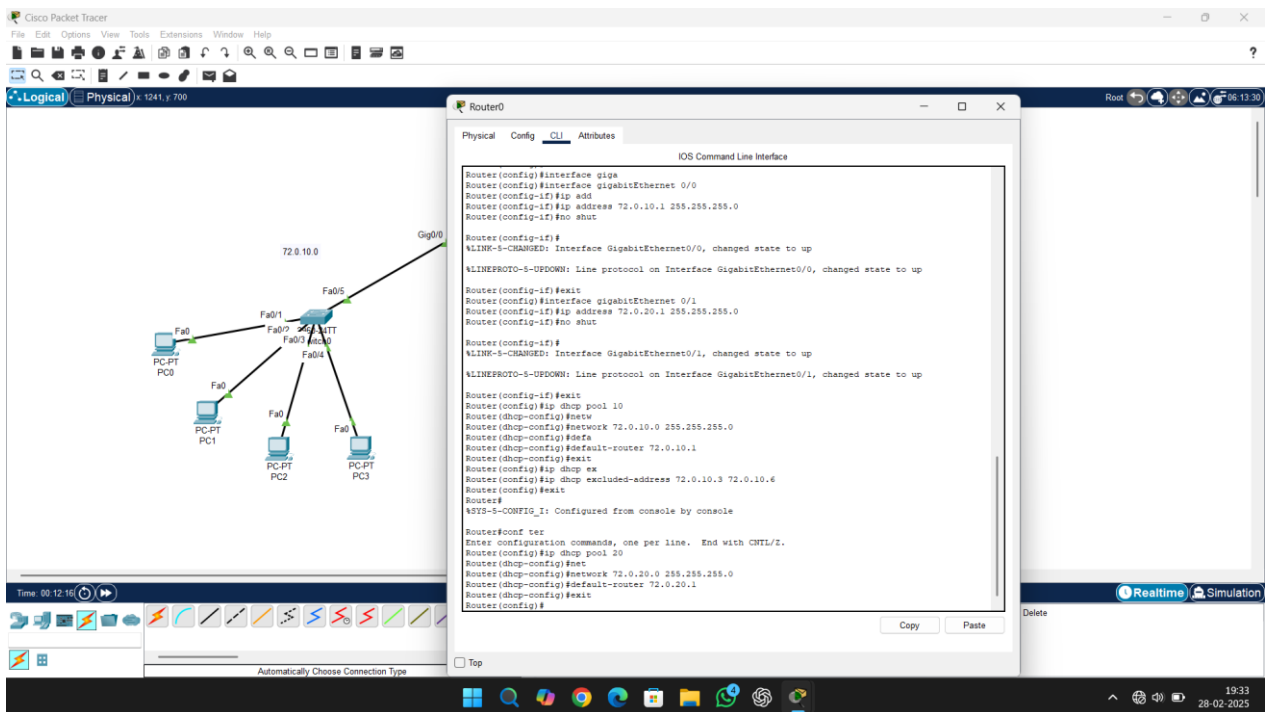
5. Describe step by step configuration steps properly (you may copy the commands used in the configuration tab and paste it.)

Router Configuration:

- 1) Enable and configure the terminal
- 2) Enter the commands below
- 3) Interface gigabitEthernet 0/0
- 4) Ip address 72.0.10.1 255.255.255.0
- 5) no shut
- 6) exit
- 7) same steps for another Ip address 72.0.20.
- 8) Next setup the DHCP configuration
- 9) Ip dhcp pool 10
- 10) network 72.0.10.0 255.255.255.0
- 11) default-router 72.0.10.1
- 12) exit
- 13) ip dhcp excluded-address 72.0.10.3 72.0.10.6
- 14) exit
- 15) ip dhcp pool 20
- 16) network 72.0.20.0 255.255.255.0
- 17) default-router 72.0.20.1
- 18) exit

6. Output Diagram (Minimum 3 screenshot):





Rubrics for Experiment Assessment:

Rubrics	Good	Normal	Poor	Marks
Creation of Topology (4)	Created the topology, identified the proper devices and made the connections (4)	Created the topology, Identify the proper devices, making the connections But missing some features (3)	Created wrong topology, Failed to Identify the proper devices and making connections (1)	
Verify the connectivity (4)	Verified the connectivity in all the levels (4)	Verified the connectivity at some levels (only some nodes) (2)	Verified the connectivity is not done. (1)	
Timely Completion (2)	Completed the lab before the allotted time (2)	Completed the lab after the deadline (1)	Did not submitted before grading (0)	
Total				

CONCLUSION (provide conclusion about this experiment):

Hence, DHCP configuration has implemented successfully.