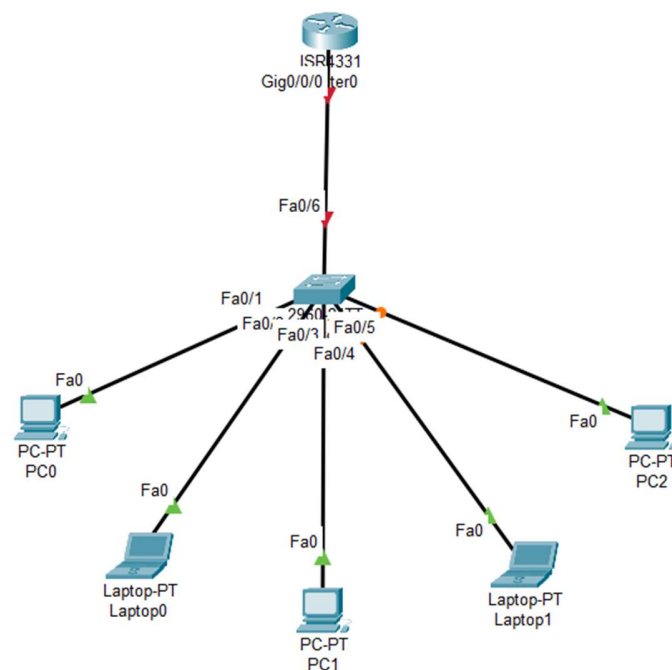
 Marwadi University Marwadi Chandarana Group	Marwadi University Faculty of Engineering and Technology Department of Information and Communication Technology	
Subject: Computer Networks (01CT0503)	Aim: Configuration of DHCP Server in Packet Tracer Software and analysis of DHCP messages.	
Experiment No: 09	Date: 30-10-2023	Enrolment No: 92210133006

Aim: Configuration of DHCP Server in Packet Tracer Software and analysis of DHCP messages.


Step 1: Create a small network with 1 router, 1 switch, and 6 devices.

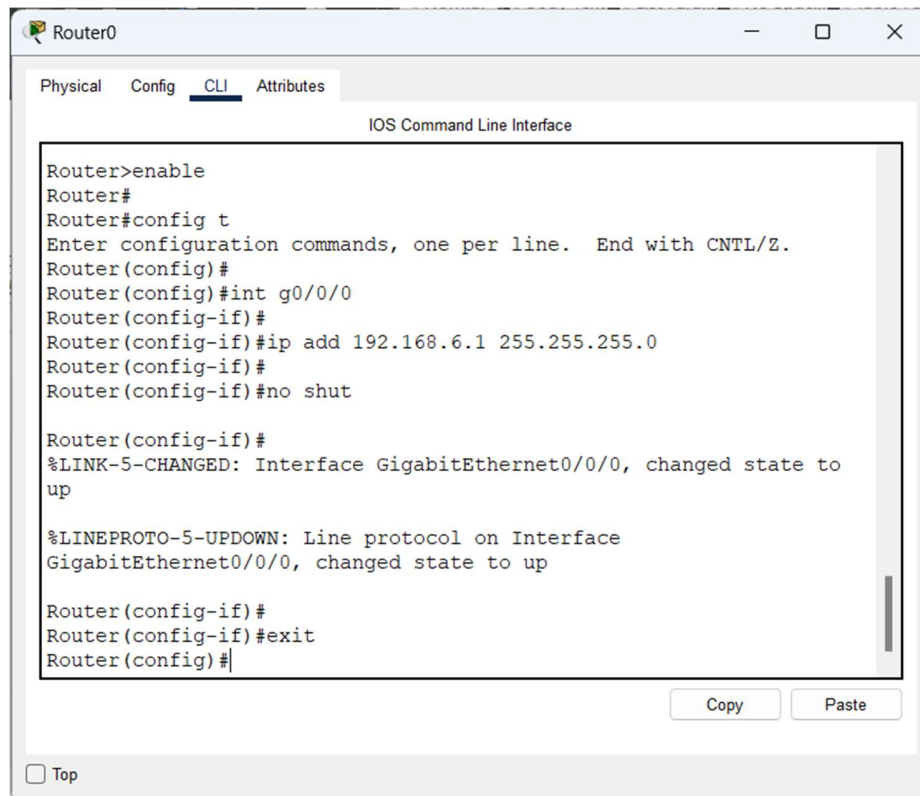
Connect device to switch and switch to router using copper straight through cable.



Step 2: Assign Ip addresses to Router.

Commands are "enable", "config t" or "configure terminal", "int interface_name" or "interface <interface_name>", "ip add <ipv4_address> <subnet_mask>", "no shut", "exit".

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```

Router0
Physical Config CLI Attributes
IOS Command Line Interface

Router>enable
Router#
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#int g0/0/0
Router(config-if)#
Router(config-if)#ip add 192.168.6.1 255.255.255.0
Router(config-if)#
Router(config-if)#no shut

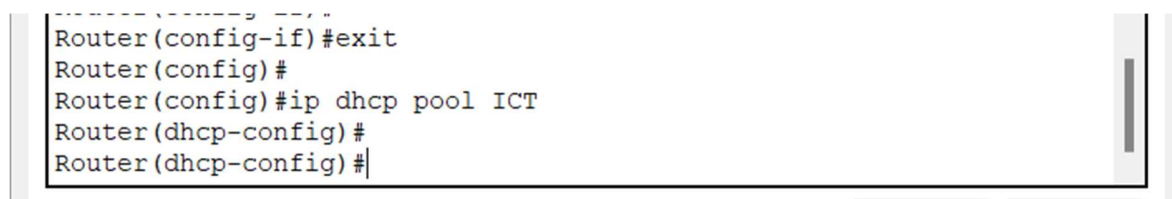
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to
up

%LINEPROTO-5-UPDOWN: Line protocol on Interface
GigabitEthernet0/0/0, changed state to up

Router(config-if)#
Router(config-if)#exit
Router(config)#

```

Step 3: To implement DHCP Protocol command is "ip dhcp pool <pool_name>".

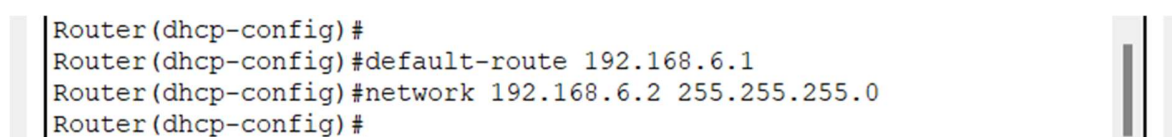


```

Router(config-if)#exit
Router(config)#
Router(config)#ip dhcp pool ICT
Router(dhcp-config)#
Router(dhcp-config)#

```


Step 4: To set default gateway through DHCP when new device request to connect "default-route <router_port_ip_address>" and assign the IP address from which you need to start assigning IP address to PCs for that command is "network <starting_ip_address> <subnet_mask>".



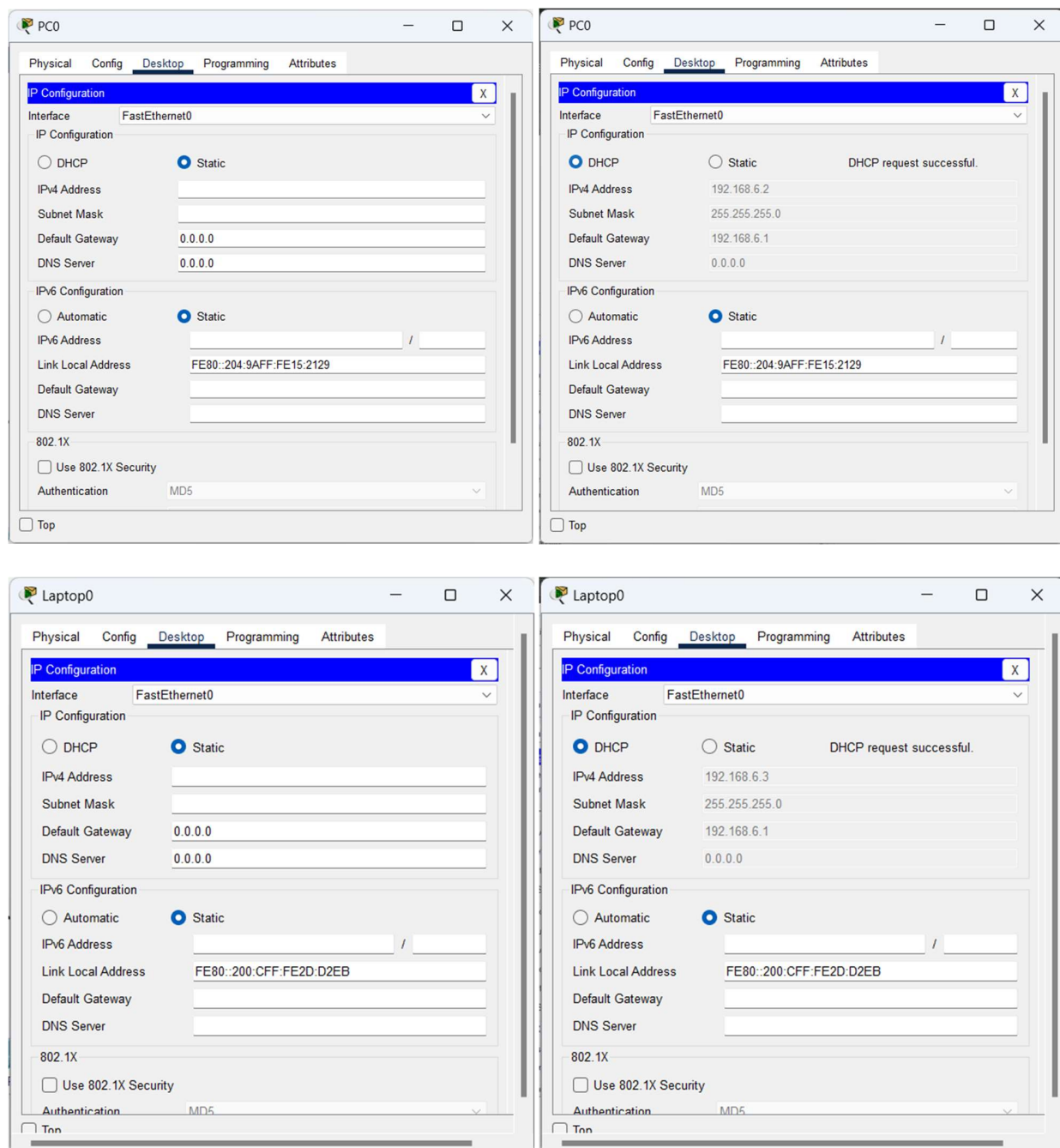
```


Router(dhcp-config)#
Router(dhcp-config)#default-route 192.168.6.1
Router(dhcp-config)#network 192.168.6.2 255.255.255.0
Router(dhcp-config)#

```

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Step 5: Open any device and go to IP configuration and DHCP instead of Static to configure ip address dynamically.



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Conclusion:

Through this experiment, I learned the importance of DHCP (Dynamic Host Configuration Protocol) to configure ip address dynamically to overcome disadvantages of RARP and BOOTP protocol. Using DHCP we can reduce wastage of IP addresses.