Practical-10 (a)

Aim:

Inter networking with routers in CPT simulator

Design and configure as simple internetworking using a router.

In this network, a router and 2PCs are used. Computers are connected with routers using a copper stright through cable.

Procedure:

Step 1: (configure Router 1):

1. Select the router and OPEN CLI

2. Press Enter to start configuring Router.

3. Type enable to activate the privledged mode

Step 2 (configuring PCs):

1. Assign IP addresses to every PC in the network

2. Go to desktop and select IP config and IP address

3. Assign the default gateway of PC0 as 192.168.10.1

4. Assign the default gateway of PC1 as 192.168.20.1
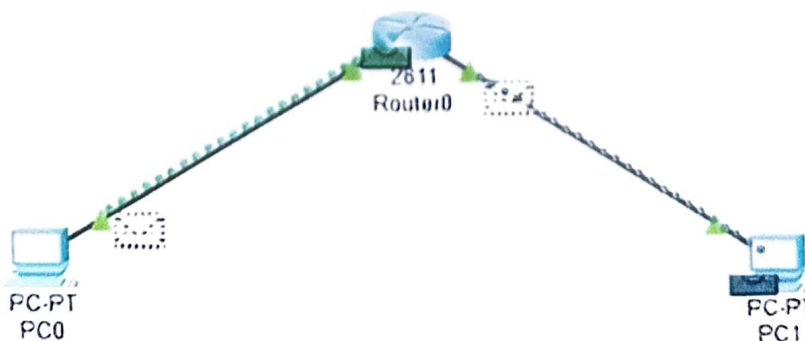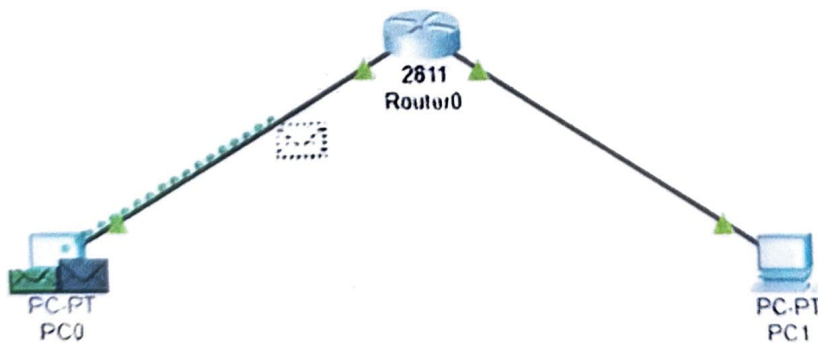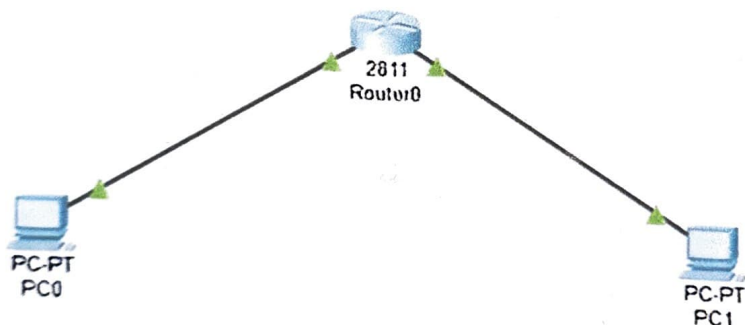
Step 3 (connecting PCs with Router):

1. Connect FastEthernet0 port of PC0 with Fast Ethernet 0/0 port of R1 using copper cable

2. Similarly do the same for port of PC1

Router Configure Table

Device Name	IP address FastEth 0/0	subnet mask	IP address Eth 0/1	subnet mask
Router 1	192.168.10.1	255.255.255.0	192.168.20.1	255.255.255

PC configuration Table:

Device name	IP address	Subnet Mask	Gateway
PC0	192.168.10.2	255.255.255.0	192.168.10.1
PC1	192.168.20.2	255.255.255.0	192.168.20.1

2811
Router0

PC-PT
PC0

PC-PT
PC1

2811
Router0

PC-PT
PC0

PC-PT
PC1

2811
Router0

PC-PT
PC0

PC-PT
PC1

Practical - 10

Aim:

Design a configure internetwork using wireless router, DHCP server and internet cloud

Part 1: Build a simple network in the logical Topology workspace

Step 1: Lauch Packet Tracer

Step 2: Build the topology.

a. Add network devices to workspace

b. Change display names of the network devices

c. Add the physical cabling between devices on the workplaces.

Part 2: Configure the network devices.

Step 1: Configure the wireless router.

a. Create the wireless network on the wireless router. Configure the internet connection on the wireless router, click - set tab in the wireless GUI

b. Click on the save settings tab

Step 2: Configure the laptop

    a. Configure the laptop to access the wireless network.

    b. Click on the Desktop tab at the top and select the pc wireless icon.

Step 3: Configure the PC

    a. Configure the PC for the wired network.

Step 4: Configure the Internet cloud.

    a. Install module of necessary

    b. Identify the type of provider

    c. Identify the type of from & to ports.

Step 5: Configure the cisco.com server.

a. Configure the Cisco server as a DHCP server

b. Configure the cisco.com server as a DNS server to provide domain name to IP v4 address resolution.

c. Configure the cisco.com server Global settings

d. Configure the cisco.com server Fast Ethernet(s) Interface settings.
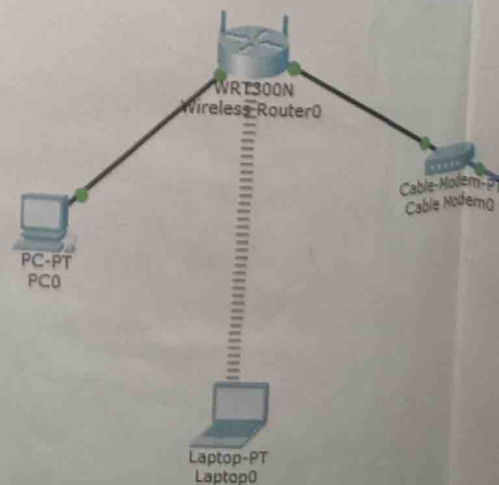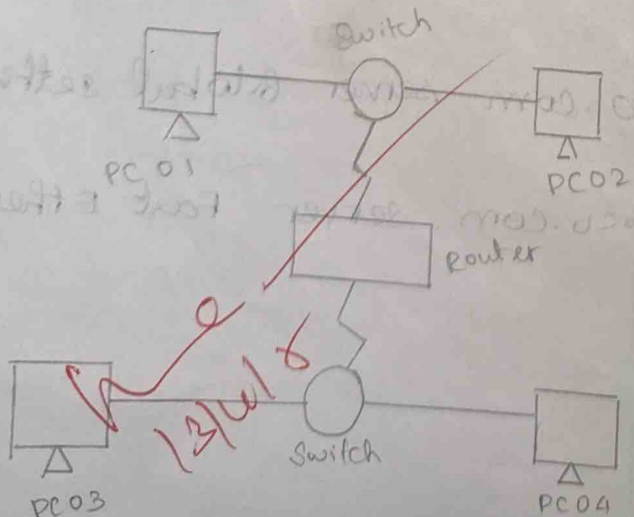
Part 3: Verify Connectivity:

Step 1: Refresh the IR4 settings on the PC

    a. verify that the PC is receiving IPV4 configuration information from DHCP.

    b. Test connectivity to cisco.com server from the PC.

Student Observation:

1. Key features of configuring a wireless router and DHCP server

Ans:
- wireless Router Configuration.
- DHCP server configuration.

2. Significance of DHCP in internetworking.
- Eliminates manuals configuration
- Prevents IP address conflicts
- Enables Scability & Mobility.

3. Design of Lab inter-network

Switch

PC 01

PC 02

Router

PC 03

Switch

PC 04

WRT300N
Wireless Router0

Cable-Modem-P
Cable Modem0

PC-PT
PC0

Laptop-PT
Laptop0

Result: Thus the internetworking was performed successfully.