NETWORKING ASSIGNMENT-5

Packet Tracer - Create a Simple Network

Objectives:

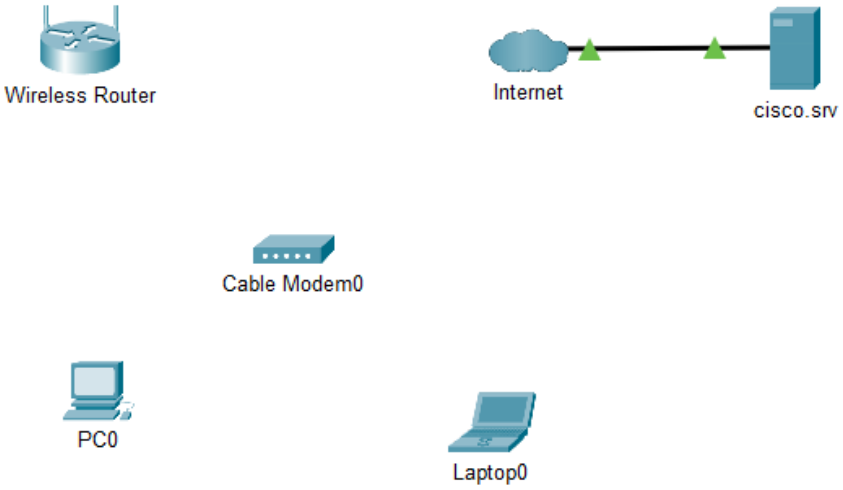
In this activity, you will build a simple network in Packet Tracer in the Logical Workspace.

Part 1: Build a Simple Network

Step 1: Add Network Devices to the Workspace

In **Cisco Packet Tracer**, the following devices will be added to the workspace:

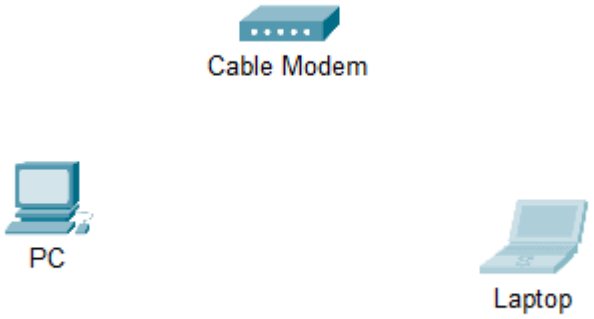
1. **PC** (End Devices > End Devices > PC)
2. **Laptop** (End Devices > End Devices > Laptop)
3. **Cable Modem** (Network Devices > WAN Emulation > Cable Modem)
4. **Wireless Router** (Network Devices > Routers > Linksys Router or another wireless router)
5. **Internet Cloud** (Network Devices > WAN Emulation > Cloud)



Step 2: Change Display Names of the Devices

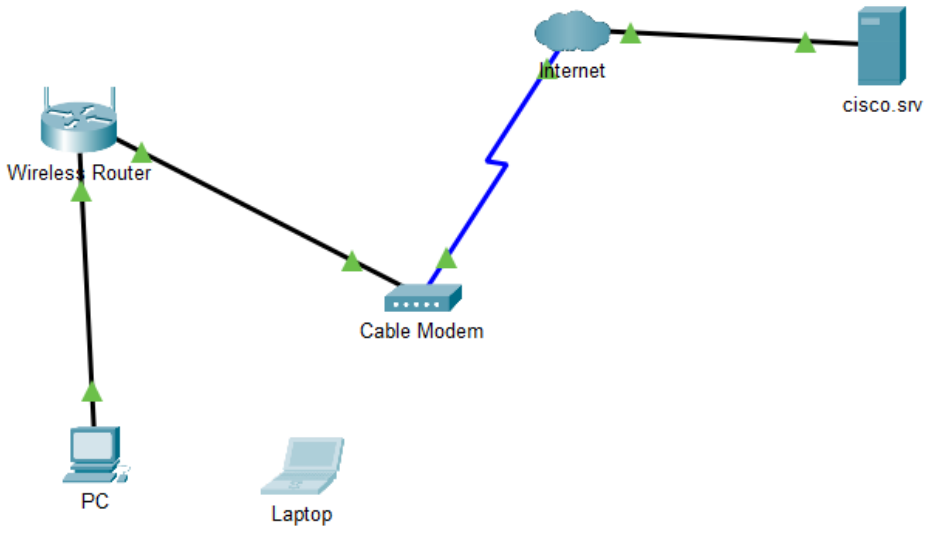
After adding the devices to the workspace:

1. Click on each device (PC, Laptop, Cable Modem).
2. In the **Config** tab, change the device name to "PC," "Laptop," and "Cable Modem."



Step 3: Connect the Devices Using Cables

1. **PC to Wireless Router**:
   - Use a **Copper Straight-Through Cable** to connect **PC's FastEthernet0** to **Wireless Router's Ethernet 1**.
2. **Wireless Router to Cable Modem**:
   - Use a **Copper Straight-Through Cable** to connect **Wireless Router's Internet (WAN) port** to **Cable Modem's Port 1**.
3. **Cable Modem to Internet Cloud**:
   - Use a **Coaxial Cable** to connect **Cable Modem's Port 0** to **Internet Cloud's Coaxial 7**.



Part 2: Configure the End Devices and Verify Connectivity

Step 1: Configure the PC

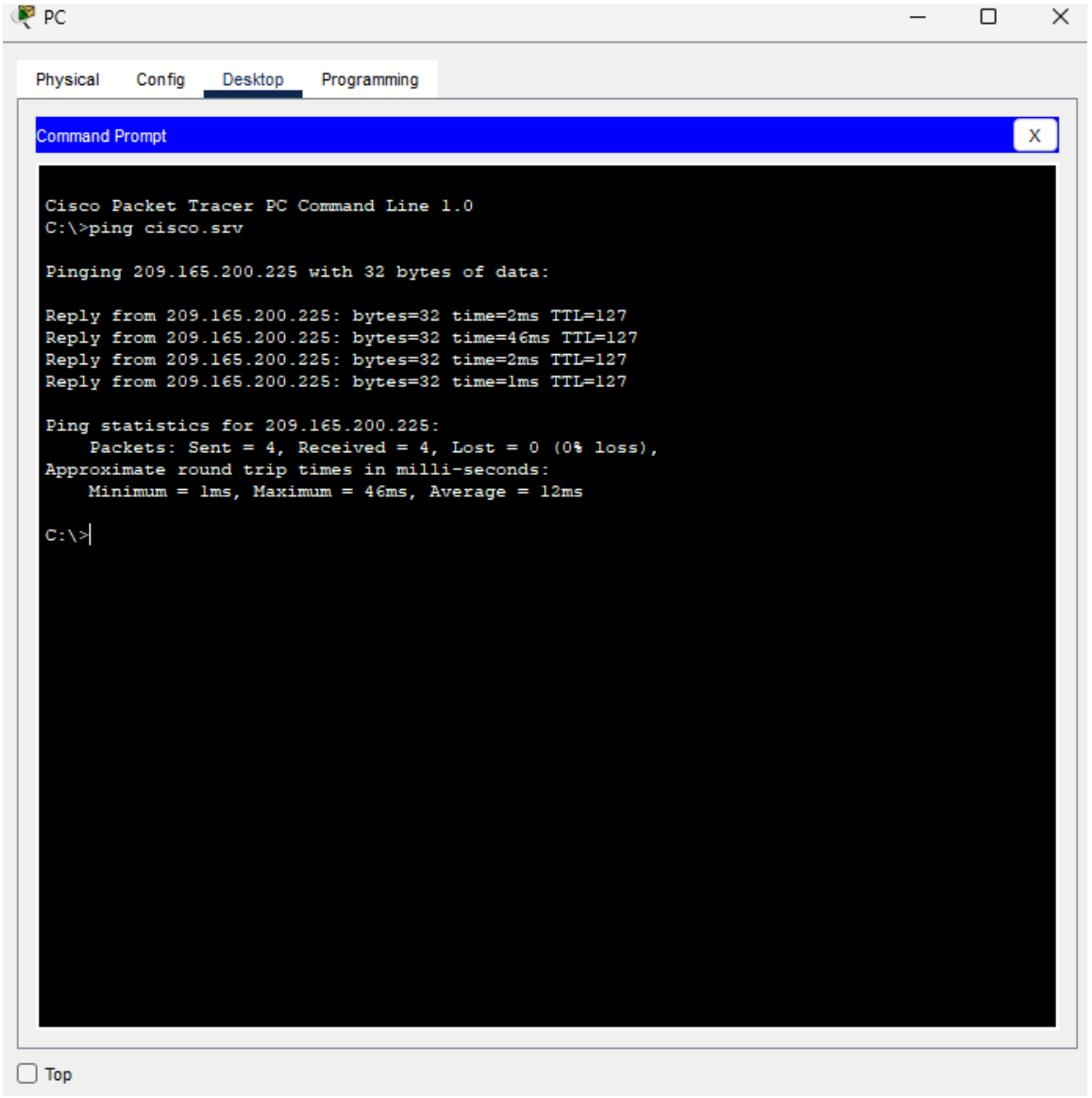
1. **Configure IP Address via DHCP**:
   - Click on the **PC**, go to the **Desktop tab** and select **IP Configuration**.

- Set **DHCP** to allow the PC to receive an IP address automatically from the Wireless Router.

2. **Verify the IP Address**:
   - After the DHCP process, the PC should receive an IP address in the **192.168.0.x** range (e.g., 192.168.0.2).
3. **Ping Test**:
   - Open the **Command Prompt** from the **Desktop tab** and type:

     ```
     ping cisco.srv
     ```

   - Verify that the PC receives a reply, confirming network connectivity.

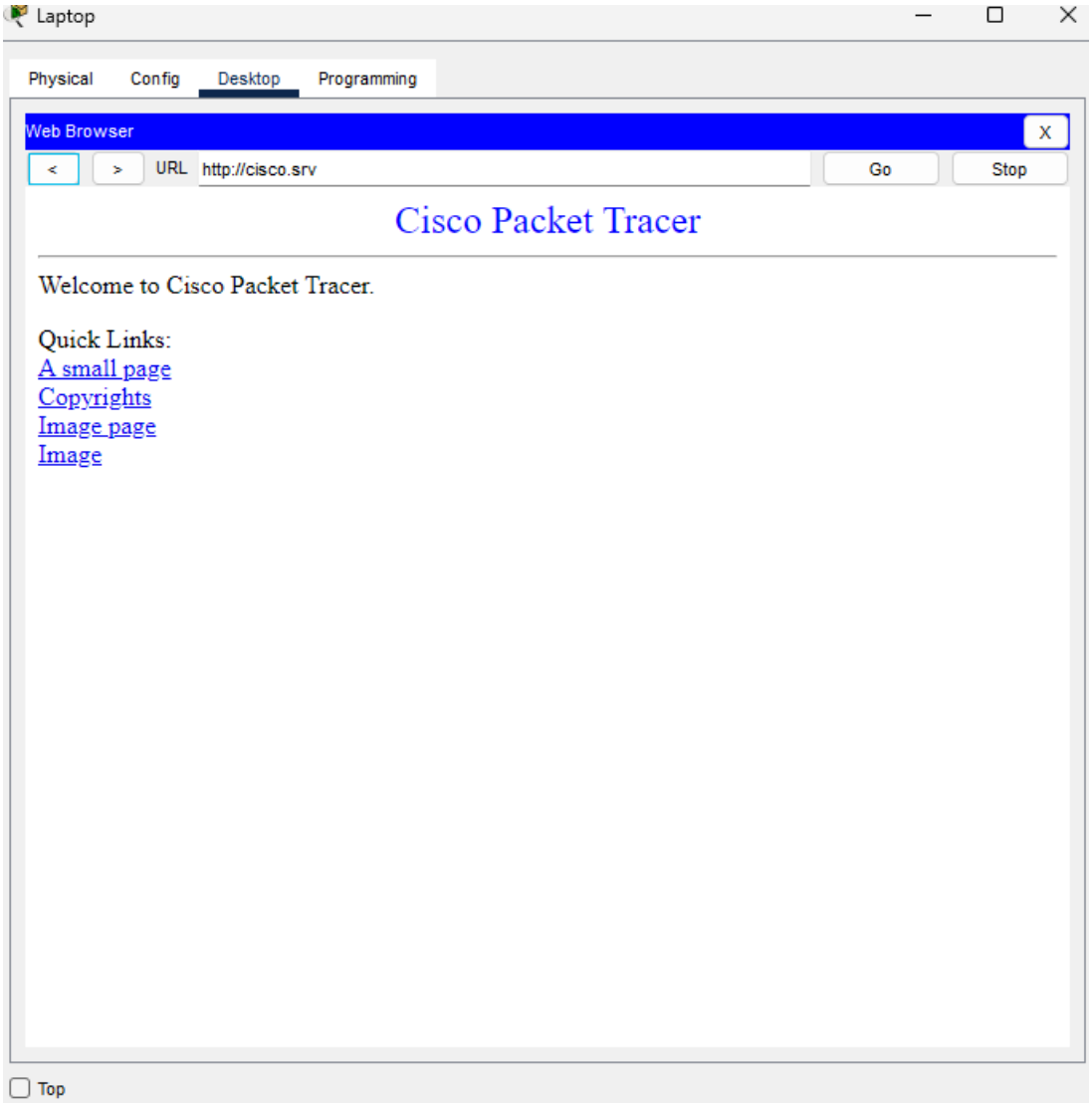


Step 2: Configure the Laptop

1. **Install Wireless Network Interface Card**:
   - Click on the **Laptop**, go to the **Physical tab**.
   - Power off the **Laptop**, remove the **Ethernet module**, and install the **Wireless WPC300N module** from the **Modules pane**.
2. **Connect to the Wireless Network**:
   - Power on the **Laptop** and go to the **Desktop tab**.
   - Click on **PC Wireless**, then select **Connect**.

- After a short delay, the wireless network named **HomeNetwork** should appear. Select it and click **Connect**.

3. **Verify Connectivity**:
   - Open the **Web Browser** from the **Desktop tab** and navigate to **cisco.srv**.
   - The page should load, confirming the Laptop's successful wireless connection.



Reflection and IP Configuration

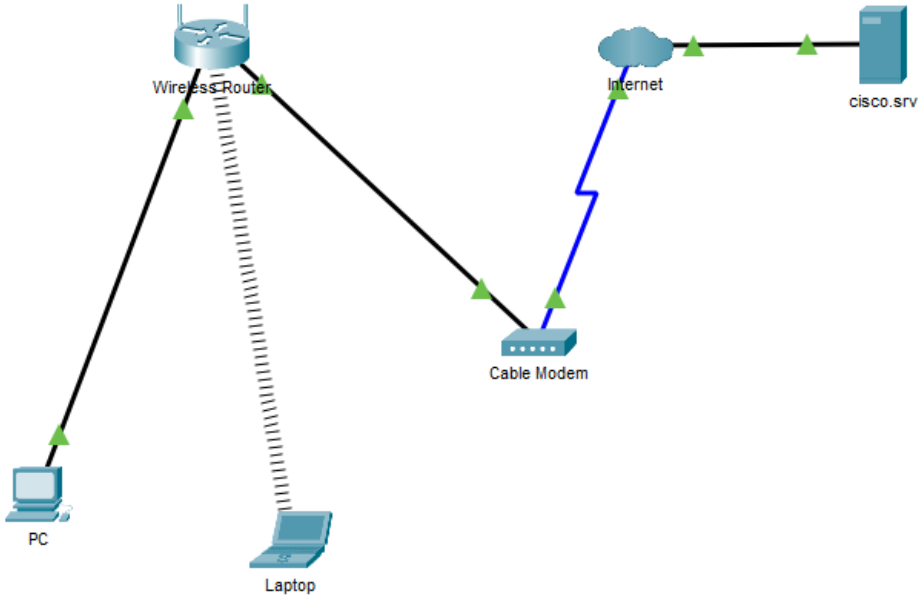
The following table outlines the IP addressing configuration for both the **PC** and **Laptop**:

Device	IPv4 Address	Subnet Mask	Default Gateway
PC	192.168.0.3	255.255.255.0	192.168.0.1
Laptop	192.168.0.2	255.255.255.0	192.168.0.1

Final Look:

Your network setup should now look like this:

1. **PC** and **Laptop** connected to the **Wireless Router** (via Ethernet and Wireless).
2. **Wireless Router** connected to **Cable Modem**.
3. **Cable Modem** connected to the **Internet Cloud**.



Conclusion:

In this activity, we created a simple network consisting of a **PC**, **Laptop**, **Wireless Router**, **Cable Modem**, and **Internet** connection. The devices were

configured using **DHCP** to automatically obtain IP addresses, and connectivity was verified by **pinging** the **cisco.srv**. This setup allowed both wired and wireless devices to communicate with the network and access the Internet.

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