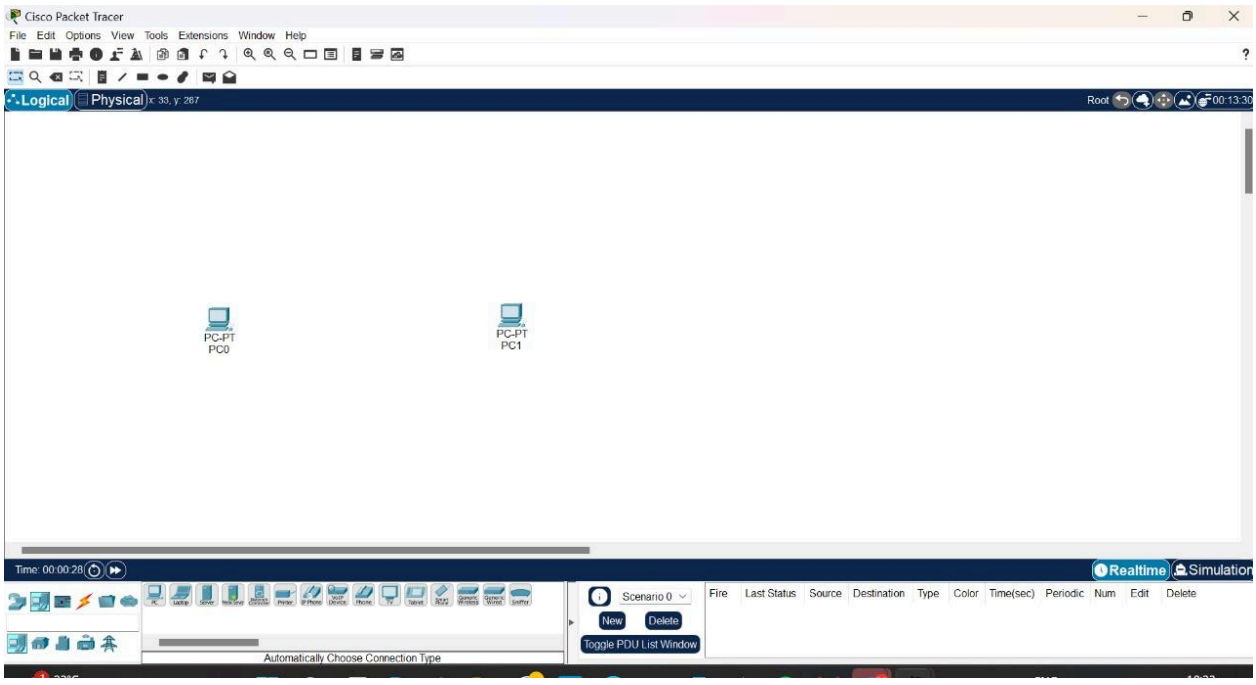
DATE:30-12-2024

NPS LAB-2

NAME:PRANEETHA.M
ROLL NO:2320030114
SEC-1

Step 1: Launch Cisco Packet Tracer:

Double-click the Cisco Packet Tracer icon on your desktop or find it in your applications list to open the program.



Step 2: Create a Simple Network Topology

1. Add Devices:

- **Routers and Switches**: Drag and drop a router and a switch from the device list onto the workspace.
- **PCs**: Drag and drop two PCs onto the workspace.

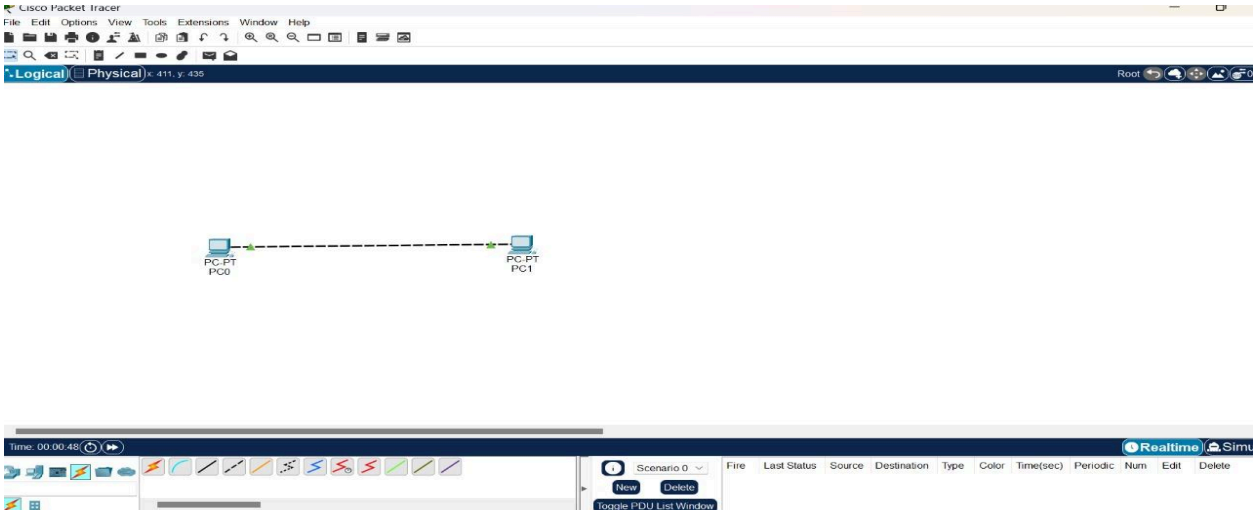
2. Connect Devices:

- Use the **Connection** tool to connect the devices:

- Connect one PC to the switch using a copper straight-through cable.

-Connect the switch to the router using another copper straight-through cable.

- Connect the second PC to the switch using a copper straight-through cable.



Step 3: Configure Devices

1. Configure the Router:

- Click on the router.
- Go to the **Config** tab.
- Assign IP addresses to the router interfaces.
- Example:

Interface G0/0: IP address 192.168.1.1, Subnet Mask 255.255.255.0

Interface G0/1: IP address 192.168.2.1, Subnet Mask 255.255.255.0

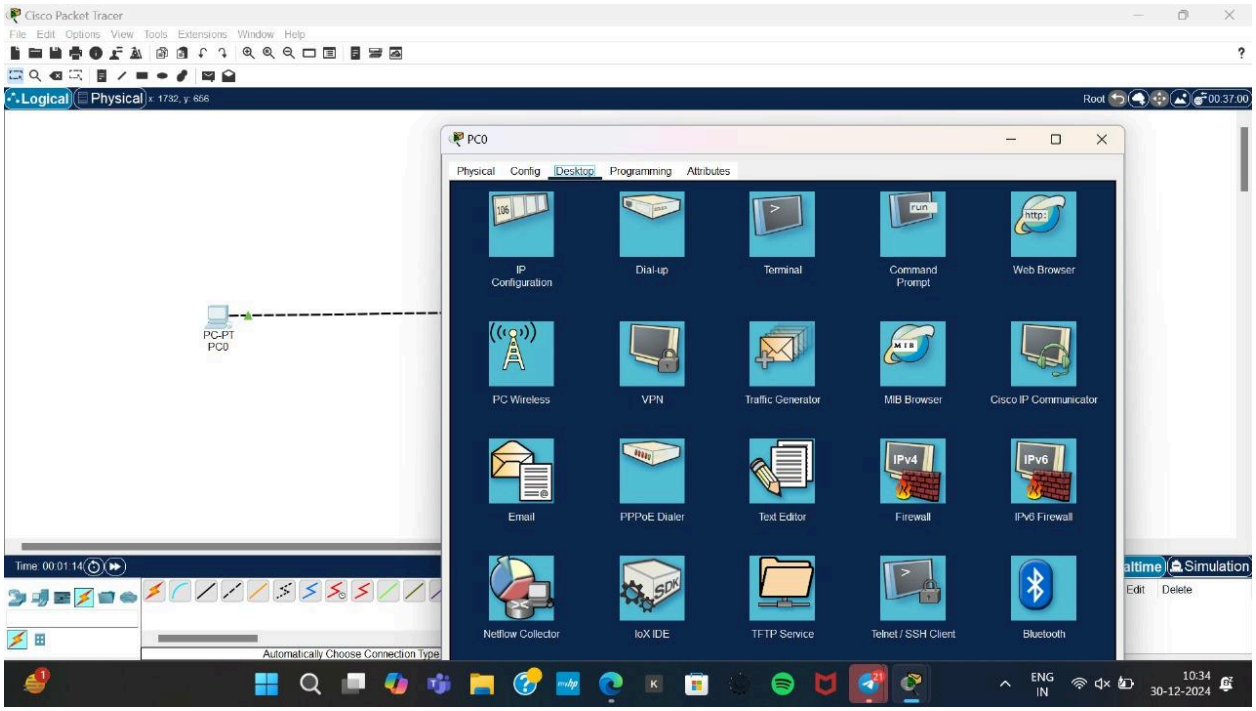
2. Configure the PCs:

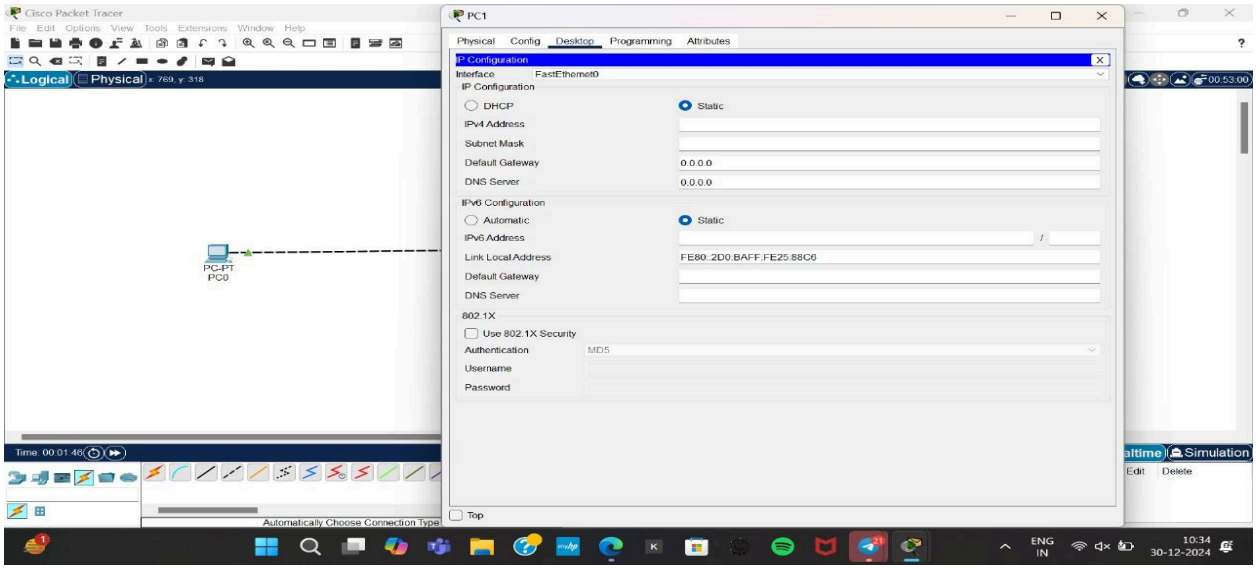
- Click on each PC.
- Go to the **Desktop** tab and then **IP Configuration**.

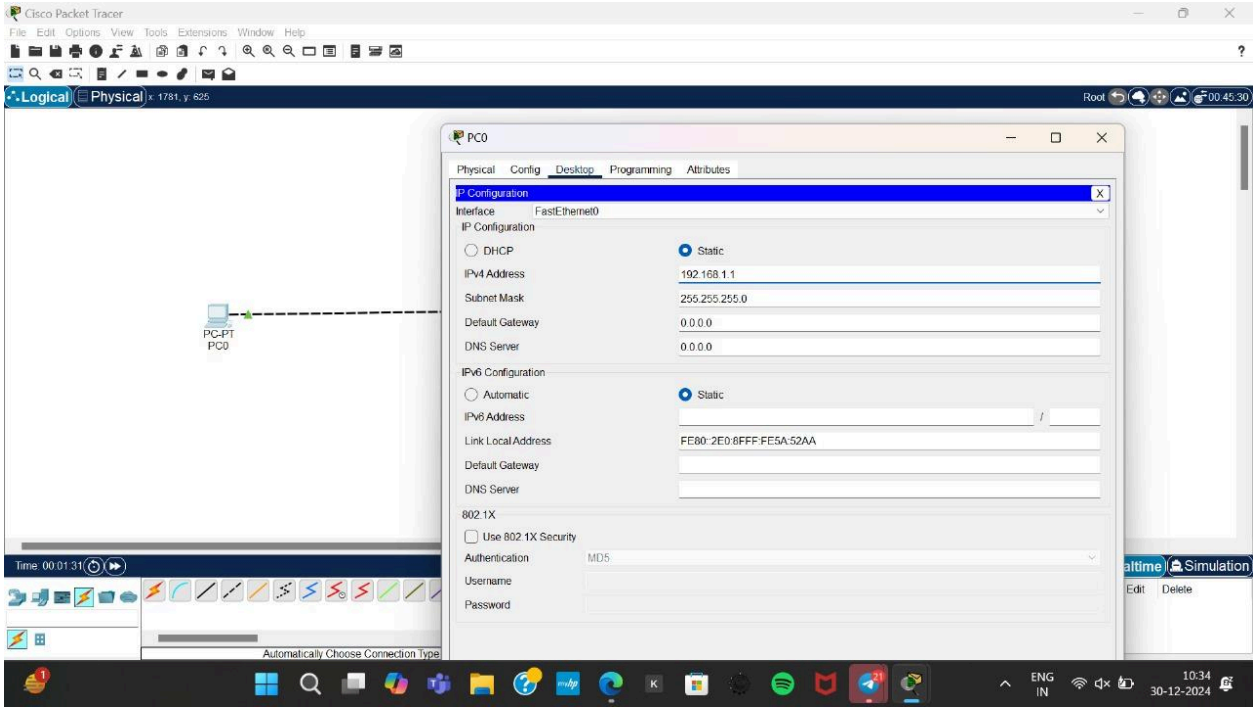
- Assign IP addresses to each PC.
- Example:

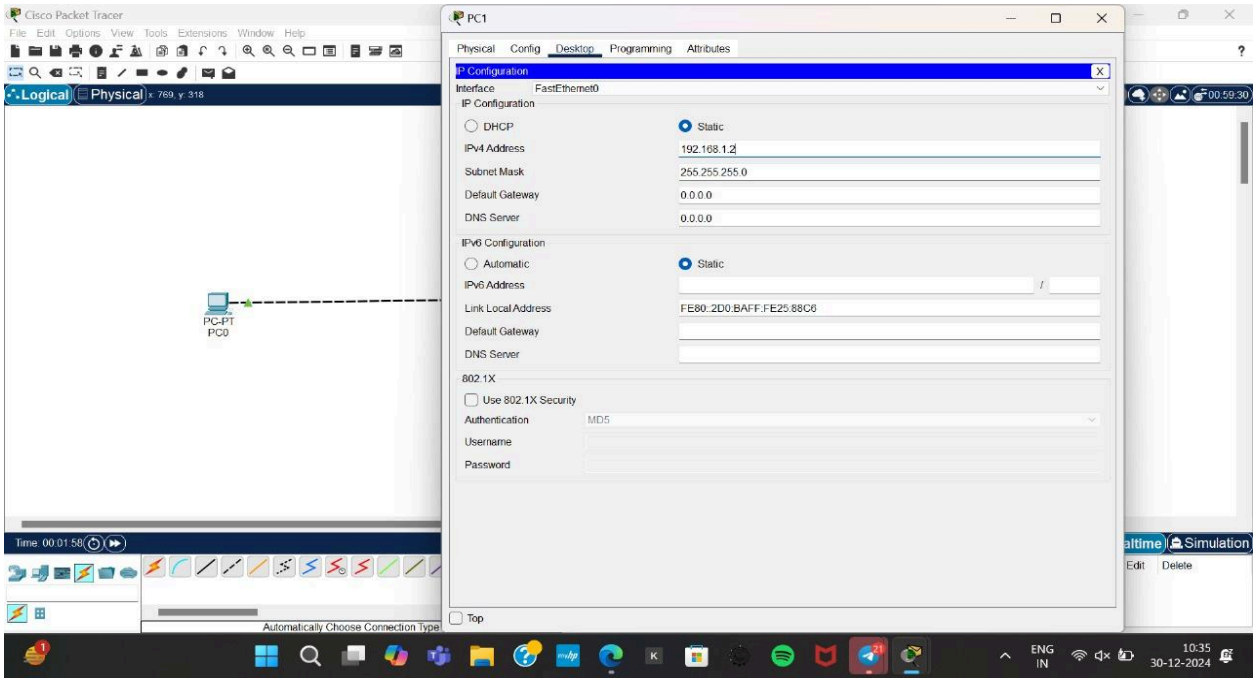
PC0: IP address 192.168.1.2, Subnet Mask 255.255.255.0, Default Gateway 192.168.1.1

PC1: IP address 192.168.2.2, Subnet Mask 255.255.255.0, Default Gateway 192.168.2.1




Cisco Packet Tracer
PC1
Physical Config Desktop Programming Attributes
IP Configuration
Interface FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
Subnet Mask
Default Gateway 0.0.0.0
DNS Server 0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
Link Local Address FE80::2D0:BAFF:FE25:88C6
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication MD5
Username
Password
Top
Logical Physical
PC-PT PC0
Time: 00:01:46
Automatically Choose Connection Type
Simulation
Edit Delete
ENG IN
10:34 30-12-2024


Cisco Packet Tracer
PC0
Physical Config Desktop Programming Attributes
IP Configuration
Interface FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address 192.168.1.1
Subnet Mask 255.255.255.0
Default Gateway 0.0.0.0
DNS Server 0.0.0.0
IPv6 Configuration
Automatic
Static
IPv6 Address
Link Local Address FE80::2E0:8FFF:FE5A:52AA
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication MD5
Username
Password
Logical Physical
Root
PC-PT PC0
Time: 00:01:31
Automatically Choose Connection Type
Simulation
Edit Delete
ENG IN
10:34 30-12-2024

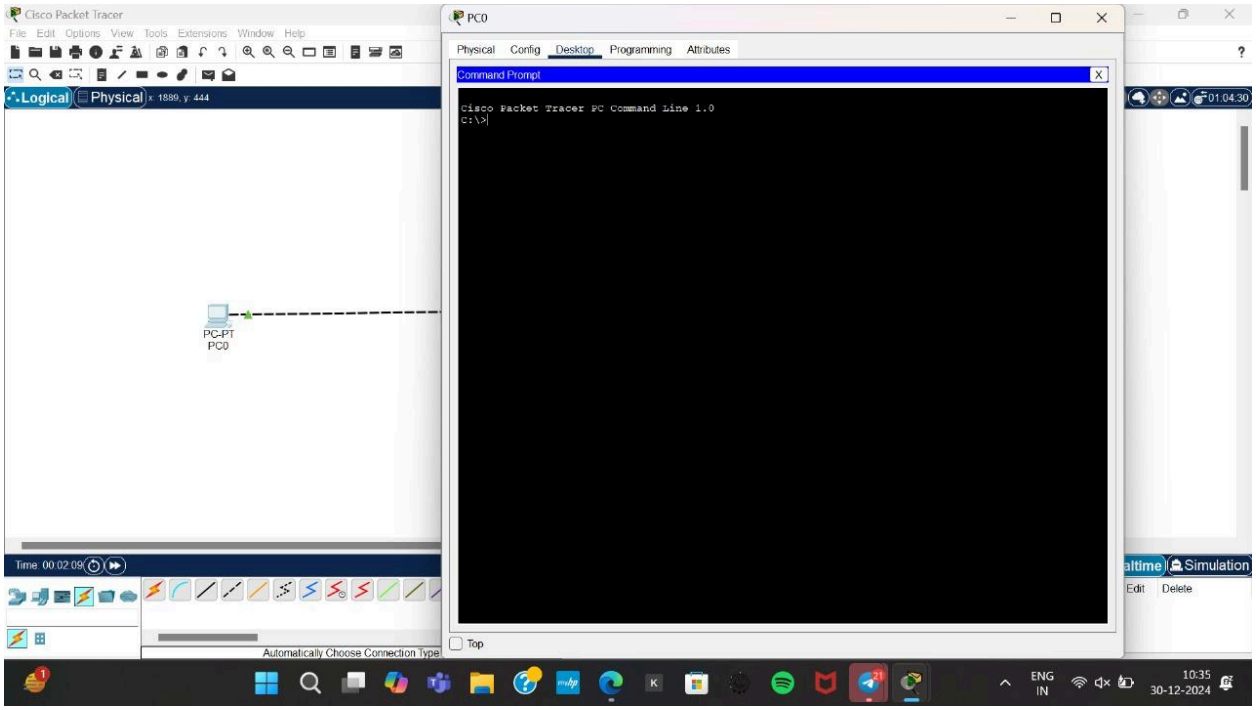


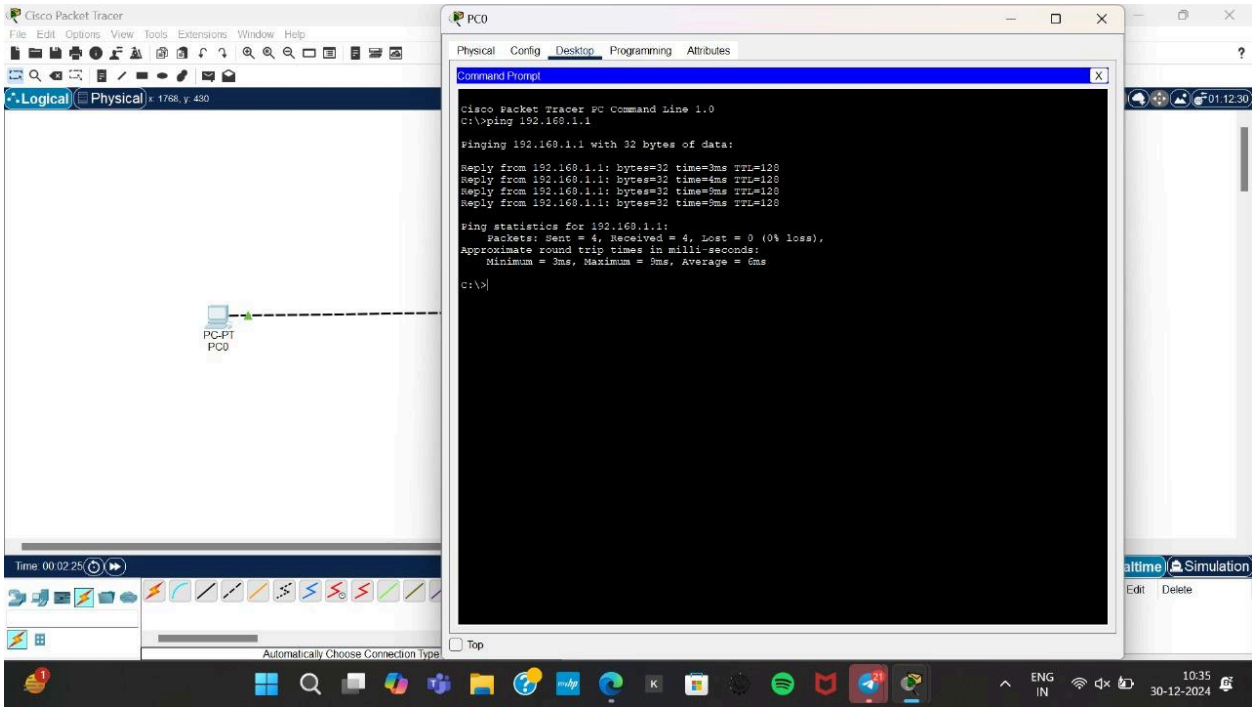
Step 4: Execute Networking Commands

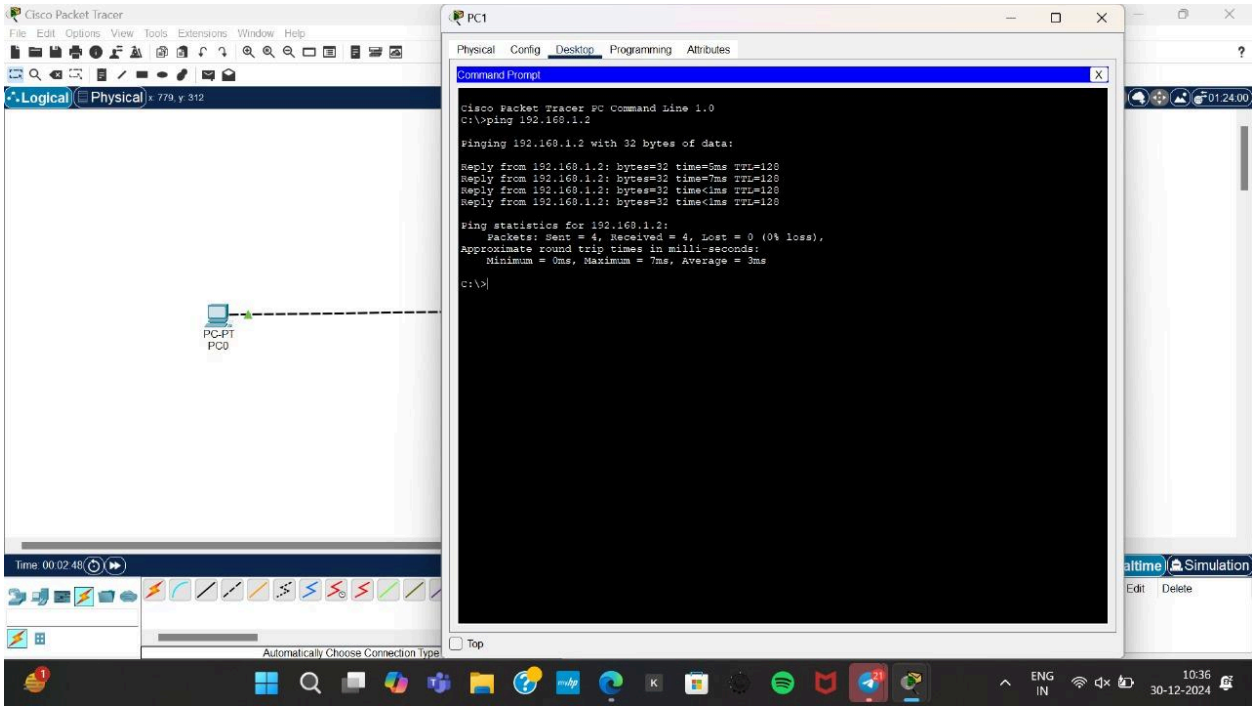
1. **Open Command Prompt on a PC0**:
    - Click on a PC0.
    - Go to the **Desktop** tab and open the **Command Prompt**.

1. ipconfig:

This command displays all current TCP/IP network configuration values and refreshes DHCP and DNS settings.


Cisco Packet Tracer
PC0
Physical
Config
Desktop
Programming
Attributes
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>
Logical
Physical
PC-PT
PC0
Top
Simulation
Edit
Delete
ENG
IN
10:35
30-12-2024


Cisco Packet Tracer
PC0
Physical
Config
Desktop
Programming
Attributes
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1
Pinging 192.168.1.1 with 32 bytes of data:
Reply from 192.168.1.1: bytes=32 time=3ms TTL=128
Reply from 192.168.1.1: bytes=32 time=4ms TTL=128
Reply from 192.168.1.1: bytes=32 time=9ms TTL=128
Reply from 192.168.1.1: bytes=32 time=9ms TTL=128
Ping statistics for 192.168.1.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 3ms, Maximum = 9ms, Average = 6ms
C:\>
Logical
Physical
PC-PT
PC0
Top
Simulation
Edit
Delete
ENG
IN
10:35
30-12-2024


Cisco Packet Tracer
File Edit Options View Tools Extensions Window Help
Logical Physical x 779, y 312
PC-PT
PC0
Time: 00:02:48
Automatically Choose Connection Type
PC1
Physical Config Desktop Programming Attributes
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.2
Pinging 192.168.1.2 with 32 bytes of data:
Reply from 192.168.1.2: bytes=32 time=5ms TTL=128
Reply from 192.168.1.2: bytes=32 time=7ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Ping statistics for 192.168.1.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 7ms, Average = 3ms
C:\>
Top
01:24:00
altime
Simulation
Edit
Delete
ENG
IN
10:36
30-12-2024