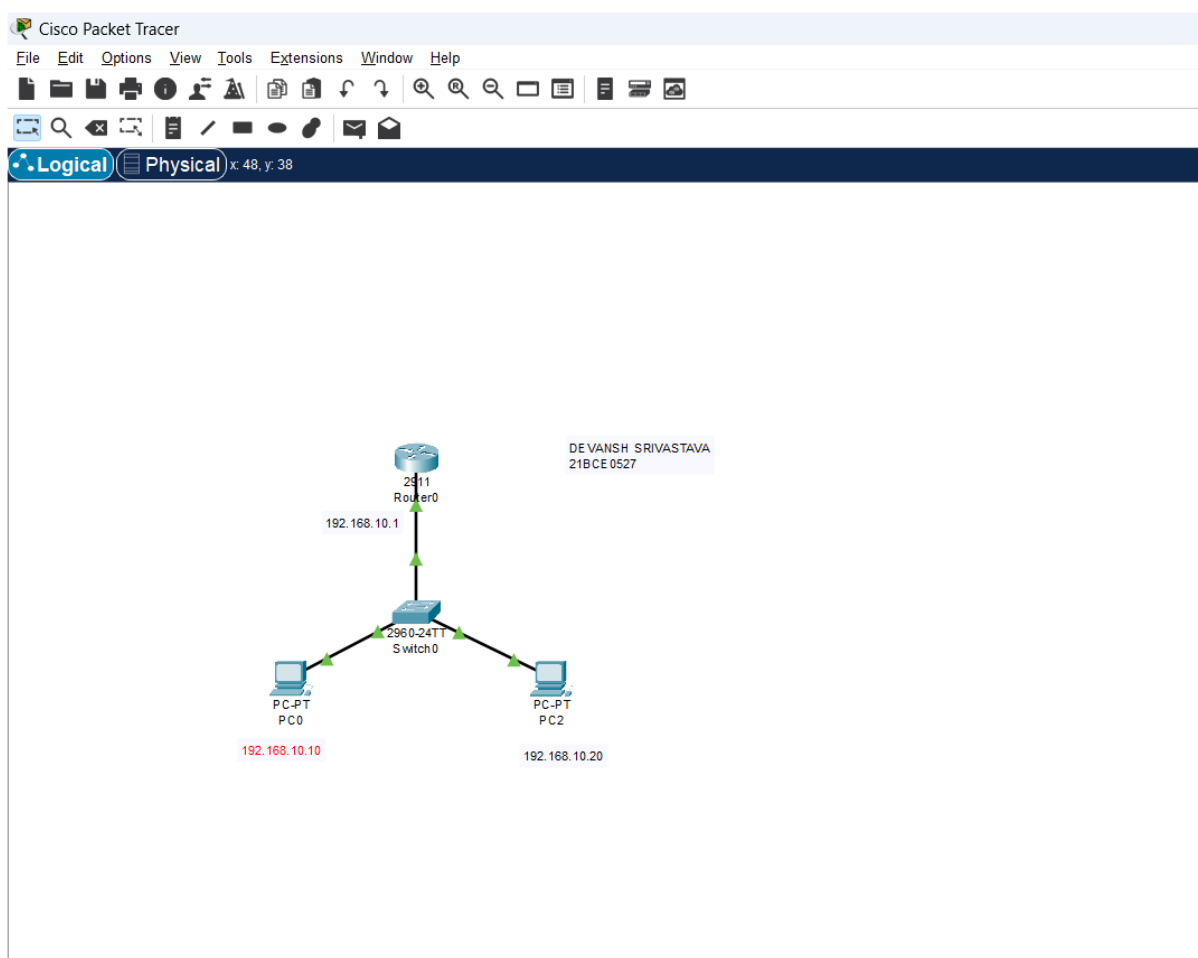Name: Devansh Srivastava

Registration No: 21BCE0527

Network Training Programme

Module 5

Q3. Manually configure static IPs on the client devices(like Pc or your mobile phone) and verify connectivity using ping.

Network Diagram:

Static IP and default gateway Configuration:

PC2 — Desktop — IP Configuration

| Interface | FastEthernet0 |

IP Configuration

○ DHCP   ● Static

IPv4 Address	192.168.10.20
Subnet Mask	255.255.255.0
Default Gateway	192.168.10.1
DNS Server	0.0.0.0

IPv6 Configuration

○ Automatic   ● Static

IPv6 Address	/
Link Local Address	FE80::201:96FF:FE7E:7114
Default Gateway	
DNS Server	

802.1X

☐ Use 802.1X Security

Authentication	MD5
Username	
Password	

ROUTER Configuration using CLI command:

```
Router#
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface GigabitEthernet0/0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#no shutdown

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

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

Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#
```
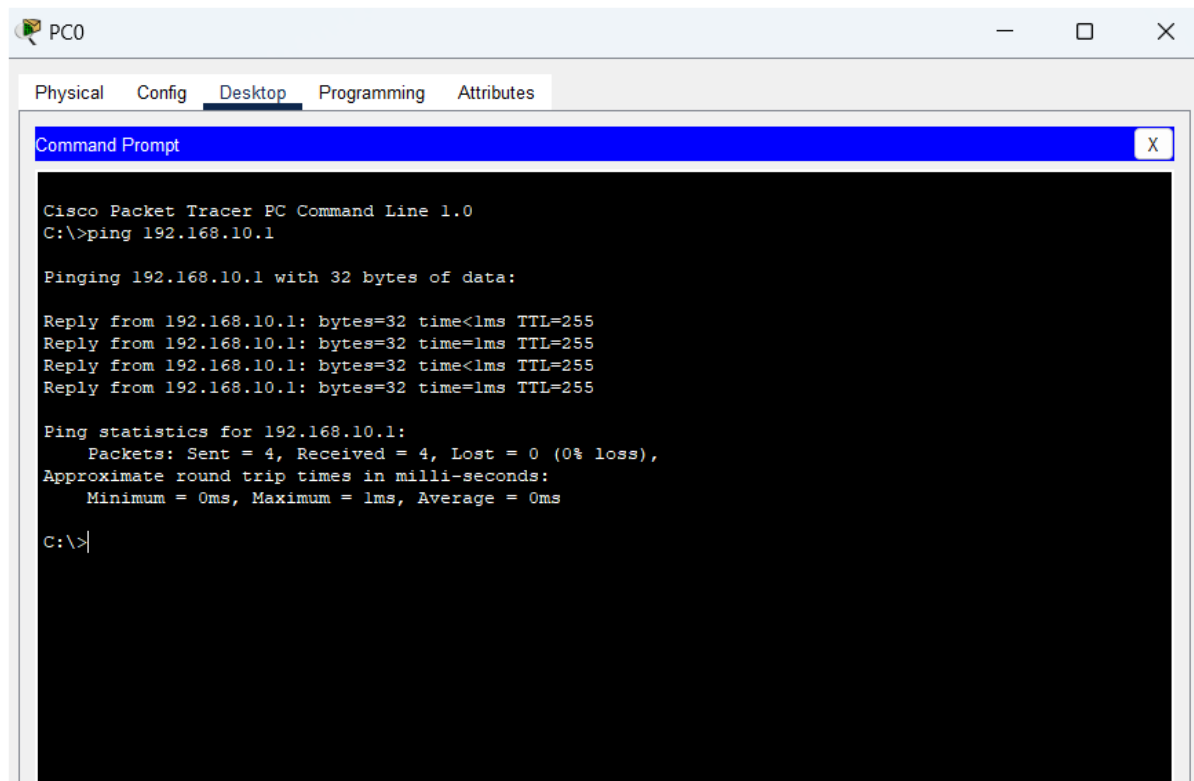
Copy   Paste

☐ Top

Checking connectivity using Ping command

PC0 — □ ✕

Physical   Config   Desktop   Programming   Attributes

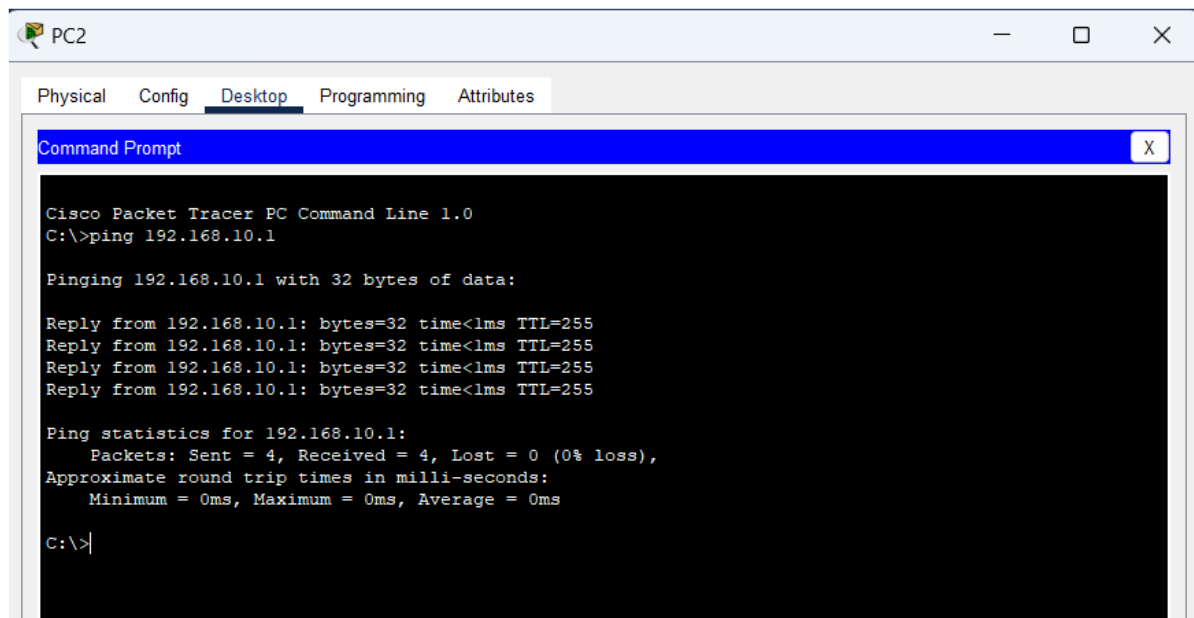Command Prompt   X

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.1

Pinging 192.168.10.1 with 32 bytes of data:

Reply from 192.168.10.1: bytes=32 time<1ms TTL=255
Reply from 192.168.10.1: bytes=32 time=1ms TTL=255
Reply from 192.168.10.1: bytes=32 time<1ms TTL=255
Reply from 192.168.10.1: bytes=32 time=1ms TTL=255

Ping statistics for 192.168.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

PC2 — □ ✕

Physical   Config   Desktop   Programming   Attributes

Command Prompt   X

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.10.1

Pinging 192.168.10.1 with 32 bytes of data:

Reply from 192.168.10.1: bytes=32 time<1ms TTL=255
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Ping statistics for 192.168.10.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Key Learning:

- Static IPs prevent conflicts caused by dynamic IP changes.

- Ping confirms successful connectivity.