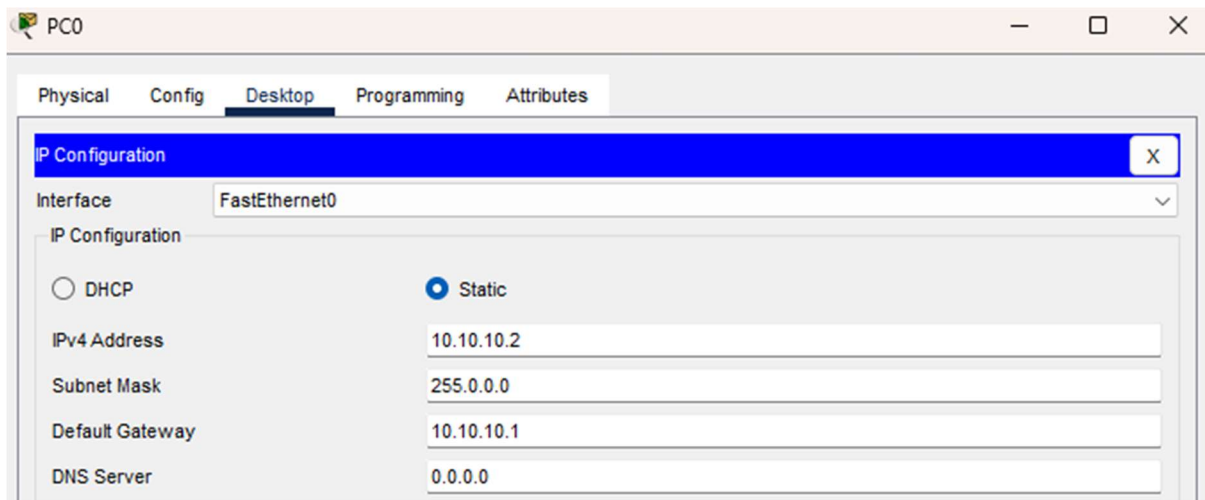
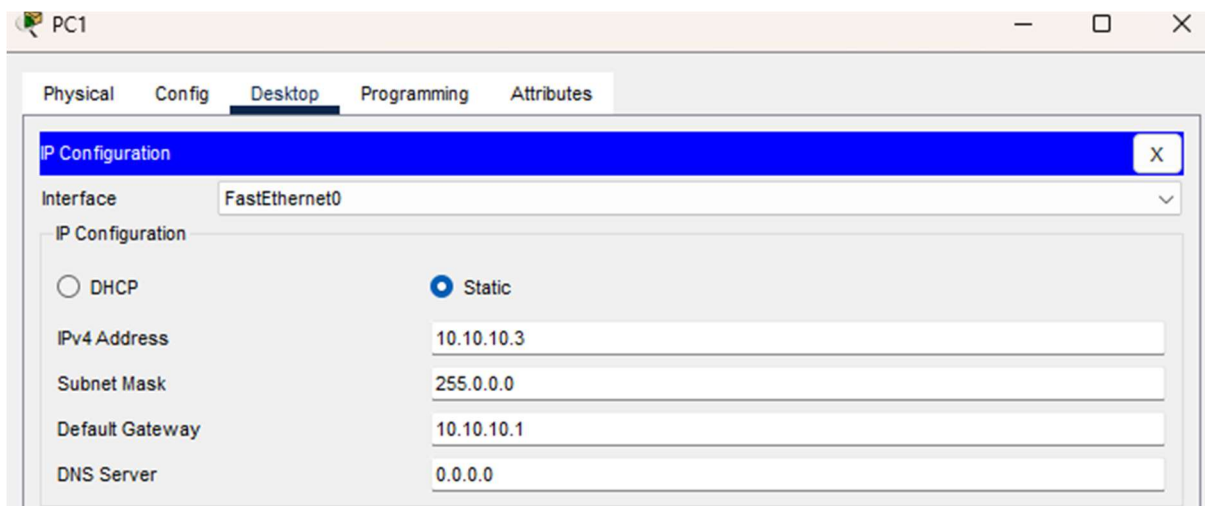


Implementation :-



- **Configuring PC1:**



- **Configuring PC2:**

PC2

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 10.10.10.4

Subnet Mask 255.0.0.0

Default Gateway 10.10.10.1

DNS Server 0.0.0.0

- **Configuring PC3:**

PC3

Physical Config **Desktop** Programming Attributes

IP Configuration [X]

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

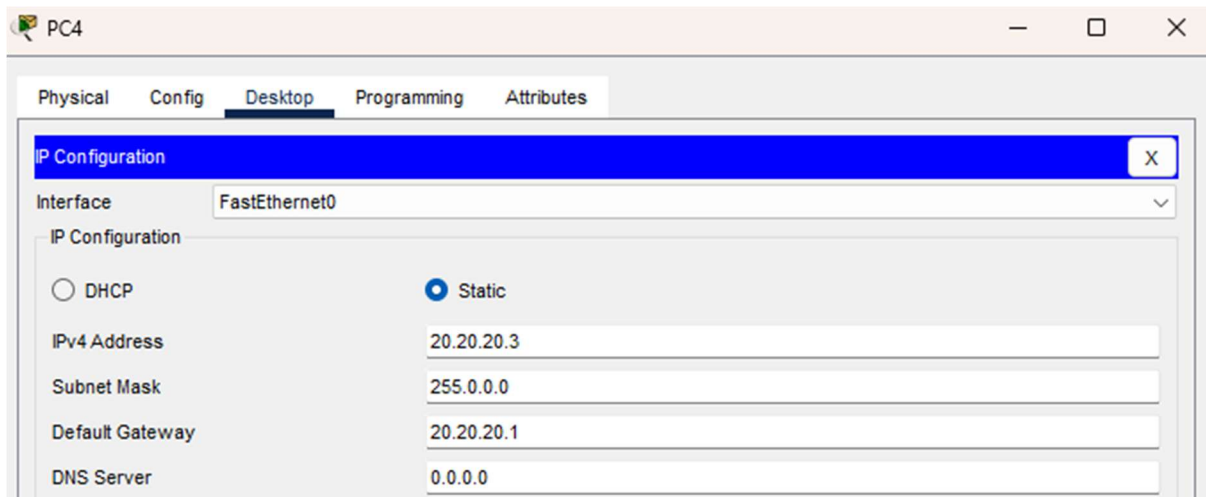
IPv4 Address 20.20.20.2

Subnet Mask 255.0.0.0

Default Gateway 20.20.20.1

DNS Server 0.0.0.0

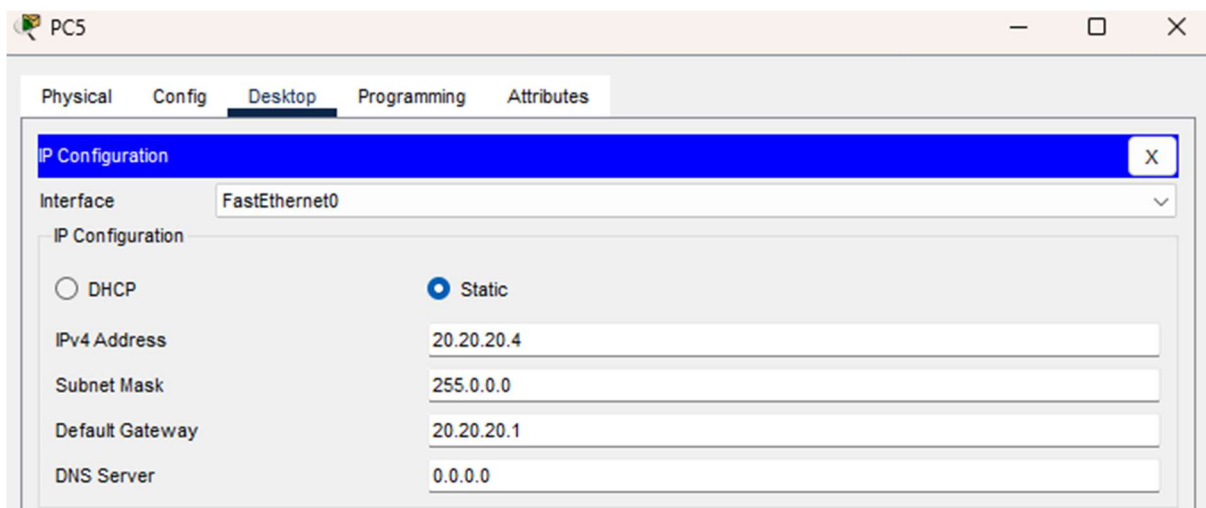
- **Configuring PC4:**



The screenshot shows the configuration window for PC4. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for the IP configuration method. The fields are filled with the following values:

Field	Value
Interface	FastEthernet0
IP Configuration	Static
IPv4 Address	20.20.20.3
Subnet Mask	255.0.0.0
Default Gateway	20.20.20.1
DNS Server	0.0.0.0

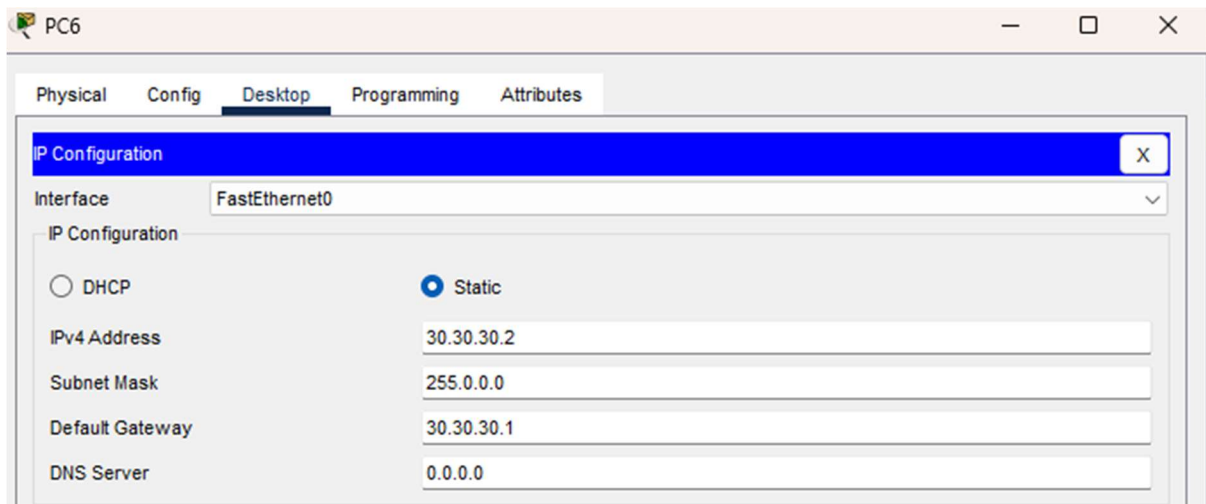
- **Configuring PC5:**



The screenshot shows the configuration window for PC5. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for the IP configuration method. The fields are filled with the following values:

Field	Value
Interface	FastEthernet0
IP Configuration	Static
IPv4 Address	20.20.20.4
Subnet Mask	255.0.0.0
Default Gateway	20.20.20.1
DNS Server	0.0.0.0

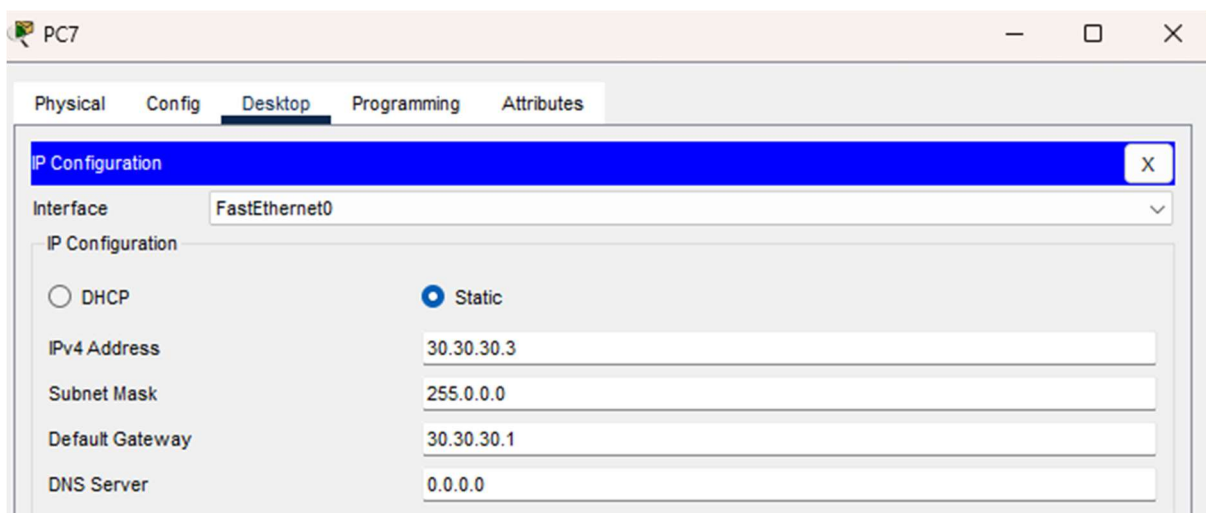
- **Configuring PC6:**



The screenshot shows the configuration window for PC6. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for the IP configuration type. The fields are filled with the following values:

Field	Value
Interface	FastEthernet0
IP Configuration	Static
IPv4 Address	30.30.30.2
Subnet Mask	255.0.0.0
Default Gateway	30.30.30.1
DNS Server	0.0.0.0

- **Configuring PC7:**



The screenshot shows the configuration window for PC7. The 'Desktop' tab is selected. The 'IP Configuration' section is expanded, showing the 'FastEthernet0' interface. The 'Static' radio button is selected for the IP configuration type. The fields are filled with the following values:

Field	Value
Interface	FastEthernet0
IP Configuration	Static
IPv4 Address	30.30.30.3
Subnet Mask	255.0.0.0
Default Gateway	30.30.30.1
DNS Server	0.0.0.0

- **Configuring PC8:**

The screenshot shows the 'PC8' configuration window with the 'Desktop' tab selected. The 'IP Configuration' section is active, showing the 'Interface' as 'FastEthernet0'. The 'Static' radio button is selected for IP configuration. The fields are filled with the following values:

Field	Value
IPv4 Address	30.30.30.4
Subnet Mask	255.0.0.0
Default Gateway	30.30.30.1
DNS Server	0.0.0.0

- **Router0 Configuration With PC0,PC1,PC2:**

The screenshot shows the 'Router0' configuration window with the 'Config' tab selected. The 'FastEthernet0/0' interface is selected in the left sidebar. The configuration for this interface is shown on the right:

Field	Value
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	<input checked="" type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto
Duplex	<input type="radio"/> Half Duplex <input checked="" type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto
MAC Address	0040.0B12.9AD3
IP Configuration	
IPv4 Address	10.10.10.1
Subnet Mask	255.0.0.0
Tx Ring Limit	10

- **Router1 Configuration With PC3,PC4,PC5:**

The screenshot shows the configuration window for Router1. The 'Config' tab is selected. On the left, the 'INTERFACE' section is expanded, and 'FastEthernet0/0' is selected. The main area displays the configuration for this interface. The 'Port Status' is 'On'. The 'Bandwidth' is set to '100 Mbps'. The 'Duplex' is set to 'Full Duplex'. The 'MAC Address' is '0010.111D.7179'. The 'IP Configuration' section shows the 'IPv4 Address' as '20.20.20.1' and the 'Subnet Mask' as '255.0.0.0'. The 'Tx Ring Limit' is set to '10'.

FastEthernet0/0	
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	<input checked="" type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto
Duplex	<input type="radio"/> Half Duplex <input checked="" type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto
MAC Address	0010.111D.7179
IP Configuration	
IPv4 Address	20.20.20.1
Subnet Mask	255.0.0.0
Tx Ring Limit	10

- **Router2 Configuration With PC6,PC7,PC8:**

The screenshot shows the configuration window for Router2. The 'Config' tab is selected. On the left, the 'INTERFACE' section is expanded, and 'FastEthernet0/0' is selected. The main area displays the configuration for this interface. The 'Port Status' is 'On'. The 'Bandwidth' is set to '100 Mbps'. The 'Duplex' is set to 'Full Duplex'. The 'MAC Address' is '00E0.F93C.C994'. The 'IP Configuration' section shows the 'IPv4 Address' as '30.30.30.1' and the 'Subnet Mask' as '255.0.0.0'. The 'Tx Ring Limit' is set to '10'.

FastEthernet0/0	
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	<input checked="" type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto
Duplex	<input type="radio"/> Half Duplex <input checked="" type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto
MAC Address	00E0.F93C.C994
IP Configuration	
IPv4 Address	30.30.30.1
Subnet Mask	255.0.0.0
Tx Ring Limit	10

- Router0 Configuration With Router1:

The screenshot shows the configuration window for Router0. The 'Config' tab is selected, and the 'Serial2/0' interface is chosen from the left-hand menu. The interface settings are as follows:

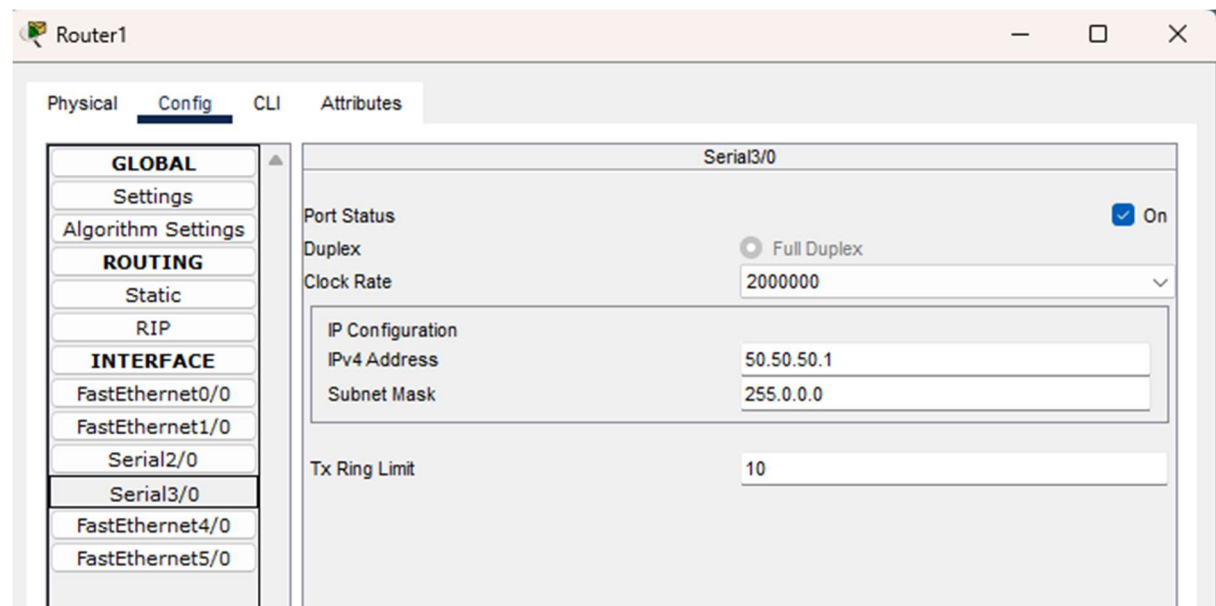
Serial2/0	
Port Status	<input checked="" type="checkbox"/> On
Duplex	<input type="radio"/> Full Duplex
Clock Rate	2000000
IP Configuration	
IPv4 Address	40.40.40.1
Subnet Mask	255.0.0.0
Tx Ring Limit	10

- Router1 Configuration With Router0:

The screenshot shows the configuration window for Router1. The 'Config' tab is selected, and the 'Serial2/0' interface is chosen from the left-hand menu. The interface settings are as follows:

Serial2/0	
Port Status	<input checked="" type="checkbox"/> On
Duplex	<input type="radio"/> Full Duplex
Clock Rate	2000000
IP Configuration	
IPv4 Address	40.40.40.2
Subnet Mask	255.0.0.0
Tx Ring Limit	10

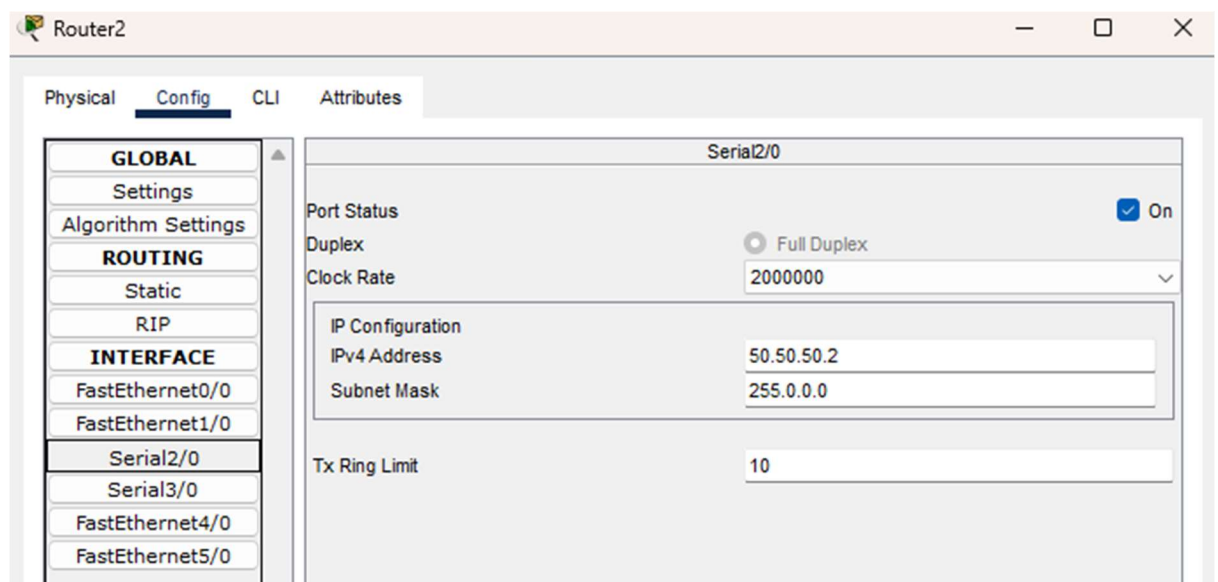
- Router1 Configuration With Router2:



The image shows the configuration window for Router1. The 'Config' tab is selected. On the left, the 'INTERFACE' section is expanded, and 'Serial3/0' is selected. The main area shows the configuration for Serial3/0. The 'Port Status' is 'On'. The 'Duplex' is set to 'Full Duplex'. The 'Clock Rate' is '2000000'. The 'IP Configuration' section shows the 'IPv4 Address' as '50.50.50.1' and the 'Subnet Mask' as '255.0.0.0'. The 'Tx Ring Limit' is '10'.

Serial3/0	
Port Status	<input checked="" type="checkbox"/> On
Duplex	<input type="radio"/> Full Duplex
Clock Rate	2000000
IP Configuration	
IPv4 Address	50.50.50.1
Subnet Mask	255.0.0.0
Tx Ring Limit	10

- Router2 Configuration With Router1:



The image shows the configuration window for Router2. The 'Config' tab is selected. On the left, the 'INTERFACE' section is expanded, and 'Serial2/0' is selected. The main area shows the configuration for Serial2/0. The 'Port Status' is 'On'. The 'Duplex' is set to 'Full Duplex'. The 'Clock Rate' is '2000000'. The 'IP Configuration' section shows the 'IPv4 Address' as '50.50.50.2' and the 'Subnet Mask' as '255.0.0.0'. The 'Tx Ring Limit' is '10'.

Serial2/0	
Port Status	<input checked="" type="checkbox"/> On
Duplex	<input type="radio"/> Full Duplex
Clock Rate	2000000
IP Configuration	
IPv4 Address	50.50.50.2
Subnet Mask	255.0.0.0
Tx Ring Limit	10

- **RIP Configuration For All Routers:**

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

INTERFACE

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

RIP Routing

Network

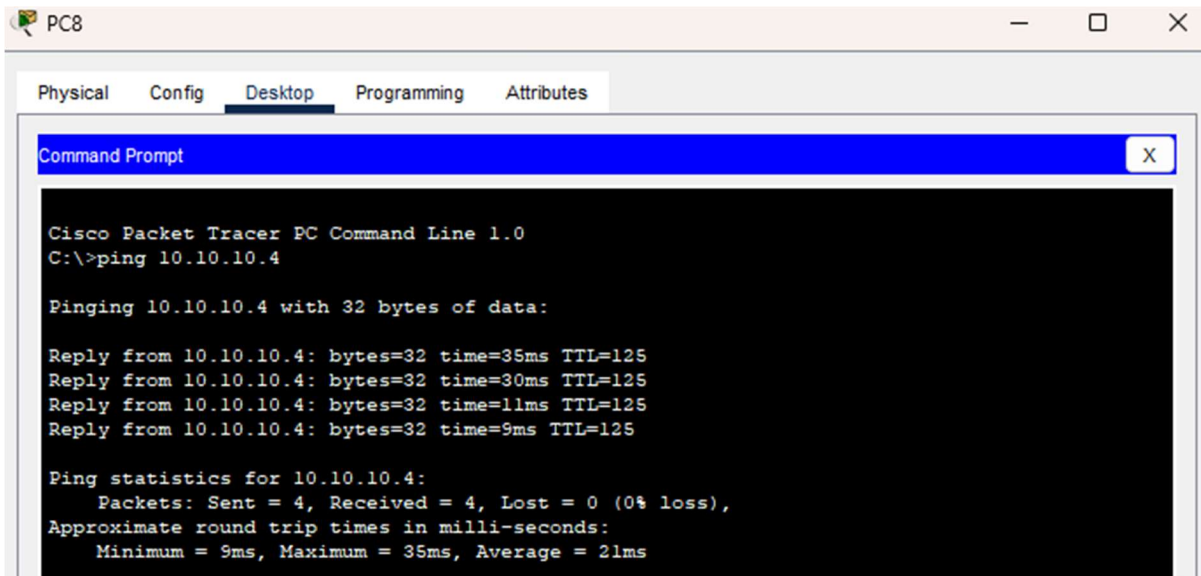
Add

Network Address
10.0.0.0
20.0.0.0
30.0.0.0
40.0.0.0
50.0.0.0

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
%SYS-5-CONFIG_I: Configured from console by console
ip address 10.10.10.1 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#ip address 40.40.40.1 255.0.0.0
Router(config-if)#ip address 40.40.40.1 255.0.0.0
Router(config-if)#
Router(config-if)#exit
Router(config)#router rip
Router(config-router)#network 10.0.0.0
Router(config-router)#network 20.0.0.0
Router(config-router)#network 30.0.0.0
Router(config-router)#network 40.0.0.0
Router(config-router)#network 50.0.0.0
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#
%SYS-5-CONFIG_I: Configured from console by console
```

Fig :- CLI

- Pinging PC2 (IP address 10.10.10.2) from PC8



The screenshot shows a Cisco Packet Tracer PC window for PC8. The 'Desktop' tab is active, displaying a Command Prompt window. The command prompt shows the execution of the command 'ping 10.10.10.4'. The output indicates that the ping was successful, with 4 packets sent and 4 received, resulting in 0% loss. The approximate round trip times in milliseconds are: Minimum = 9ms, Maximum = 35ms, and Average = 21ms.

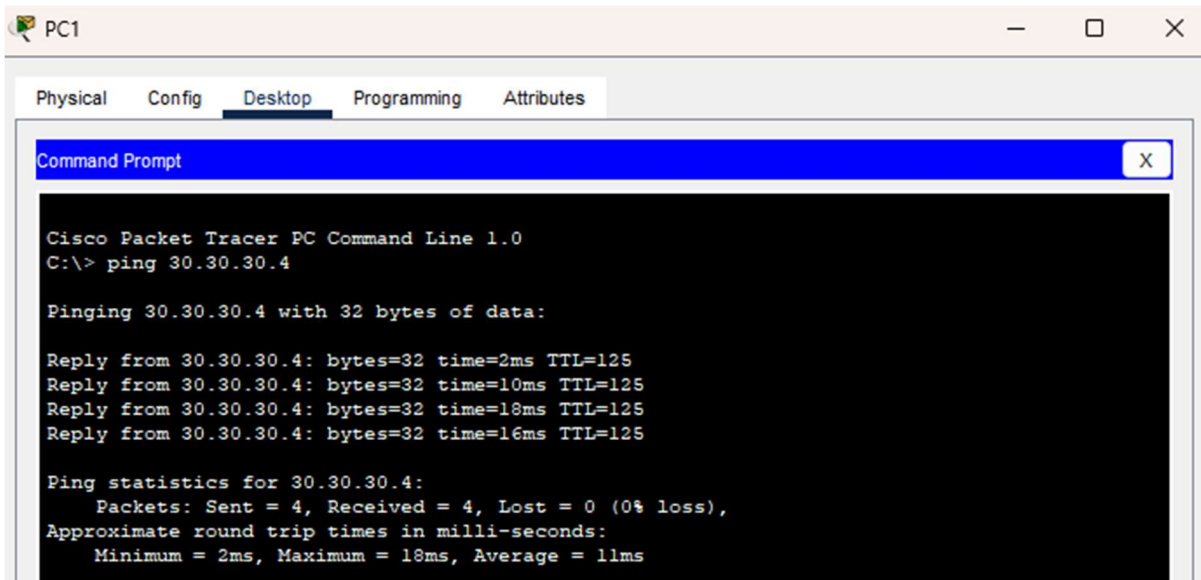
```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 10.10.10.4

Pinging 10.10.10.4 with 32 bytes of data:

Reply from 10.10.10.4: bytes=32 time=35ms TTL=125
Reply from 10.10.10.4: bytes=32 time=30ms TTL=125
Reply from 10.10.10.4: bytes=32 time=11ms TTL=125
Reply from 10.10.10.4: bytes=32 time=9ms TTL=125

Ping statistics for 10.10.10.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 9ms, Maximum = 35ms, Average = 21ms
```

- Pinging PC8 (IP address 30.30.30.4) from PC1



The screenshot shows a Cisco Packet Tracer PC window for PC1. The 'Desktop' tab is active, displaying a Command Prompt window. The command prompt shows the execution of the command 'ping 30.30.30.4'. The output indicates that the ping was successful, with 4 packets sent and 4 received, resulting in 0% loss. The approximate round trip times in milliseconds are: Minimum = 2ms, Maximum = 18ms, and Average = 11ms.

```
Cisco Packet Tracer PC Command Line 1.0
C:\> ping 30.30.30.4

Pinging 30.30.30.4 with 32 bytes of data:

Reply from 30.30.30.4: bytes=32 time=2ms TTL=125
Reply from 30.30.30.4: bytes=32 time=10ms TTL=125
Reply from 30.30.30.4: bytes=32 time=18ms TTL=125
Reply from 30.30.30.4: bytes=32 time=16ms TTL=125

Ping statistics for 30.30.30.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 18ms, Average = 11ms
```

Similarly the ping message can be checked for all the devices.

Result :-

Hence the RIPv1 has been studied and verified through the given network.