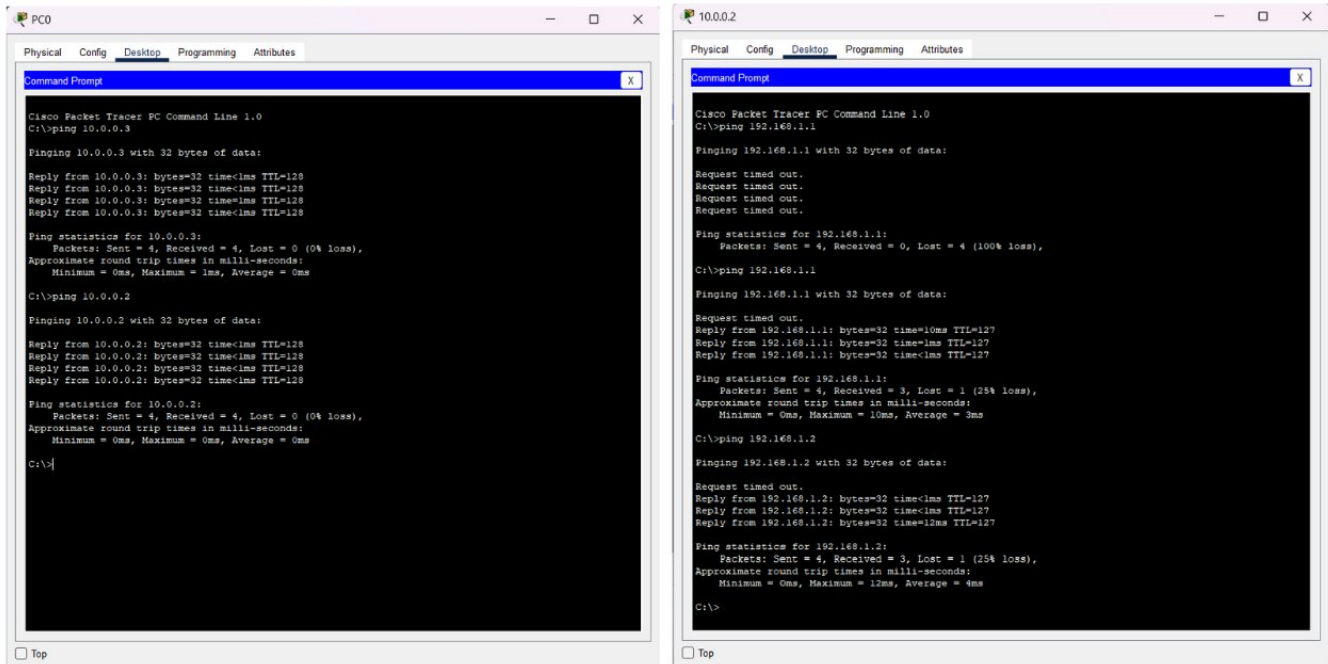


EXPERIMENT – 10

AIM: - a) Internetworking with routers in CISCO PACKET TRACER simulator.

OUTPUT: -



The image shows two side-by-side screenshots of the Cisco Packet Tracer Command Prompt interface. The left window is titled 'PC0' and shows the results of a ping command from PC0 to 10.0.0.3 and 10.0.0.2. The right window is titled '10.0.0.2' and shows the results of a ping command from 10.0.0.2 to 192.168.1.1 and 192.168.1.2.

```
PC0
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:
Reply from 10.0.0.3: bytes=32 time=1ms TTL=128
Reply from 10.0.0.3: bytes=32 time=1ms TTL=128
Reply from 10.0.0.3: bytes=32 time=1ms TTL=128
Reply from 10.0.0.3: bytes=32 time=1ms TTL=128

Ping statistics for 10.0.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:
Reply from 10.0.0.2: bytes=32 time=1ms TTL=128
Reply from 10.0.0.2: bytes=32 time=1ms TTL=128
Reply from 10.0.0.2: bytes=32 time=1ms TTL=128
Reply from 10.0.0.2: bytes=32 time=1ms TTL=128

Ping statistics for 10.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>

10.0.0.2
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:
Request timed out.
Reply from 192.168.1.1: bytes=32 time=10ms TTL=127
Reply from 192.168.1.1: bytes=32 time=1ms TTL=127
Reply from 192.168.1.1: bytes=32 time=1ms TTL=127

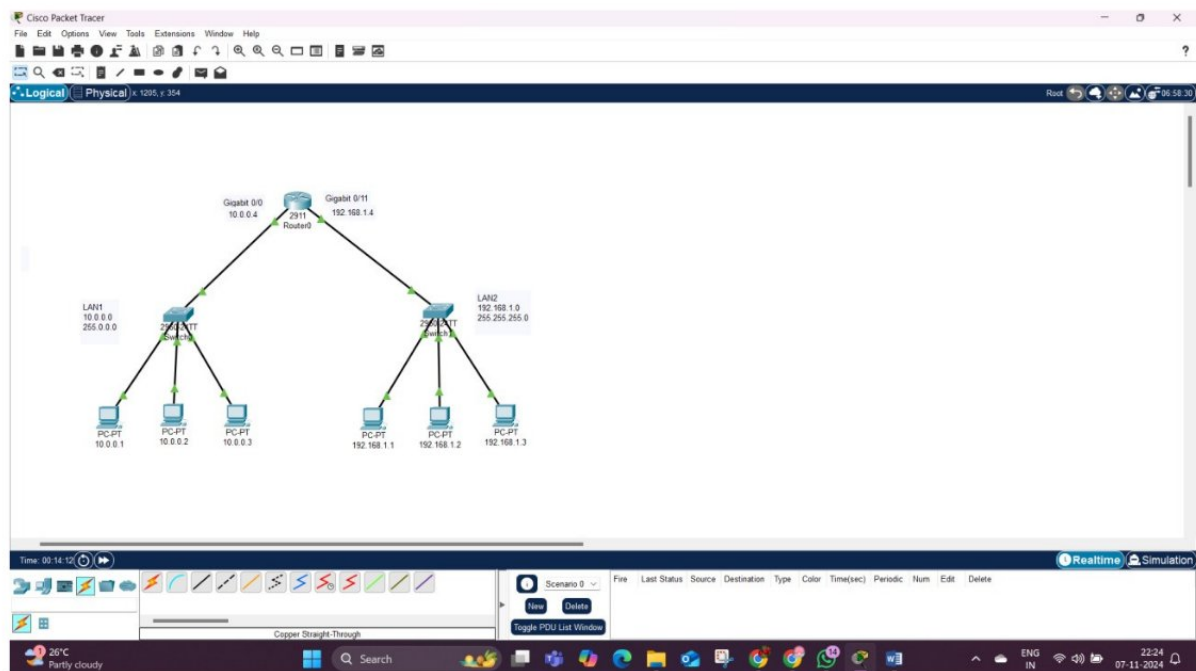
Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 10ms, Average = 3ms

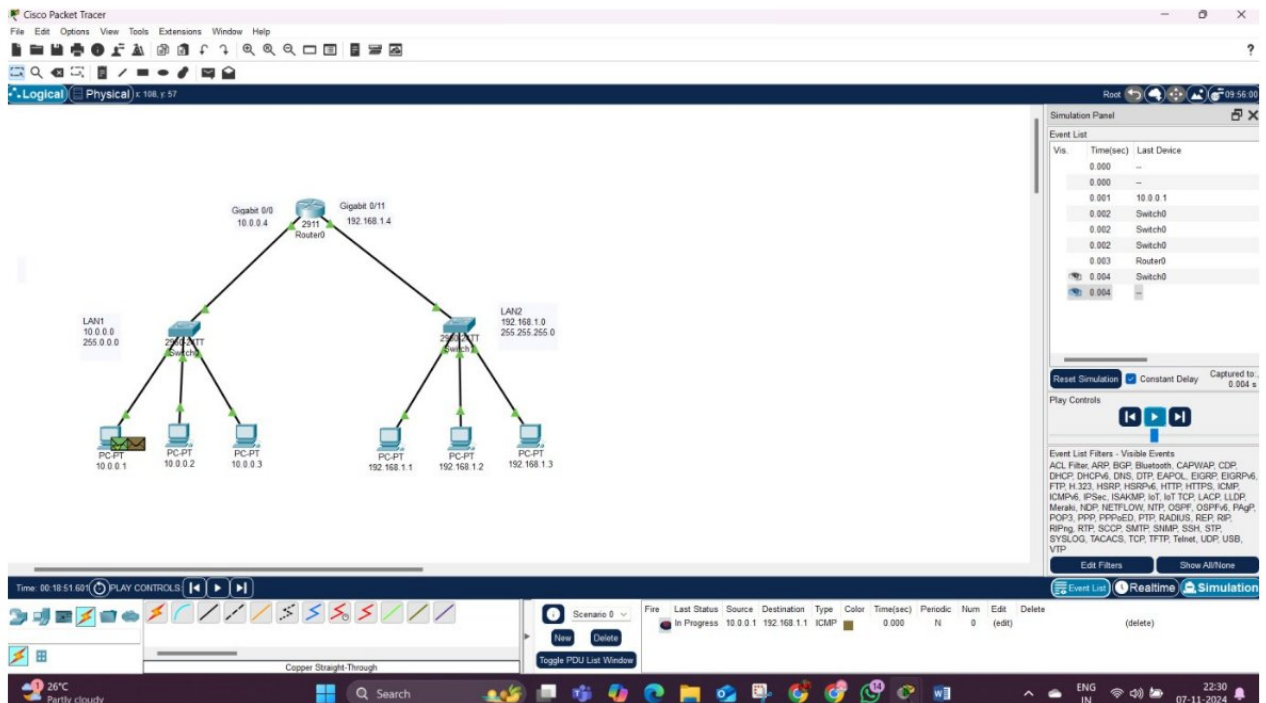
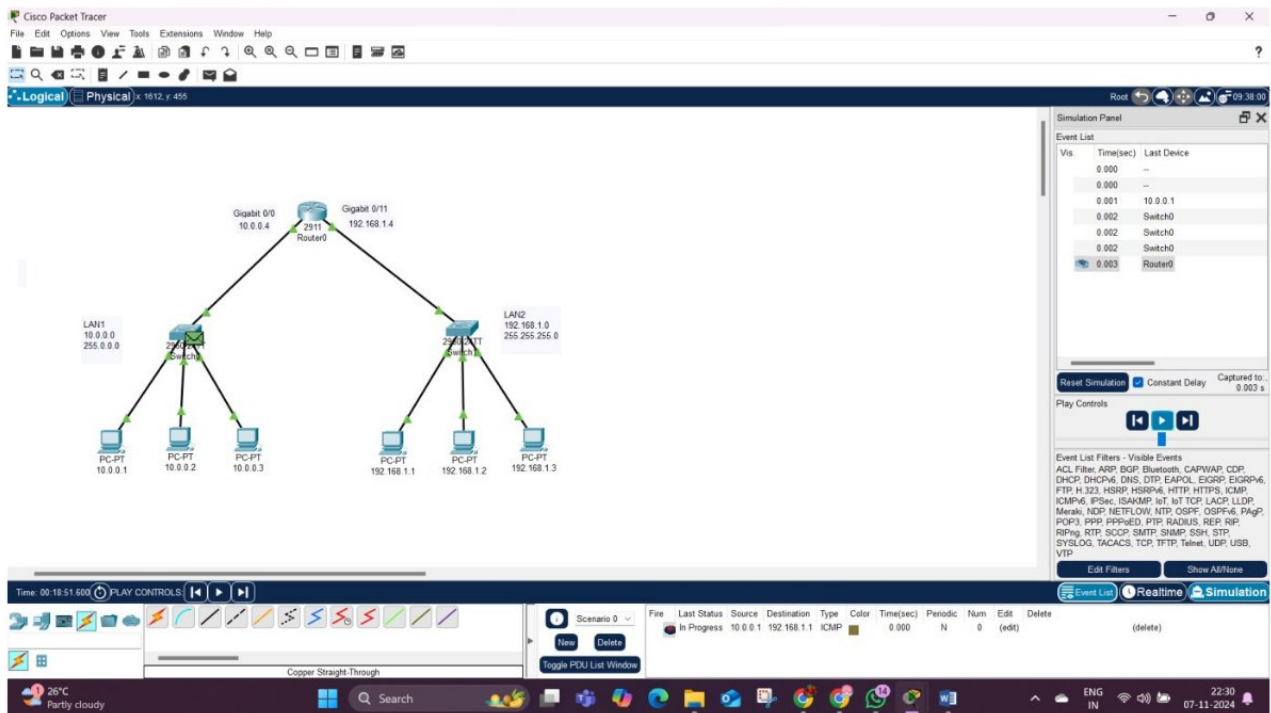
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:
Request timed out.
Reply from 192.168.1.2: bytes=32 time=1ms TTL=127
Reply from 192.168.1.2: bytes=32 time=1ms TTL=127
Reply from 192.168.1.2: bytes=32 time=1ms TTL=127

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 12ms, Average = 4ms

C:\>
```





Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical 0:35, 7:23

Simulation Panel

Event List

Vis	Time(sec)	Last Device
0.000	--	
0.000	--	
0.001	10.0.0.1	
0.002	Switch0	
0.002	Switch0	
0.002	Switch0	
0.003	Router0	
0.004	Switch0	
0.004	--	
0.005	10.0.0.1	

Reset Simulation Constant Delay Captured to: 0.005 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv2, RIPv4, RIPv6, RSTP, RSTPv6, SLL, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Event List Realtime Simulation

Scenario 0

New Delete

Toggle PDU List Window

Time: 00:18:51.002 PLAY CONTROLS

26°C Partly cloudy

Search

ENG IN 22:31 07-11-2024

Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical 0:01, 4

Simulation Panel

Event List

Vis	Time(sec)	Last Device
0.000	--	
0.000	--	
0.001	10.0.0.1	
0.002	Switch0	
0.002	Switch0	
0.002	Switch0	
0.003	Router0	
0.004	Switch0	
0.004	--	
0.005	10.0.0.1	
0.006	Switch0	
0.007	Router0	

Reset Simulation Constant Delay Captured to: 0.007 s

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv2, RIPv4, RIPv6, RSTP, RSTPv6, SLL, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Event List Realtime Simulation

Scenario 0

New Delete

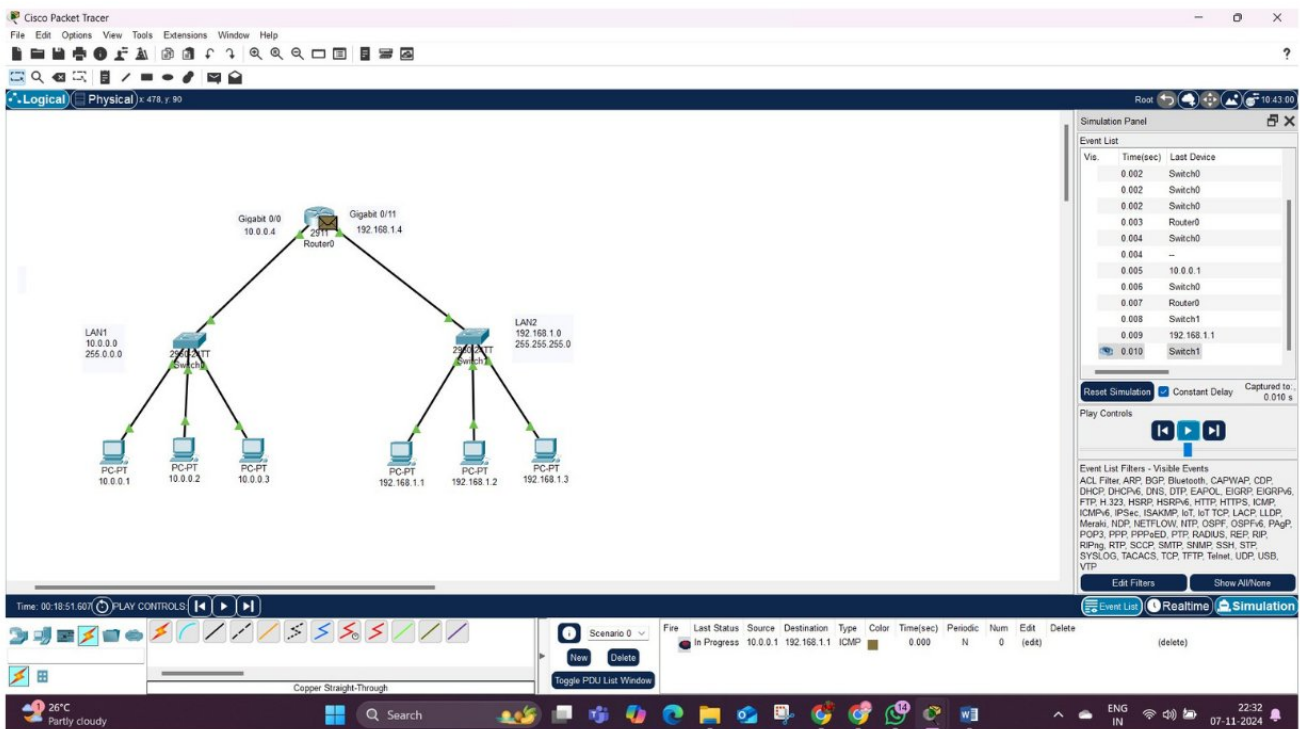
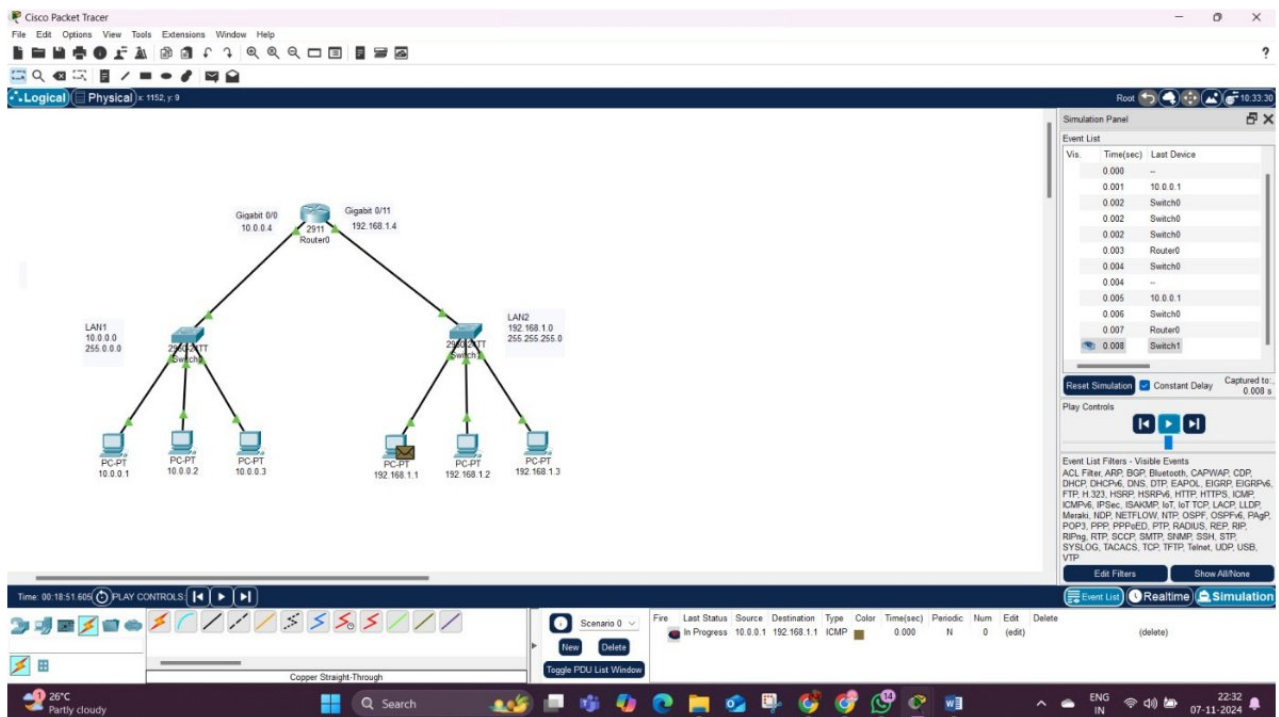
Toggle PDU List Window

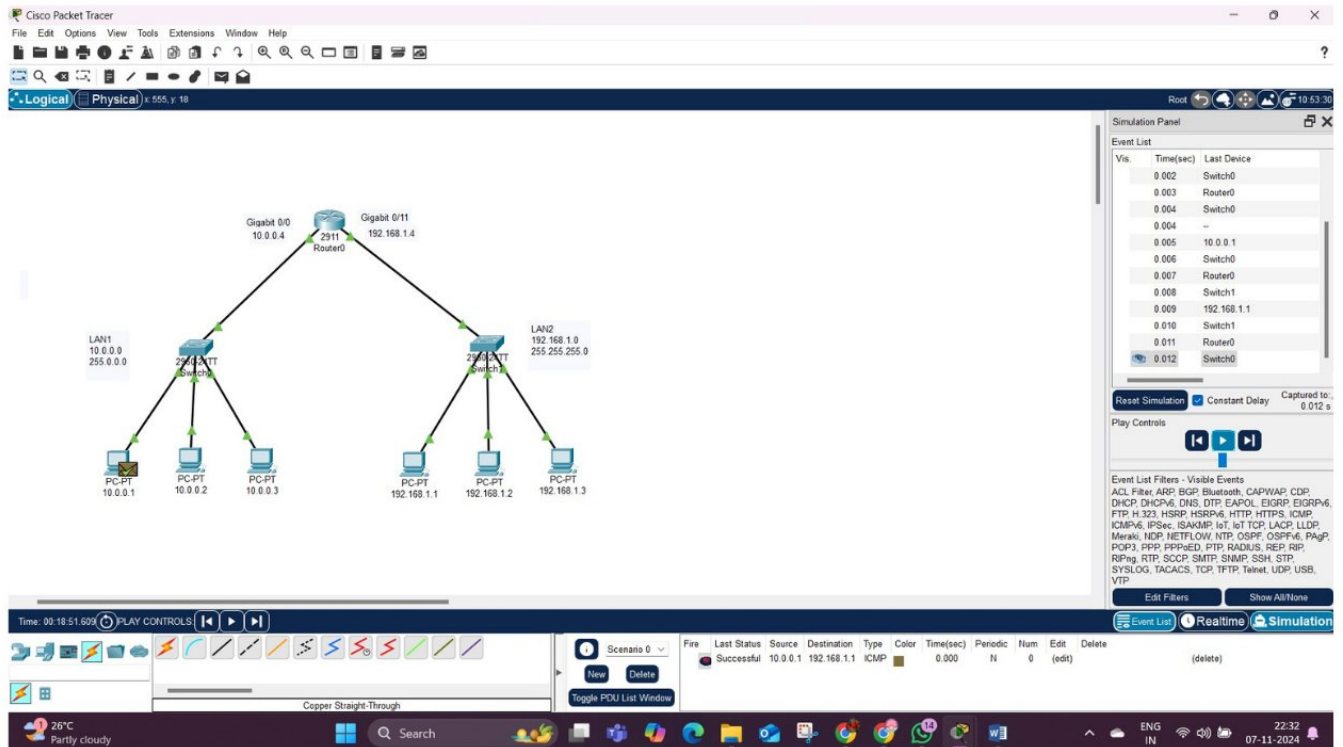
Time: 00:18:51.004 PLAY CONTROLS

26°C Partly cloudy

Search

ENG IN 22:31 07-11-2024





Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	10.0.0.1	192.168.1.1	ICMP		0.000	N	0	(edit)	(delete)

RESULT: -

Router have been successfully done in CISCO PACKET TRACER.

AIM: - b) Design and configure an internetwork using wireless router, DHCP server and internet cloud.

OUTPUT: -

The screenshot shows the 'Internet Setup' configuration page for a 'Wireless-N Broadband Router' (Firmware Version: v0.93.3). The page is divided into two main sections: 'Internet Setup' and 'Network Setup'. The 'Internet Setup' section includes a dropdown for 'Internet Connection type' set to 'Automatic Configuration - DHCP'. Below this are fields for 'Host Name', 'Domain Name', and 'MTU' (set to 1500). The 'Network Setup' section includes fields for 'Router IP' (192.168.0.1) and 'Subnet Mask' (255.255.255.0). The 'DHCP Server Settings' section has a 'DHCP Server' toggle set to 'Disabled', a 'Start IP Address' of 192.168.0.100, a 'Maximum number of Users' of 50, an 'IP Address Range' of 192.168.0.100 - 149, and a 'Client Lease Time' of 0 minutes. There are also fields for 'Static DNS 1', 'Static DNS 2', and 'Static DNS 3', all set to 0.0.0.0. A 'WINS' section is partially visible at the bottom.

Wireless Router0

Physical Config **GUI** Attributes

Wireless-N Broadband Router

Firmware Version: v0.93.3

Setup Setup **Wireless** Security Access Restrictions Applications & Gaming Administration Status

Basic Setup DNS MAC Address Clone Advanced Routing

Internet Setup

Internet Connection type: Automatic Configuration - DHCP

Optional Settings (required by some internet service providers):

Host Name:

Domain Name:

MTU: Size: 1500

Network Setup

Router IP: IP Address: 192 . 168 . 0 . 1 Subnet Mask: 255.255.255.0

DHCP Server Settings

DHCP Server: ☐ Enabled ☒ Disabled DHCP Reservation

Start IP Address: 192.168.0.100

Maximum number of Users: 50

IP Address Range: 192.168.0.100 - 149

Client Lease Time: 0 minutes (0 means one day)

Static DNS 1: 0 . 0 . 0 . 0

Static DNS 2: 0 . 0 . 0 . 0

Static DNS 3: 0 . 0 . 0 . 0

WINS: 0 . 0 . 0 . 0

☐ Top

The screenshot shows the 'Wireless' configuration page for a 'Wireless-N Broadband Router' (Firmware Version: v0.93.3). The page is divided into two main sections: 'Basic Wireless Settings' and 'Advanced Wireless Settings'. The 'Basic Wireless Settings' section includes a 'Network Mode' dropdown set to 'Mixed', a 'Network Name (SSID)' field set to 'MyHomeNetwork', a 'Radio Band' dropdown set to 'Auto', a 'Wide Channel' dropdown set to 'Auto', a 'Standard Channel' dropdown set to '1 - 2.412GHz', and an 'SSID Broadcast' toggle set to 'Enabled'. The 'Advanced Wireless Settings' section is partially visible at the bottom.

Wireless Router0

Physical Config **GUI** Attributes

Wireless-N Broadband Router

Firmware Version: v0.93.3

Wireless Setup Wireless Security Access Restrictions Applications & Gaming Administration Status

Basic Wireless Settings Wireless Security Guest Network Wireless MAC Filter Advanced Wireless Settings

Basic Wireless Settings

Network Mode: Mixed

Network Name (SSID): MyHomeNetwork

Radio Band: Auto

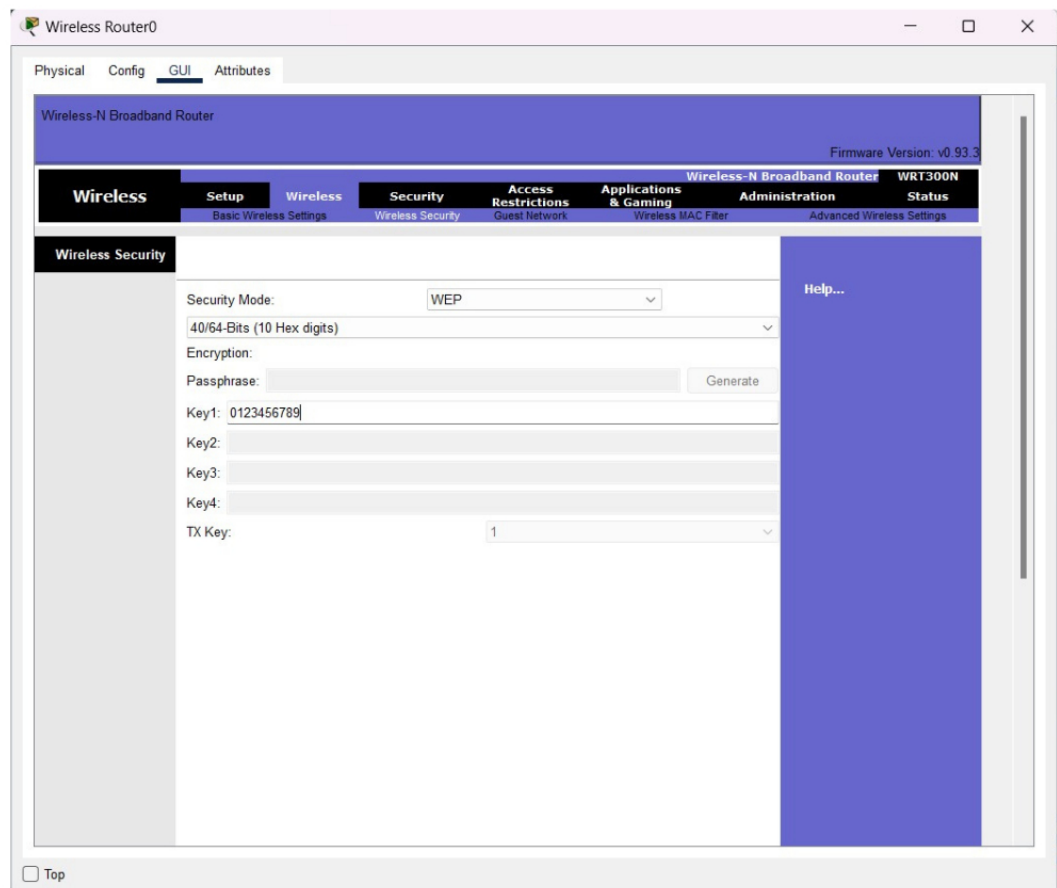
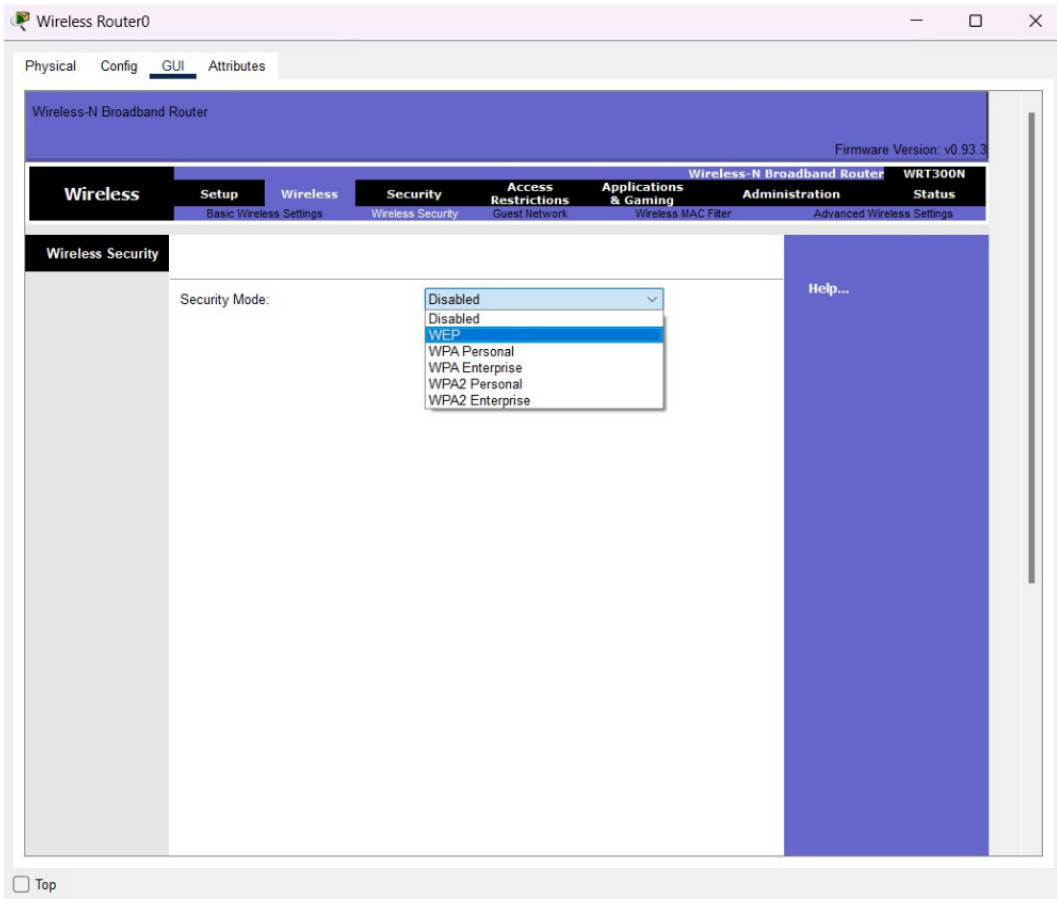
Wide Channel: Auto

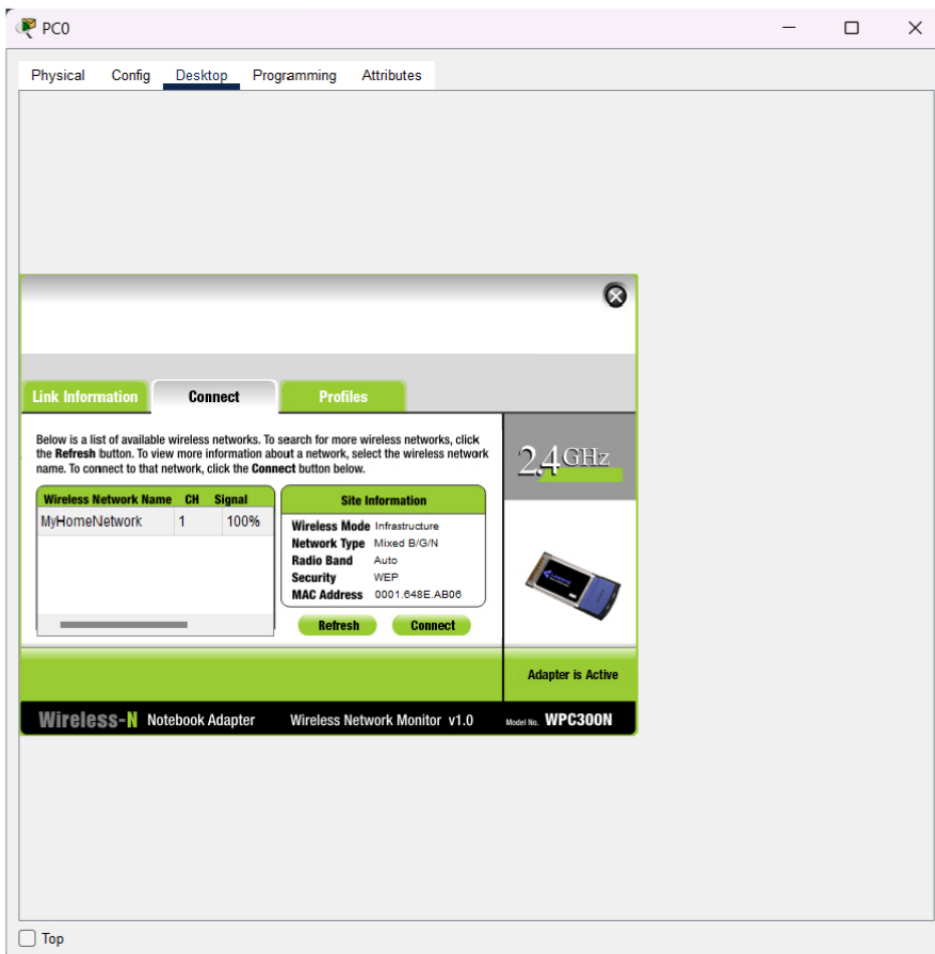
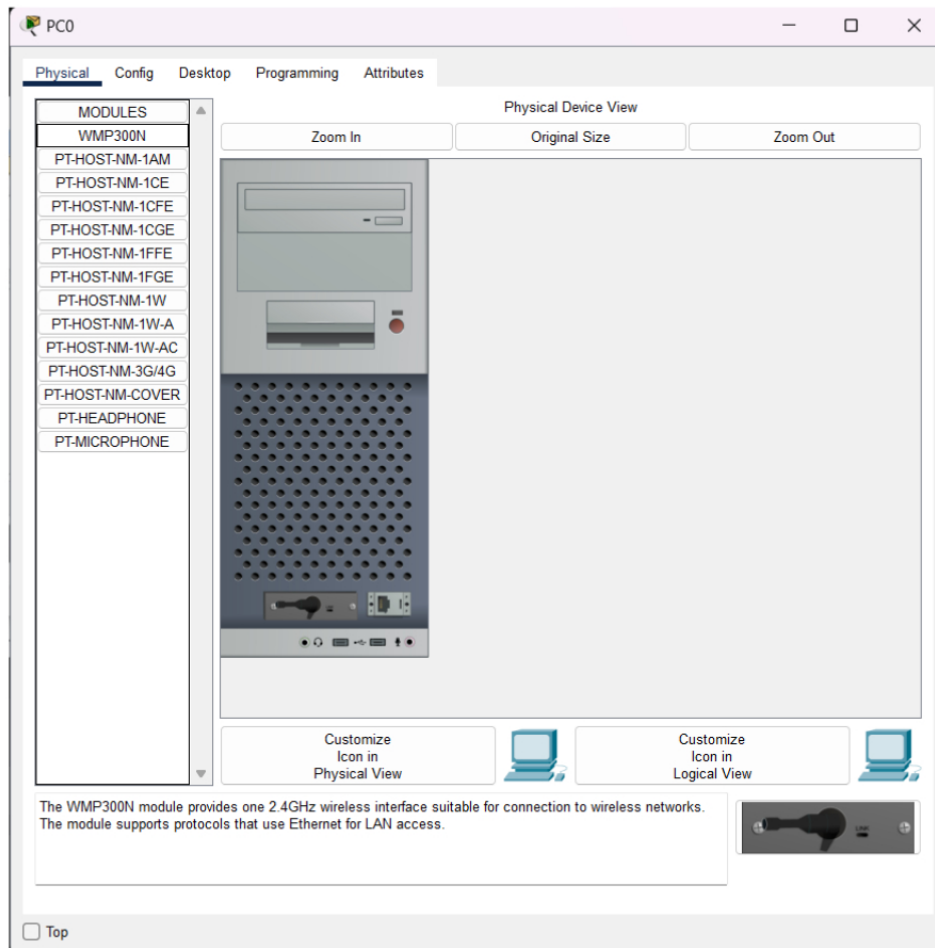
Standard Channel: 1 - 2.412GHz

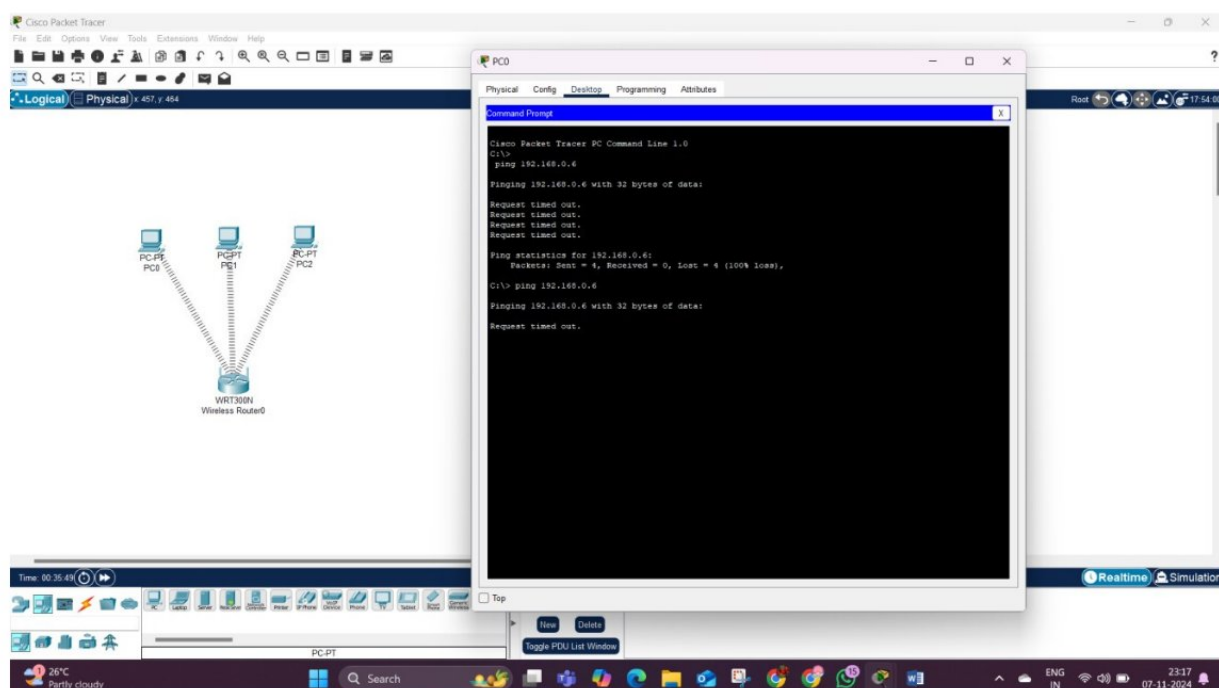
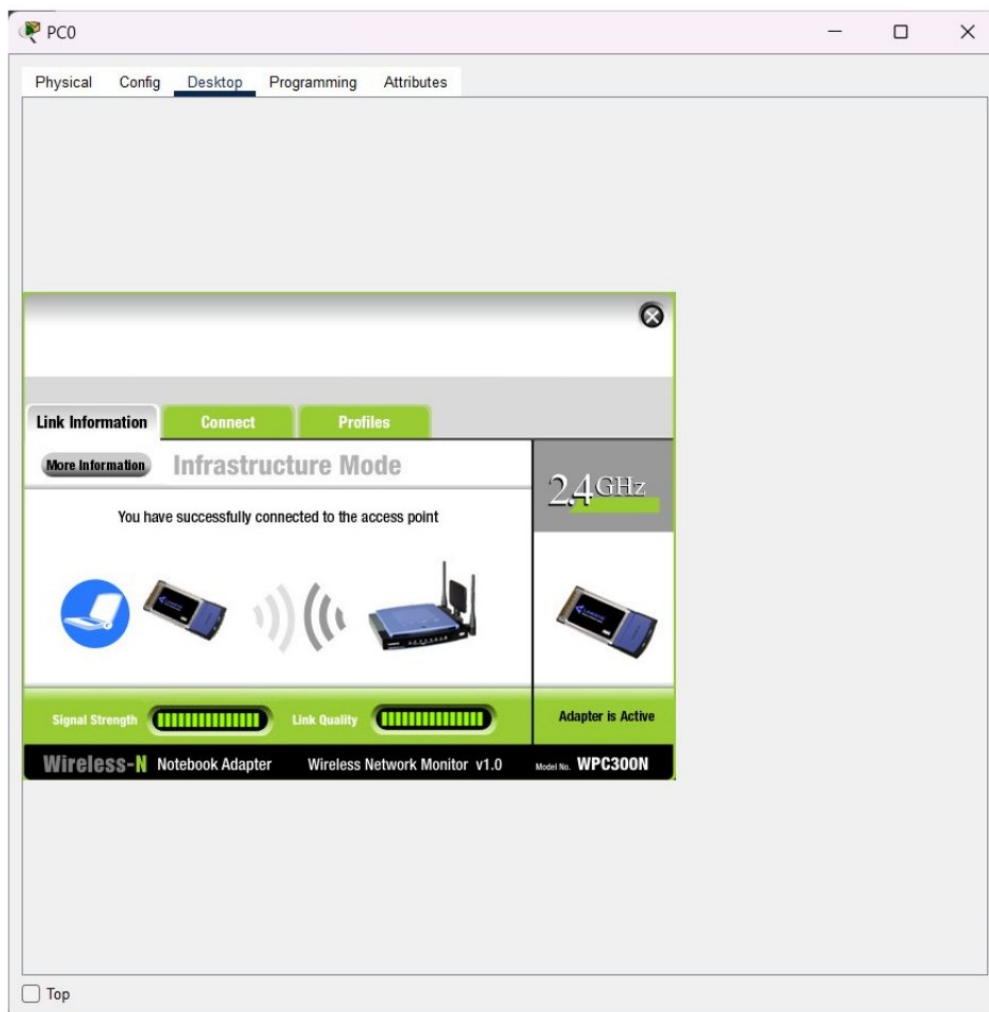
SSID Broadcast: ☒ Enabled ☐ Disabled

Help...

☐ Top







RESULT: -

Wireless Router have been successfully done in CISCO PACKET TRACER.