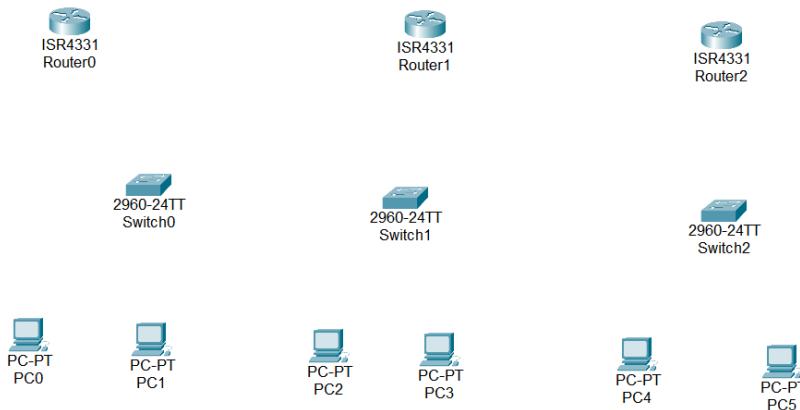


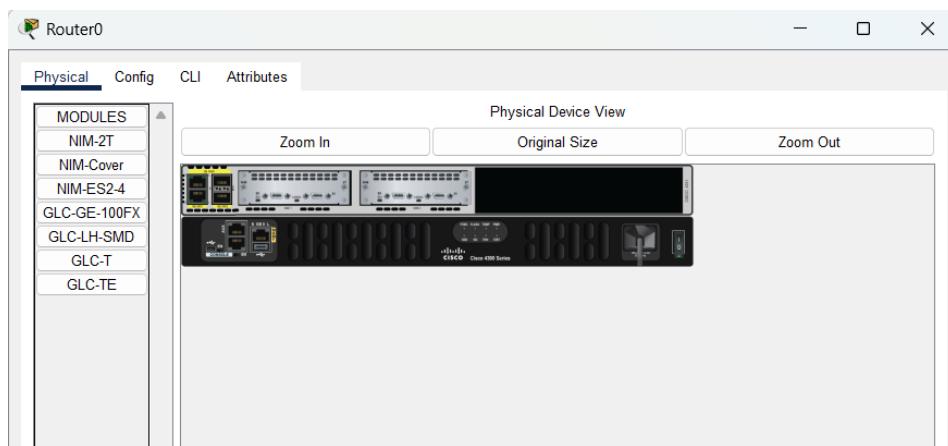
 Marwadi University Marwadi Chandarana Group	Marwadi University Faculty of Engineering and Technology Department of Information and Communication Technology	
Subject: Computer Networks (01CT0503)	Aim: Guided project.	
Experiment No: 14	Date: 24-11-2025	Enrolment No: 92301733024

Multi-Lab College Network using RIP Protocol

Step – 1:- Open the Cisco Packet tracer and take three routers, three switch and six PC's.



Step – 2 :- To long distance communication we need to connect router using Serial DTE cable. For the serial port we have to open router turn off it and drag and drop WIC-1T on router and turn on router.



Step – 3 :- Now Connect Two Routers Using Serial DTE Cable.





Subject: Computer Networks (01CT0503)

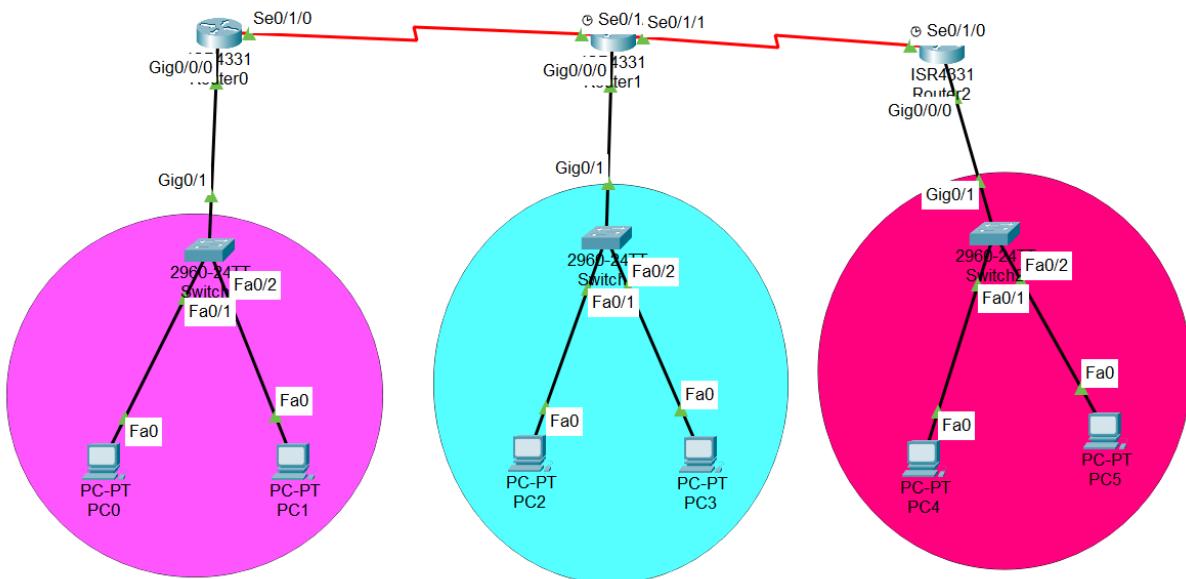
Aim: Guided project.

Experiment No: 14

Date: 24-11-2025

Enrolment No: 92301733024

Step – 4 :- Now Connect the Switches with routers using Copper Straight through cable In GigaEthernet Port. And Connect PC's with Switches using copper Straight through cab



Step – 5:- Now assign the IP address And Subnet mask and Gateway to all PC's.

PC	IP Address	Subnet Mask	Default Gateway
PC0	192.168.1.1	255.255.255.0	192.168.1.100
PC1	192.168.1.2	255.255.255.0	192.168.1.100
PC2	192.168.2.1	255.255.255.0	192.168.2.100
PC3	192.168.2.2	255.255.255.0	192.168.2.100



Subject: Computer Networks (01CT0503)

Aim: Guided project.

Experiment No: 14

Date: 24-11-2025

Enrolment No: 92301733024

Parameter	PC4 (DHCP)	PC5 (Static)
IPV4 Address	192.168.3.1	192.168.3.2
Subnet Mask	255.255.255.0	255.255.255.0
Default Gateway	192.168.3.100	192.168.3.100
DNS Server	0.0.0.0	0.0.0.0

Step – 6:- Assign IP Address to Routers

Router – 0 :-

```

* Incomplete command.
Router(config)#interface serial 0/1/0
Router(config-if)#ip address 10.0.0.1 255.0.0.0
Router(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial0/1/0, changed state to down
Router(config-if)#exit
Router(config)#interface gigabit
* Incomplete command.
Router(config)#interface gigabitEthernet
Router(config)#interface gigabitEthernet 0/0/0
Router(config-if)#ip add
Router(config-if)#ip address 192.168.1.100 255.255.255
^
* Invalid input detected at '' marker.

Router(config-if)#ip address 192.168.1.100 255.255.255.0
Router(config-if)#no shu
Router(config-if)#no shutdown

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

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

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

Router#show ip in
Router#show ip interface brief
Interface          IP-Address      OK? Method Status     Protocol
GigabitEthernet0/0/0 192.168.1.100  YES manual up        up
GigabitEthernet0/0/1 unassigned    YES unset administratively down down
GigabitEthernet0/0/2 unassigned    YES unset administratively down down
Serial0/1/0         10.0.0.1      YES manual down      down
Serial0/1/1         unassigned    YES unset administratively down down
Serial0/2/0         unassigned    YES unset administratively down down
Serial0/2/1         unassigned    YES unset administratively down down
Vlan1              unassigned    YES unset administratively down down

```

Top

Router – 1 :-



Subject: Computer Networks (01CT0503)

Aim: Guided project.

Experiment No: 14

Date: 24-11-2025

Enrolment No: 92301733024

```

Router#show ip interface brief
Interface          IP-Address      OK? Method Status      Protocol
GigabitEthernet0/0/0 192.168.2.100  YES manual up           up
GigabitEthernet0/0/1 unassigned       YES unset administratively down down
GigabitEthernet0/0/2 unassigned       YES unset administratively down down
Serial0/1/0         10.0.0.2        YES manual up           up
Serial0/1/1         unassigned       YES unset administratively down down
Serial0/2/0         unassigned       YES unset administratively down down
Serial0/2/1         unassigned       YES unset administratively down down
Vlan1              unassigned       YES unset administratively down down
Router#en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface serial 0/1/1
Router(config-if)#ip address 11.0.0.1 255.0.0.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface Serial0/1/1, changed state to up

Router(config-if)#exit
Router(config)#e
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/1, changed state to up
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show ip interface brief
Interface          IP-Address      OK? Method Status      Protocol
GigabitEthernet0/0/0 192.168.2.100  YES manual up           up
GigabitEthernet0/0/1 unassigned       YES unset administratively down down
GigabitEthernet0/0/2 unassigned       YES unset administratively down down
Serial0/1/0         10.0.0.2        YES manual up           up
Serial0/1/1         11.0.0.1        YES manual up           up
Serial0/2/0         unassigned       YES unset administratively down down
Serial0/2/1         unassigned       YES unset administratively down down
Vlan1              unassigned       YES unset administratively down down
Router#

```

Router – 2 :-

```

Router#en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface serial 0/1/0
Router(config-if)#ip add
Router(config-if)#ip address 11.0.0.2 255.0.0.0
Router(config-if)#no shut down
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface giga
Router(config)#interface gigabitEthernet 0/0/0
Router(config-if)#ip add
Router(config-if)#ip address 192.168.3.100
% Incomplete command.
Router(config-if)#ip address 192.168.3.100 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show ip interface brief
Interface          IP-Address      OK? Method Status      Protocol
GigabitEthernet0/0/0 192.168.3.100  YES manual up           up
GigabitEthernet0/0/1 unassigned       YES unset administratively down down
GigabitEthernet0/0/2 unassigned       YES unset administratively down down
Serial0/1/0         11.0.0.2        YES manual up           up
Serial0/1/1         unassigned       YES unset administratively down down
Serial0/2/0         unassigned       YES unset administratively down down
Serial0/2/1         unassigned       YES unset administratively down down
Vlan1              unassigned       YES unset administratively down down
Router#

```

Step – 7:- now we will configure router for RIP Protocol.

Router - 0



Subject: Computer Networks (01CT0503)

Aim: Guided project.

Experiment No: 14

Date: 24-11-2025

Enrolment No: 92301733024

```
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#rou
Router(config)#router rip
Router(config-router)#ver
Router(config-router)#version 2
Router(config-router)#net
Router(config-router)#network 192.168.1.100
Router(config-router)#net
Router(config-router)#network 10.0.0.0
Router(config-router)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

Router – 1 :-

```
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#rou
Router(config)#router rip
Router(config-router)#ver
Router(config-router)#version 2
Router(config-router)#network 192.168.2.100
Router(config-router)#network 10
 ^
% Invalid input detected at '^' marker.

Router(config-router)#network 10.0.0.0
Router(config-router)#network 11.0.0.0
Router(config-router)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

Router-2 :-

```
Router#cong t
^
% Invalid input detected at '^' marker.

Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#rou
Router(config)#router rip
Router(config-router)#ver
Router(config-router)#version 2
Router(config-router)#net
Router(config-router)#network 192.168.3.100
Router(config-router)#network 11.0.0.0
Router(config-router)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

Step – 8 :- now we will check connection using ping command. And using tracert ip_add command we can check how packet will be reach at ip add.



Marwadi University
Faculty of Engineering and Technology
Department of Information and Communication Technology

Subject: Computer Networks (01CT0503)

Aim: Guided project.

Experiment No: 14

Date: 24-11-2025

Enrolment No: 92301733024

PC5

- □ ×

Physical Config Desktop Programming Attributes

Command Prompt X

```
Cisco Packet Tracer PC Command Line 1.0
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=2ms TTL=125
Reply from 192.168.1.2: bytes=32 time=21ms TTL=125
Reply from 192.168.1.2: bytes=32 time=10ms TTL=125

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 21ms, Average = 11ms

C:>tracert 192.168.1.2

Tracing route to 192.168.1.2 over a maximum of 30 hops:

  1  0 ms      0 ms      0 ms      192.168.3.100
  2  1 ms      0 ms      0 ms      11.0.0.1
  3  1 ms      2 ms      2 ms      10.0.0.1
  4  1 ms      0 ms      1 ms      192.168.1.2

Trace complete.

C:>
```



Subject: Computer Networks (01CT0503)

Aim: Guided project.

Experiment No: 14

Date: 24-11-2025

Enrolment No: 92301733024

Router0

Physical Config CLI Attributes

IOS Command Line Interface

```
Processor board ID FLM232010GU
3 Gigabit Ethernet interfaces
4 Serial interfaces
32768K bytes of non-volatile configuration memory.
4194304K bytes of physical memory.
3223551K bytes of flash memory at bootflash:.

Press RETURN to get started!

%LINK-5-CHANGED: Interface Serial0/1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed state to up

Router>
Router>en
Router#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
      D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
      N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
      E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
      i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
      * - candidate default, U - per-user static route, o - ODR
      P - periodic downloaded static route

Gateway of last resort is not set

  10.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C    10.0.0.0/8 is directly connected, Serial0/1/0
L    10.0.0.1/32 is directly connected, Serial0/1/0
R    11.0.0.0/8 [120/1] via 10.0.0.2, 00:00:07, Serial0/1/0
     192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C      192.168.1.0/24 is directly connected, GigabitEthernet0/0/0
L      192.168.1.100/32 is directly connected, GigabitEthernet0/0/0
R      192.168.2.0/24 [120/1] via 10.0.0.2, 00:00:07, Serial0/1/0
R      192.168.3.0/24 [120/2] via 10.0.0.2, 00:00:07, Serial0/1/0

Router#
```

Copy Paste

Top