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Class → MCA 'C'

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Paper Name → Computer Network [PMC - 202]

Q1. There is an organization A with multiple departments. Design a network for the HR department and the size of the department is 10 users. Also, show the communication between user number 1 and user number 5 of the network.

Sol 1.

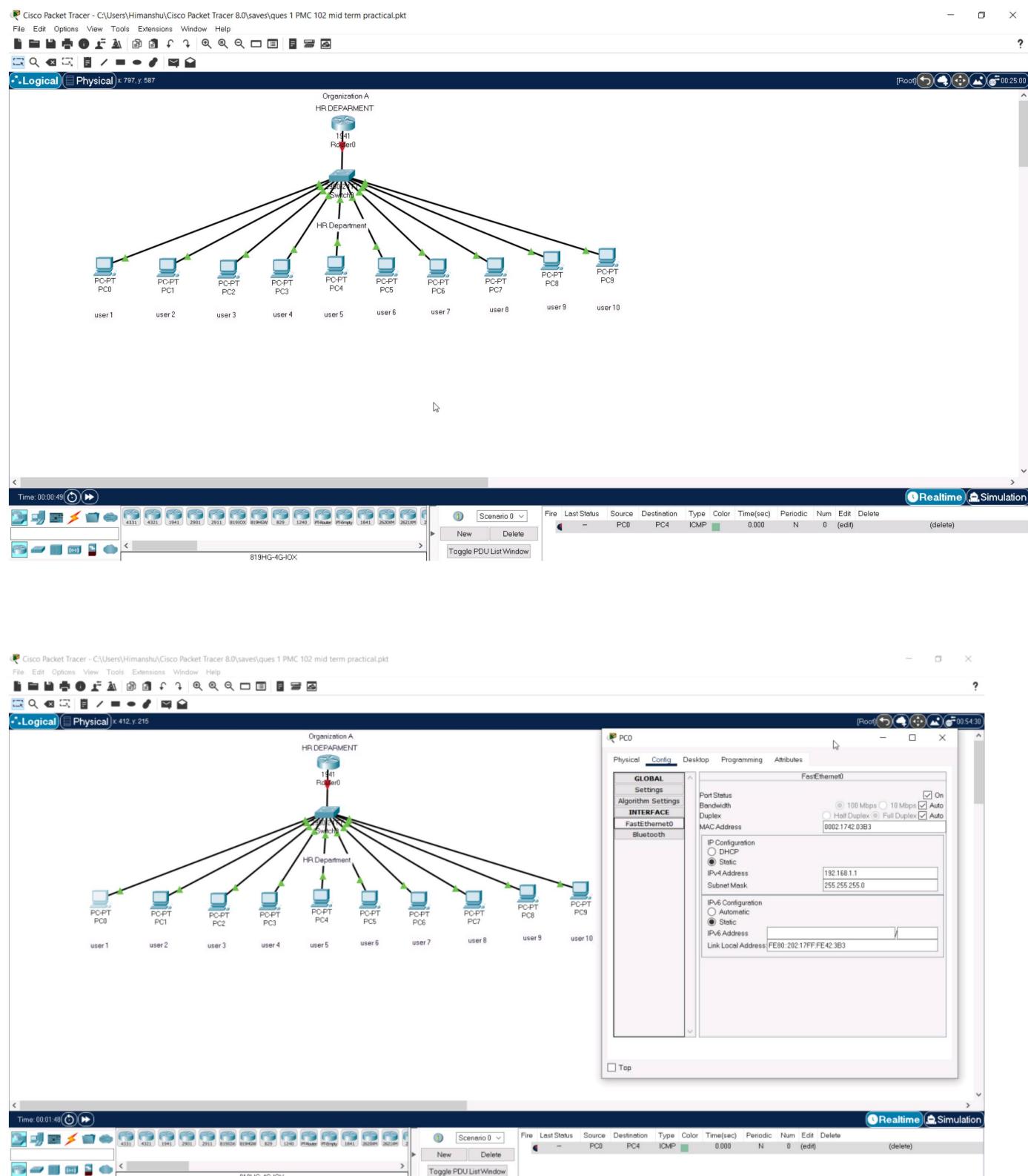
Objective: The objective is to establish connection between the two organization with the help of wires and networking devices.

STEPS :

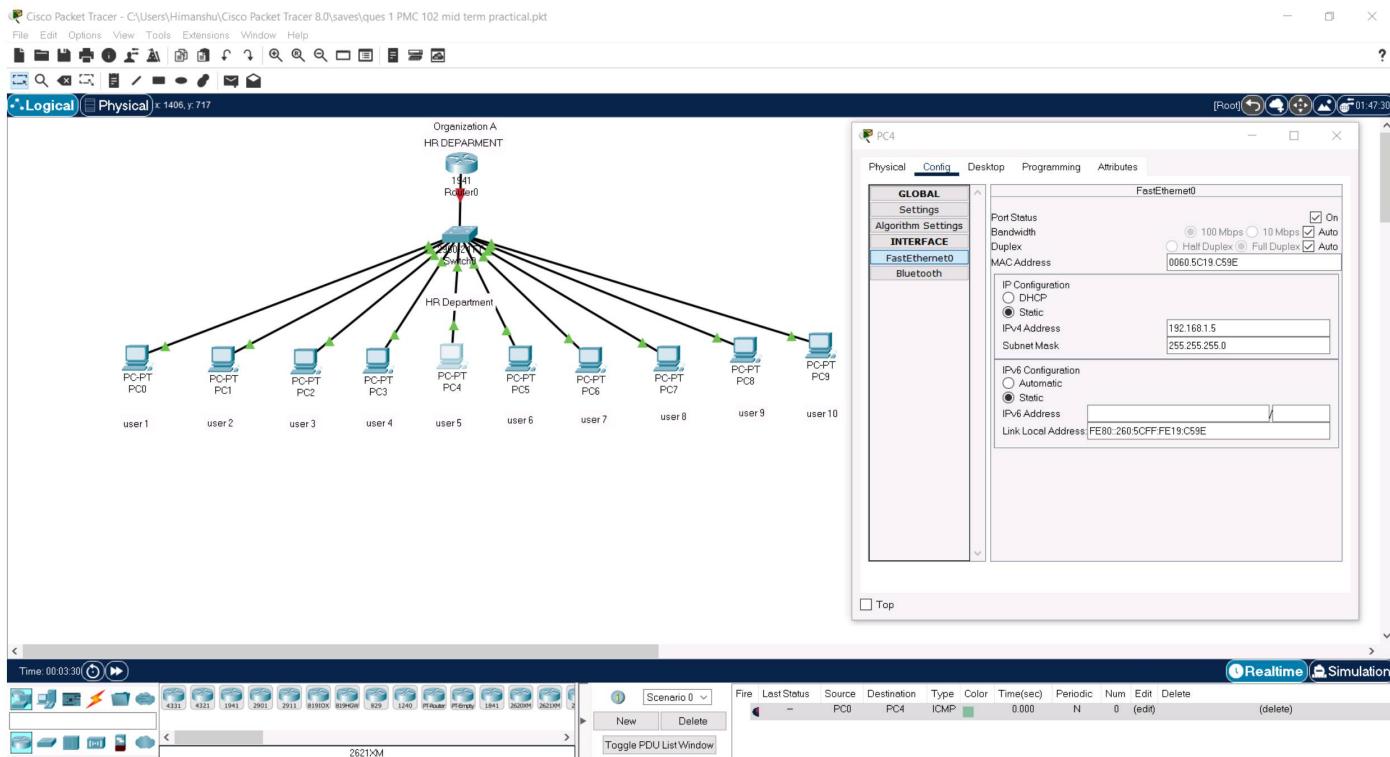
- 1) First Place PC, routers and switch on the screen.
- 2) Then connect them using copper wire.
- 3) Connect switch and router with wires.
- 4) Then start configuring the devices.

Riaan

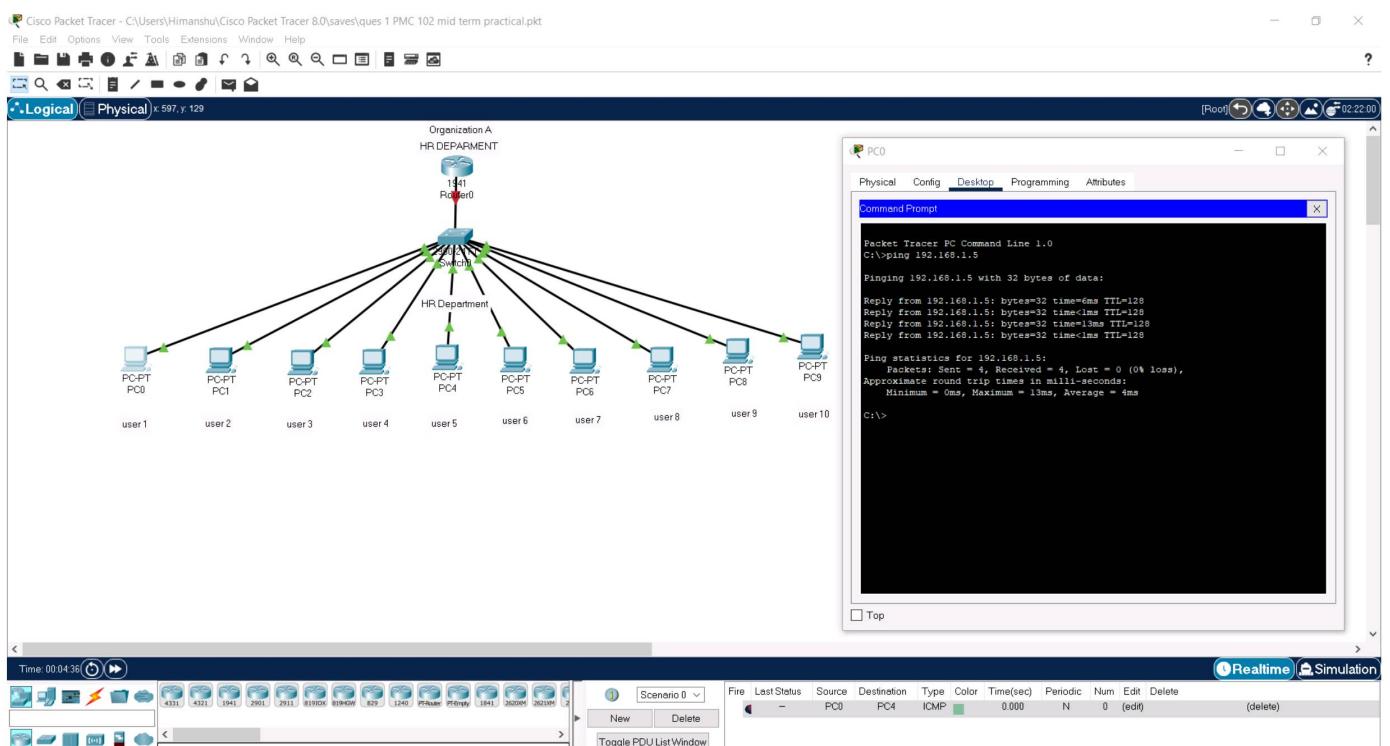
Output Screenshots from Packet Tracer Q1



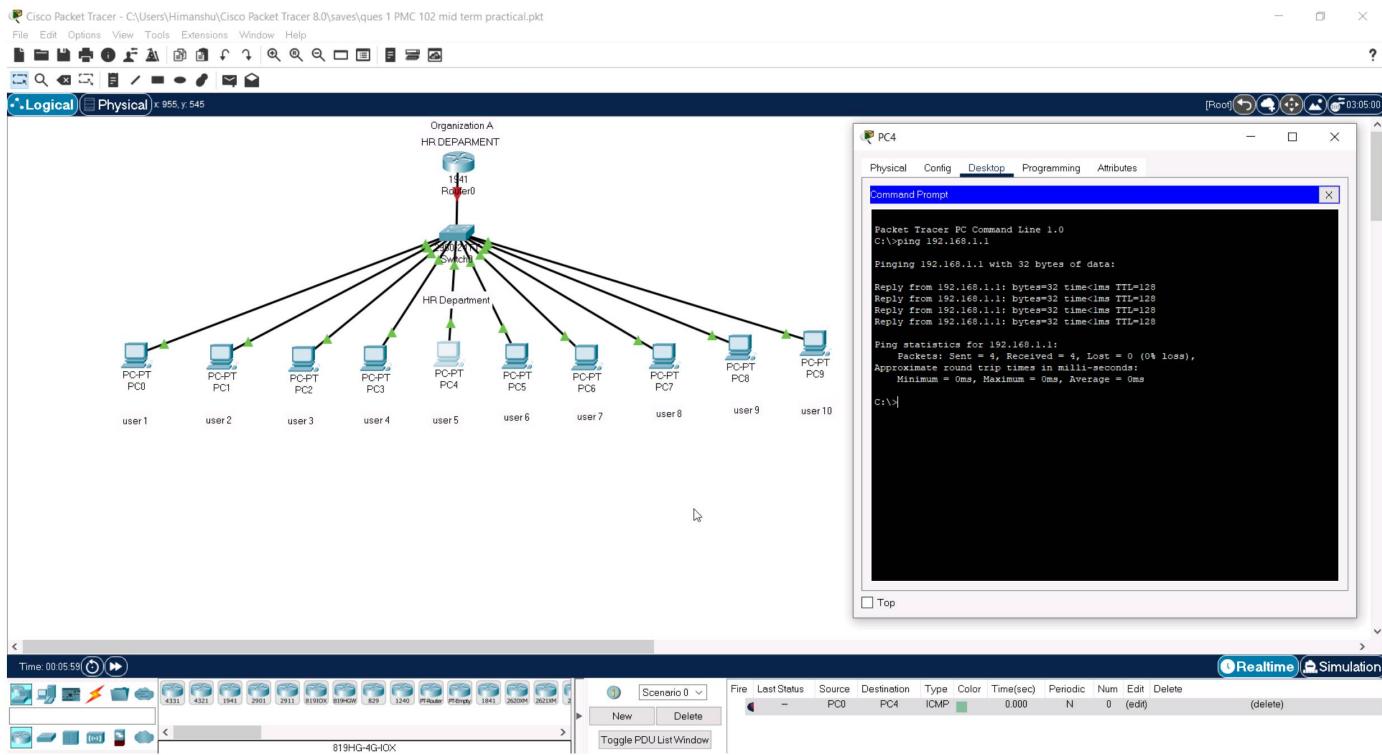
IP assigned to User 1



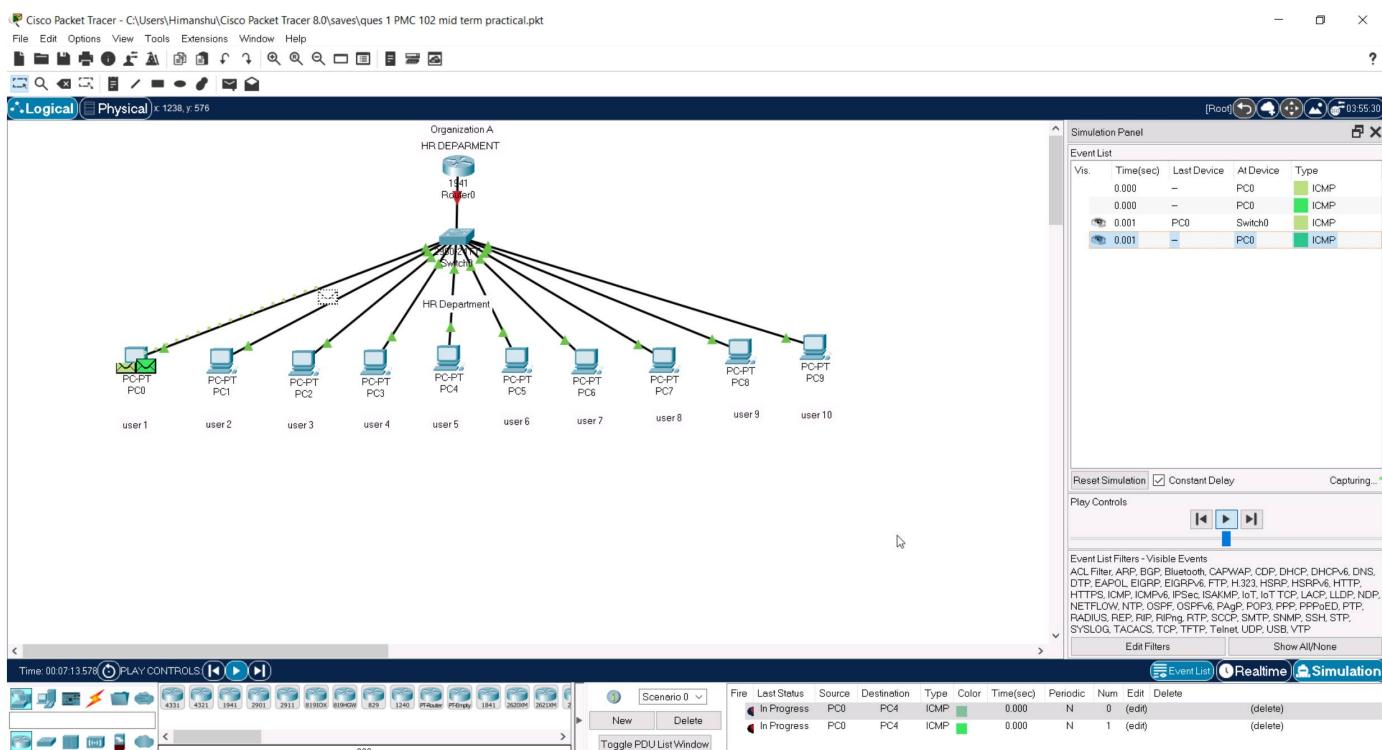
IP Assigned to User 5



Pinging User 1 to User 5. Successful

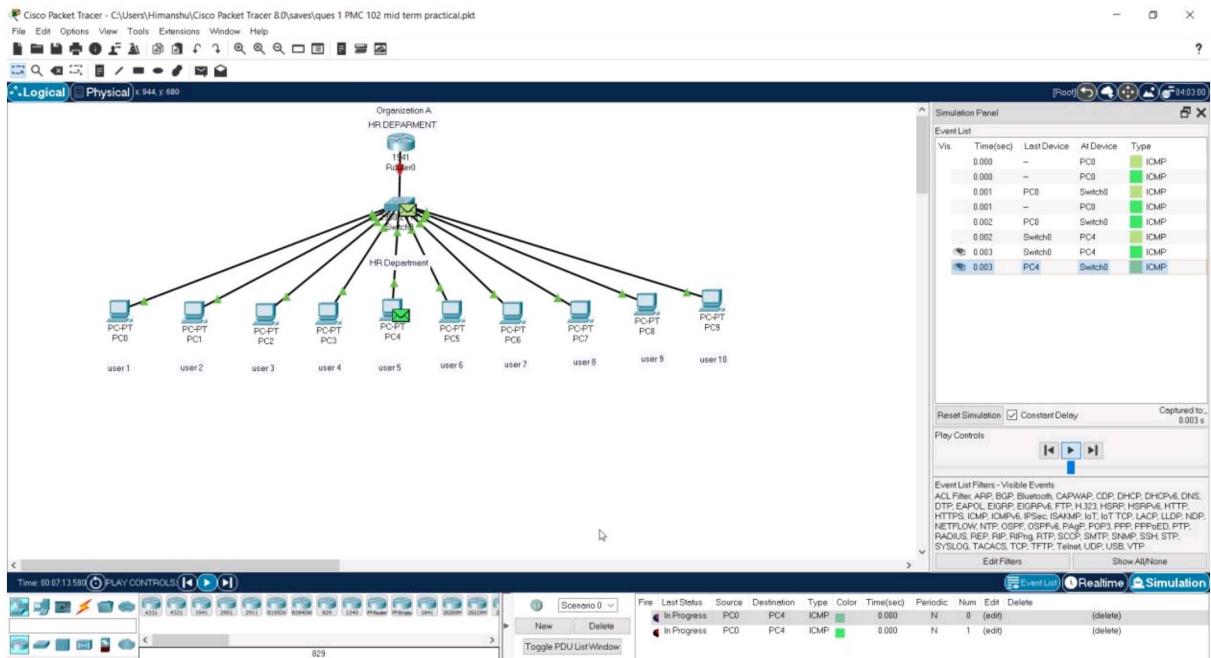


Pinging User 5 to User 1. Successful

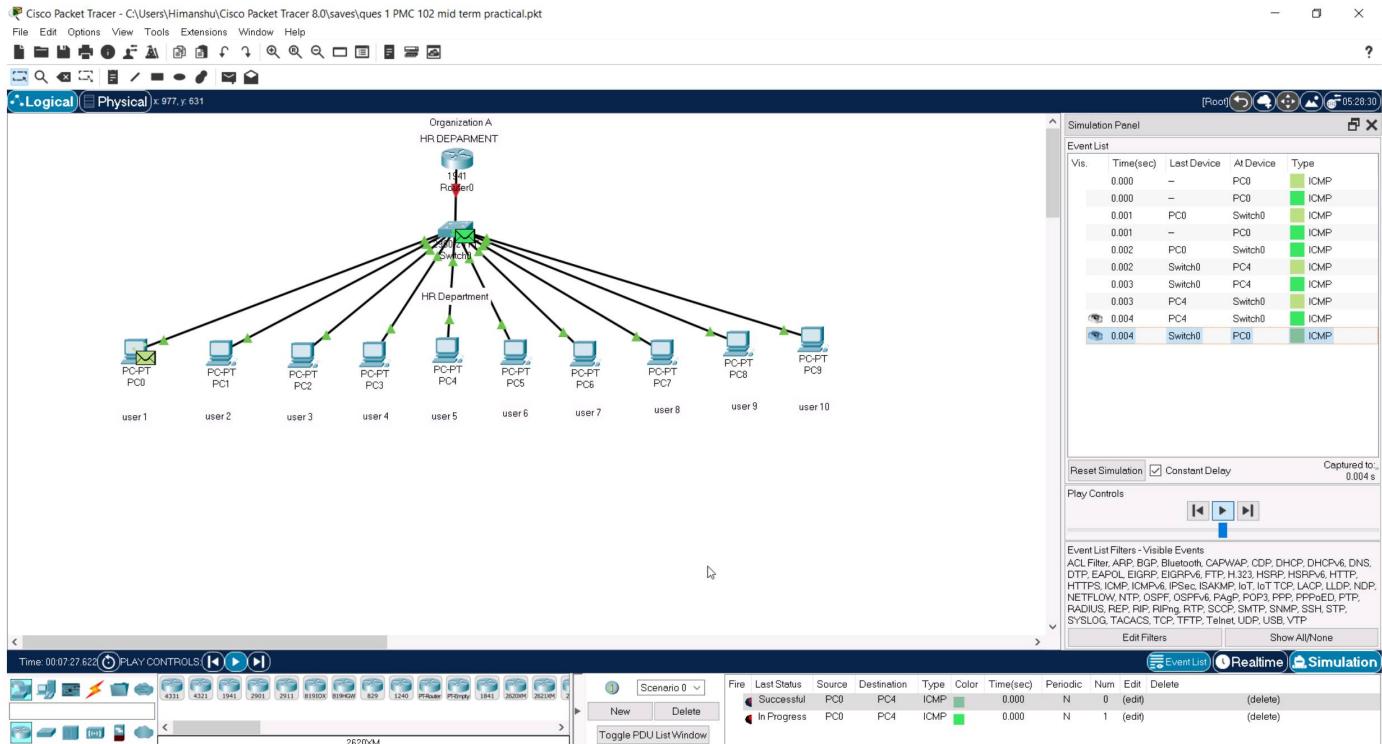


Sending PDU from User 1 to User 5 In simulation Mode

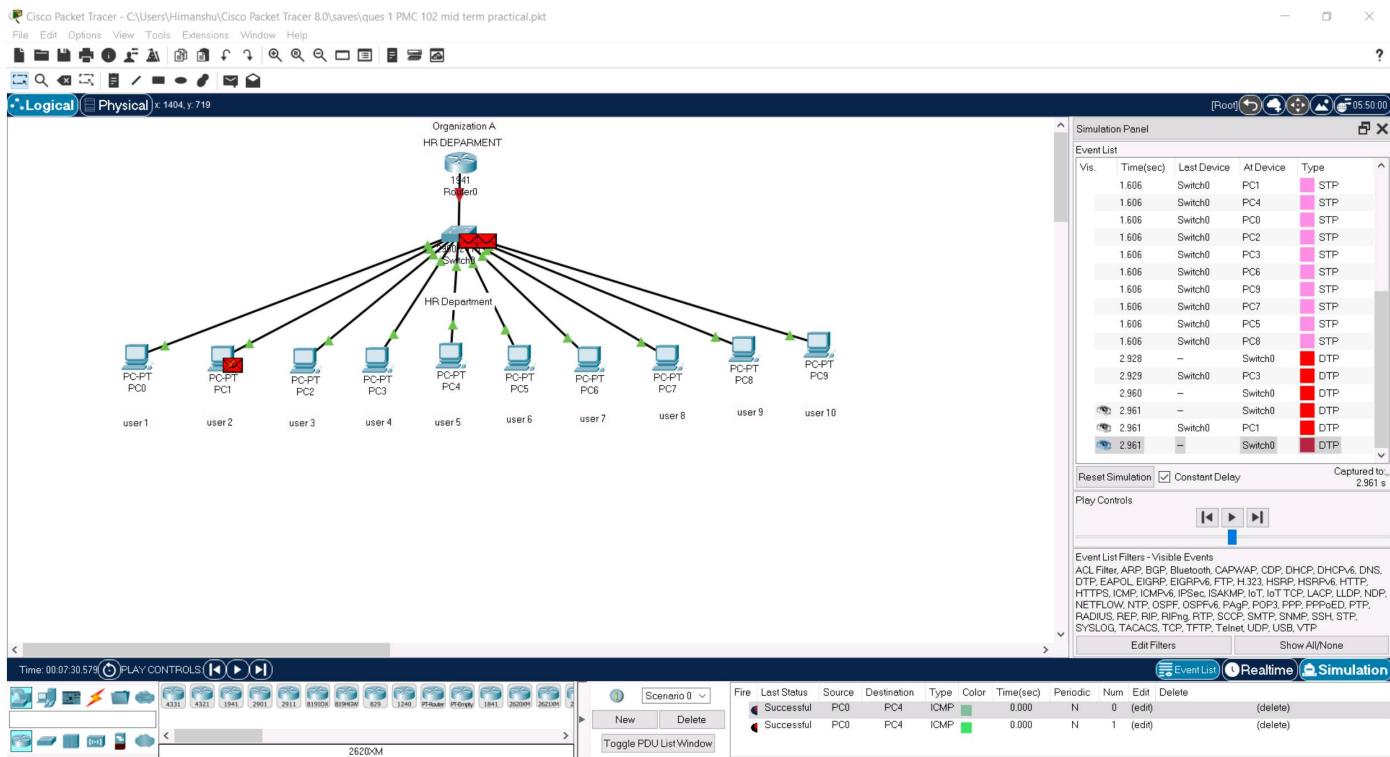
Show All/None



Packet Received by User 5 which was sent from user 1



Packet sent back to user 1 from user 5



Here we can see Successful Message at right bottom corner.

Hence Connection is established and working.

Question 2

2. There are two organizations in a city named GEU and GEHU, design a network between the SOC department of GEU and GEHU. Also, show the communication between user number 1 of GEU and user number 2 of GEHU.

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Sol:

Objective: We will create a virtual LAN environment in Cisco Packet Tracer that will connect 2 user of different departments and connection will be established.

STEPS:

a) We will place nodes first:

- 2 organization named GEU & GEHU.
- 50C Departments
- User 1 & User 2

b) we will place 2 router & 2 switches.

Router 0, Router 1

switch 0, switch 1

c) Connect both routers with serial DTE wire.

d) Connect switch & routers with normal wire.

e) Add 2 system or 2 user in each organization named user no 1 & user no 2.

f) Assign IP address to all 4 system in both departments

g) we have assigned following IP address to 2 system.

IP of GEU User 1: 192.168.10.2

IP of GEHU User 2: 192.168.20.3

Rajani

h) Now again there are 2 ways to verify communication between 2 users.

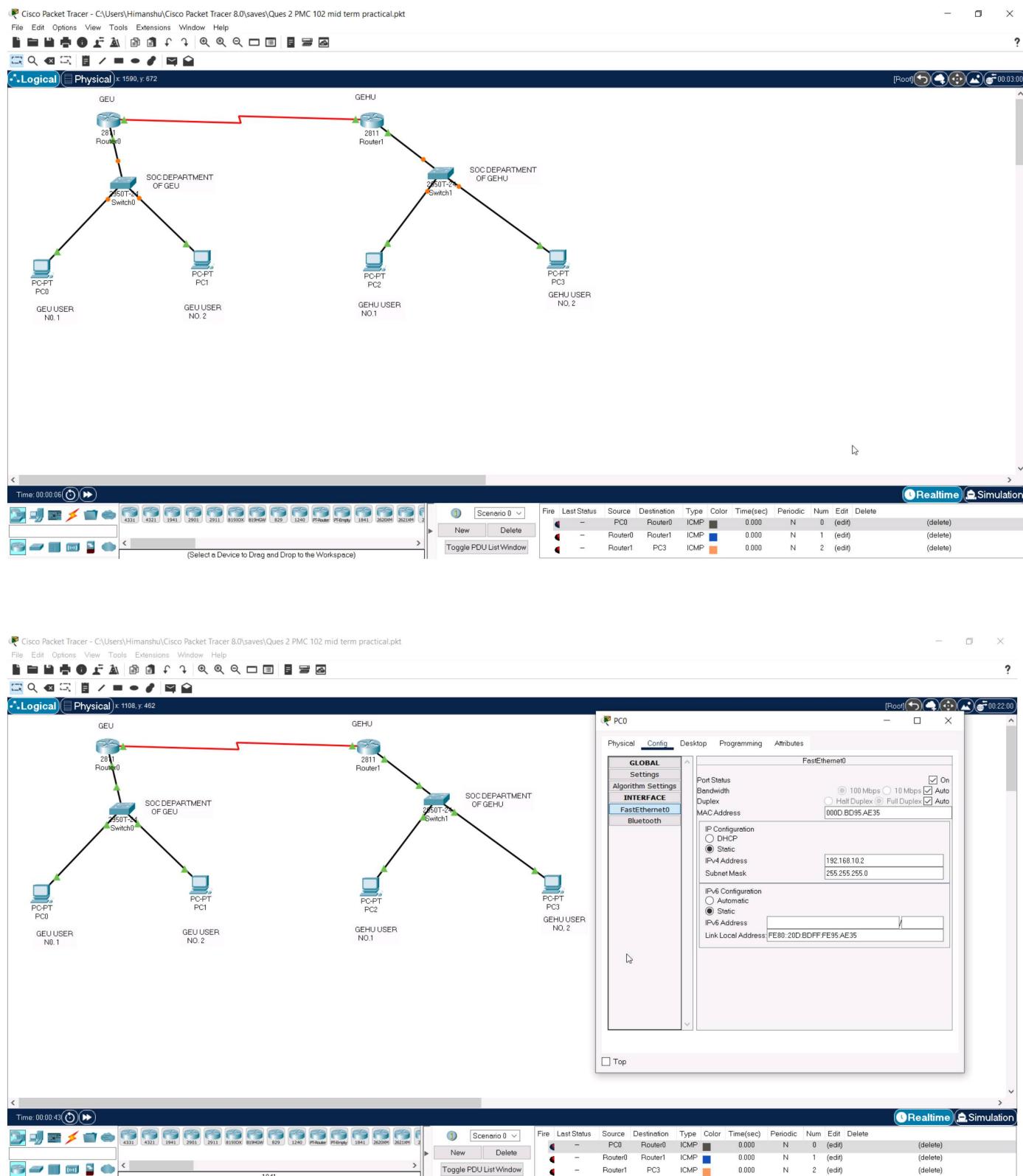
→ Pinging other user IP

→ Sending PDU Packet from user 1 to user 2.

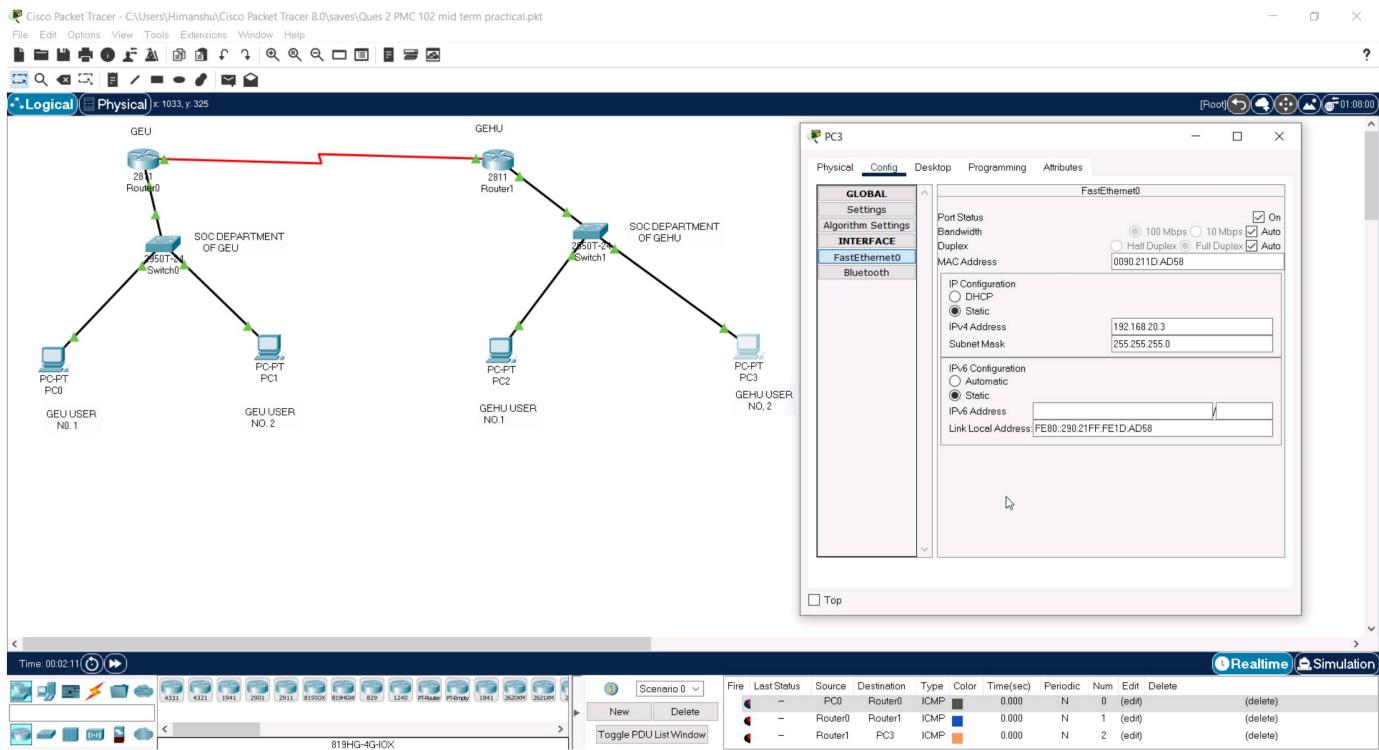
i) We can see now user 1 & user 2 connected.
We are able to communication between them via various methods.

Pause

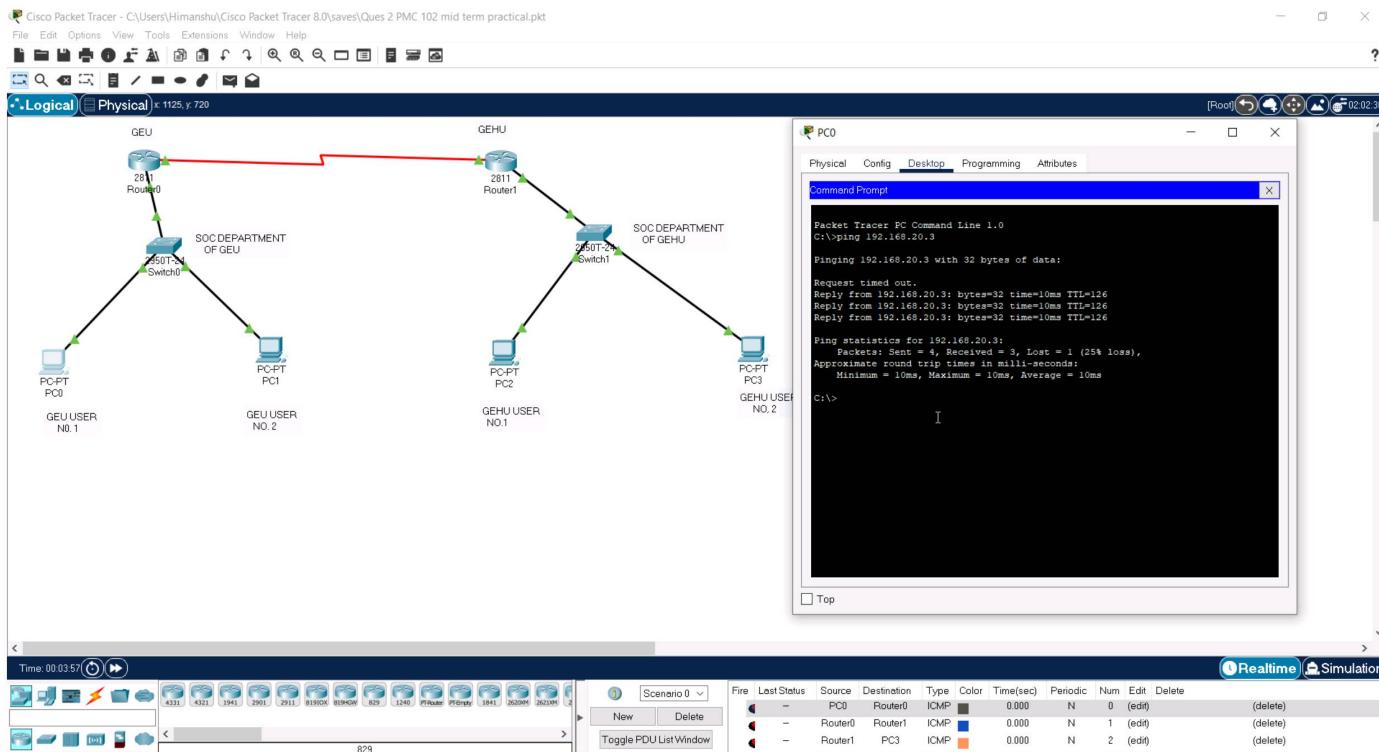
Output Screenshots from Packet Tracer Q2



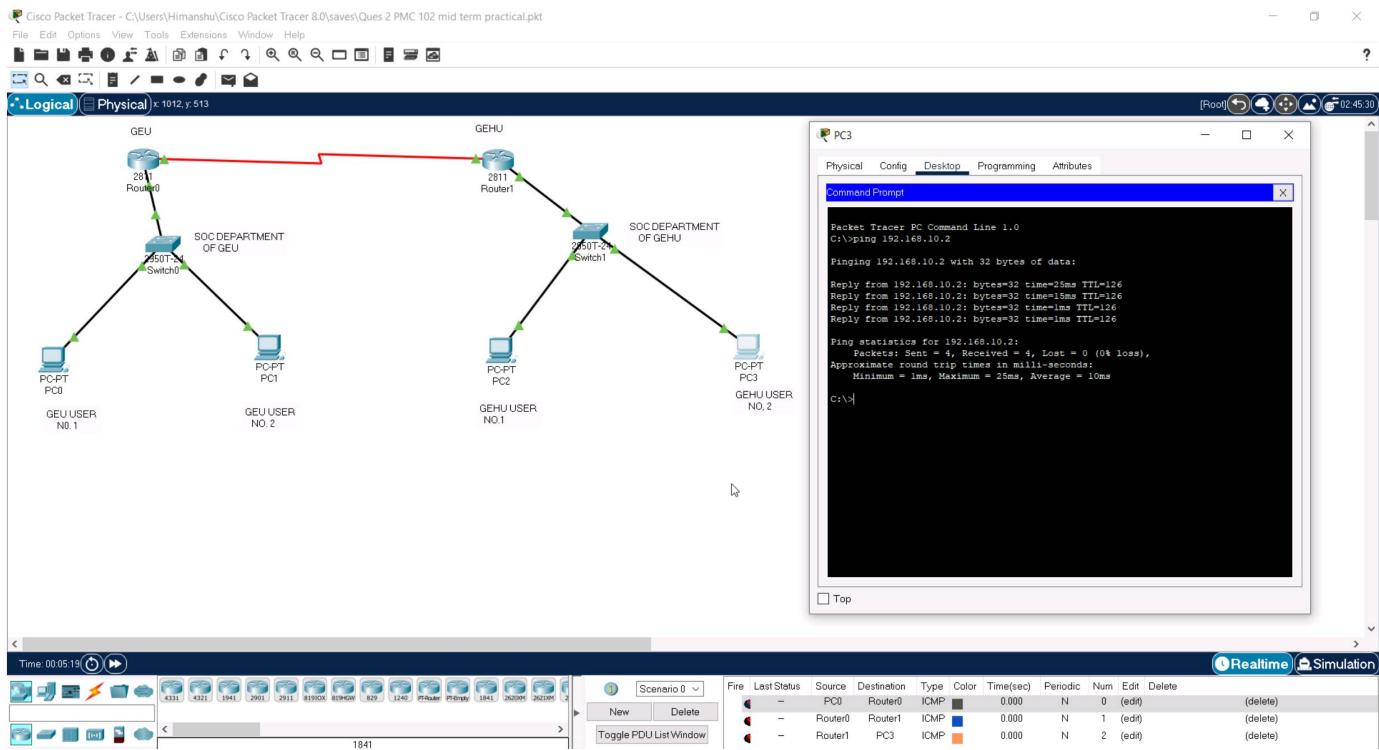
IP assigned to User 1 of GEU. 192.168.10.2



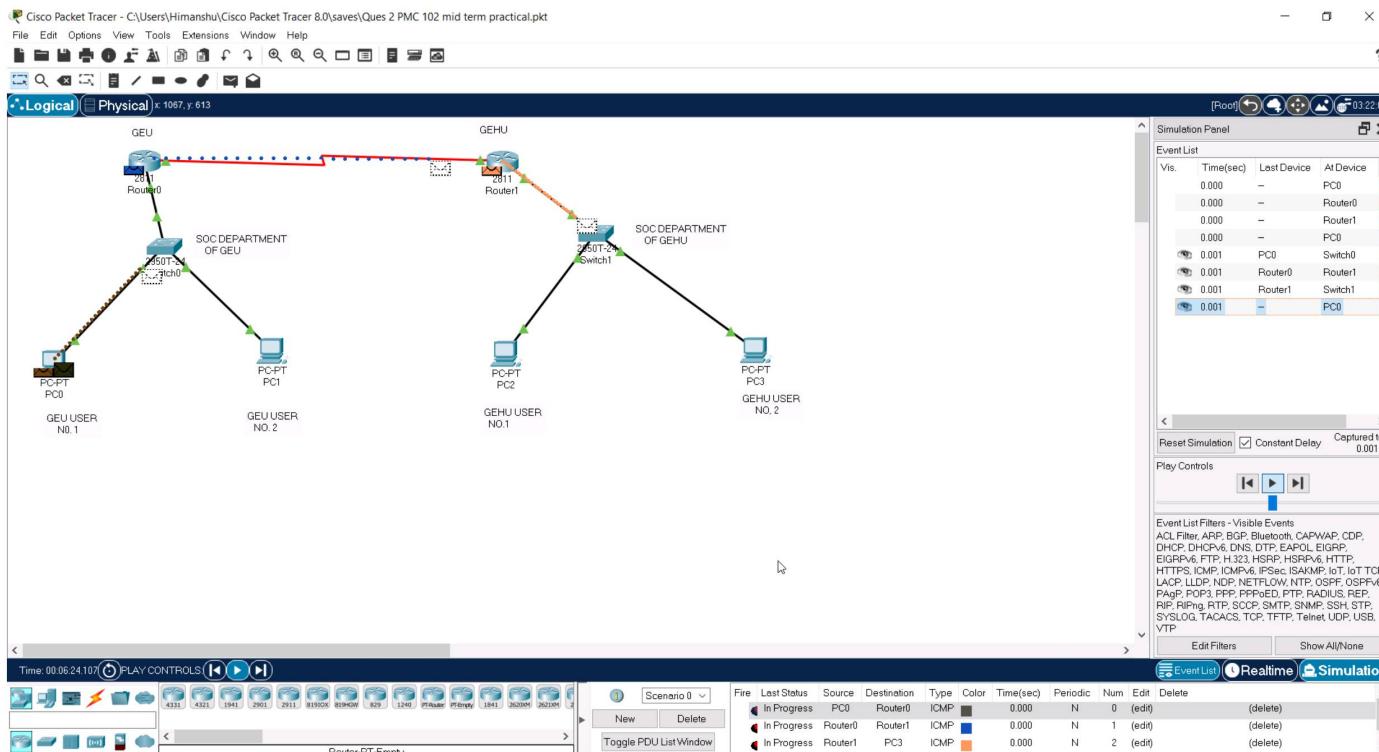
IP assigned to User 2 of GEHU. 192.168.20.3



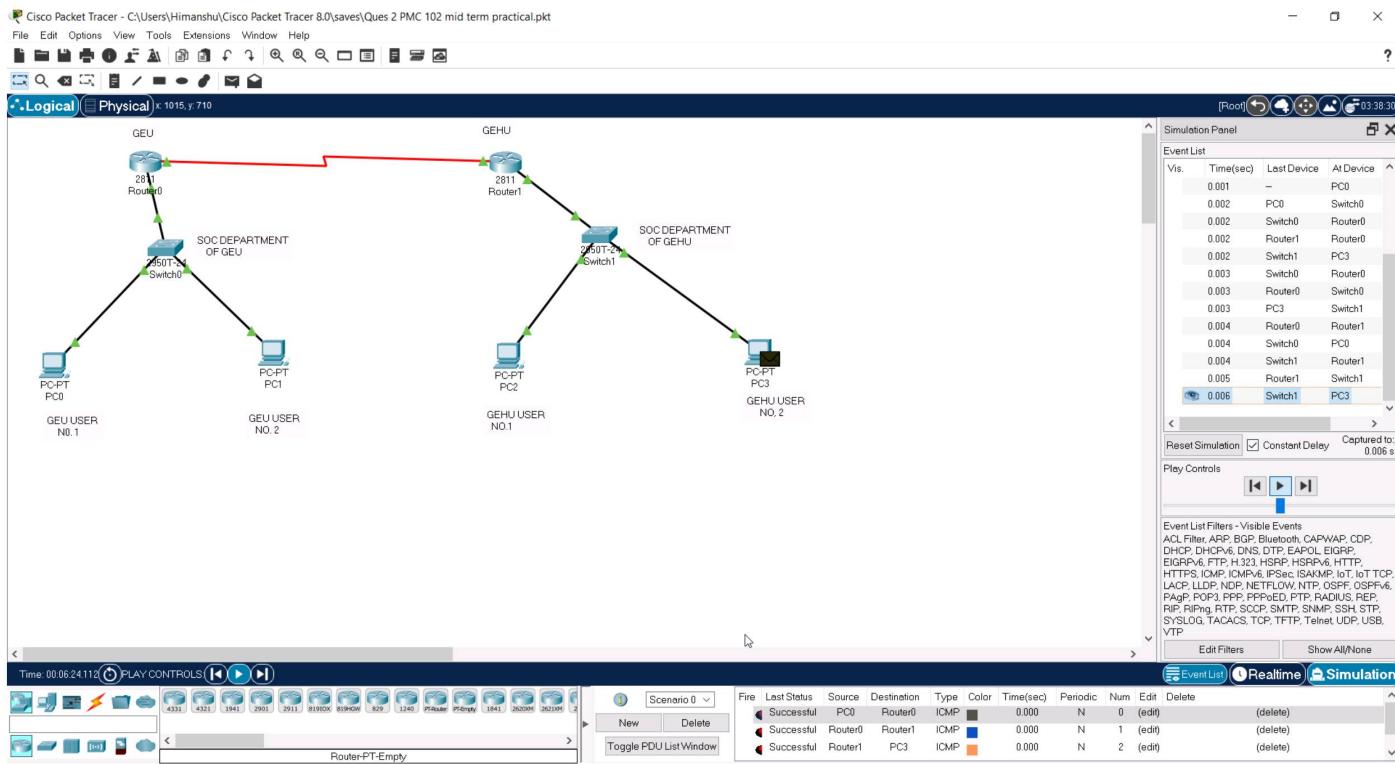
Pinging User 2 of Gehu from User 1 of GEU



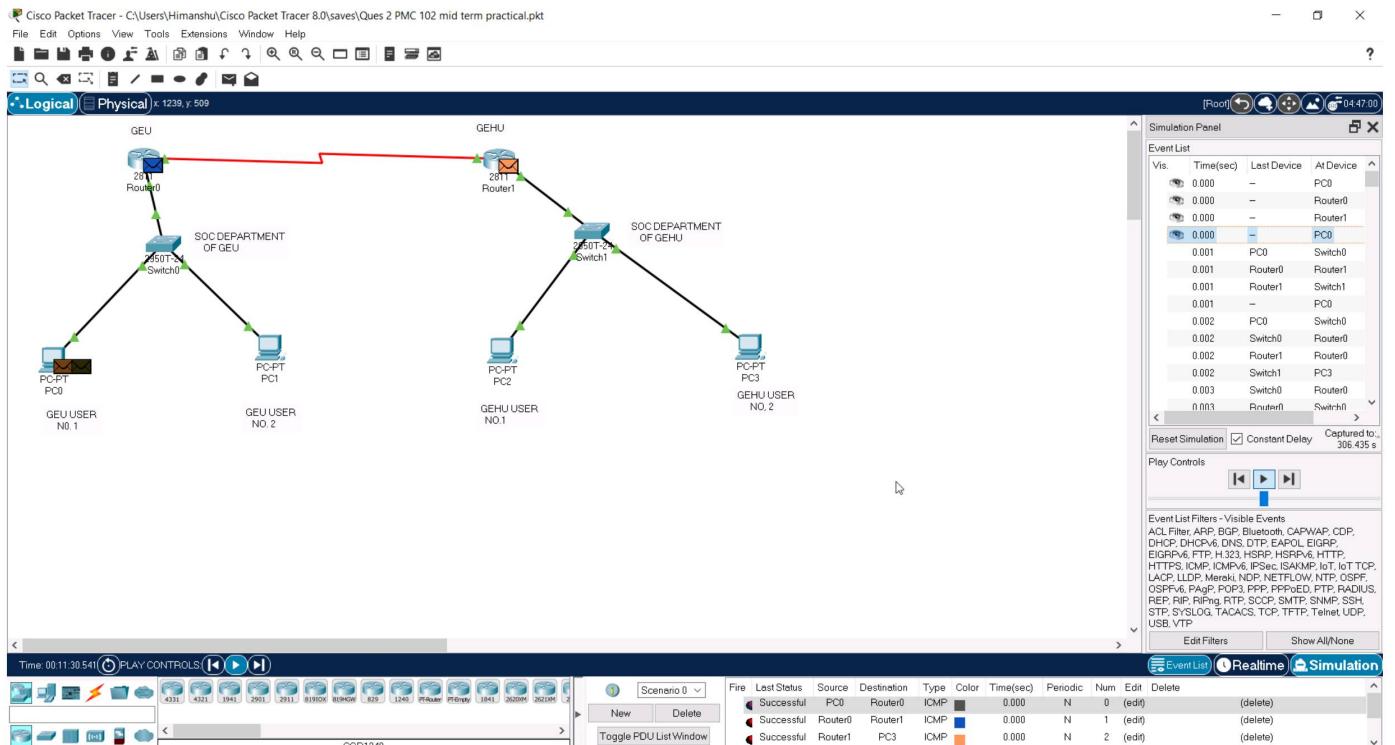
Pinging user 1 of Geu from user 2 of GEHU



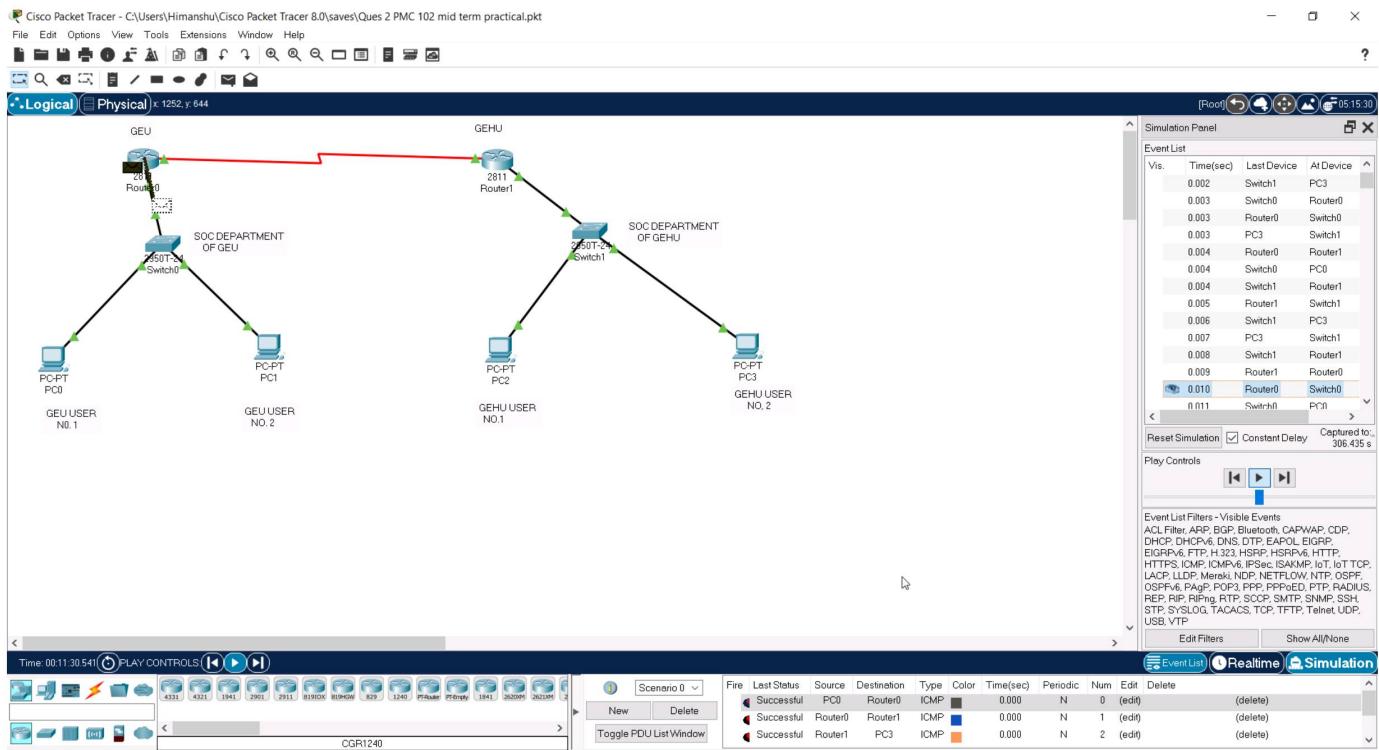
PDU being sent to User 2 of GEHU from User 1 of GEU



PDU Received by User 2 of GEHU from User 1 of GEU



PDU received back by user 1 of GEU from User 2 of GEHU



Successfully established connection there from User 1 of GEU to user 2 of GEHU. Check Successful message at right bottom corner.

Event List											Realtime	Simulation
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete		
Successful	PC0	Router0		ICMP	Black	0.000	N	0	(edit)	(delete)		
Successful	Router0	Router1		ICMP	Blue	0.000	N	1	(edit)	(delete)		
Successful	Router1	PC3		ICMP	Orange	0.000	N	2	(edit)	(delete)		

PC 0 (GEU user 1) to PC 3 (GEHU user 2)

Event List											Realtime	Simulation
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete		
Successful	PC0	PC3		ICMP	Black	0.000	N	3	(edit)	(delete)		
Successful	PC0	PC3		ICMP	Green	6.431	N	4	(edit)	(delete)		
Successful	PC3	PC0		ICMP	Red	306.435	N	5	(edit)	(delete)		

PC 3 to PC0

Successfully connection established in both ways.

Submitted by:- Himanshu Chandola (HLD Campus) , STD ID:- 20711136