

Name → Pushpendra Rawat

Rollno → ~~2001109~~ 2001109

Sec → C

Course → MCA

Subject → Computer Networks

Q1 → Problem Statement → There is an organisation A with Multiple departments

Design a network for HR department & the size of department is 10 users Also & show the communication of user 1 and user 5 of the network.

objective → To design a network b/wⁿ a switch and 10 PCs and show

The communication between PC1 & PC5.

Description → LAN: LAN is a local area network that interconnect computers

within a limited area such as an organisation, school, lab, university campus or office building.

Step 1 - Network Design

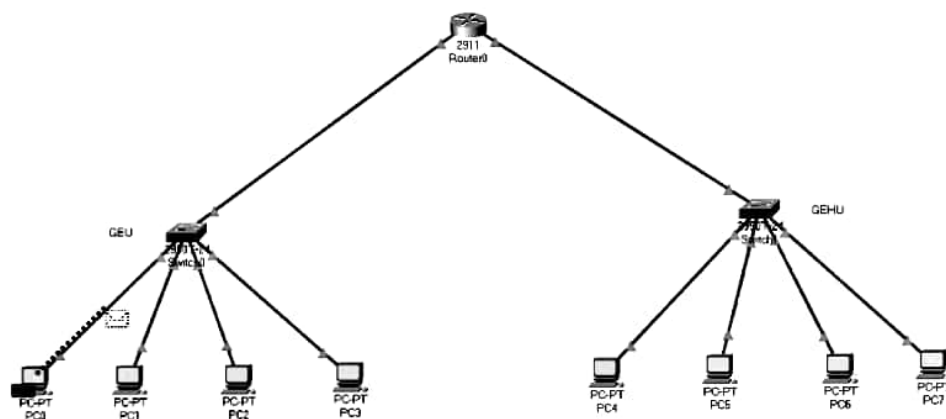
Step 2 → IP Configuration

Setting the IP addresses for PC's.

Step 3 → Connectivity.

using the ping command to check
the connectivity.





Simulation Panel

Event List

Vis	Time(sec)	Last Device	At Device
	0.000	-	PC0
	0.001	PC0	Switch0

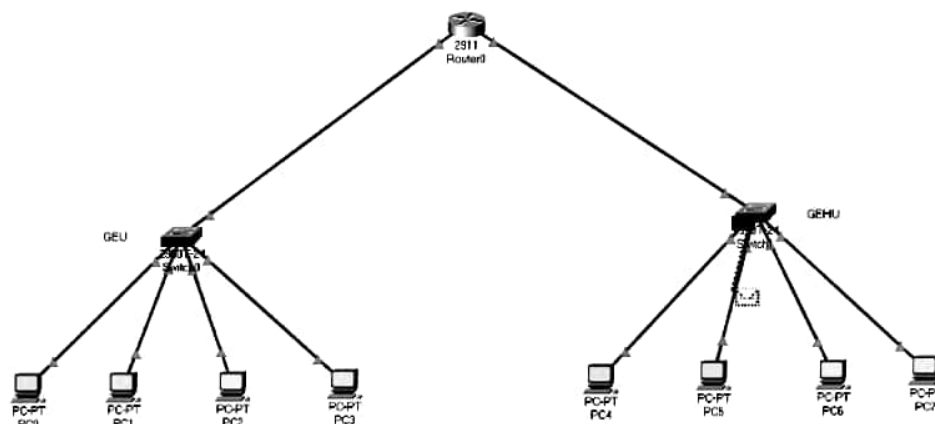
Reset Simulation ☒ Constant Delay ☐ Capturing ☐

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, Mmrk, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv6, RTP, SCCP, SMTP, SNMP, SSH, STR, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None



Simulation Panel

Event List

Vis.	Time(sec)	Host Device	At Device
	0.000	-	PC0
	0.001	PC0	Switch0
	0.002	Switch0	Router0
	0.003	Router0	Switch1
	0.004	Switch1	PC5
	0.005	PC5	Switch1
	0.006	Switch1	Router0
	0.007	Router0	Switch0
	0.008	Switch0	PC0
	0.381	-	Switch1

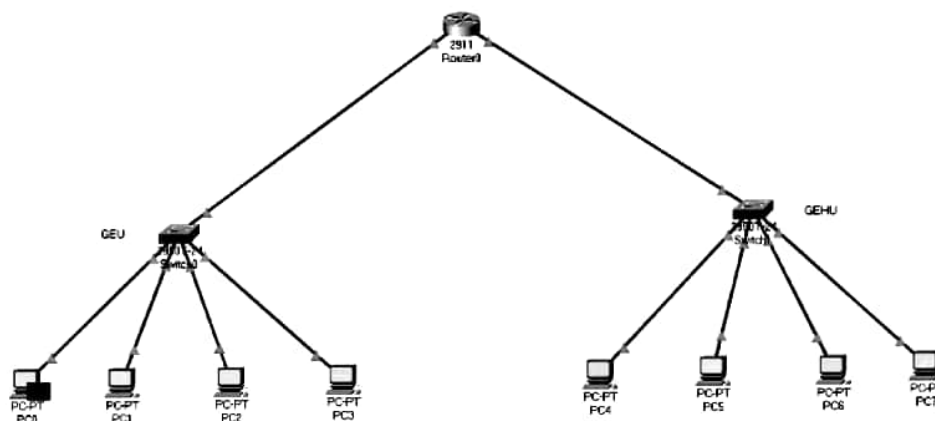
Reset Simulation ☒ Constant Delay Captured to 0.381

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, CMIS, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, MIB, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, POP3S, PPTP, RADIUS, REP, RIP, RIPv2, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	AI Device
	0.000	-	PC0
	0.001	PC0	Switch0
	0.002	Switch0	Router0
	0.003	Router0	Switch1
	0.004	Switch1	PC5
	0.005	PC5	Switch1
	0.006	Switch1	Router0
	0.007	Router0	Switch0
	0.008	Switch0	PC0
	0.381	-	Switch1

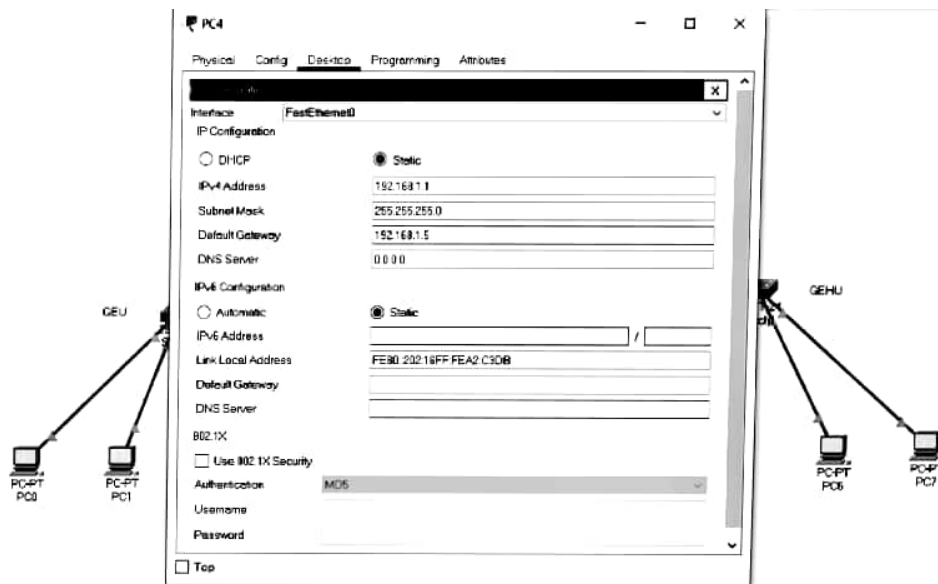
Reset Simulation ☒ Constant Delay Captured 0.381

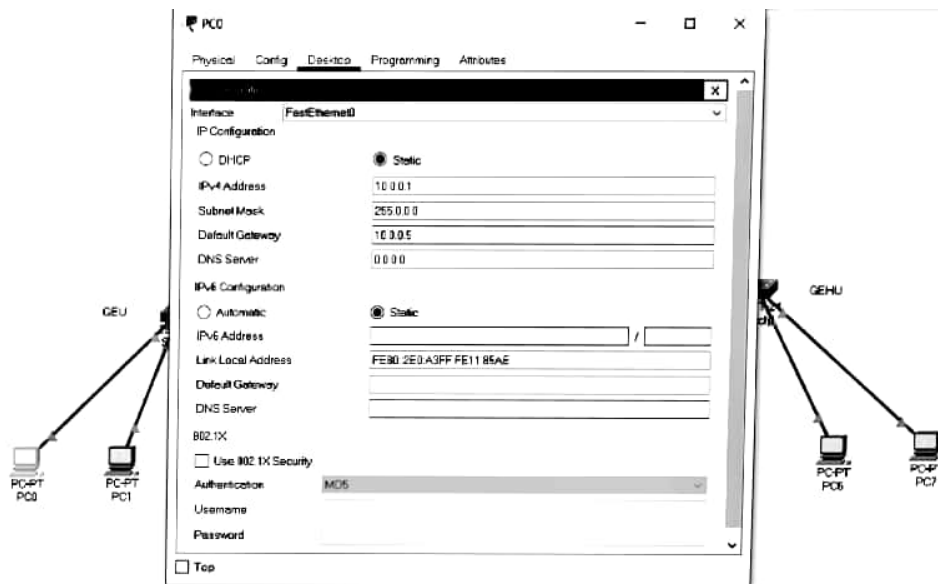
Play Controls

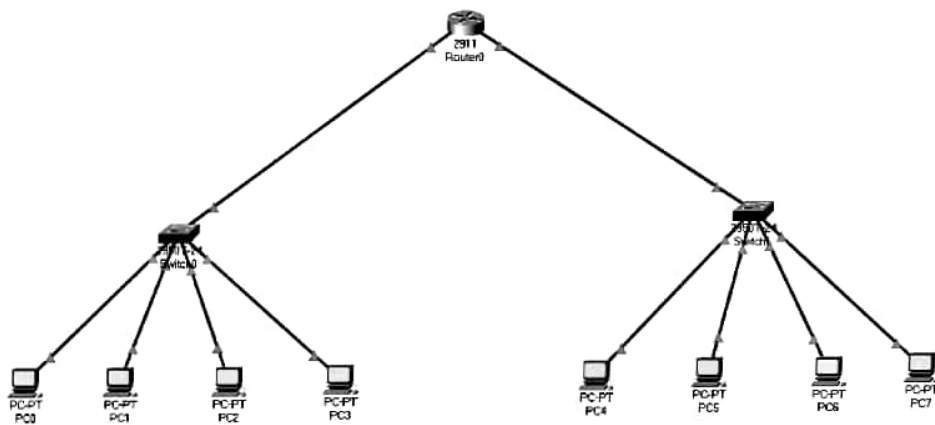
Event List Filters - Visible Events

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, Mxak, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, PCP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPv6, RTP, SCCP, SMTP, SNMP, SSH, STP, Syslog, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None







Q2-7 Objective Description → 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 to Perform

(a) we will place notes first:-

- 2 organisation named GEFU and GEHU
- SOC Departments
- user1 & user2

(b) we will place 2 routers and 2 switches.
Routers 0, Router 1
Switch 0, Switch 1

(c) Connect both routers with serial DTE
wire

(d) Connect switch & routers with normal
wire.

(e) Assign IP address to all 4 systems in both departments.

IP of GFU user1: 192.168.10.2

IP of GFHU user2: 192.168.20.3

(f) Now again there are 2 ways to verify communication b/w 2 users

→ Pinging other user IP

→ sending PDU Packet from user1 to user2.

(g) we can see now user1 & user2 connected. we are able to communicate b/w them via various Method.