

Mid Term Practical Exam Computer Networks

Q1 There is an organization with multiple department
----- no 5 of
the network.

Ans Objective as the question states we have
to create a network within HR department
~~network~~ and to show the communication
between the user 1 and user 5.

Step 1 - we have to find port of 2 routers and
2 switches with 10 pc's. Now we have to
use a automatically connection will do
connect router and switch

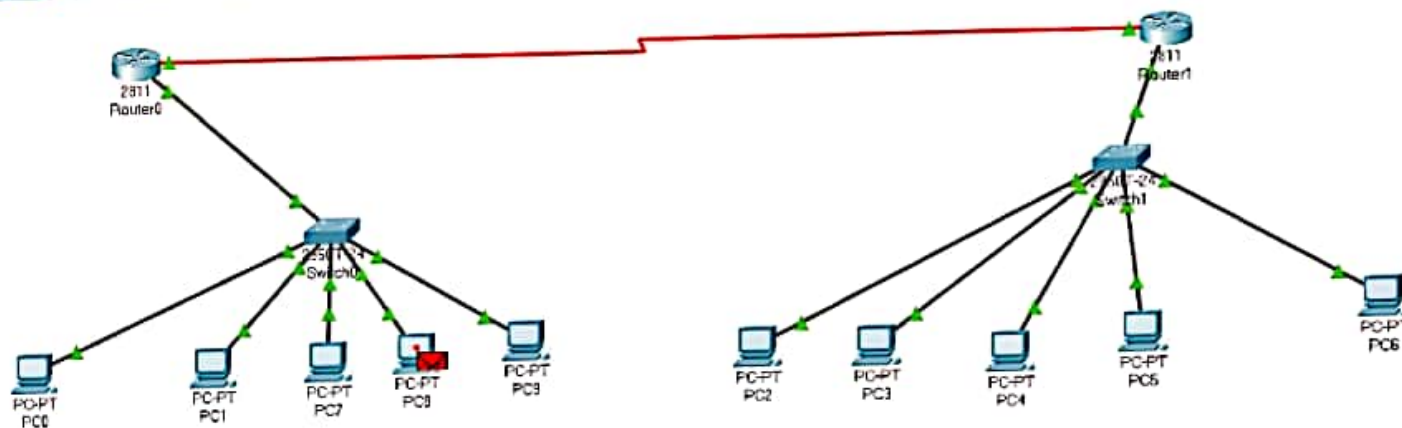
Step 2 Now assign IP to routers and PC and
the default gateway of PC will be the same
as the IP of the router.

Step 3 Check the connection by sending message
from PC 1 to PC 5

Step 4 Use the stimulation to illustrate the network
working.



Logical Physical x 1300, y 470



Simulation Panel

Event List

Via	Time(sec)	Last Device	At Device
	3.836	Switch1	PC5
	3.836	Switch1	PC5
	3.836	Switch1	Router1
	3.836	Switch1	PC4
	4.020	-	Switch0
	4.021	Switch0	PC0
	4.021	Switch0	PC1
	4.021	Switch0	Router0
	4.021	Switch0	PC7
	4.021	Switch0	PC8
	4.021	Switch0	PC9
	4.184	-	Switch0
	4.185	Switch0	PC9

Reset Simulation ☒ Constant Delay Captured to 4185

Play Controls

Event List Filters - Visible Events
 ACLFilter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSFP, OSFPv6, PAgP, PCP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USD, VTP

Edit Filters Show All/None

Event List Realtime Simulation

Time 00:03:17.800 PLAY CONTROLS



Automatically Choose Connection Type

Scenario 0

New Delete

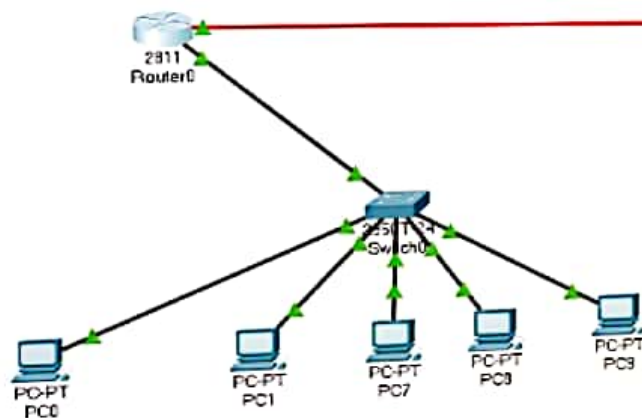
Toggle PDU List Window

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

Successful	PC1	PC5	ICMP		0.000	N	0	(edit)	(delete)
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Logical Physical x 590, y: 151



Router0

Physical Config CU Attributes

GLOBAL

- Settings
- Algorithm Settings
- ROUTING**
- Static
- RIP
- SWITCHING**
- VLAN Database
- INTERFACE**
- FastEthernet0/0
- FastEthernet0/1
- Serial0/0/0

FastEthernet0/0

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☒ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0002.17A7.5B01

IP Configuration

IPv4 Address 192.168.10.1

Subnet Mask 255.255.255.0

Tx Ping Limit 10

Equivalent IOS Commands

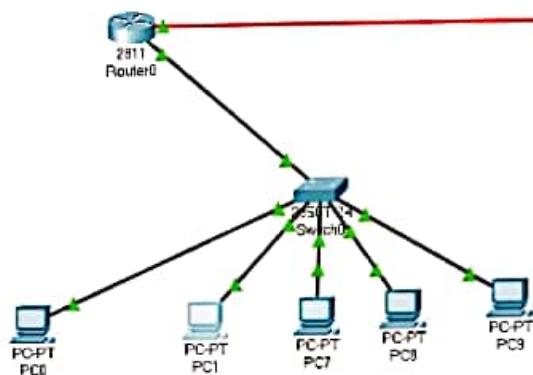
```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

☐ Top

Event List Realtime Simulation

Time Color Time(sec) Periodic Num Edit Delete (delete)

Logical Physical 491, 197



PC1

Physical Config Desktop Programming Attributes

IP Configuration

Interface FastEthernet0

☐ DHCP
 ☒ Static

IPv4 Address 192.168.10.1

Subnet Mask 255.255.255.0

Default Gateway 192.168.10.1

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic
 ☒ Static

IPv6 Address

Link Local Address FE80:201:E4FF:FE56:56C

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

☐ Top

Time 00:12:06.154 PLAY CONTROLS [Icons for play, pause, stop, etc.]



Automatically Choose Connection Type

Scenario 0

New

Delete

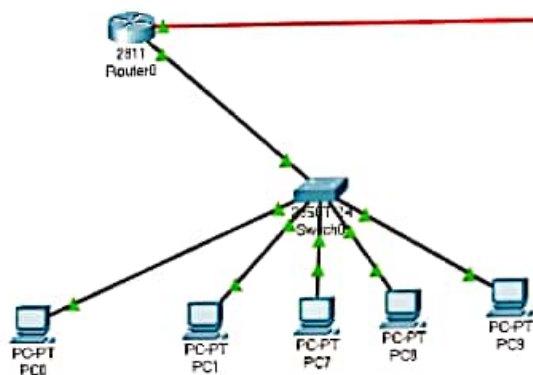
Toggle PDU List Window

Event List

Realtime

Simulation

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
Successful		PC1	PC5	ICMP		0.003	N	0	(edit)	(delete)



PCS

Physical Config Desktop Programming Attributes

IP Configuration

Interface FastEthernet0

☐ DHCP
 ☒ Static

IPv4 Address 192.168.20.5

Subnet Mask 255.255.255.0

Default Gateway 192.168.20.1

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic
 ☒ Static

IPv6 Address

Link Local Address FE80:206:2AFF:FE0B:5B7D

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

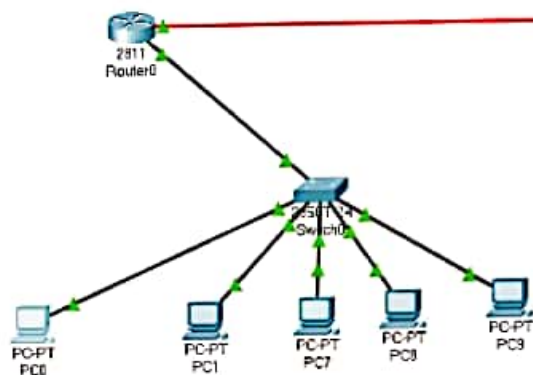
Authentication MD5

Username

Password

☐ Top

Logical Physical x 509, y 354



PC0

Physical Config Desktop Programming Attributes

IP Configuration

Interface: FastEthernet0

☐ DHCP
 ☒ Static

IPv4 Address: 192.168.10.2

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.10.1

DNS Server: 0.0.0.0

IPv6 Configuration

☐ Automatic
 ☒ Static

IPv6 Address: /

Link Local Address: FE80:20D:B0FF:FE95:AE35

Default Gateway:

DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:

☐ Top

Time: 00:12:06:154 PLAY CONTROLS [Icons for play, pause, stop, etc.]

Event List Realtime Simulation

[Icons for various simulation tools and functions]
 Automatically Choose Connection Type

Scenario 0

New Delete

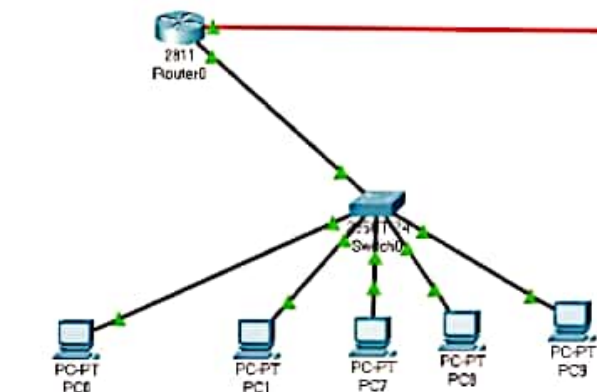
Toggle PDU List Window

Prio	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
0	Successful	PC1	PC5	ICMP	Blue	0.003	N	0	(edit)	(delete)



Logical Physical c 1341, y 333

[Pool] 11.04



Router1

Physical Config CU Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

Serial0/0/0

FastEthernet0/0

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☒ 10 Mbps ☒ Auto

Duplex ☒ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 000B BE01 CE01

IP Configuration

IPv4 Address 192.168.20.1

Subnet Mask 255.255.255.0

Tx Ring Limit 16

Equivalent IOS Commands

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

☐ Top

Time: 00:12:06.154 PLAY CONTROLS



Automatically Choose Connection Type

Scenario 0

New Delete

Toggle PDU List Window

File	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
Successful		PC1	PC5	ICMP		0.000	N	0	(edit)	(delete)

Q2 Network between Soc ~~and~~ Dept of Cse and Cui.

① Objective — as the question states we have to create a network between Soc Dept of both Cui and Cui.

Step1 — we take a router and along with that we attach two switches (consider Cui and Cui) with automatically connection wire then we add 8 PC, 4 on each switch.

Step2 Give IP to all the PC as shown in the screenshots, when they are all connected to each other, show the illustration with Simulation mode.

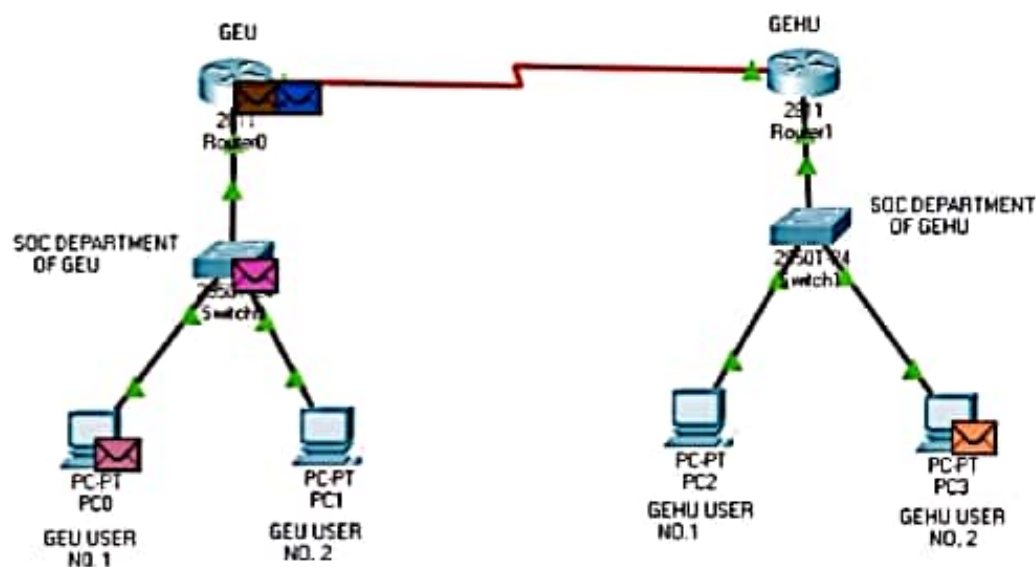
Step3 if the Ping test display successful it means connection has been established and the network is built between them.

Cisco Packet Tracer - C:\Users\LENOVO\Downloads\SOL-ORGANIZATION.plt

File Edit Options View Tools Extensions Window Help



Logical Physical 1271 423



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Dev
	0.002	Switch0	Router0
	0.002	Router1	Router0
	0.002	Switch1	PC3
	0.002	-	PC0

Reset Simulation ☒ Constant Delay Captured for 0.002 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, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 35:57:16.257 PLAY CONTROLS



Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit
	In Progress	PC0	Router0	ICMP		0.000	N	0	(edit)
	Successful	Router0	Router1	ICMP		0.000	N	1	(edit)
	In Progress	Router1	PC3	ICMP		0.000	N	2	(edit)

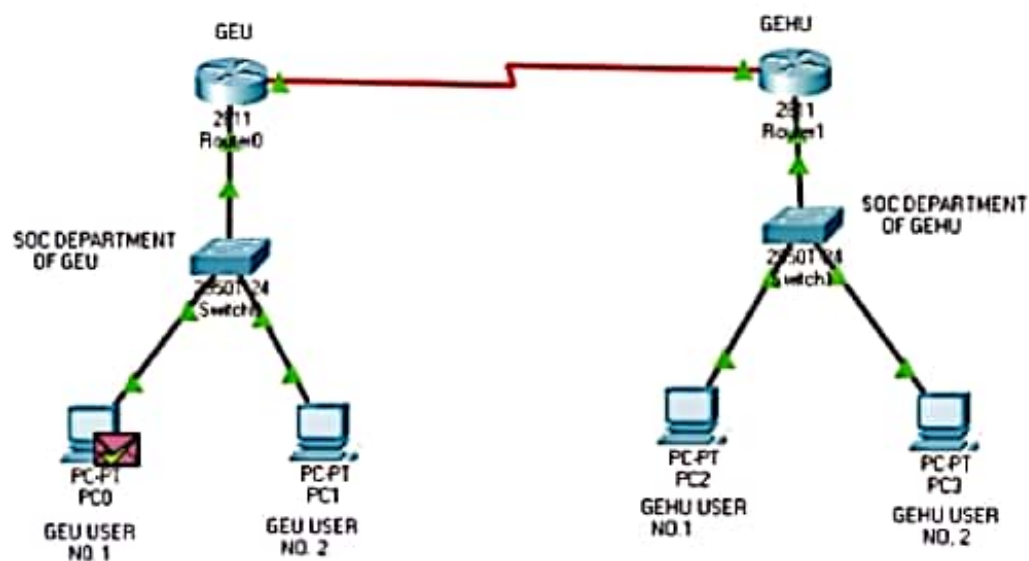
Cisco Packet Tracer - C:\Users\LENOVO\Downloads\SOL-ORGANIZATION.pkt

File Edit Options View Tools Extensions Window Help



Logical Physical 1271 y 423

[Root] 09:23:00



Simulation Panel

Event List

Vis	Time(sec)	Last Device	As Dev
	0.009	Switch1	Router1
	0.010	Router1	Router0
	0.011	Router0	Switch0
	0.012	Switch0	PC0

Reset Simulation

☒ Constant Delay

Captured to 0.012

Play Controls



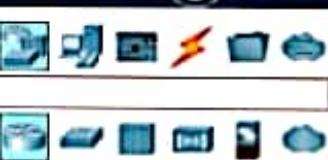
Event List Filters - Visible Events

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

Edit Filters

Show All/None

Time: 35:57:16.277 PLAY CONTROLS



Router PT-Empty

Scenario 0

New

Delete

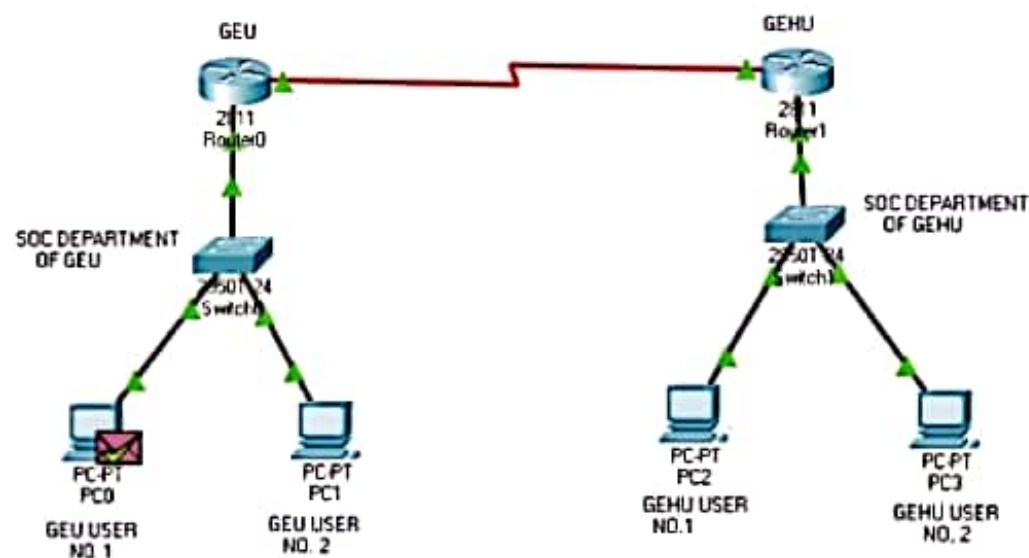
Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Ed
	Successful	PC0	Router0	ICMP		0.000	N	0	(edit)
	Successful	Router0	Router1	ICMP		0.000	N	1	(edit)
	Successful	Router1	PC3	ICMP		0.000	N	2	(edit)



Logical Physical 1/27/19 4:23

[Root] 09:23:00



Simulation Panel

Event List

Vis	Time(sec)	Last Device	At Dev
	0.009	Switch1	Router1
	0.010	Router1	Router0
	0.011	Router0	Switch0
	0.012	Switch0	PC0

Reset Simulation Constant Delay Captured to 0.012 s

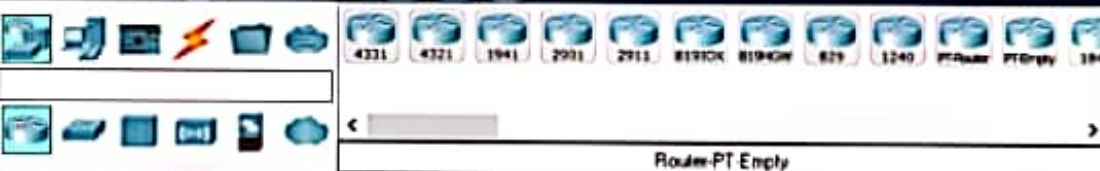
Play Controls


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

Edit Filters

Show All/None

Time: 35:57:16.277 PLAY CONTROLS



Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit
	Successful	PC0	Router0	ICMP		0.000	N	0	[edit]
	Successful	Router0	Router1	ICMP		0.000	N	1	[edit]
	Successful	Router1	PC3	ICMP		0.000	N	2	[edit]