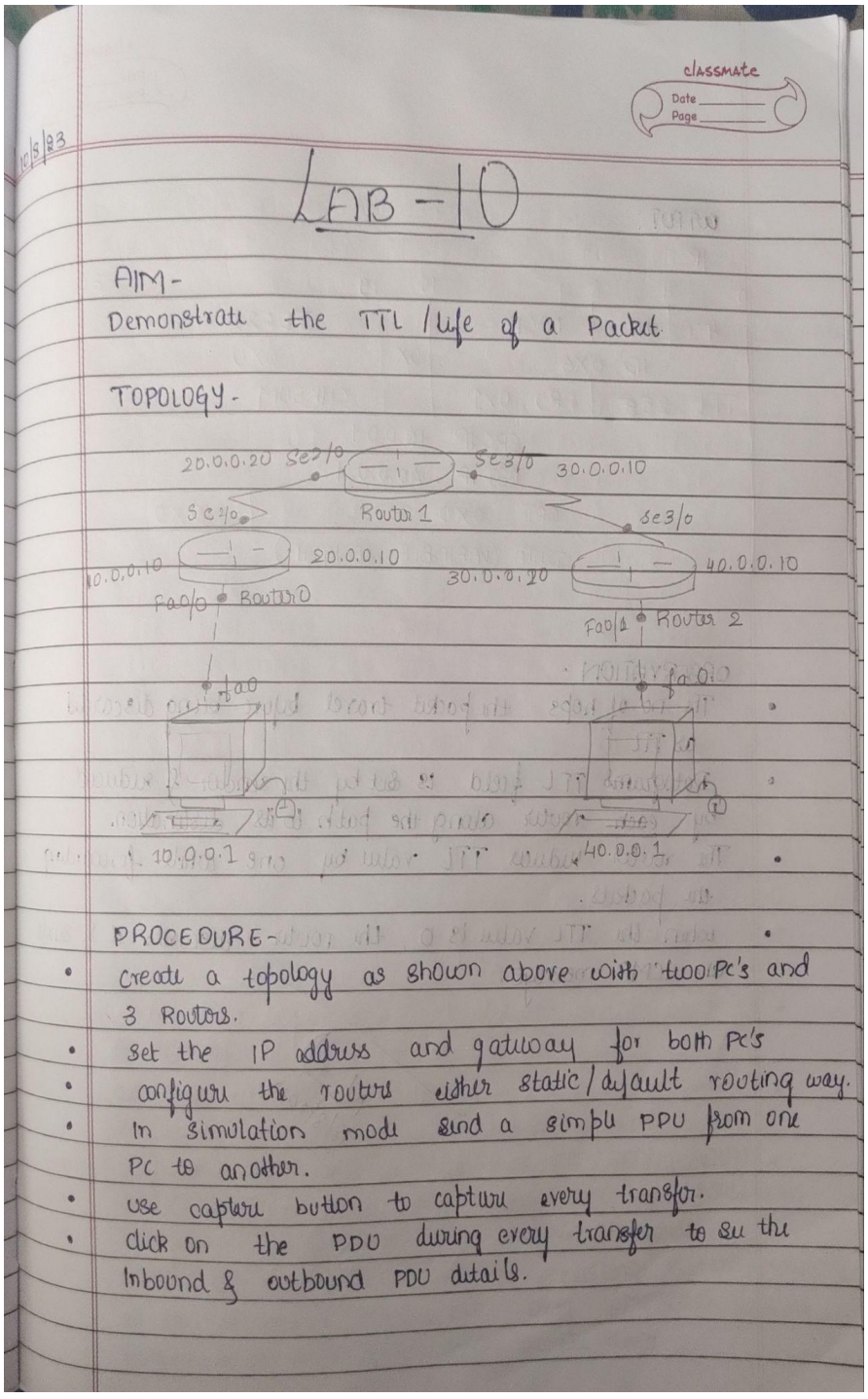
WEEK 10

Demonstrate the TTL/ Life of a Packet.

OBSERVATION:



LAB - 10

AIM -
Demonstrate the TTL / life of a Packet

TOPOLOGY -

PROCEDURE -

- Create a topology as shown above with two PC's and 3 Routers.
- Set the IP address and gateway for both PC's
- configure the routers either static / default routing way.
- In simulation mode send a simple PDU from one PC to another.
- use capture button to capture every transfer.
- click on the PDU during every transfer to see the Inbound & outbound PDU details.

OUTPUT:

IP

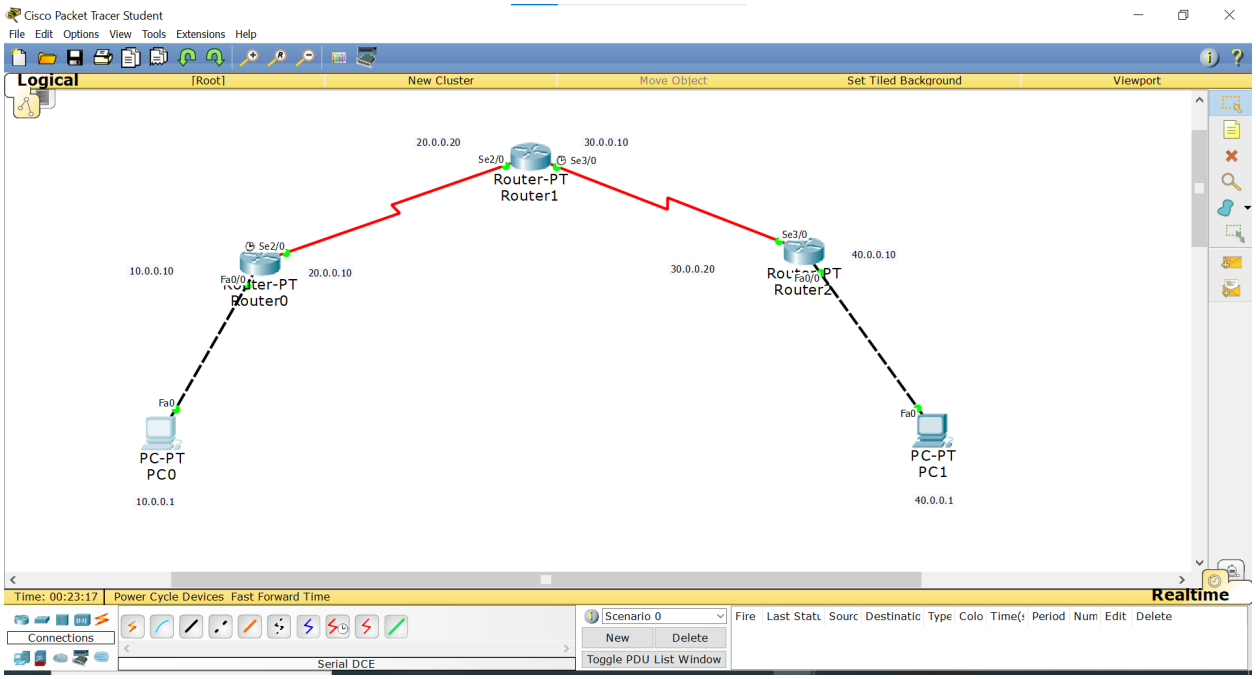
0	4	8	16	19	31
4	IHL	DSCP	TL : 28		
ID : 0X6			0X	0X0	
TTL : 255	PRO : 0x1		CHKSUM		
SRC IP : 10.0.0.1					
DST IP : 40.0.0.1					
OPT : 0X0				0X0	
DATA (VARIABLE LENGTH)					

OBSERVATION -

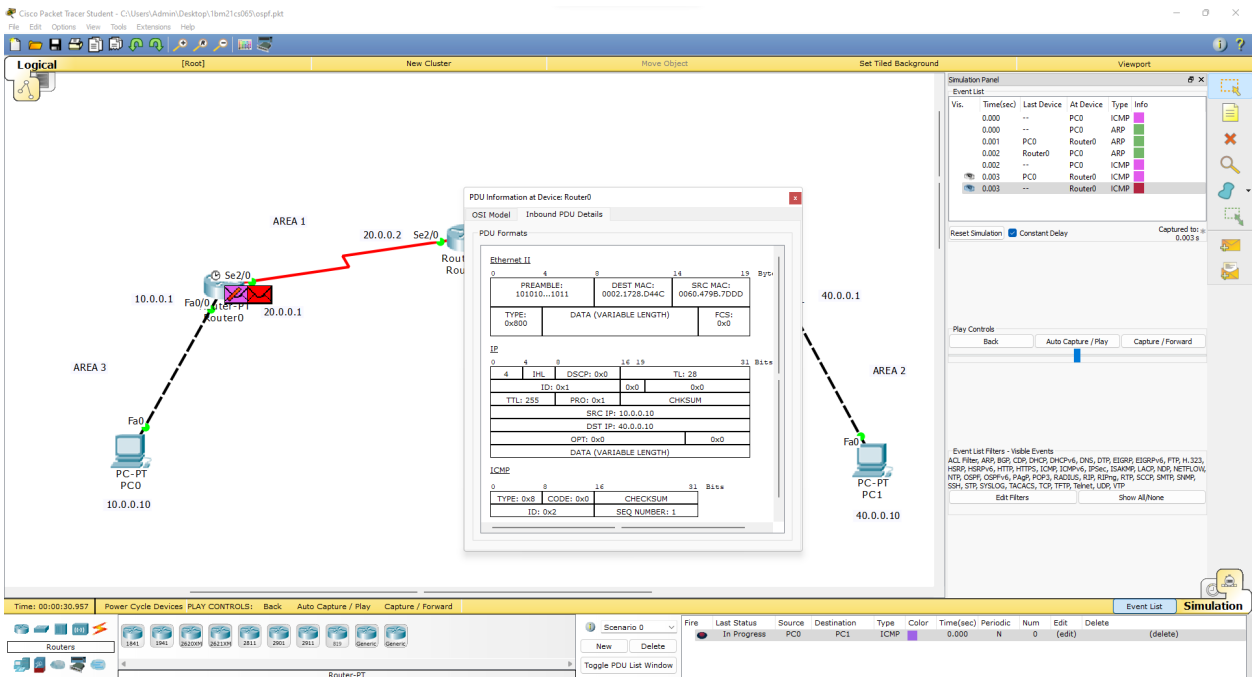
- The no. of hops the packet travel before being discarded as TTL
- Datagrams TTL field is set by the sender & reduced by each router along the path to its destination.
- The router reduces TTL value by one while forwarding the packets.
- When the TTL value is 0, the router discards it & sends an ICMP message.

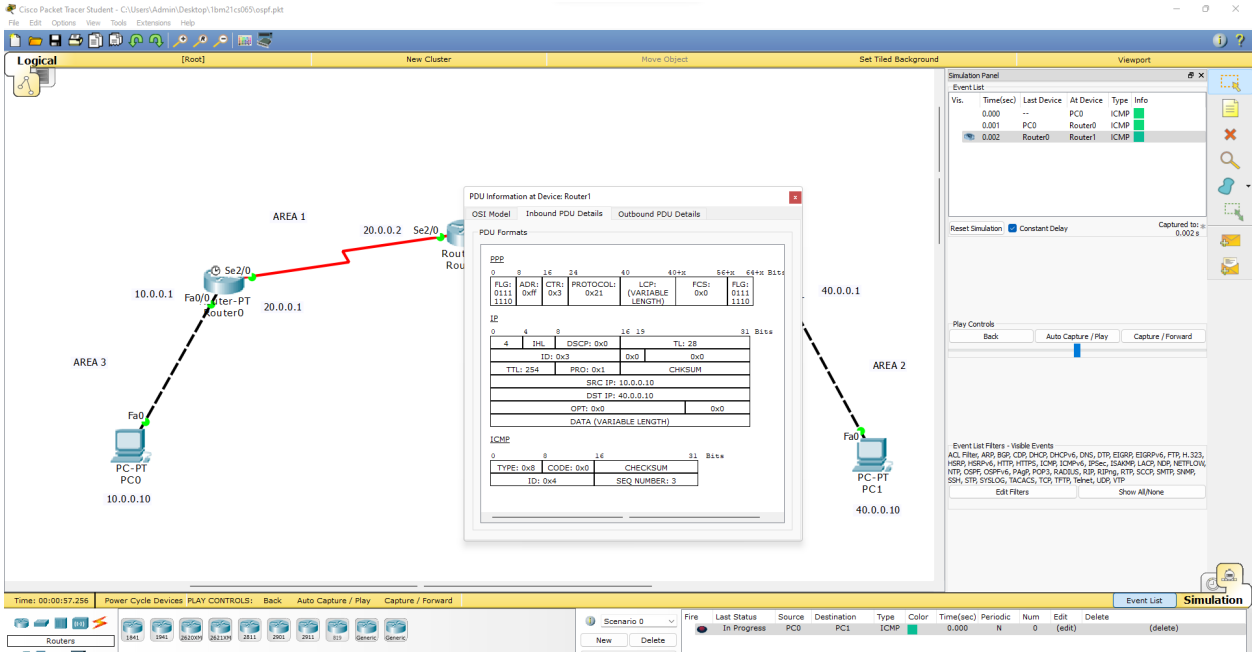
18/8/2022

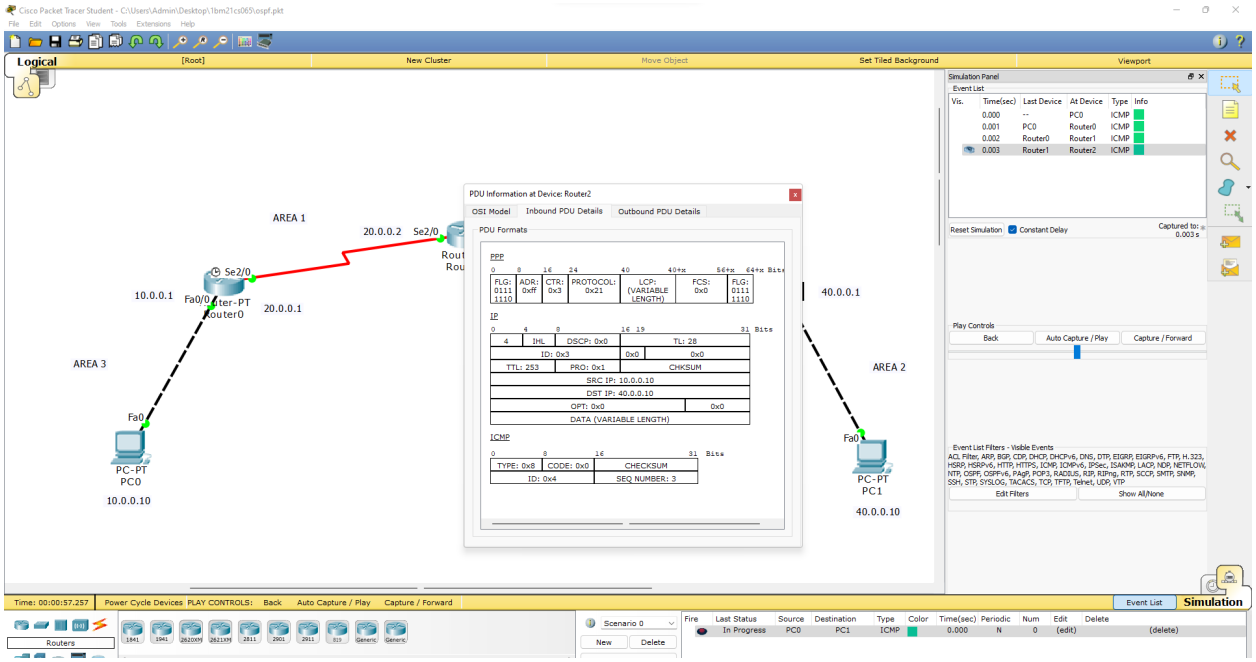
TOPOLOGY:

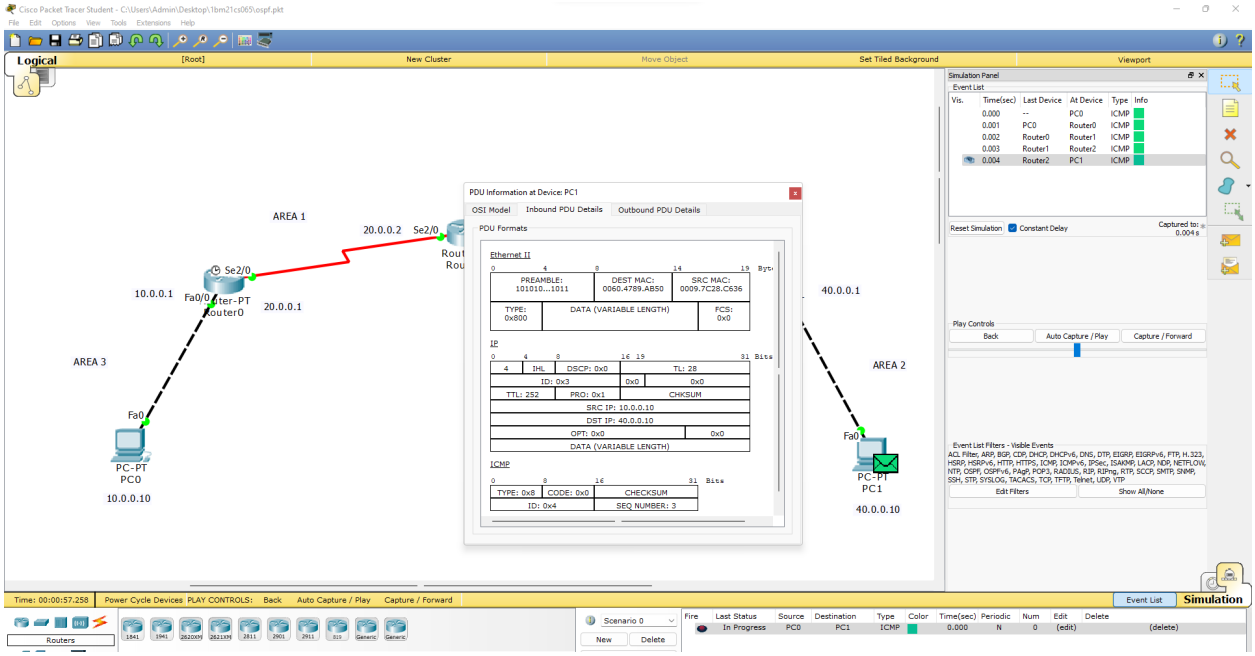


OUTPUT:




Cisco Packet Tracer Student - C:\Users\Admin\Desktop\1bm21cs065\ospf.pkt
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
AREA 1
AREA 2
AREA 3
20.0.0.2
Se2/0
10.0.0.1
Fa0/0
Router-PT
Router0
20.0.0.1
40.0.0.1
Fa0
PC-PT
PC0
10.0.0.10
PC-PT
PC1
40.0.0.10
PDU Information at Device: Router1
OSI Model
Inbound PDU Details
Outbound PDU Details
PDU Formats
PPP
IP
ICMP
Simulation Panel
Event List
Vis.
Time(sec)
Last Device
At Device
Type
Info
Reset Simulation
Constant Delay
Play Controls
Back
Auto Capture / Play
Capture / Forward
Event List Filters - Visible Events
Edit Filters
Show All/None
Time: 00:00:57.256
Power Cycle Devices
PLAY CONTROLS:
Simulation
Routers
Scenario 0
New
Delete
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
In Progress
PC0
PC1
ICMP
0.000
N
0
(edit)
(delete)


Cisco Packet Tracer Student - C:\Users\Admin\Desktop\1bm21cs065\ospf.pkt
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
AREA 1
AREA 2
AREA 3
20.0.0.2
Se2/0
10.0.0.1
Fa0/0
Router-PT
Router0
20.0.0.1
40.0.0.1
Fa0
PC-PT
PC0
10.0.0.10
PC-PT
PC1
40.0.0.10
PDU Information at Device: Router2
OSI Model
Inbound PDU Details
Outbound PDU Details
PDU Formats
PPP
IP
ICMP
Simulation Panel
Event List
Vis.
Time(sec)
Last Device
At Device
Type
Info
Reset Simulation
Constant Delay
Play Controls
Back
Auto Capture / Play
Capture / Forward
Event List Filters - Visible Events
Edit Filters
Show All/None
Time: 00:00:57.257
Power Cycle Devices
PLAY CONTROLS:
Simulation
Routers
Scenario 0
New
Delete
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
In Progress
PC0
PC1
ICMP
0.000
N
0
(edit)
(delete)


Logical
AREA 1
20.0.0.2
Se2/0
10.0.0.1
Fa0/0
Router-PT
Router0
20.0.0.1
AREA 3
Fa0
PC-PT
PC0
10.0.0.10
40.0.0.1
AREA 2
Fa0
PC-PT
PC1
40.0.0.10
PDU Information at Device: PC1
OSI Model
Inbound PDU Details
Outbound PDU Details
PDU Formats
Ethernet II
PREAMBLE: 101010...1011
DEST MAC: 0060.4789.AB50
SRC MAC: 0009.7C28.C636
TYPE: 0x800
DATA (VARIABLE LENGTH)
FCS: 0x0
IP
4
IHL
DSCP: 0x0
TL: 28
ID: 0x3
0x0
0x0
TTL: 252
PRO: 0x1
CHKSUM
SRC IP: 10.0.0.10
DST IP: 40.0.0.10
OPT: 0x0
0x0
DATA (VARIABLE LENGTH)
ICMP
TYPE: 0x8
CODE: 0x0
CHECKSUM
ID: 0x4
SEQ NUMBER: 3
Simulation Panel
Event List
Vis.
Time(sec)
Last Device
At Device
Type
Info
0.000 -- PC0 ICMP
0.001 PC0 Router0 ICMP
0.002 Router0 Router1 ICMP
0.003 Router1 Router2 ICMP
0.004 Router2 PC1 ICMP
Reset Simulation
Constant Delay
Captured to: 0.004 s
Play Controls
Back
Auto Capture / Play
Capture / Forward
Event List Filters - Visible Events
Edit Filters
Show All/None
Time: 00:00:57.258
Power Cycle Devices
PLAY CONTROLS:
Back
Auto Capture / Play
Capture / Forward
Event List
Simulation
Routers
Scenario 0
New
Delete
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
In Progress
PC0
PC1
ICMP
0.000
N
0
(edit)
(delete)