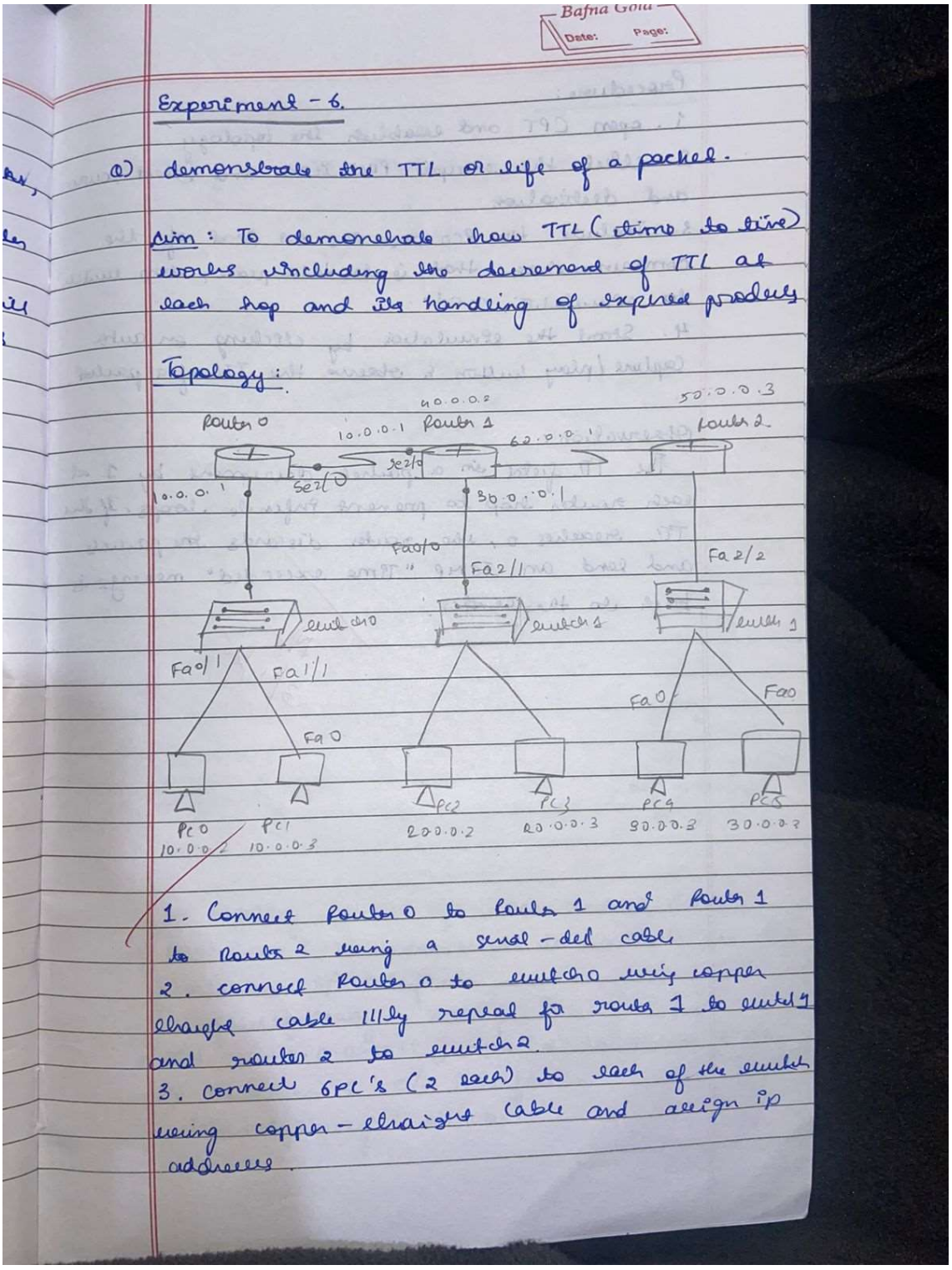
Avani.A (1BM22CS059)

EXPERIMENT-6

Aim:Demonstrate the TTL/ Life of a Packet .

Topology , Procedure and Observation:



Procedure:

1. open CPT and establish the topology
2. Select the simple PDU icon and select source and destination
3. Include the PC0 and PC5 as part of the communication that is to take place, then switch to simulation mode.
4. Start the simulation by clicking on auto capture/play button & observe the TTL of a packet.

Observation:

The TTL field in a packet decrements by 1 at each router hop to prevent infinite loops. If the TTL reaches 0, the router discards the packet and send an ICMP "Time exceeded" message is back to the sender.

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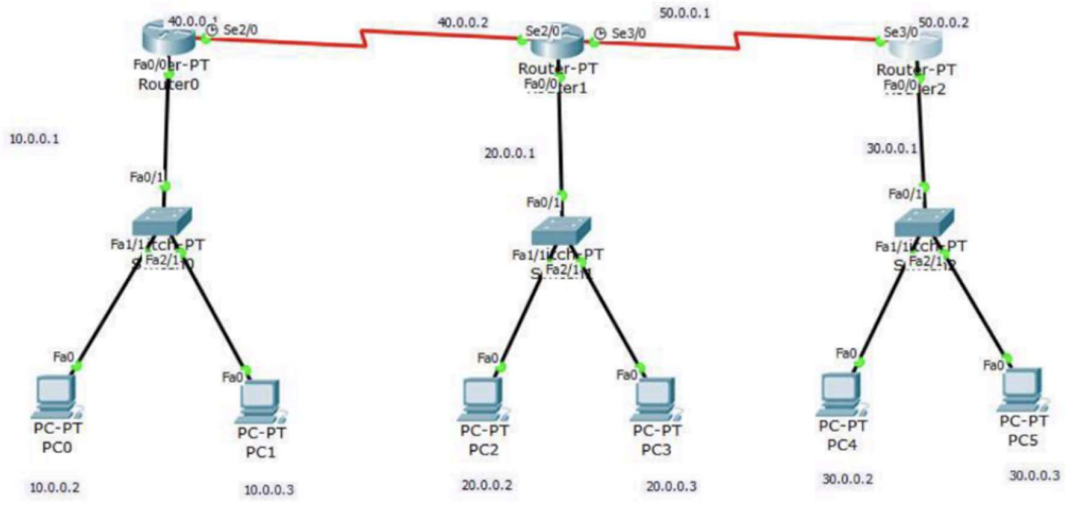
Screenshots:



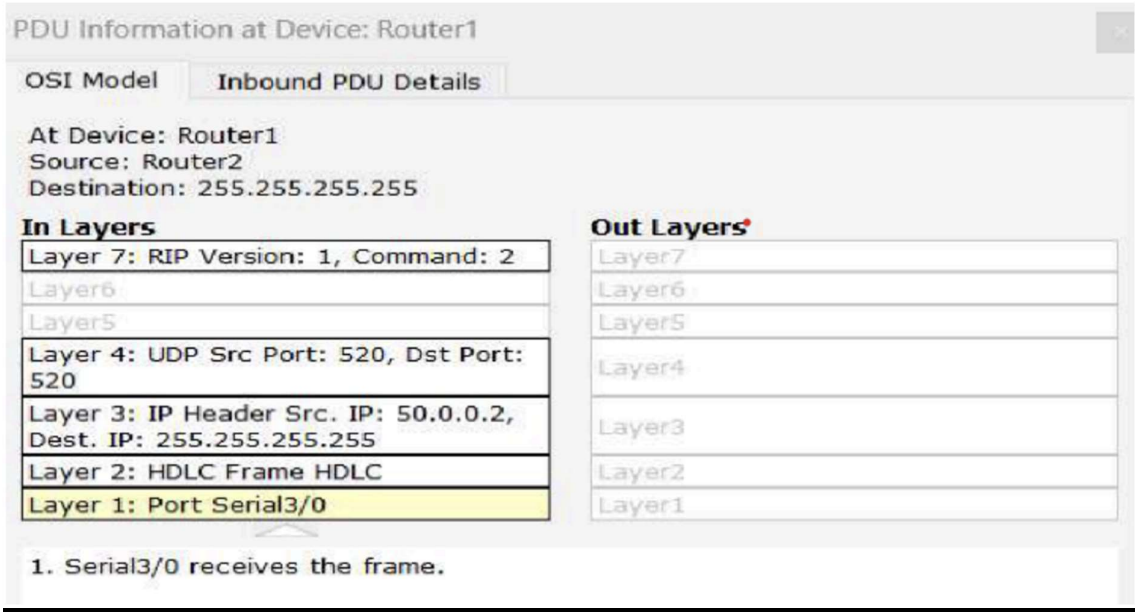
PDU Information at Device: Router0

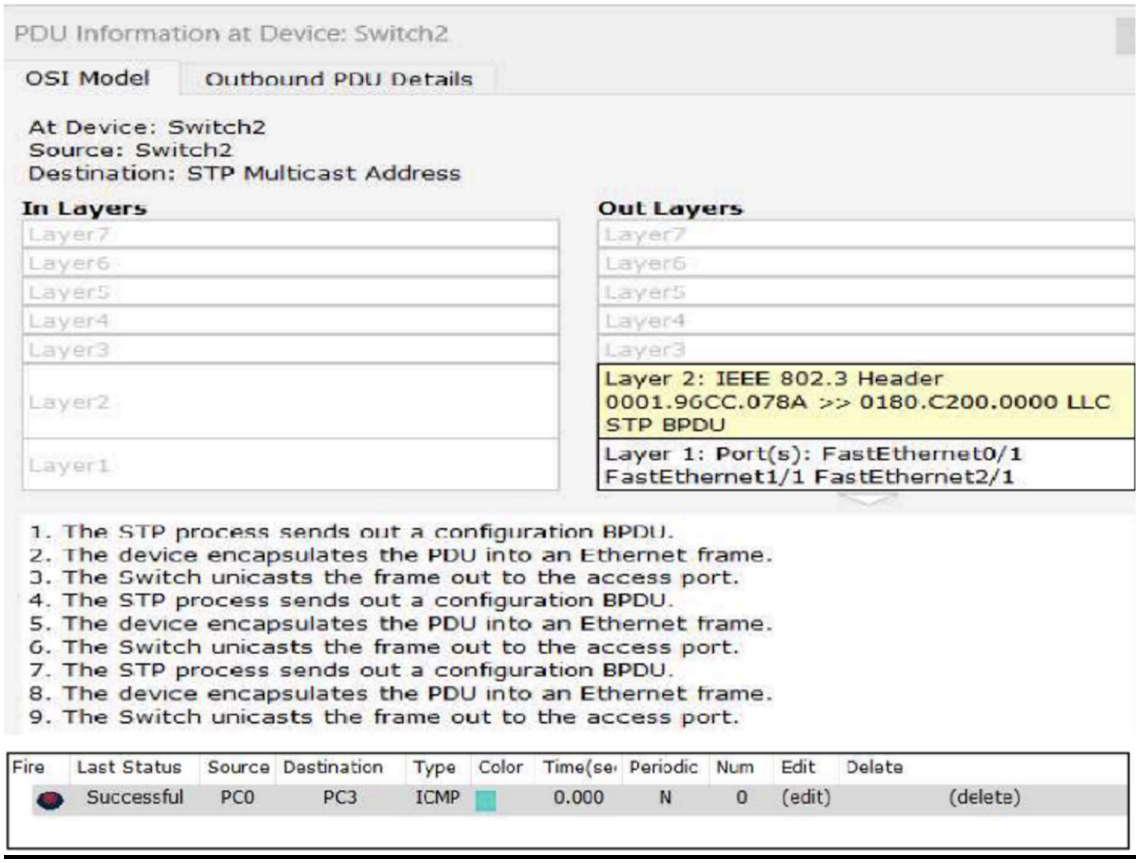
OSI Model | Inbound PDU Details

At Device: Router0
Source: Switch0
Destination: STP Multicast Address

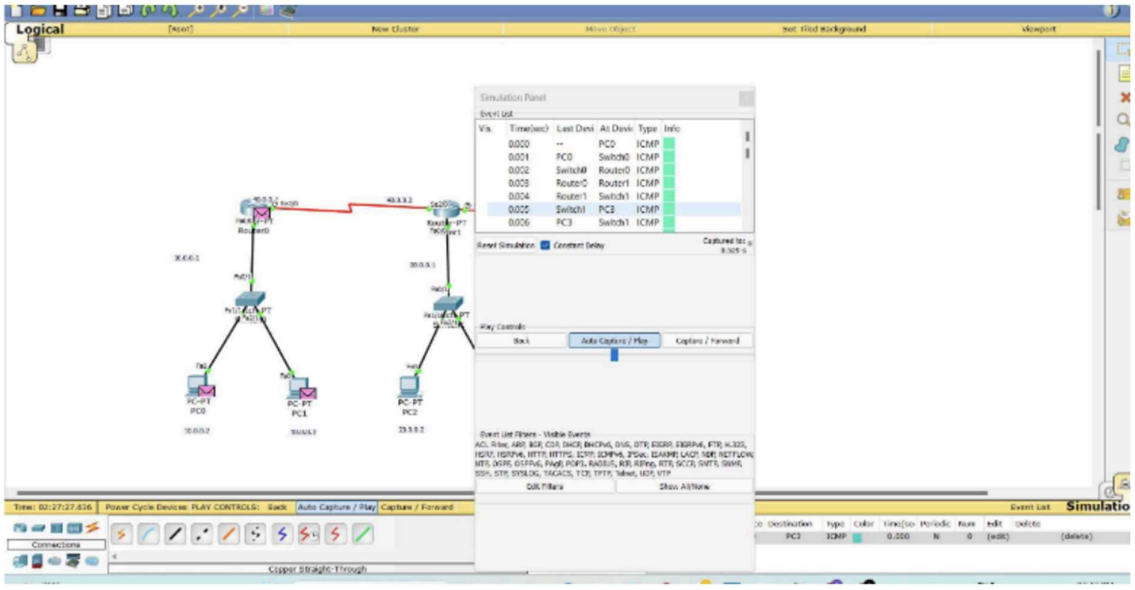
In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer3	Layer3
Layer 2: IEEE 802.3 Header 0002.4A37.ED9D >> 0180.C200.0000 LLC STP BPDU	Layer2
Layer 1: Port FastEthernet0/0	Layer1

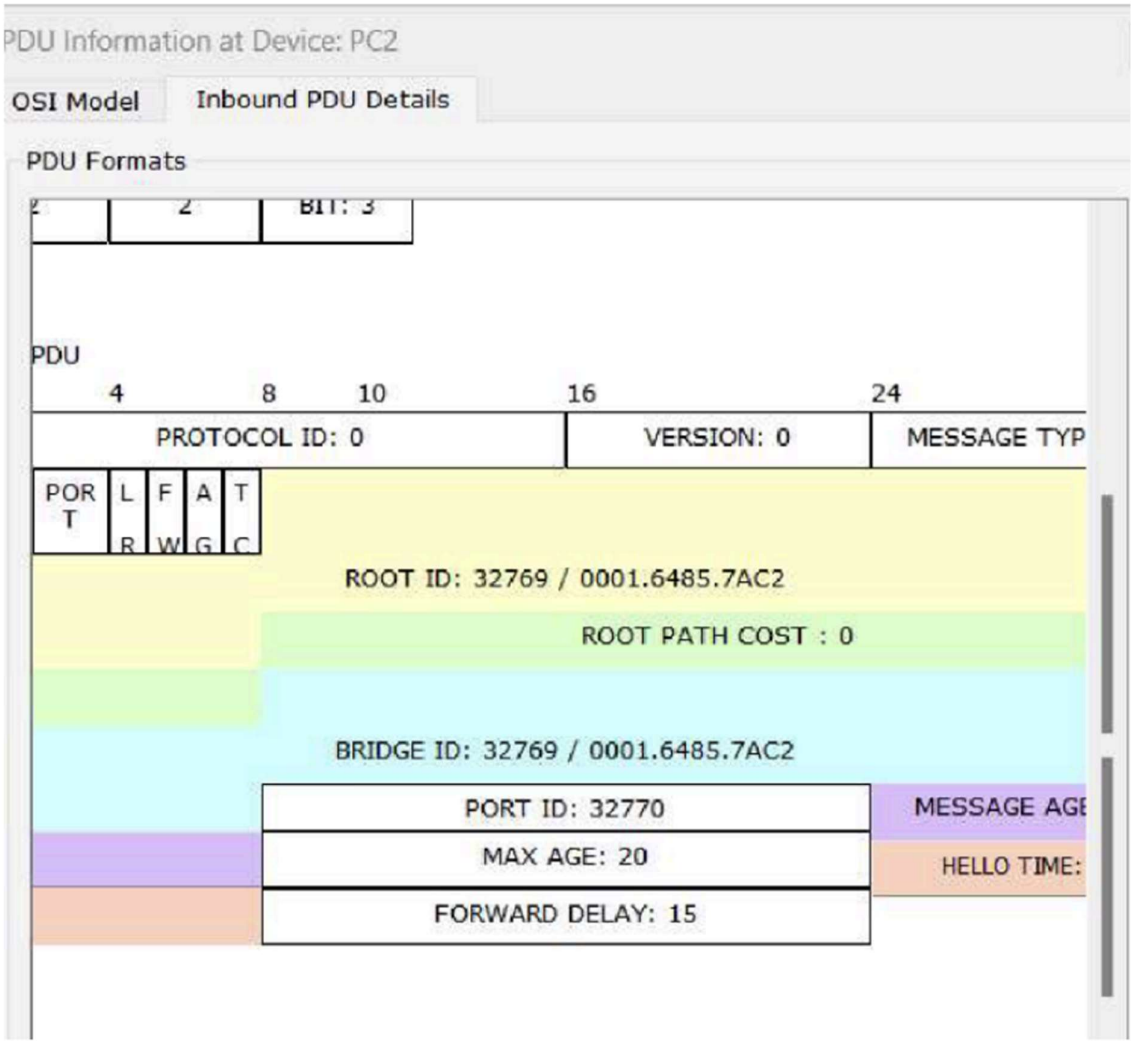
1. FastEthernet0/0 receives the frame.





Fire	Last Status	Source	Destination	Type	Color	Time(se	Periodic	Num	Edit	Delete
	Successful	PC0	PC3	ICMP		0.000	N	0	(edit)	(delete)


Logical
Simulation Panel
Event List
Vis.
Time(sec)
Last Dev.
At Dev.
Type
Info
0.000 -- PC0 ICMP
0.001 PC0 Switch0 ICMP
0.002 Switch0 Router0 ICMP
0.003 Router0 Router1 ICMP
0.004 Router1 Switch1 ICMP
0.005 Switch1 PC3 ICMP
0.006 PC3 Switch1 ICMP
Reset Simulation
Constant Delay
Play Controls
Back
Auto Capture / Play
Capture / Forward
Event List Filters - Visible Events
Edit Filters
Show All/None
Power Cycle Devices
PLAY CONTROLS:
Connections
Copper Straight-Through
Simulation


PDU Information at Device: PC2
OSI Model
Inbound PDU Details
PDU Formats
BIT: 3
PDU
4
8
10
16
24
PROTOCOL ID: 0
VERSION: 0
MESSAGE TYP
POR T
L R
F W
A G
T C
ROOT ID: 32769 / 0001.6485.7AC2
ROOT PATH COST : 0
BRIDGE ID: 32769 / 0001.6485.7AC2
PORT ID: 32770
MESSAGE AGE
MAX AGE: 20
HELLO TIME:
FORWARD DELAY: 15