Program 7
Aim: Demonstrate the TTL/ Life of a Packet .

Topology , Procedure and Observation:

20-11-2024   LAB-6

Q. Demonstrate TTL on life of a packet .

AIM: To demonstrate TTL on life of a packet

TOPOLOGY ::

PROCEDURE.

The configuration has been configured and established .

Now start the simulation and send a package from the system with IP address 10.0.0.2 to 30.0.0.3 and click on Auto capture/play button, the simulation would start and it would end when TTL becomes 0
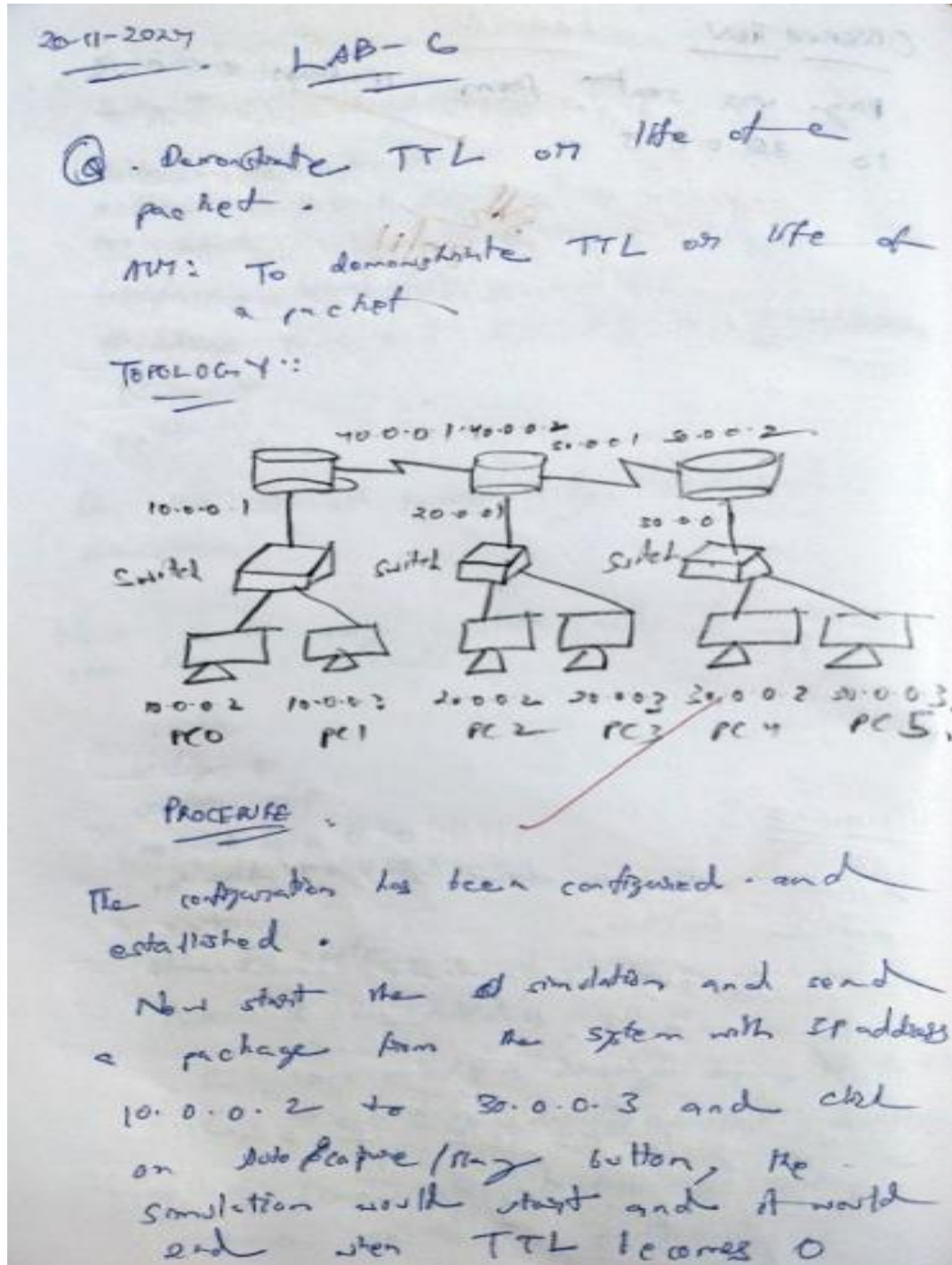
...and the packet would be removed.

OBSERVATION :
He notice that the TTL decrease when the message is sent from one router to other.

Screen Shots:

PDU Information at Device: Router0   ×

| OSI Model | Inbound PDU Details | Outbound PDU Details |

At Device: Router0
Source: PC0
Destination: PC3

In Layers

| Layer7 |
| Layer6 |
| Layer5 |
| Layer4 |
| Layer 3: IP Header Src. IP: 10.0.0.2, Dest. IP: 20.0.0.3 ICMP Message Type: 8 |
| Layer 2: Ethernet II Header 000A.41E3.E33A >> 0010.11A0.4697 |
| Layer 1: Port FastEthernet0/0 |

Out Layers

| Layer7 |
| Layer6 |
| Layer5 |
| Layer4 |
| Layer 3: IP Header Src. IP: 10.0.0.2, Dest. IP: 20.0.0.3 ICMP Message Type: 8 |
| Layer 2: HDLC Frame HDLC |
| Layer 1: Port(s): Serial2/0 |

1. FastEthernet0/0 receives the frame.

| Challenge Me | | << Previous Layer | Next Layer >> |

PDU Information at Device: Router0

OSI Model | **Inbound PDU Details** | Outbound PDU Details

PDU Formats

Ethernet II

| 0 | 4 | 8 | 14 | 19 Byt |

PREAMBLE: 101010...1011	DEST MAC: 0010.11A0.4697	SRC MAC: 000A.41E3.E33A
TYPE: 0x800	DATA (VARIABLE LENGTH)	FCS: 0x0

IP

| 0 | 4 | 8 | 16 | 19 | 31 Bits |

4	IHL	DSCP: 0x0	TL: 28	
ID: 0xa		0x0	0x0	
TTL: 255	PRO: 0x1	CHKSUM	
SRC IP: 10.0.0.2			
DST IP: 20.0.0.3			
OPT: 0x0		0x0	
DATA (VARIABLE LENGTH)			

ICMP

| 0 | 8 | 16 | 31 Bits |

TYPE: 0x8	CODE: 0x0	CHECKSUM

PDU Information at Device: Router0

OSI Model | **Inbound PDU Details** | Outbound PDU Details

PDU Formats

HDLC

| 0 | 8 | 16 | 32 | 32+x | 48+x 56+ |

FLG: 0111 1110	ADR: 0x8f	CONTROL: 0x0	DATA: (VARIABLE LENGTH)	FCS: 0x0	FLG: 0111 1110

IP

| 0 | 4 | 8 | 16 | 19 | 31 Bits |

4	IHL	DSCP: 0x0	TL: 28	
ID: 0xa		0x0	0x0	
TTL: 254	PRO: 0x1	CHKSUM	
SRC IP: 10.0.0.2			
DST IP: 20.0.0.3			
OPT: 0x0		0x0	
DATA (VARIABLE LENGTH)			

ICMP

| 0 | 8 | 16 | 31 Bits |

TYPE: 0x8	CODE: 0x0	CHECKSUM
ID: 0x5	SEQ NUMBER: 10	