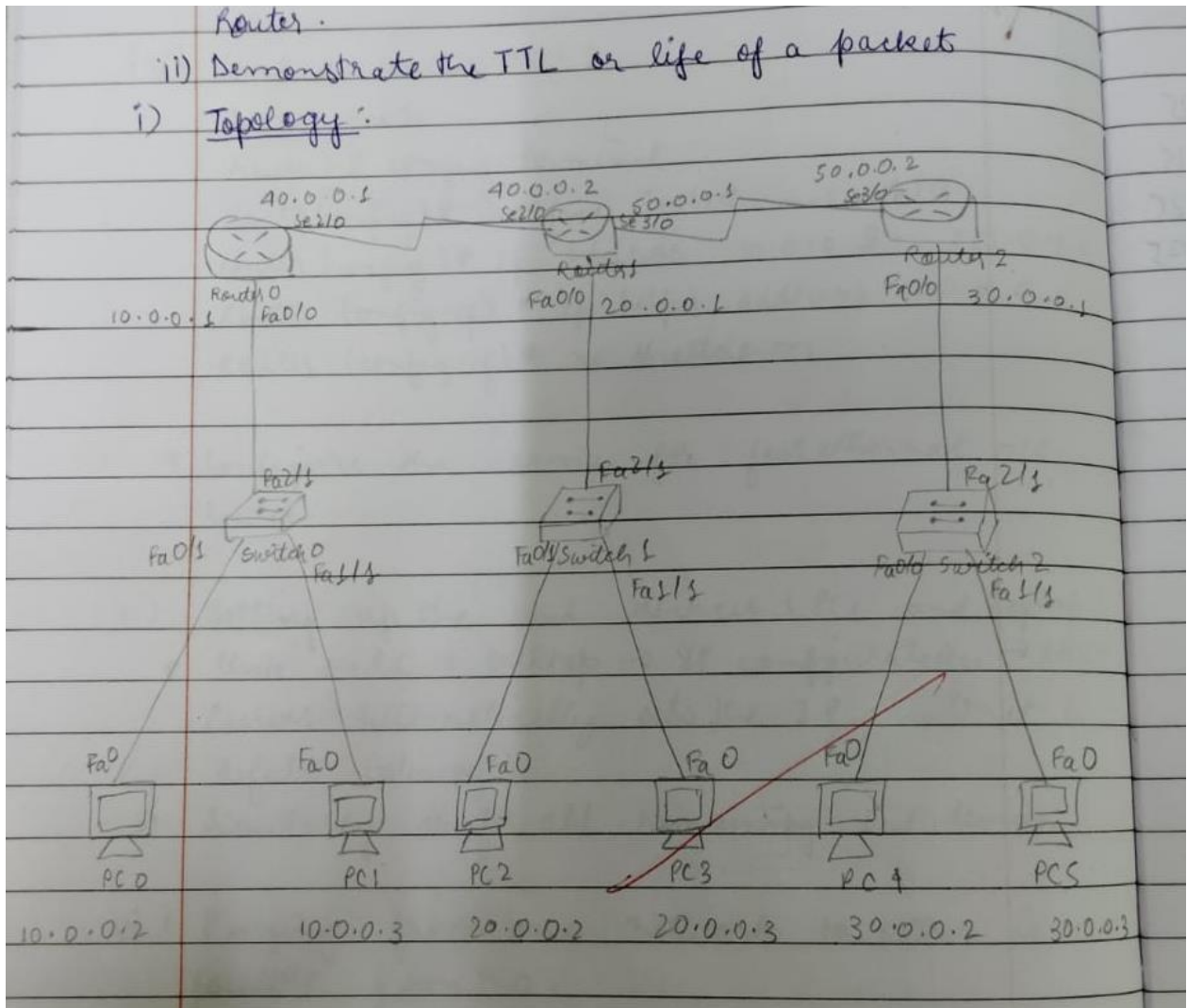


Program 7

Aim: Demonstrate the TTL/ Life of a Packet .

Topology , Procedure and Observation:



Procedure:

1. Click on simulation node
2. Click on Packet ~~option~~ on the source to destination end device.
3. Enter Auto capture / Play
4. We can see the packet movement from the source to destination and then the acknowledgment sent back to the source.
5. At each point, we can click on the packet and view the OSI model, Inbound. POV ~~at~~ details, Outbound POV details.

Output:

1. We can observe that the TTL starts with 255 and gradually as the packet is being transferred, the TTL reduces finally to 125.
2. ~~At~~ At the end, TTL reduces to 125
3. In the simulation panel, under event list, clicking line, we can see where the packet was.

Q. ~~Ans~~
24/12/24

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
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		CHKSUM

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+x
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	