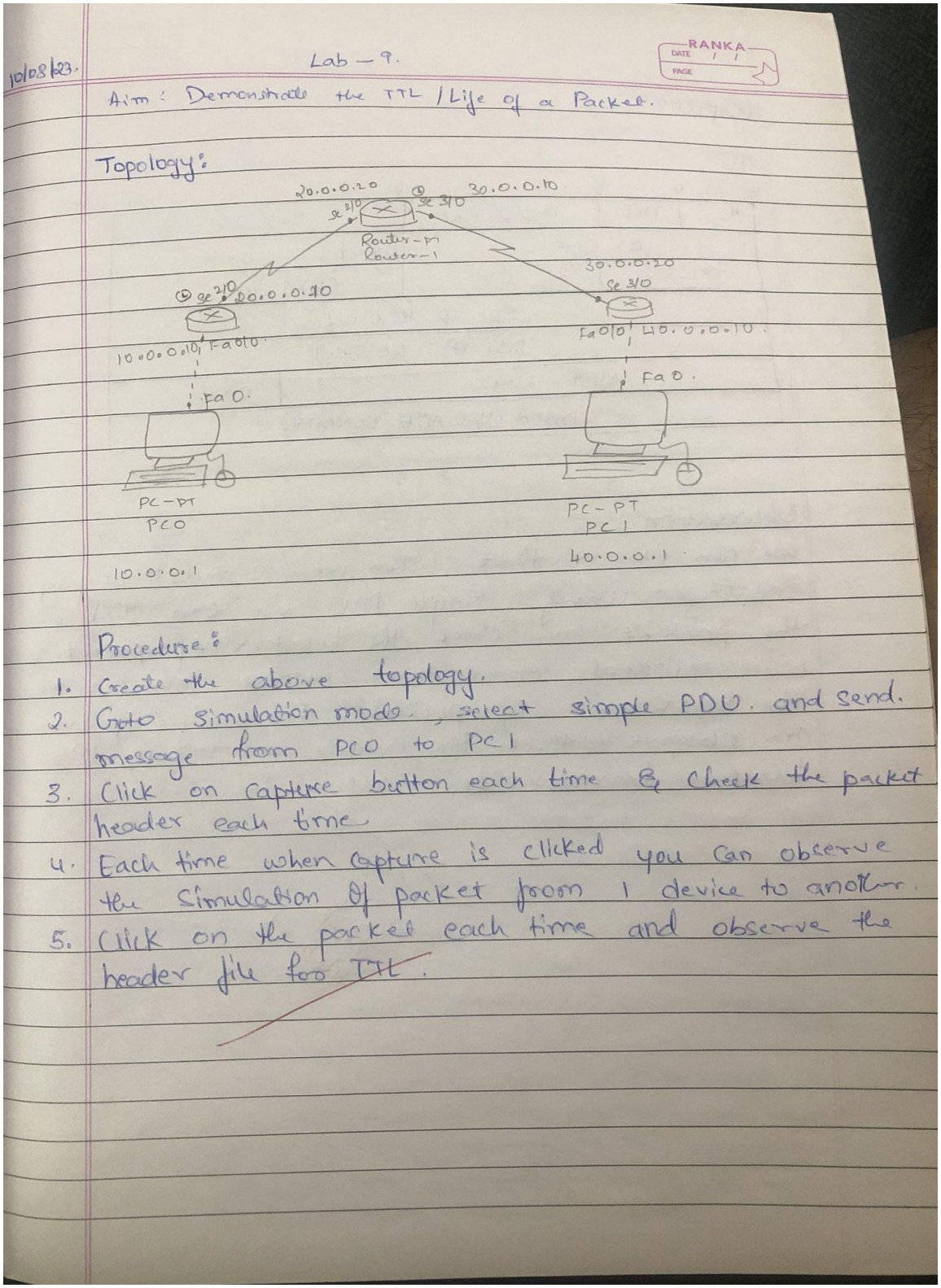
Aim: Demonstrate the TTL/ Life of a Packet

Observation:



11/08/23

Output:

IP

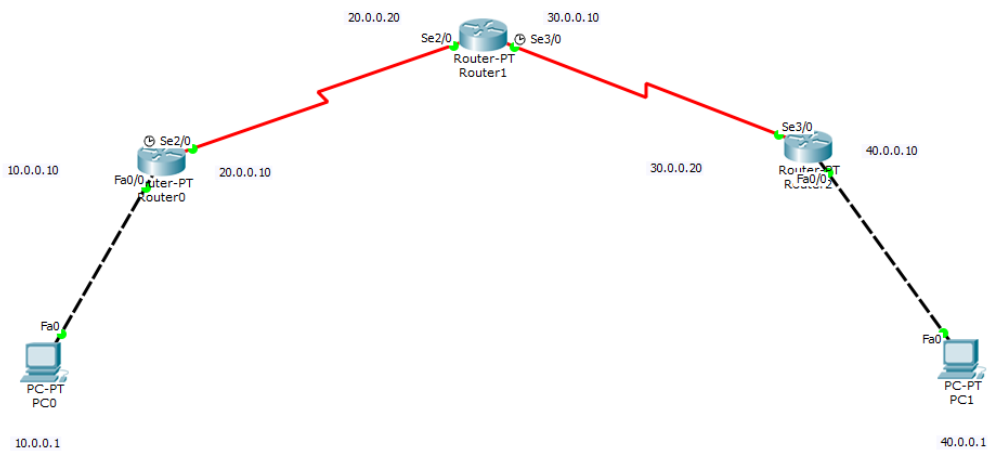
0	4	8	16	19	31 bits
4	IHL	DSCP: 0x0	TL: 28		
ID: 0x1			0x0	0x0	
TTL: 252	PRO: 0x1		CHKSUM		
SRC IP: 10.0.0.1					
DST IP: 40.0.0.1					
OPT: 0x0				0x0	
DATA (VARIABLE LENGTH)					

Observation:

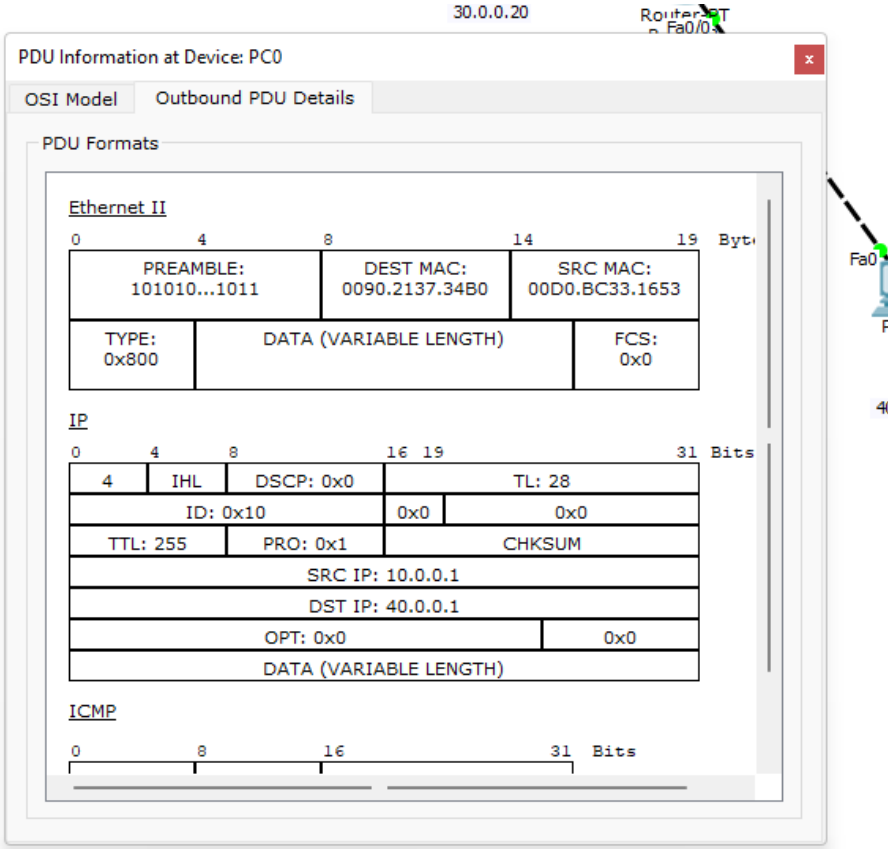
We can observe that when we simulate a ping message using simple PDU we can click on the packet and check the headers of packet when clicked on capture button you can see the trajectory of packet. For every hop we can observe that the value of TTL in IP header decreases by 1 value.

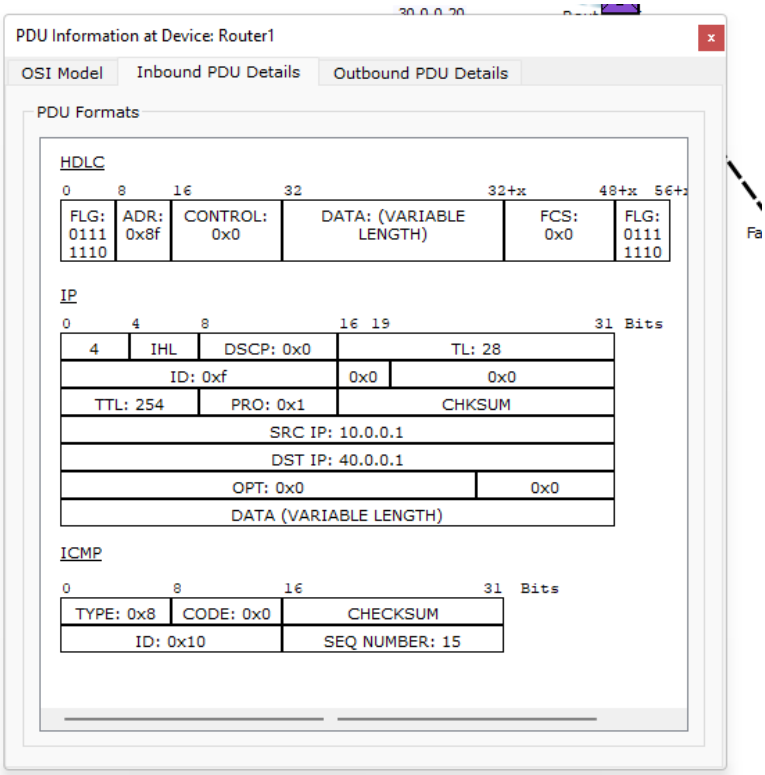
11/8/2023

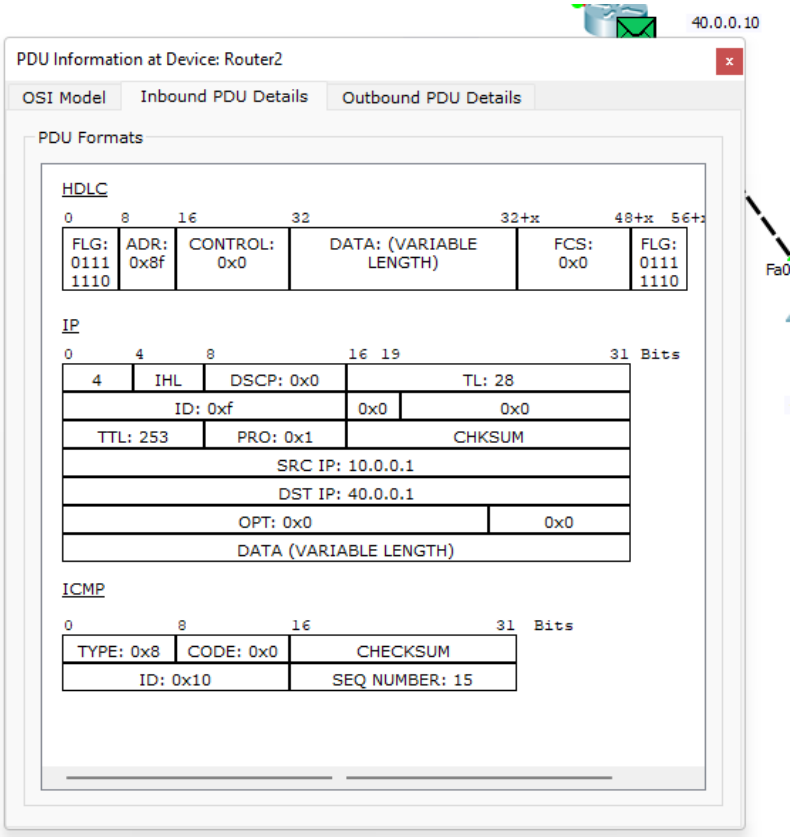
Topology:

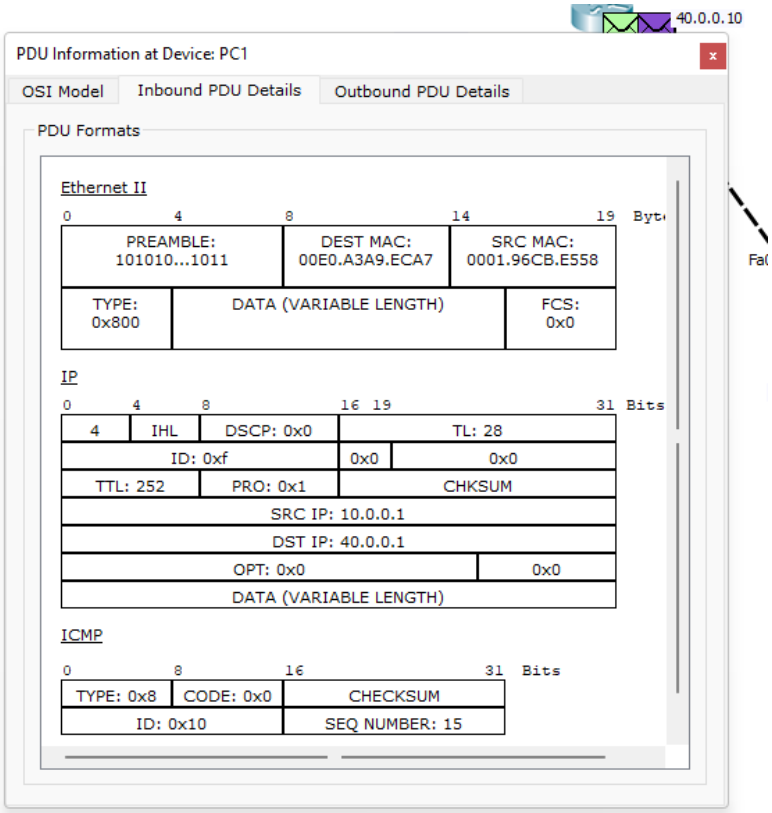


Output:




PDU Information at Device: Router1
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: 0xf
0x0
0x0
TTL: 254
PRO: 0x1
CHKSUM
SRC IP: 10.0.0.1
DST IP: 40.0.0.1
OPT: 0x0
0x0
DATA (VARIABLE LENGTH)
ICMP
0 8 16 31 Bits
TYPE: 0x8
CODE: 0x0
CHECKSUM
ID: 0x10
SEQ NUMBER: 15
Fa


40.0.0.10
PDU Information at Device: Router2
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: 0xf
0x0
0x0
TTL: 253
PRO: 0x1
CHKSUM
SRC IP: 10.0.0.1
DST IP: 40.0.0.1
OPT: 0x0
0x0
DATA (VARIABLE LENGTH)
ICMP
0 8 16 31 Bits
TYPE: 0x8
CODE: 0x0
CHECKSUM
ID: 0x10
SEQ NUMBER: 15
Fa0


40.0.0.10
PDU Information at Device: PC1
OSI Model
Inbound PDU Details
Outbound PDU Details
PDU Formats
Ethernet II
0 4 8 14 19 Byt
PREAMBLE: 101010...1011
DEST MAC: 00E0.A3A9.ECA7
SRC MAC: 0001.96CB.E558
TYPE: 0x800
DATA (VARIABLE LENGTH)
FCS: 0x0
IP
0 4 8 16 19 31 Bits
4
IHL
DSCP: 0x0
TL: 28
ID: 0xf
0x0
0x0
TTL: 252
PRO: 0x1
CHKSUM
SRC IP: 10.0.0.1
DST IP: 40.0.0.1
OPT: 0x0
0x0
DATA (VARIABLE LENGTH)
ICMP
0 8 16 31 Bits
TYPE: 0x8
CODE: 0x0
CHECKSUM
ID: 0x10
SEQ NUMBER: 15