Computer Networks Lab

WEEK-2

NAME: D.L.RAMESHWAR
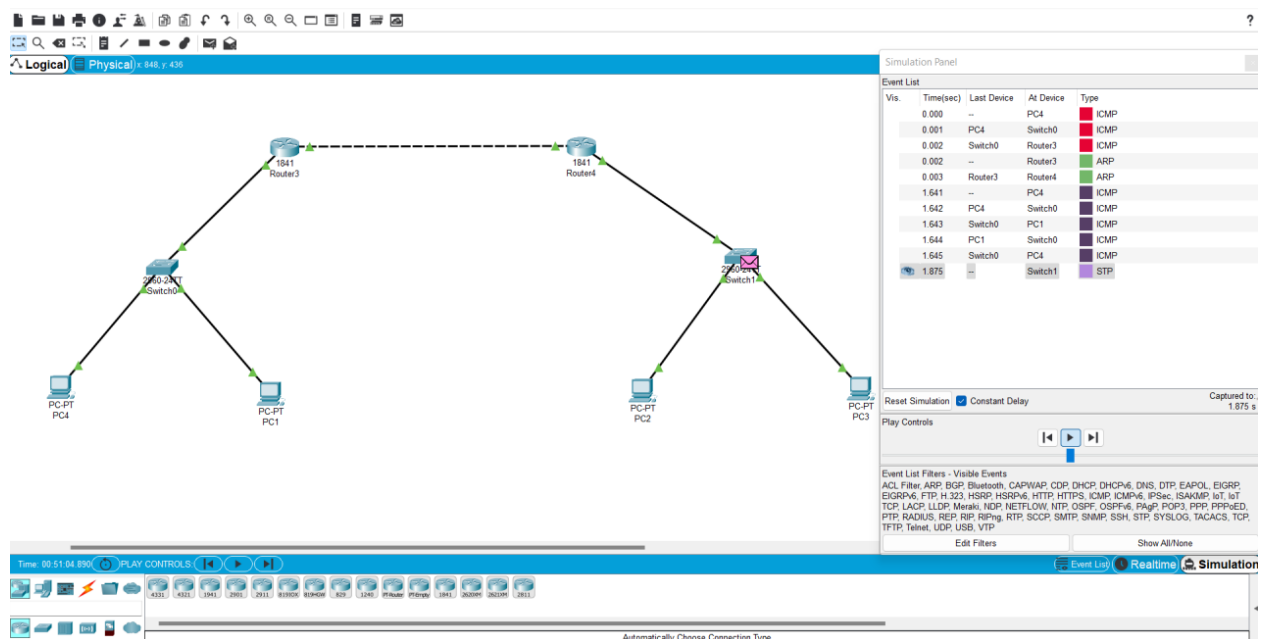
SRN:PES1UG21CS164

R.NO:61

JAN 2023

Task 1:

Network Topology:

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
●	Successful	PC2	PC4	ICMP	■	0.000	N	0	(edit)	(delete)

PDU Information at Device: PC4

OSI Model   Inbound PDU Details   Outbound PDU Details

At Device: PC4
Source: PC2
Destination: PC4

In Layers

Layer7

Layer6

Layer5

Layer4

Layer 3: IP Header Src. IP: 10.0.0.1, Dest. IP: 30.0.0.2 ICMP Message Type: 8

Layer 2: Ethernet II Header 0000.0CED. 2C02 >> 000B.BE89.4452

Layer 1: Port FastEthernet0

Out Layers

Layer7

Layer6

Layer5

Layer4

Layer 3: IP Header Src. IP: 30.0.0.2, Dest. IP: 10.0.0.1 ICMP Message Type: 0

Layer 2: Ethernet II Header 000B.BE89.4452 >> 0000.0CED.2C02

Layer 1: Port(s): FastEthernet0

1. FastEthernet0 receives the frame.

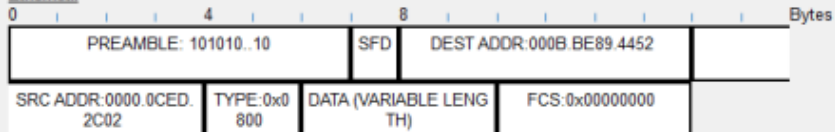Challenge Me   << Previous Layer   Next Layer >>

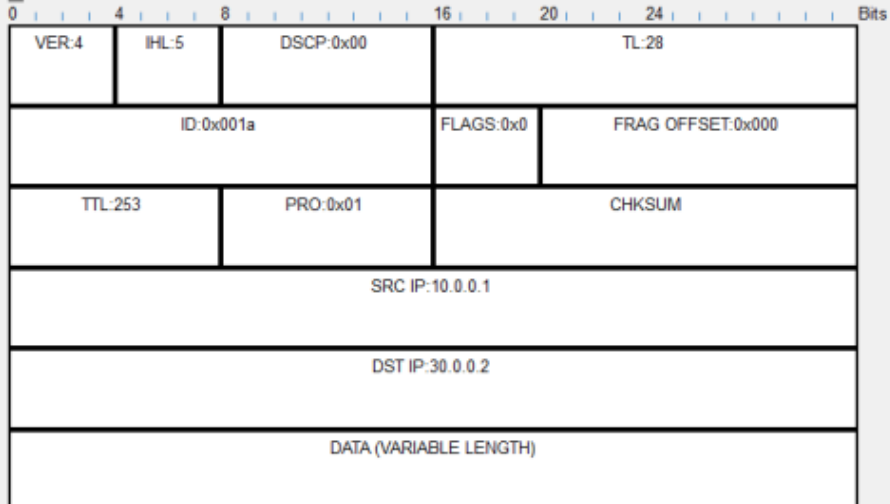i)Sending PDU from PC0 to PC1 (30.0.0.1 to 10.0.0.2)

PDU Information at Device: PC4

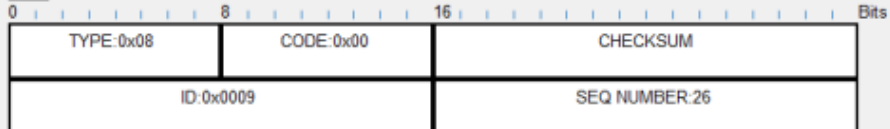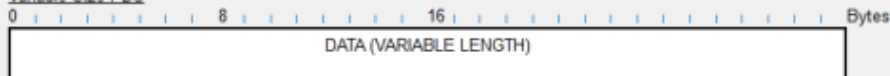OSI Model | Inbound PDU Details | Outbound PDU Details

PDU Formats

EthernetII

0	4	8	Bytes
PREAMBLE: 101010..10	SFD	DEST ADDR:000B.BE89.4452	
SRC ADDR:0000.0CED.2C02	TYPE:0x0800	DATA (VARIABLE LENGTH)	FCS:0x00000000

IP

0	4	8	16	20	24	Bits
VER:4	IHL:5	DSCP:0x00		TL:28		
ID:0x001a			FLAGS:0x0	FRAG OFFSET:0x000		
TTL:253		PRO:0x01		CHKSUM		
SRC IP:10.0.0.1						
DST IP:30.0.0.2						
DATA (VARIABLE LENGTH)						

ICMP

0	8	16	Bits
TYPE:0x08	CODE:0x00	CHECKSUM	
ID:0x0009		SEQ NUMBER:26	

Variable Size PDU

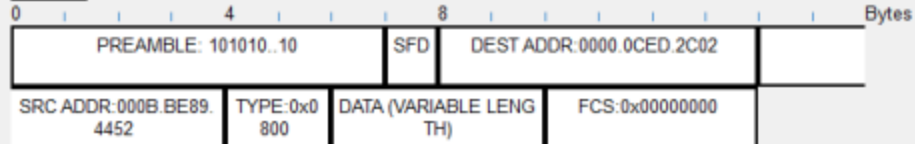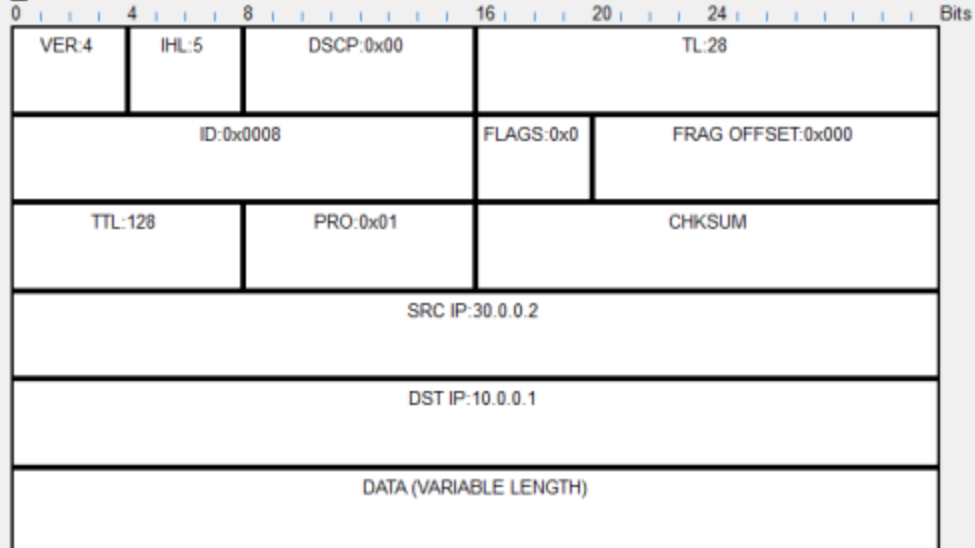| 0	8	16	Bytes
DATA (VARIABLE LENGTH)			

PDU Information at Device: PC4

OSI Model   Inbound PDU Details   Outbound PDU Details

PDU Formats

EthernetII

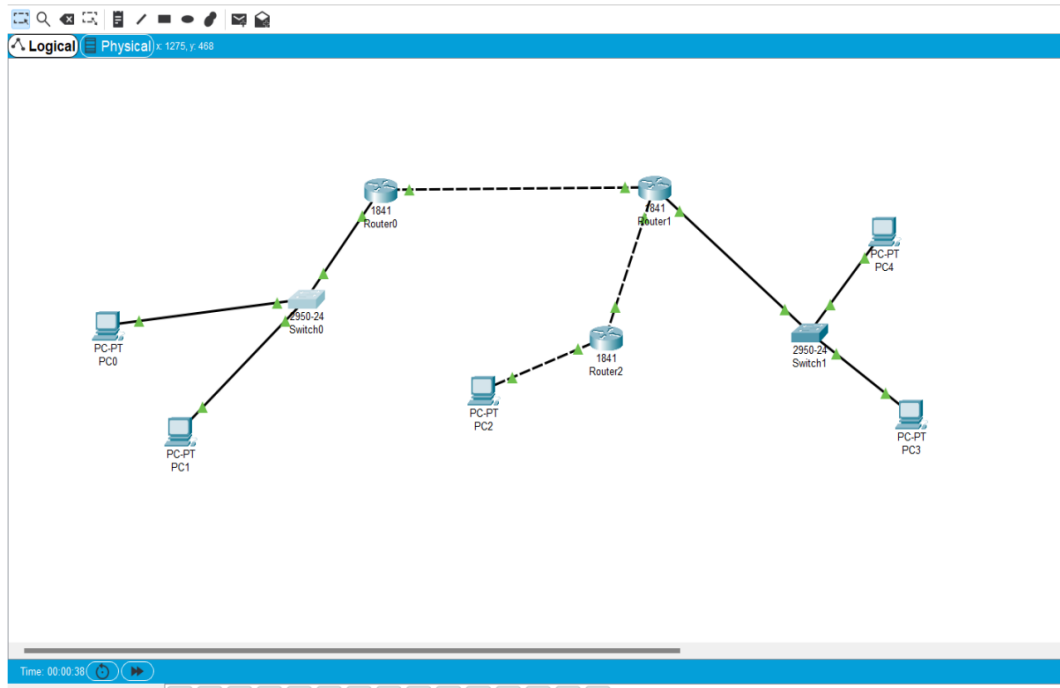| 0				4				8								Bytes

PREAMBLE: 101010..10	SFD	DEST ADDR:0000.0CED.2C02	

SRC ADDR:000B.BE89.4452	TYPE:0x0800	DATA (VARIABLE LENGTH)	FCS:0x00000000

IP

0			4			8							16			20			24							Bits

VER:4	IHL:5	DSCP:0x00	TL:28

ID:0x0008	FLAGS:0x0	FRAG OFFSET:0x000

TTL:128	PRO:0x01	CHKSUM

SRC IP:30.0.0.2

DST IP:10.0.0.1

DATA (VARIABLE LENGTH)

ICMP

0								8								16																Bits

TYPE:0x00	CODE:0x00	CHECKSUM

ID:0x0009	SEQ NUMBER:26

Variable Size PDU

0								8								16																Bytes

DATA (VARIABLE LENGTH)

Task 2:

Network Topology:

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete	
●	Successful	PC1	PC0	ICMP		0.000	N	0	(edit)		(delete)
●	Successful	PC1	PC2	ICMP		0.000	N	1	(edit)		(delete)
●	Successful	PC1	PC3	ICMP		0.000	N	2	(edit)		(delete)
●	Successful	PC1	PC4	ICMP		0.000	N	3	(edit)		(delete)

i) Sending PDU from PC0 to PC1 (1.1.1.2 to 1.1.1.3)
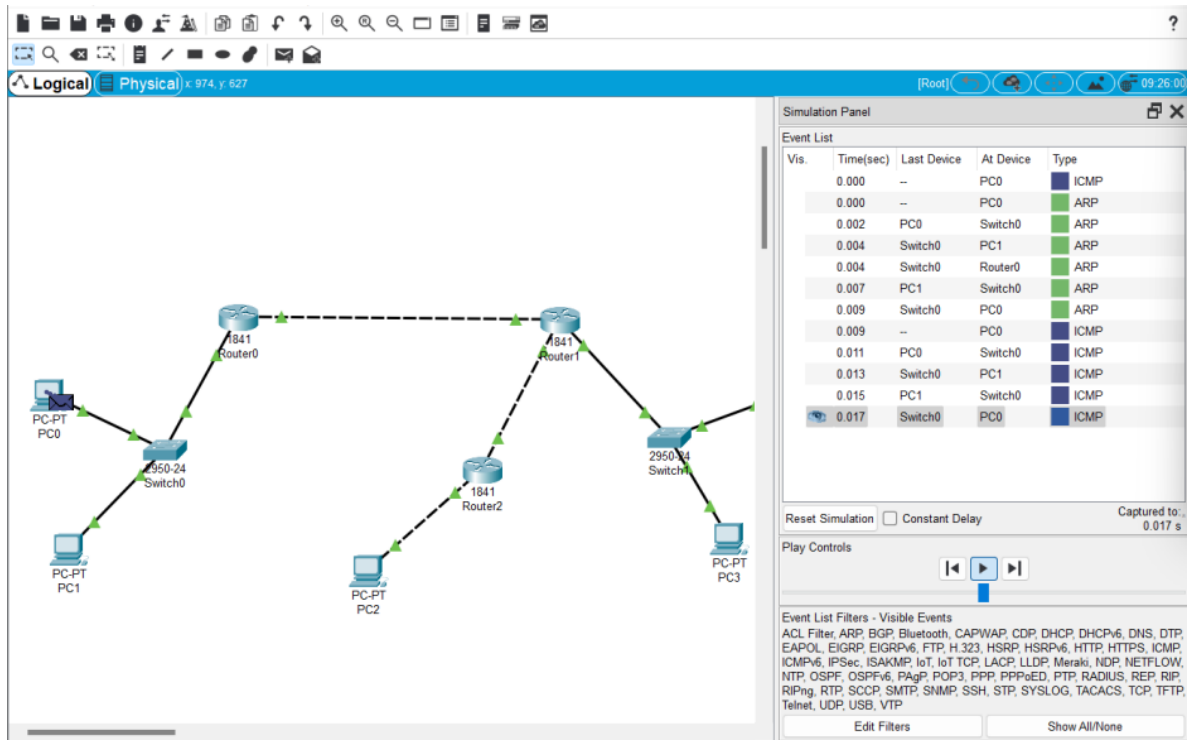
ii)Sending PDU from PC1 to PC2 (1.1.1.3 to 6.6.6.2)

PDU Information at Device: PC2

OSI Model | Inbound PDU Details | Outbound PDU Details

At Device: PC2
Source: PC1
Destination: PC2

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer 3: IP Header Src. IP: 1.1.1.3, Dest. IP: 6.6.6.2 ICMP Message Type: 8	Layer 3: IP Header Src. IP: 6.6.6.2, Dest. IP: 1.1.1.3 ICMP Message Type: 0
Layer 2: Ethernet II Header 00D0.BCE6.3301 >> 0090.2BA2.558C	Layer 2: Ethernet II Header 0090.2BA2.558C >> 00D0.BCE6.3301
Layer 1: Port FastEthernet0	Layer 1: Port(s): FastEthernet0

1. FastEthernet0 receives the frame.
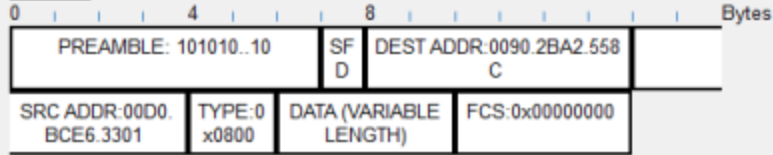
Challenge Me | << Previous Layer | Next Layer >>

PDU Information at Device: PC2

OSI Model | Inbound PDU Details | Outbound PDU Details

PDU Formats

EthernetII

0   4   8   Bytes

PREAMBLE: 101010..10	SFD	DEST ADDR:0090.2BA2.558C	

SRC ADDR:00D0.BCE6.3301	TYPE:0x0800	DATA (VARIABLE LENGTH)	FCS:0x00000000

IP

0   4   8   16   20   24   Bits

VER:4	IHL:5	DSCP:0x00	TL:28	

ID:0x002c	FLAGS: 0x0	FRAG OFFSET:0x000

TTL:252	PRO:0x01	CHKSUM

SRC IP:1.1.1.3

DST IP:6.6.6.2

DATA (VARIABLE LENGTH)

ICMP

0   8   16   Bits

TYPE:0x08	CODE:0x00	CHECKSUM

ID:0x0012	SEQ NUMBER:44

Variable Size PDU

0   8   16   Bytes

DATA (VARIABLE LENGTH)

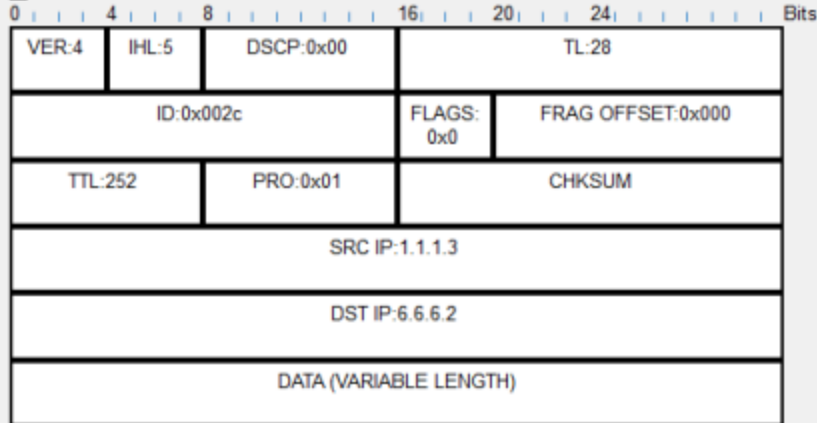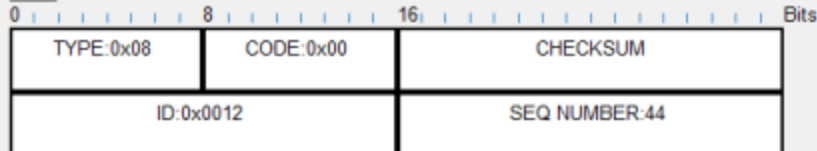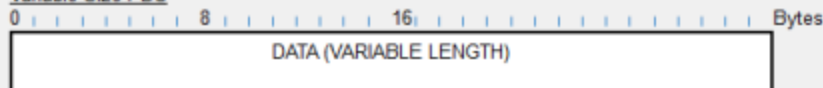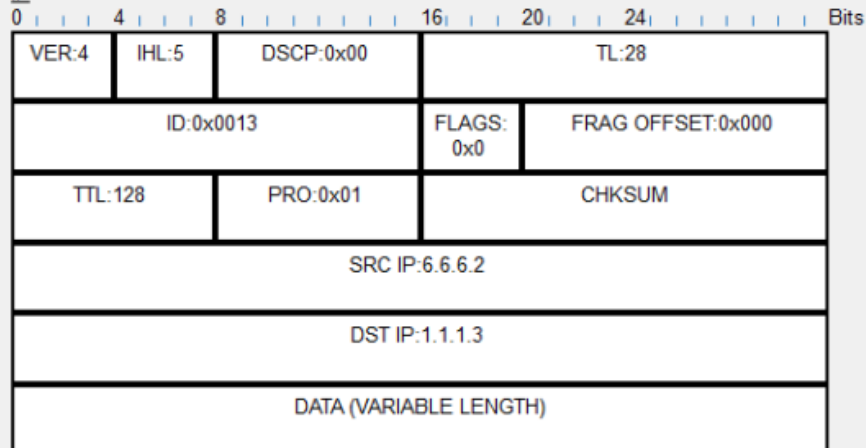OSI Model   Inbound PDU Details   Outbound PDU Details

PDU Formats

EthernetII

| 0 | | | | 4 | | | | 8 | | | | | | | | | Bytes |

| PREAMBLE: 101010..10 | SFD | DEST ADDR:00D0.BCE6.33 01 | |
| SRC ADDR:0090.2 BA2.558C | TYPE:0 x0800 | DATA (VARIABLE LENGTH) | FCS:0x00000000 |

IP

| 0 | | | 4 | | | 8 | | | | | | 16 | | | 20 | | | 24 | | | | | | | Bits |

VER:4	IHL:5	DSCP:0x00	TL:28
ID:0x0013		FLAGS: 0x0	FRAG OFFSET:0x000
TTL:128	PRO:0x01	CHKSUM
SRC IP:6.6.6.2
DST IP:1.1.1.3
DATA (VARIABLE LENGTH)

ICMP

| 0 | | | | | | | 8 | | | | | | | 16 | | | | | | | | | | | | | Bits |

| TYPE:0x00 | CODE:0x00 | CHECKSUM |
| ID:0x0012 | SEQ NUMBER:44 |

Variable Size PDU

| 0 | | | | | | | 8 | | | | | | | 16 | | | | | | | | | | | | | Bytes |

| DATA (VARIABLE LENGTH) |

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