# COMPUTER NETWORKS
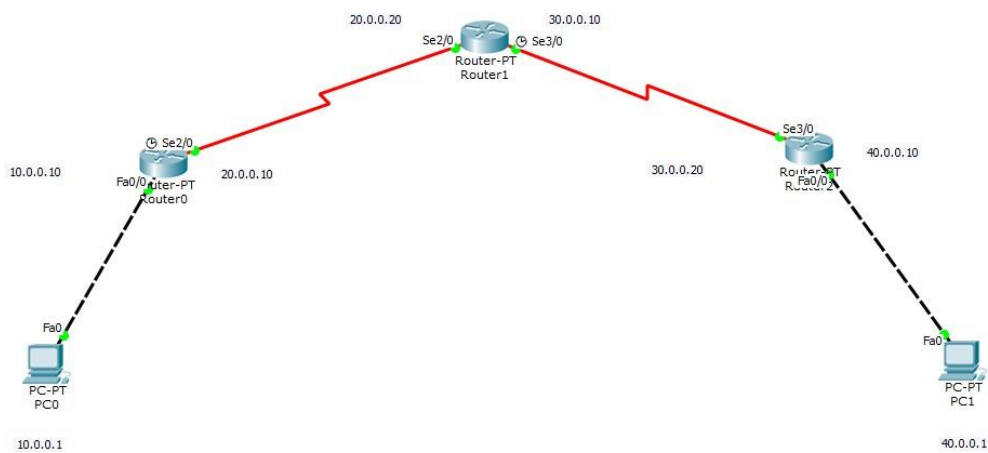# WEEK-8
# LAB OBSERVATION
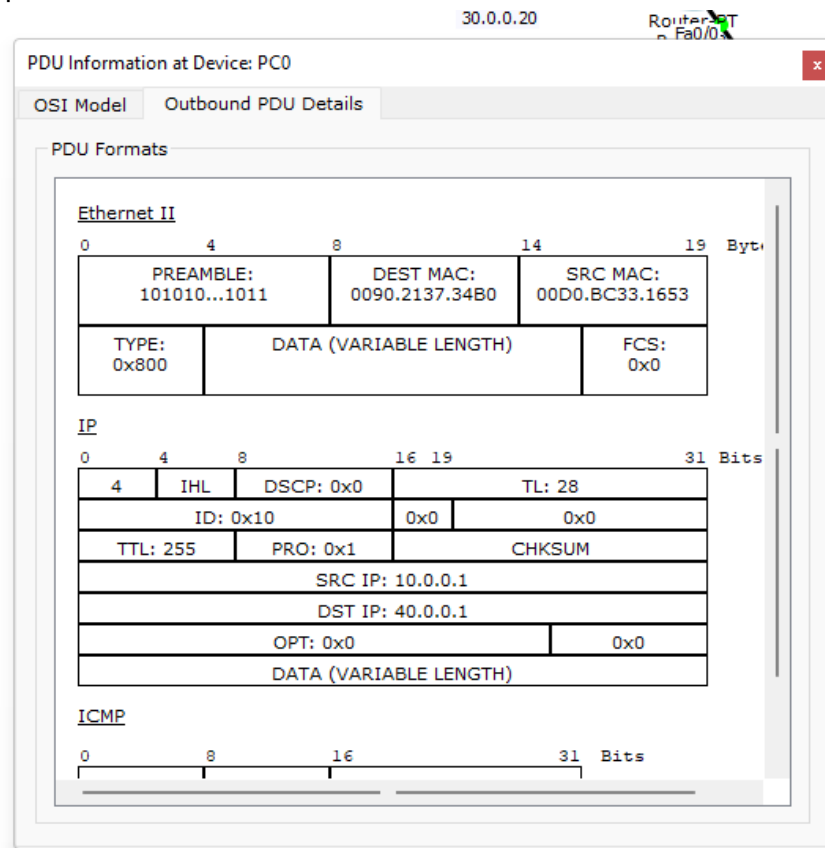# Shashank M S – 1BM21CS201

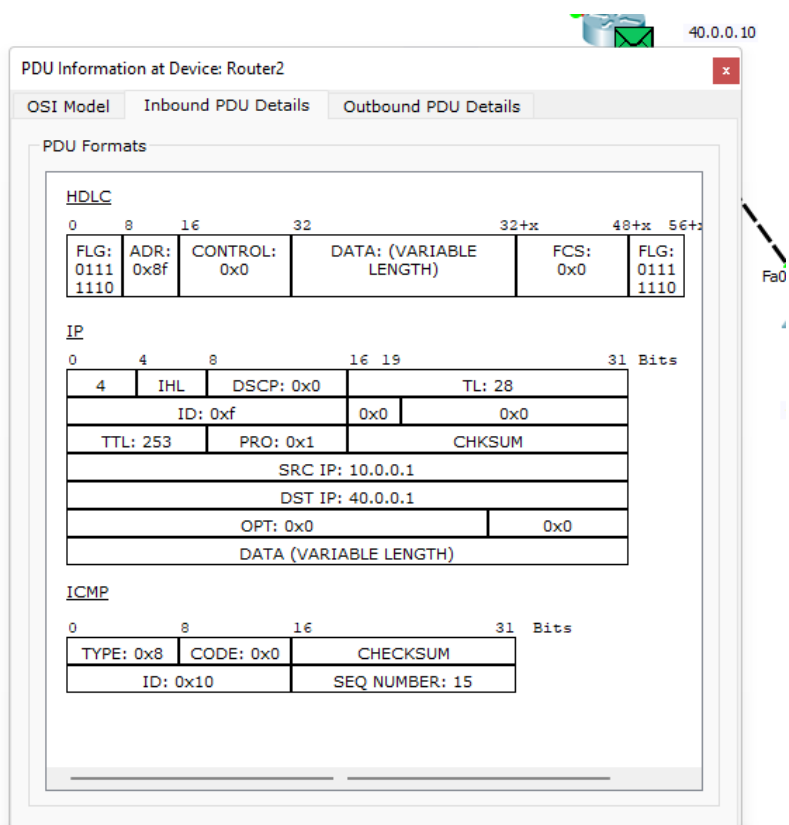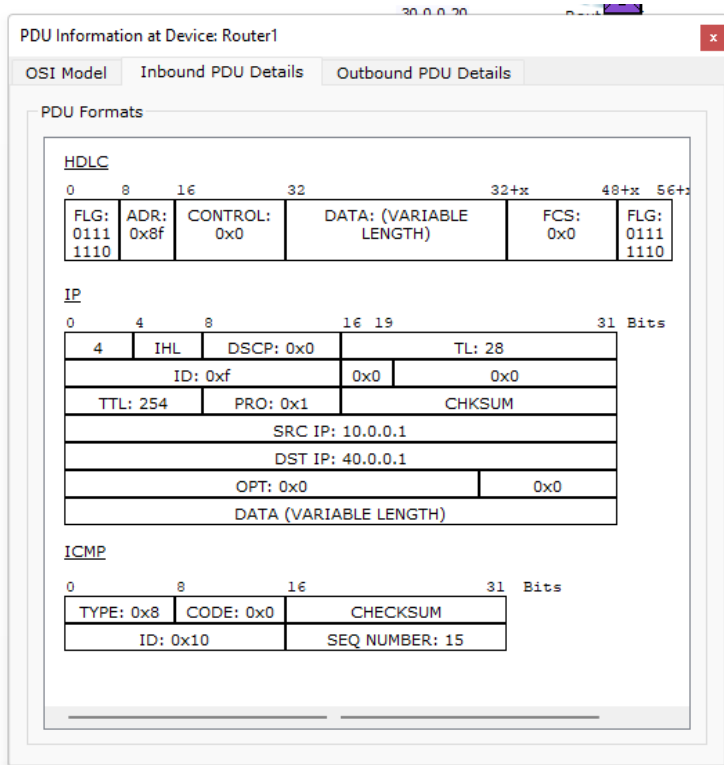DEMONSTRATE THE TTL / LIFE OF A PACKET

Topology:

Output:

30.0.0.20                    Router...T
                              Fa0/0...

**PDU Information at Device: PC0**                              [x]

OSI Model     Outbound PDU Details

PDU Formats

Ethernet II
```
0           4          8              14        19  Byt
+-----------+-----------+-------------+-----------+
| PREAMBLE:           | DEST MAC:       | SRC MAC:       |
| 101010...1011       | 0090.2137.34B0  | 00D0.BC33.1653 |
+---------------------+-----------------+----------------+
| TYPE:    | DATA (VARIABLE LENGTH)    | FCS:            |
| 0x800    |                           | 0x0             |
+----------+---------------------------+-----------------+
```

IP
```
0      4      8         16  19                    31  Bits
+------+------+----------+-------------------------+
|  4   | IHL  | DSCP: 0x0 |        TL: 28          |
+------+------+-----------+------+-----------------+
|      ID: 0x10           | 0x0  |      0x0        |
+------------------+------+------+-----------------+
|  TTL: 255        | 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
```

Fa0

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## PDU Information at Device: Router1

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

**PDU Formats**

**HDLC**

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

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

**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 | |

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40.0.0.10

## PDU Information at Device: Router2

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

**PDU Formats**

**HDLC**

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

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

**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 | |

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 | Byte |

| 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 |

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