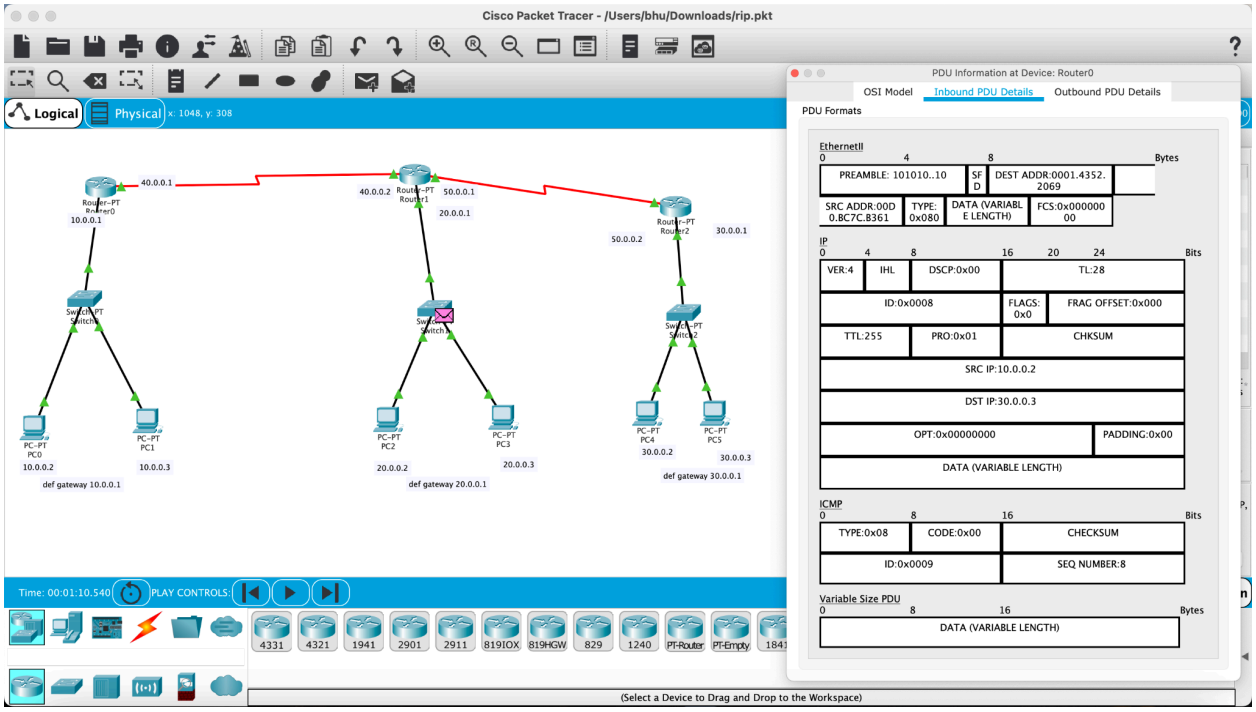
Experiment 6:

Q)CONFIGURE TTL OR LIFE OF A PACKET



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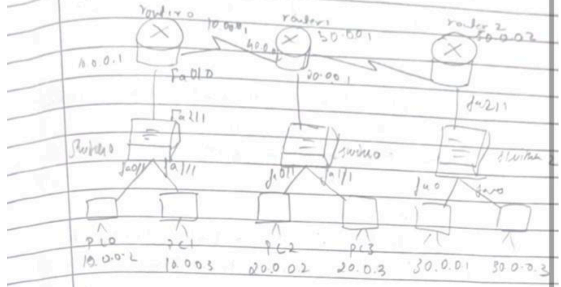
Q. Demonstrate the TTL or life of a packet.

Aim: To demonstrate how TTL (Time to Live) works, including the decrement of TTL at each hop and its handling of expired packets.



Topology Description:

1. Connect router 0 to router 1 and router 2 using a serial-dte cable.
2. Connect router 0 to switch 0 using copper straight cable and repeat for router 1 to switch 1 & router 2 to switch 2.
3. Connect 6 PCs (2 each) to each of switches using copper-straight cable & assign IP addresses.

Procedure:

1) Open cisco packet tracer and create the topology as shown above.
2) Select the simple PDU icon and select source and destination.
3) Include the PC0 and PC5 as part of the communication that is to take place, then switch to simulation mode.
4) Start the simulation by clicking on auto capture button & observe the TTL of a packet.

Observation:

TTL field in a packet decremented by 1 at each router hop to prevent infinite loops. If the TTL reaches 0, the router discards the packet & sends an ICMP (Internet Control Message Protocol) "time exceeded" message is back to the sender.