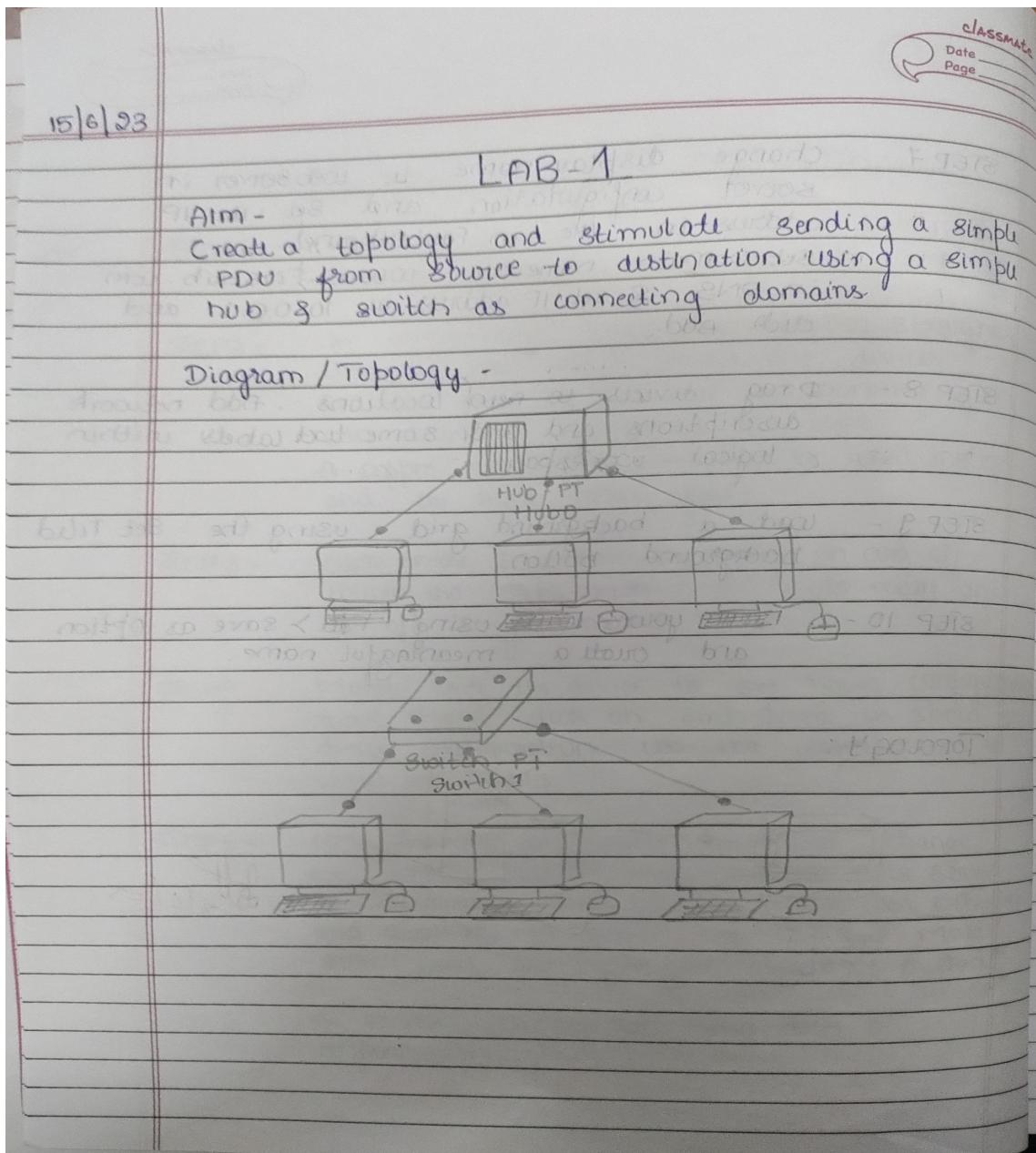
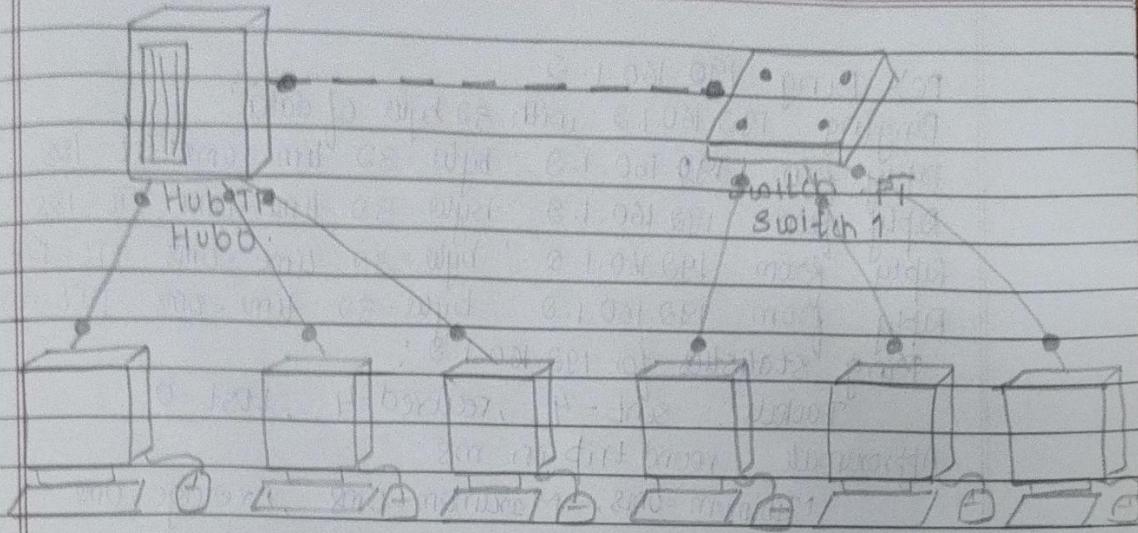


WEEK 1

Create a topology and simulate sending a simple PDU from source to destination using hub and switch as connecting devices and demonstrate ping messages.

OBSERVATION:





Procedure -

- Select a generic hub from Hubs & place it.
- Select 3 PC's from End-devices.
- Connect hub and 3 PC's using copper straight through.
- Select a switch and place it next to hub.
- Select 3 PC's from End-devices & place it.
- Connect switches & PC's using copper straight through.
- Connect switch & hub using copper crossover.

Ping - output

PC > Ping 192.160.1.5

Pinging 192.160.1.5 with 32 bytes of data :

Reply from 192.160.1.5 : Bytes = 32 time = 0ms TTL = 128

Reply from 192.160.1.5 : Bytes = 32 time = 0ms TTL = 128

Reply from 192.160.1.5 : Bytes = 32 time = 0ms TTL = 128

Reply from 192.160.1.5 : Bytes = 32 time = 0ms TTL = 128

Ping statistics for 192.160.1.5 :

Packets sent = 4 , received = 4 , lost = 0 ,

Approximate round trips in ms :

minimum = 0ms , Maximum = 0ms , Average = 0ms.

PC > Ping 192.160.1.9
 Ringing 192.160.1.9 with 32 bytes of data!
 Reply from 192.160.1.9 : bytes = 32 time = 0ms TTL = 128
 Reply from 192.160.1.9 : bytes = 32 time = 0ms TTL = 128
 Reply from 192.160.1.9 : bytes = 32 time = 0ms TTL = 128
 Reply from 192.160.1.9 : bytes = 32 time = 0ms TTL = 128
 Reply from 192.160.1.9 : bytes = 32 time = 0ms TTL = 128
 Ping statistics for 192.160.1.9 :

Packets: sent = 4, received = 4, lost = 0

Approximate round trip in ms:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC > Ping 192.160.1.5

Pinging 192.160.1.5 with 32 bytes of data!

Reply from 192.160.1.5 : bytes = 32 time = 0ms TTL = 128
 Reply from 192.160.1.5 : bytes = 32 time = 0ms TTL = 128
 Reply from 192.160.1.5 : bytes = 32 time = 0ms TTL = 128
 Reply from 192.160.1.5 : bytes = 32 time = 0ms TTL = 128

Ping statistic for 192.160.1.5 :

Packets: sent = 4, received = 4, lost = 0

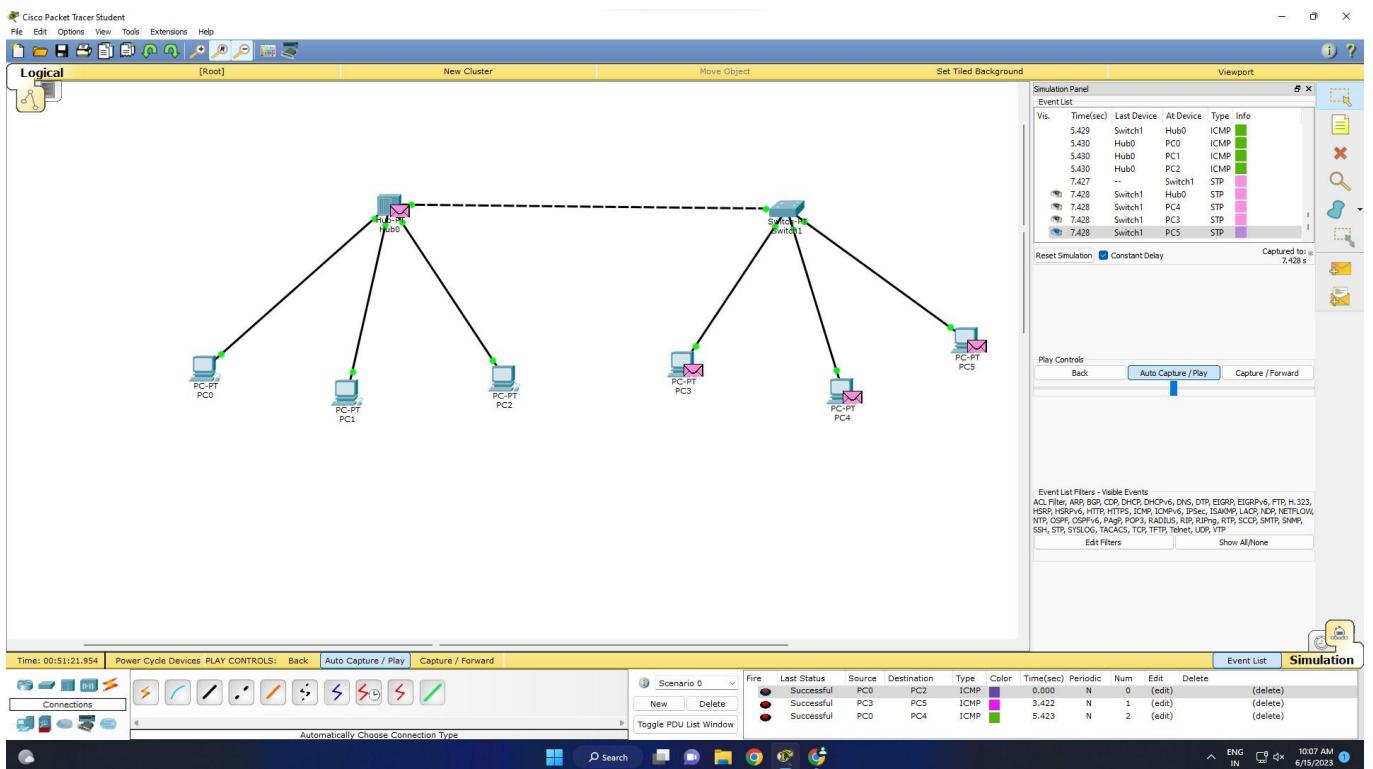
Approx roundtrip in ms:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

Observation:

- Switch broadcasts the packet to all the devices during first iteration & records the IP addresses of the intended destination device & send the packet to that specified destination next time.
- Hub broadcasts the packet to all the end devices & the device which are not intended to receive the packet discards the packet & the intended devices receives the packet & sends packet acknowledgement.

OUTPUT:



A screenshot of a Windows Command Prompt window titled "PC0". The window displays the output of several ping commands. The host names are PC0, PC1, PC2, PC3, and PC4. The ping results show successful connections between most hosts, except for one instance where PC1 failed to receive a response from PC0.

```

PC0
Physical Config Desktop Custom Interface
Command Prompt
Reset Trace RC Command Line 1.0
PCping 192.160.1.5
Pinging 192.160.1.6 with 32 bytes of data:
Reply from 192.160.1.6: bytes=32 time=0ms TTL=128
Ping statistics for 192.160.1.6:
    Packets: Sent = 4, Received = 4 (100% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
PCping 192.160.1.5
Pinging 192.160.1.6 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 192.160.1.6:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
PC192.160.1.2
Invalid Command.
PCping 192.160.1.2
Pinging 192.160.1.2 with 32 bytes of data:
Reply from 192.160.1.2: bytes=32 time=0ms TTL=128
Ping statistics for 192.160.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
PC>

```

