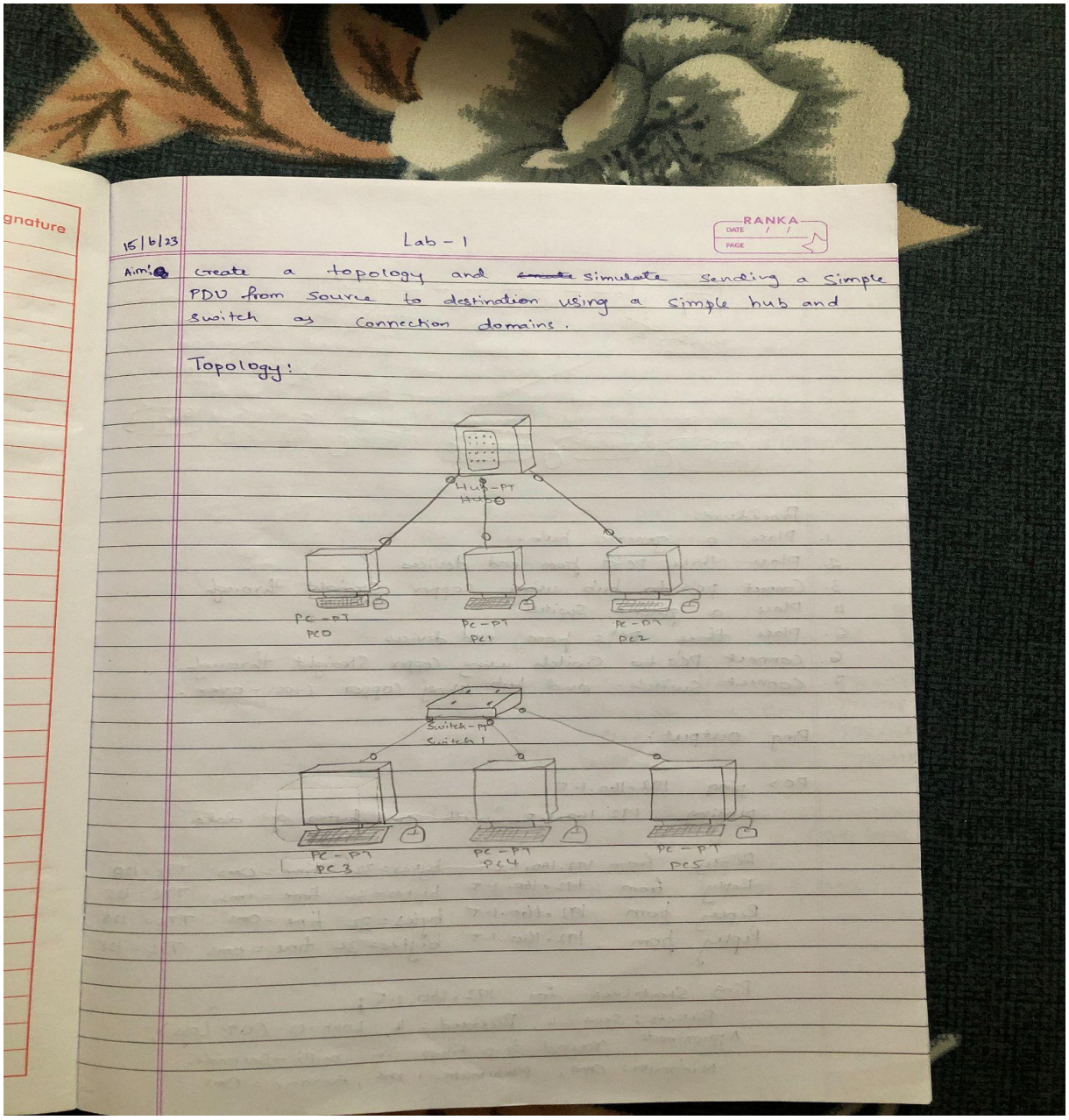
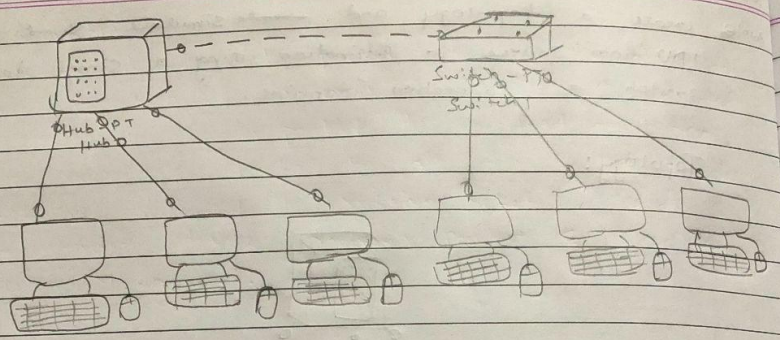
WEEK 1

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:

1. Place a generic hub.
2. Place three PC's from end devices
3. Connect pc's to hub using copper Straight through.
4. Place a generic Switch
5. Place three PC's from end devices
6. Connect PC's to Switch using copper Straight through.
7. Connect Switch and hub using copper cross-over.

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=1ms 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 (0% Loss);
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1 ms, Average = 0ms.

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PC> ping 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
Reply from 192.160.1.2: bytes=32 time=0ms TTL=128
Reply from 192.160.1.2: bytes=32 time=0ms TTL=128
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> ping 192.160.1.5
pinging 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
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 (0% Loss),
Approximate round trip times in milli-seconds:
Minimum=0ms, Maximum=0ms, Average=0ms

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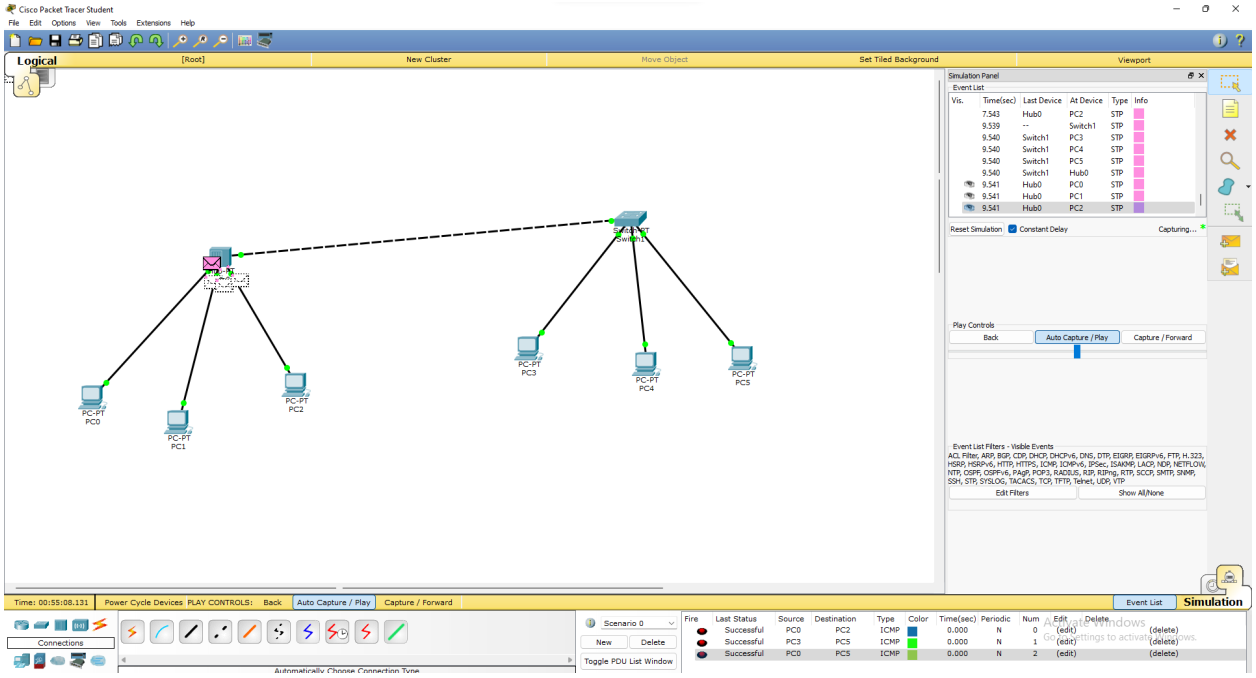
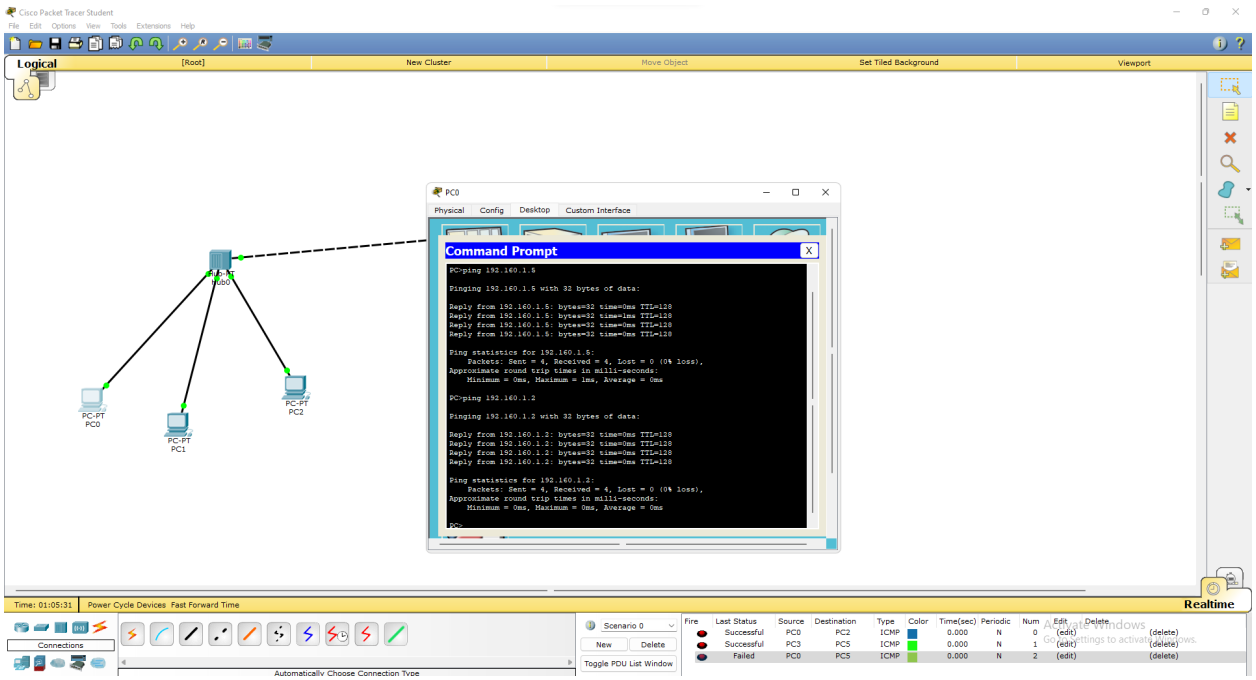
Observation:

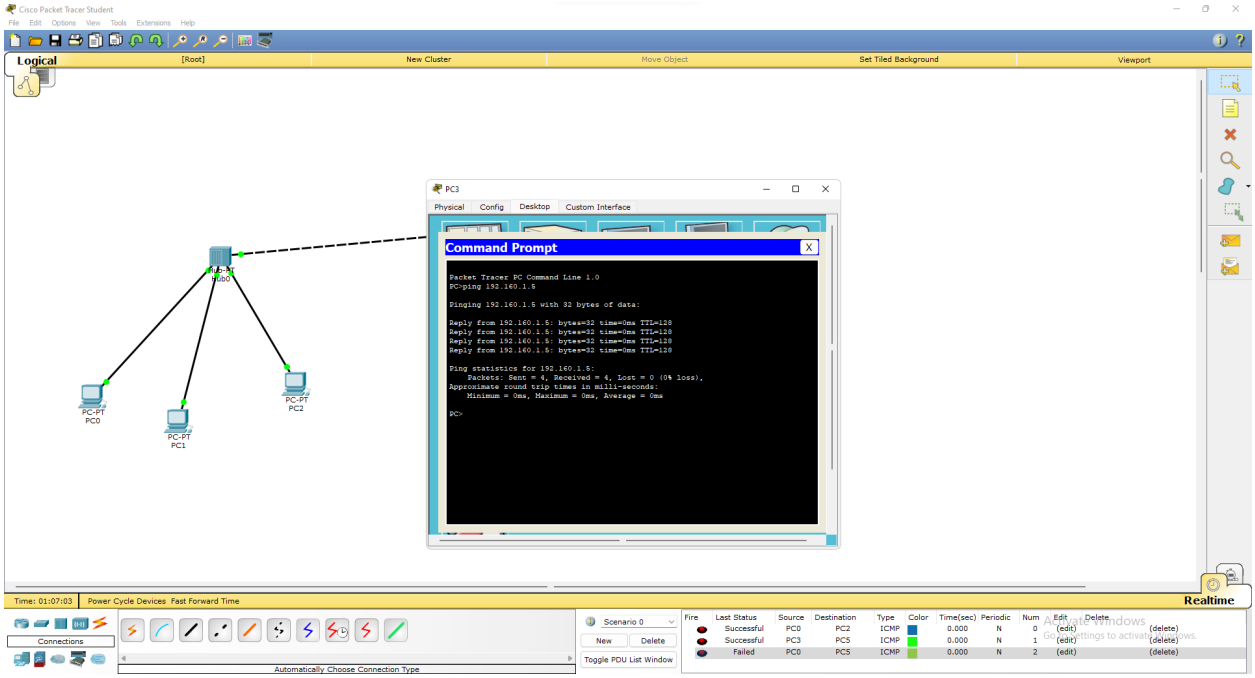
1. Switch broadcasts the packet to all the devices during first iteration & records IP address of intended destination & Sends packet to specified destination.
2. Hub broadcasts packet to all devices and the device which is intended to receive packet discards & intended device recieves packet & send the acknowledgement.

16/6/2023

OUTPUT:


Cisco Packet Tracer Student
Logical
Simulation Panel
Event List
PC-PT PC0
PC-PT PC1
PC-PT PC2
PC-PT PC3
PC-PT PC4
PC-PT PC5
Simulation


Cisco Packet Tracer Student
Logical
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
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
Ping statistics for 192.160.1.5:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
PC>ping 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>
Realtime


Cisco Packet Tracer Student
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
PC3
Physical
Config
Desktop
Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
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 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PC>
PC-PT PC0
PC-PT PC1
PC-PT PC2
Time: 01:07:03
Power Cycle Devices
Fast Forward Time
Realtime
Connections
Automatically Choose Connection Type
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Successful PC0 PC2 ICMP 0.000 N 0 (edit) (delete)
Successful PC3 PC5 ICMP 0.000 N 1 (edit) (delete)
Failed PC0 PC5 ICMP 0.000 N 2 (edit) (delete)