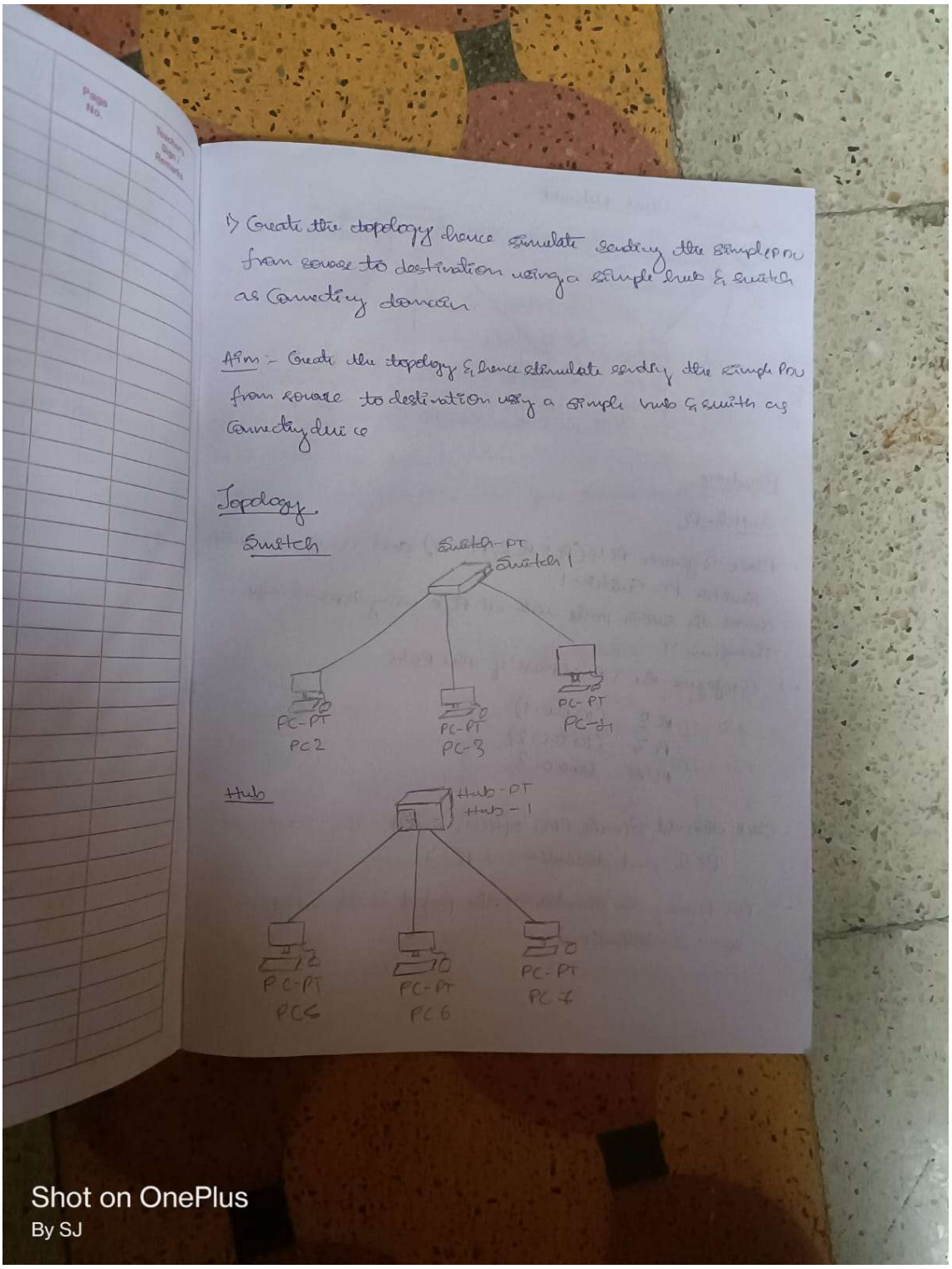
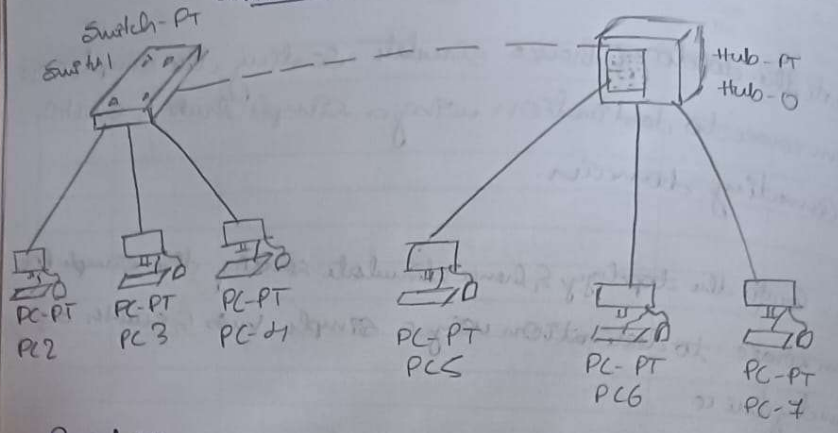
Lab 1


1) Create the topology hence simulate sending the simple PDU from source to destination using a simple hub & switch as connecting devices
Aim :- Create the topology & hence simulate sending the simple PDU from source to destination using a simple hub & switch as connecting devices
Topology
Switch
Switch-PT
Switch 1
PC-PT
PC2
PC-PT
PC-3
PC-PT
PC-4
Hub
Hub-PT
Hub-1
PC-PT
PC5
PC-PT
PC6
PC-PT
PC-7
Shot on OnePlus
By SJ

Mixed - Network



Procedure

Switch-PC

->Place 3 generic PCs (PC2, PC3, PC-4) and a generic switch
Switch PT-Switch-1

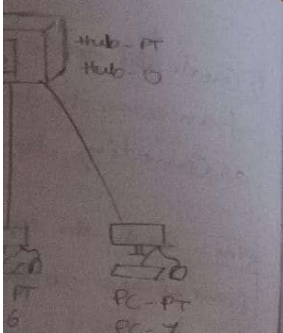
-> Connect the switch ports with all PCs using copper-straight Through wire

-> Configure the IP address of the PCs

PC2 (10.0.0.1)
PC3 (10.0.0.2)
PC4 (10.0.0.3)

-Click the add Simple PDU option, select the source as PC2 and destination as PC-4

-> On Running the Simulation the packet is traced from source to destination



and a generic switch

copper straight

the source as

be traced from

Hub-PCs

-> Follow the procedure as in the Switch-PC replace the switch with a hub.

-> Set IP address PC5 (10.0.0.2)
PC6 (10.0.0.5)
PC7 (10.0.0.6)

-> Now connect the switch and the Hub with copper cross over cable from it

-> Stimulate the packet transfer from source to destination

Output

PC > Ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data

Reply from 10.0.0.3: byte = 32 time = 0ms TTL = 128
Reply from 10.0.0.3: byte = 32 time = 2ms TTL = 128
Reply from 10.0.0.3 byte = 32 time = 0ms TTL = 128
Reply from 10.0.0.3 byte = 32 time = 0s TTL = 128

Ping statistics for 10.0.0.3:
Packets: Sent = 4, Received = 4, lost = 0
Approx: round trip time in milli seconds
Minimum = 0ms, maximum = 2ms, Average = 0ms

Observation.

i) Switch broadcasts the packets to all the devices during the first iteration and records the I-P address of the intended destination device & sends the packet to that specified destination next time

ii) Hub broadcasts the packet to all the end devices and the devices which are not intended to receive the packets discards the packet & the indicated device receives the packet & send the packet acknowledgement

NLA
5/6/2023

Output Simulation