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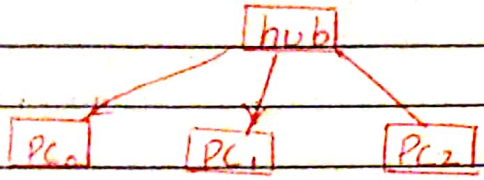
LAB 1

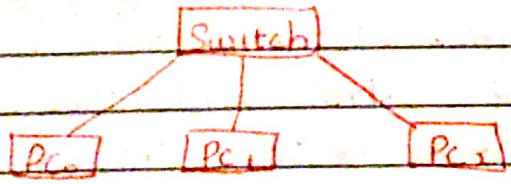
hub



hub is a simple device that does not learn its environment i.e if Pc_0 has to send a package to Pc_2 through hub, then Pc_1 will also receive it

we use copper straight through wires for connections

Switch



Switch is a smart device that learns which system is connected to which port. For example, if Pc_0 sends a package to Pc_2 then Pc_1 will not receive any thing.
Straight through wires are used for connection

~~Switch + hub~~

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Switch + hub

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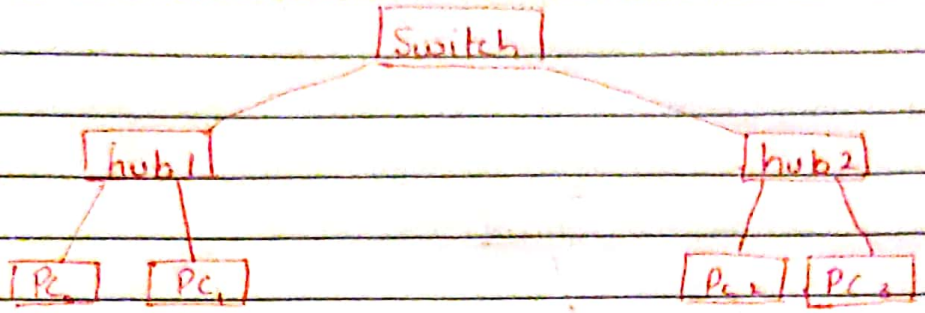

Pc's are connected to hubs through straight through wires and hubs are connected to the switch through Cross-over wires

When Pc0 wants to send a message to Pc3 it first sends the message to ~~Pc~~ the hub1 which in turn sends it to Pc1 and the switch. Pc1 rejects the message. the switch sends the message to hub2 which in turn sends it to both Pc2 and Pc3. Pc2 rejects it. Pc3 accepts the message and sends an acknowledgement back to hub2. Hub2 sends this acknowledgment to the switch and ~~to~~ Pc2. The switch sends it to hub1 which in turn sends it to Pc0 and Pc1. Pc0 rejects it and Pc1 will accept it.