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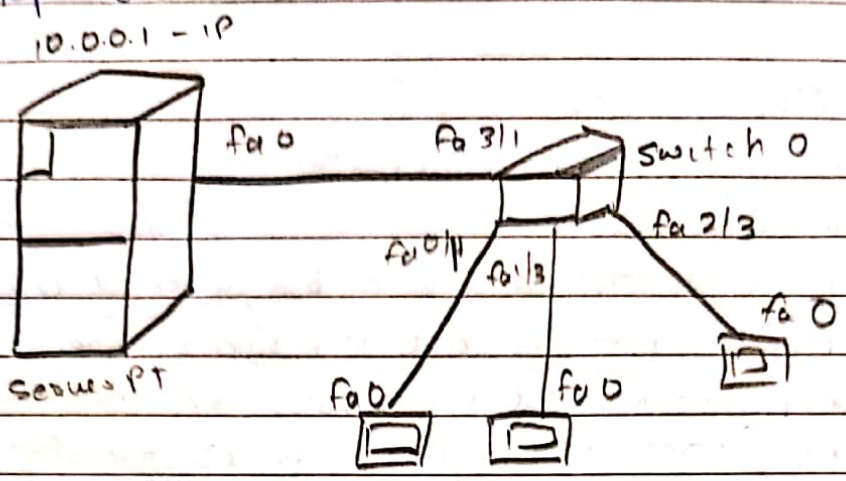
# Experiment 5

Obj :- Design a DHCP within LAN.

Topology :-




Procedure :-

Step 1: Place 3 Pc's, 1 server and one ~~router~~ switch and connect all end devices to the switch using copper straight wire

Step 2: Go to switch -> desktop -> IP config
Ip address - 10.0.0.1
Default Gateway - 10.0.0.0

Step 3: On server go to config -> services -> DHCP turn services to ON
poolname :- Switch 1
Default Gateway - 10.0.0.0
Start IP : 10.0.0.3
max no of users :- 100
Add

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Step 4:- To each PC desktop - IP config and change IP config from static to DHCP. The IP address will be assigned automatically

Step 5: Ping from PC0 to PC3

Observations:-

(1) All connections succesful

(2) ping 10.0.0.4

Pinging 10.0.0.4 with 32 bytes of data:

Reply from 10.0.0.4 : bytes=32 time=1ms TTL=128

Reply from 10.0.0.4 : bytes=32 time=0ms TTL=128

Reply from 10.0.0.4 : bytes=32 time=0ms TTL=128

Reply from 10.0.0.4 : bytes=32 time=0ms TTL=128

Ping stats for 10.0.0.4

Packets:- Sent=4, Received=4, lost=0

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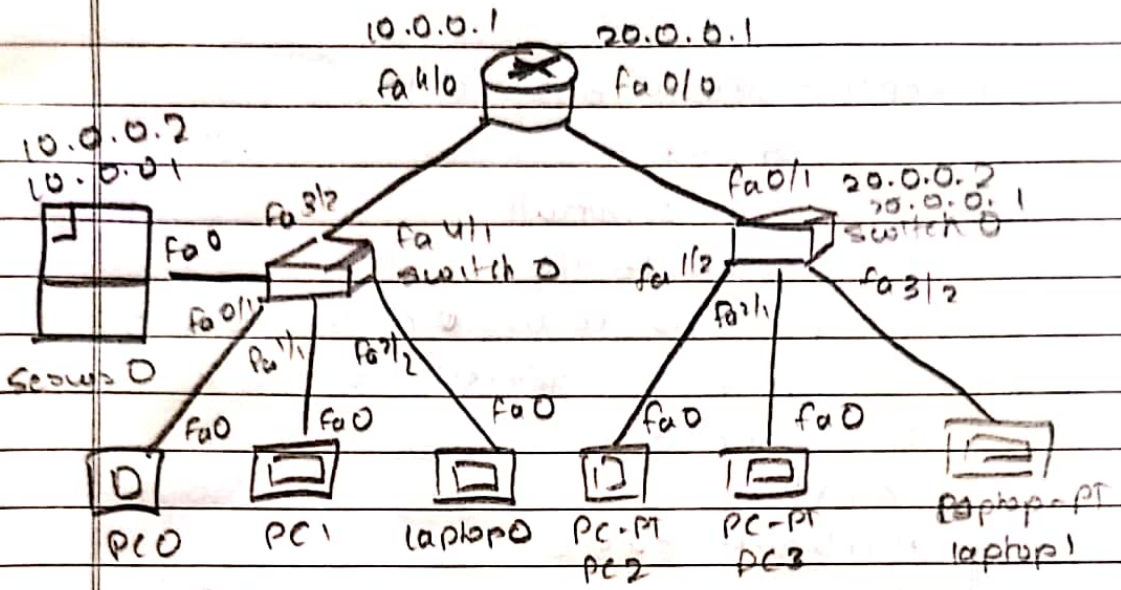
# Experiment - 6

Obj: Design DHCP outside LAN

Topology




Procedure :-

Step 1: Place 6 PC's, 2 switches, 1 server, 1 router and connect them as shown

Step 2 :- server -> desktop -> IP config
IP address - 10.0.0.2
Default Gateway - 10.0.0.1

Step 3 :- Config -> services -> DHCP, Turn ~~Off~~ services to ON
Pool name :- Switch 1
Default gateway :- 10.0.0.1
Start IP : 10.0.0.3
Max users : 100
Add

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Poolname: Switch 2
Default Gateway: 20.0.0.1
Start IP: 20.0.0.3
max users: 100
click Add

Step 4:- Go to router CLI
> enable
# config terminal
# interface fa 4/0
# ip address 10.0.0.1 255.0.0.0
# IP helper -> address 10.0.0.2
# No shut
exit
# interface fa 0/0
# ip address 20.0.0.1 255.0.0.0
# ip helper-address 10.0.0.2
# No shut

All router switch connection go up

Step 5: Go to all 6 Pc's and change IP config from static to DHCP.

Step 6: Ping PC0 to PC5

Observation: ① all connection successful
② All pc's ok assigned

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