PROGRAM -4
Configure DHCP within a LAN and outside LAN

14/9/23

Lab 5

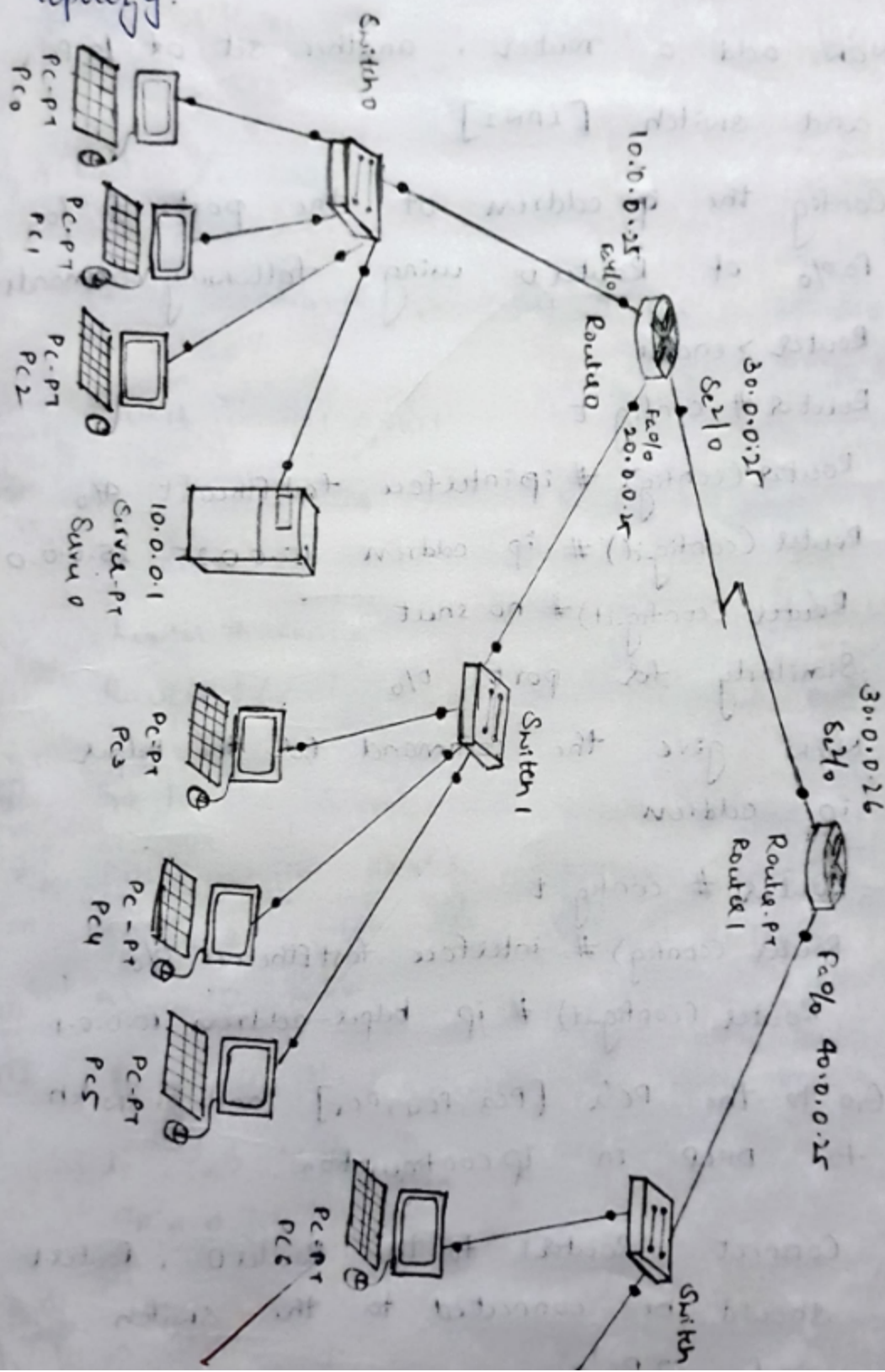Aim: Configure DHCP within a LAN and outside LAN:

for DHCP within a LAN

Topology:

Procedure:

① Drag and drop 3 PC's and 1 Server from the devices. Connect the 3 PC's to the Switch.

② Connect the Server to the Switch. Give the IP address to the Server as 10.0.0.1

③ Go to the Services → DHCP , Add the pool with poolName : ServerPool
                           Start IP Address : 10.0.0.2
                           Subnet Mask : 255.0.0.0

④ Now go to the PC's and switch to DHCP in IP configuration. IP address will be assigned

to the PC'n [PC0, PC1, PC2]

for DHCP Outside the LAN:

Topology:

Switch 0

PC-PT
PC0

PC-PT
PC1

PC-PT
PC2

10.0.0.25
ex10

Router 0

30.0.0.25
se2/0

fa0/0
20.0.0.25

10.0.0.1
Server-PT
Server 0

Switch 1

PC-PT
PC3

PC-PT
PC4

PC-PT
PC5

30.0.0.26
se2/0

Router-PT
Router 1

fa0/0 40.0.0.25

Switch

PC-PT
PC6

Procedure:

① Repeat the procedure we did for the LAN.
  DHCP within a LAN.

② Now, add a router, another set of 2 PC's
  and switch [LAN 2]

③ Config the ip address of the ports fa4/0,
  fa0/0 of Router 0 using following commands:

  Router > enable
  Router # config t
  Router (config) # ip interface fastethernet 4/0
  Router (config-if) # ip address 10.0.0.25 25.0.0.0
  Router (config-if) # no shut
  Similarly for port 0/0

④ Now give the command for the helper
  ip address:

  Router # config t
  Router (config) # interface fastethernet 0/0
  Router (config-if) # ip helper-address 10.0.0.1

⑤ Go to the PC's [PC3, PC4, PC5] and g. switch
  to DHCP in ip configuration.

⑥ Connect Router1 to the Router 0. Router1
  should be connected to the switch
  and 2 PC's.

⑦ Config the ipaddress of Router1 with for

⑧ Config the ip address of Router0 of Serid 2/0 with ip address 30.0.0.25

⑨ Now perform the static routing to connect network 40 to the Router0 with the following commands:

Router > enable

Router #config t

Router (config) # ip route 40.0.0.0 255.0.0.0
30.0.96
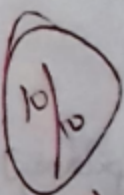
Router (config) # exit

⑩ Do the Similar with Router 1 with. default or static routing
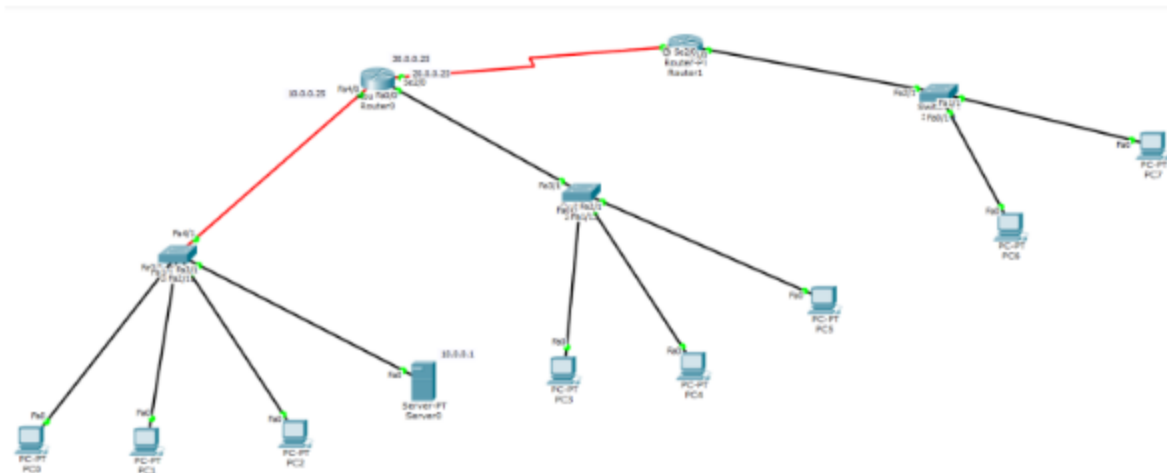
Router # config t

Router # (config) # ip route 0.0.0.0 0.0.0.0
30.0.0.25

⑪ Go to the Server and create 2 more pool with starting address 20.0.0.2, & 40.0.0.2. Give the Default Gateway as 10.0.0.25.

⑫ PC'n in the network 40 with be provided with the ip address 40.0.0.2, 40.0.0.3. using DHCP.

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