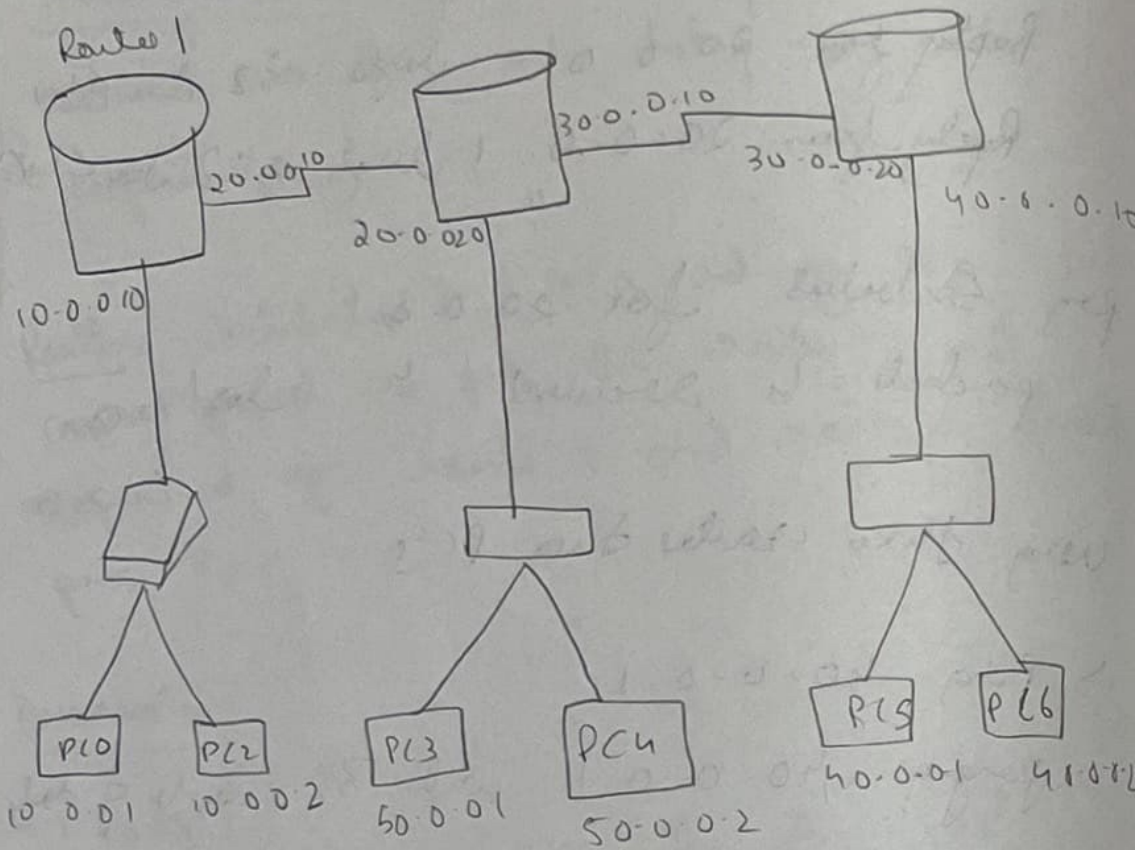
Experiment -3

Aim: Configuring default route to the router.

Topology:



Procedure:

i) Place: generic routers and two generic PC's in workspace.

ii) A PC is clicked to set the attributes for a PC and each PC has three attributes which are the IP address

subnet mask as the gateway to the
the three are set according to the
nodes placed. This process is done for all
6 PC's.

ii) For router 1 : the configuration are done
in the command link interface. The IP
address and subnet mask are set for
both interfaces - fastEthernet 0/0 as
10.0.0.10 and 255.0.0.0 and serial
2/0 as 40.0.0.1 and 255.0.0.0
Router 2 is the default router for Router1
as this is done by the command ip route
0.0.0.0 0.0.0.0 0.0.0.0

iii) For router2 the IP address and subnet
mask are set for all three interfaces.
fastEthernet 0/0 as 30.0.0.3 and
255.0.0.0 and serial 2/0 as
20.0.0.3 and 255.0.0.0 and serial 3/0
as 50.0.0.10 & 255.0.0.0
Router2 does not have any default route
and the static route is done for the
network 10 & 40. By the following command
ip route 10.0.0.0 255.0.0.0 40.0.0.10
ip route 30.0.0.0 255.0.0.0 50.0.0.10

iv) Ping ovrad is created from 10.0.0.1
to 20.0.0.1 and from 10.0.0.1 to 30.0.0.2

Observation:

→ One router cannot have two default gateway

→ The default router for first router is the middle router because any packet which have to be delivered will go to the middle router.

→ The default router for third router is the middle router for the same reason.

→ The middle router does not have any default router because if any of the router is not default the there is a chance that the packet which are to be sent to the router is not to router.

Result:

ping 20.0.0.1

pinging 20.0.0.1 with 32 bytes of data

Request timed out.

Reply from 20.0.0.1 byte = 32 time = 1ms TTL = 126

Reply from 20.0.0.1 byte = 32 time = 2ms TTL = 126

Reply from 20.0.0.1 byte = 32 time = 2ms

TTL = 128

ping 30.0.0.2

pinging 30.0.0.2 with 32 bytes of data

Request timed out

Reply from 30.0.0.2 byte = 32 time = 2ms TTL = 125

Reply from 30.0.0.2 byte = 32 time = 4ms TTL = 128

Reply from 30.0.0.2 byte = 32 time = 4ms TTL = 125