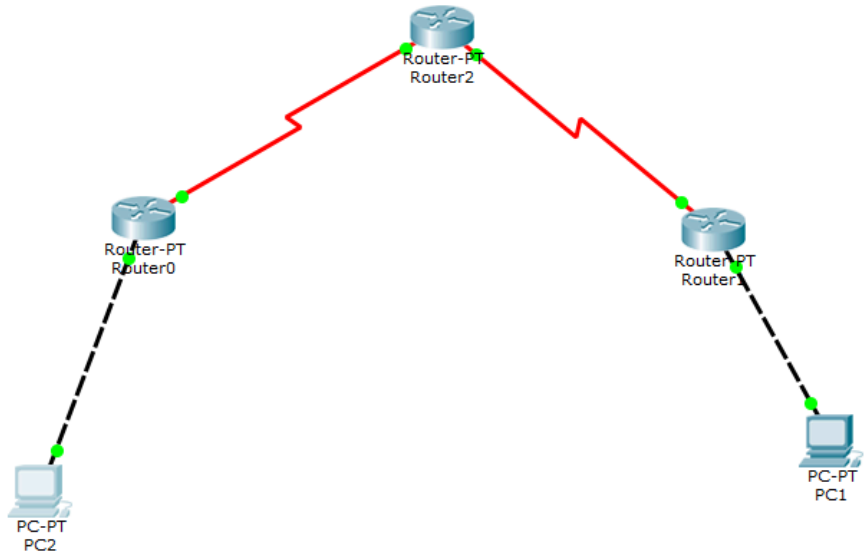
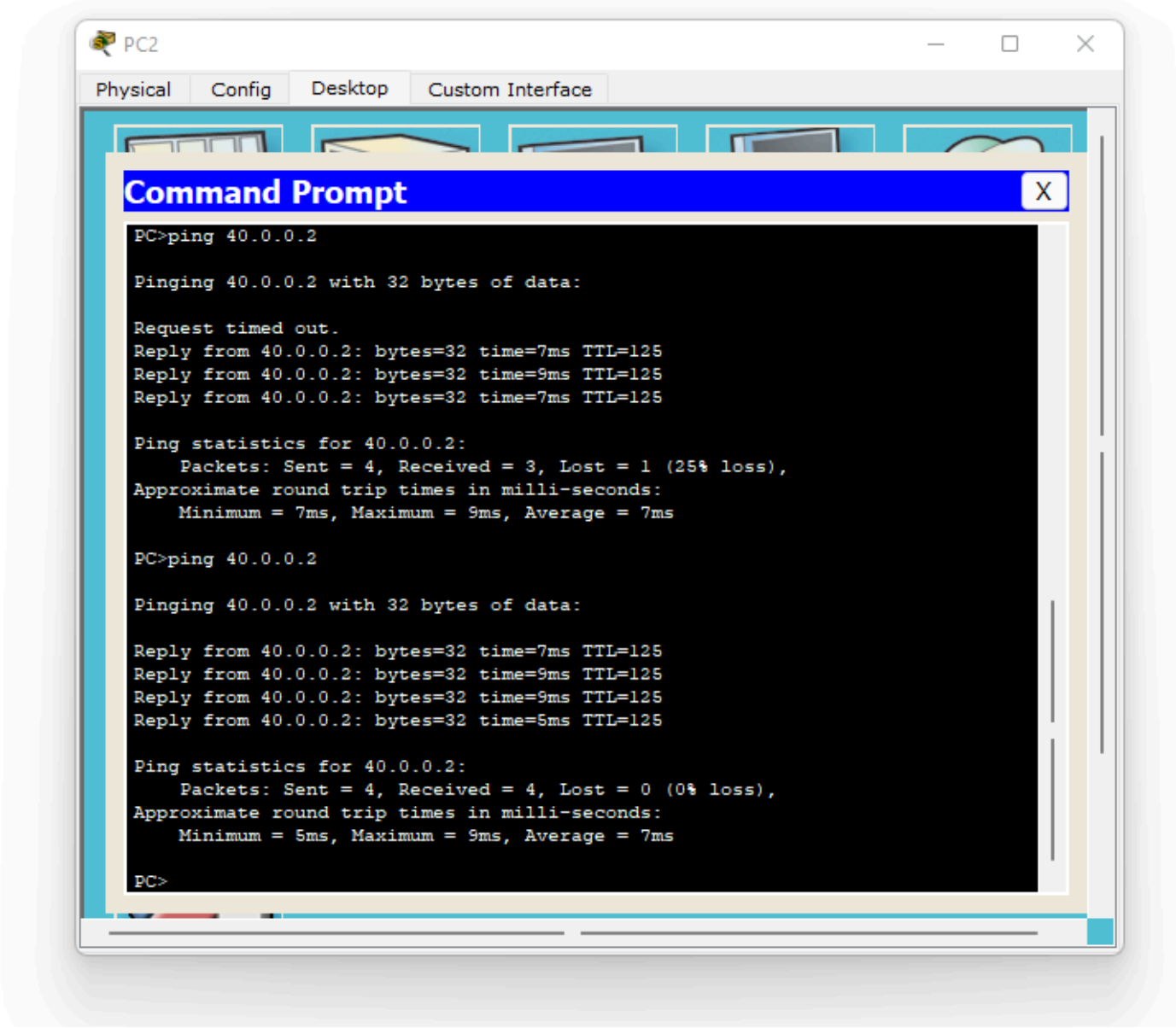
Experiment - 3

Aim: To demonstrate the configuration of static routes to the router

Topology:



Output:



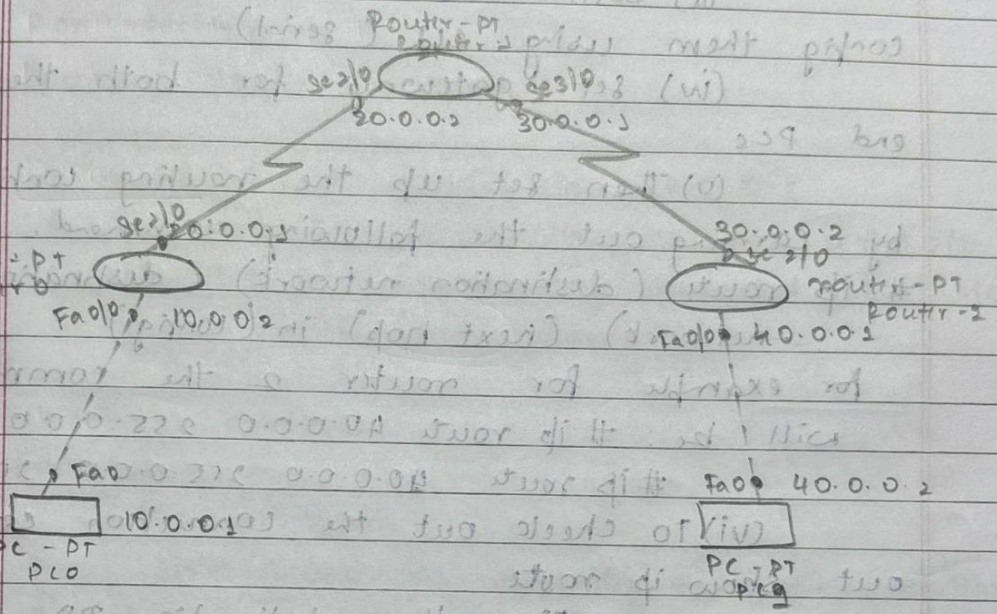
Observation:

8/10/24

Experiment-3

Aim: To demonstrate the configuration of default routes to the router

Topology:



To setup routing configuration:

→ To reach the unknown networks (current network)

ip route dubination network ip dubination mask next hop

dubination subnet mark

ip route 20.0.0.0 255.0.0.0 20.0.0.2

show ip route → shows the connected networks

Configuration:

(i) select two generic PC and 3 generic routers and config the IP address for the two generic PCs

(ii) make a connection b/w the PC and router using the CLI (fast ethernet 0/0)

(iii) connect the two routers and config them using CLI (serial)

(iv) set gateway for both the end PCs

(v) Then set up the routing configuration by carrying out the following command.

ip route (dustination network) (dustination sub-network) (next hop) in (config)

for example for router 2 the command will be: # ip route 40.0.0.0 255.0.0.0 30.0.0.2

ip route 40.0.0.0 255.0.0.0 20.0.0.1

(vi) To check out the connection carry out show ip route

(vii) Then Ping the dustination IP address from the source PC under command prompt in dustkop.

(viii) carry out ping command.

OBSERVATION:

PC> ping 40.0.0.2

Pinging 40.0.0.2 with 32 bytes of data

Reply from 40.0.0.2 : bytes = 32 time = 7ms TTL = 125
Reply from 40.0.0.2 : bytes = 32 time = 7ms TTL = 125
Reply from 40.0.0.2 : bytes = 32 time = 7ms TTL = 125

Reply from 40.0.0.2 : bytes = 32 time = 9ms TTL = 125

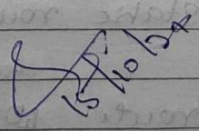
Ping statistics for 40.0.0.2
Packets: Sent = 4, Recieved = 4 Lost = 0 (0% Loss)
Approximate round trip times in milli-seconds:
minimum = 5ms Maximum = 9ms, Average = 7ms.

For router 2
Router > show ip route

S 10.0.0.0/8 [1/0] via 20.0.0.1
C 20.0.0.0/8 is directly connected, serial 2/0
C 30.0.0.0/8 is directly connected, serial 3/0
S 40.0.0.0/8 [1/0] via 30.0.0.2

For Router 0

C 10.0.0.0/8 is directly connected, FastEthernet 0/
C 20.0.0.0/8 is directly connected, serial 2/0
S 30.0.0.0/8 [1/0] via 20.0.0.2
S 40.0.0.0/8 [1/0] via 20.0.0.2

For router 1

S 10.0.0.0/8 [1/0] via 30.0.0.1
S 30.0.0.0/8 [1/0] via 30.0.0.1
C 30.0.0.0/8 is directly connected, serial 2/0
C 40.0.0.0/8 is directly connected, FastEthernet 0/0