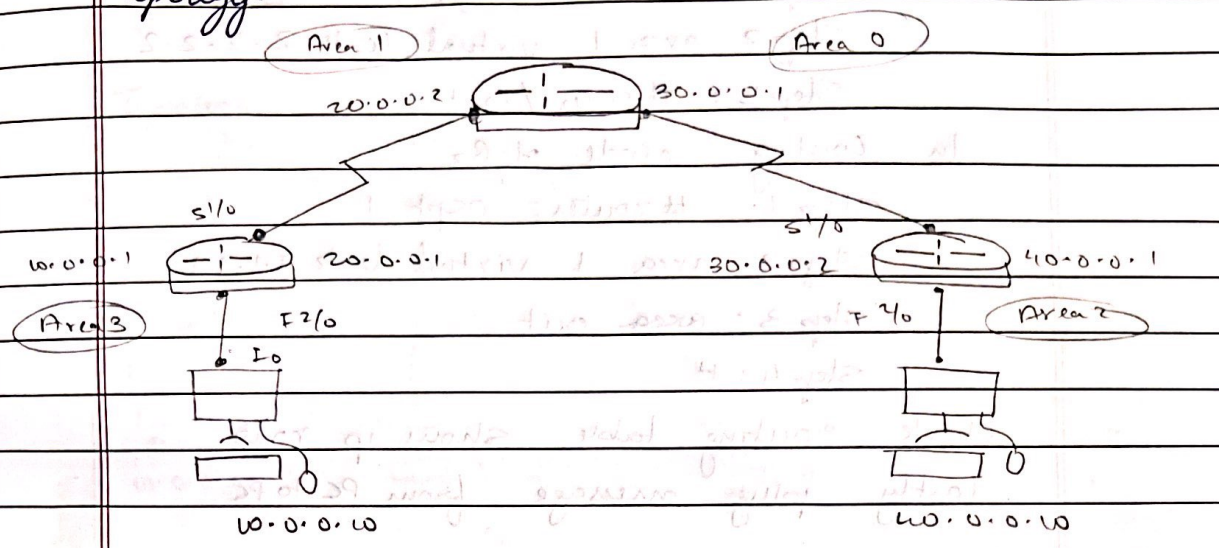
Program.-7

Aim - Configure OSPF routing protocol.

Topology:



Procedure :

- Create topology using 3 routers and 2PC's
- Configure PC's with IP address and gateway
- Configure each other routers are to IPaddress
- encapsulate ppp and Clock rate should be set as in RIP config.
- Router → CLI → Config mode.
  - Step 1: Router os pf 1.
  - Step 2: router-id 1.1.1.1.
  - Step 3: network 10.0.0.0 0.255.255.255 area 2
  - Step 4: network 20.0.0.0 0.255.255.255 area 1.
  - Step 5: exit
- repeat these commands
- type show ip router
- to set loopbacks
  - Step 1: (in config. ip mode)
  - Step 2: ip address 172.16.1.252
  - Step 3: No shut down.

- Repeat for other 2 router.
- create a virtual link b/w R_1, R_2

In config mode of R_1

Step 1 : router ospf 1

Step 2 : area 1 virtual link 2.2.2.2

Step 3 : # enter / exit.

In config mode of R_2

Step 1 : # router ospf 1

Step 2 : area 1 virtual link 1.1.1.1

Step 3 : area exit

Step 4 : #

- check routing table, show ip route
- lastly ping message from PC to PC.

Ping output :

Packet tracer PC command - line 1.0

PC > Ping 40.0.0.10

Pinging 40.0.0.10 with 32 byte data :

Request timed out.

Reply from 40.0.0.10 bytes = 32 time = 11ms TTL = 125

Reply from 40.0.0.10 bytes = 32 time = 11ms TTL = 125

Reply from 40.0.0.10 bytes = 32 time = 8ms TTL = 125

Statistics :

packets sent = 4, received = 3, lost = 1

Approx round trip time

min = 8ms, max = 11ms, Avg = 10ms

observation :

- OSPF is used to find the best path
- network is divided into 4 arrivals
- message is pinged after a virtual link.