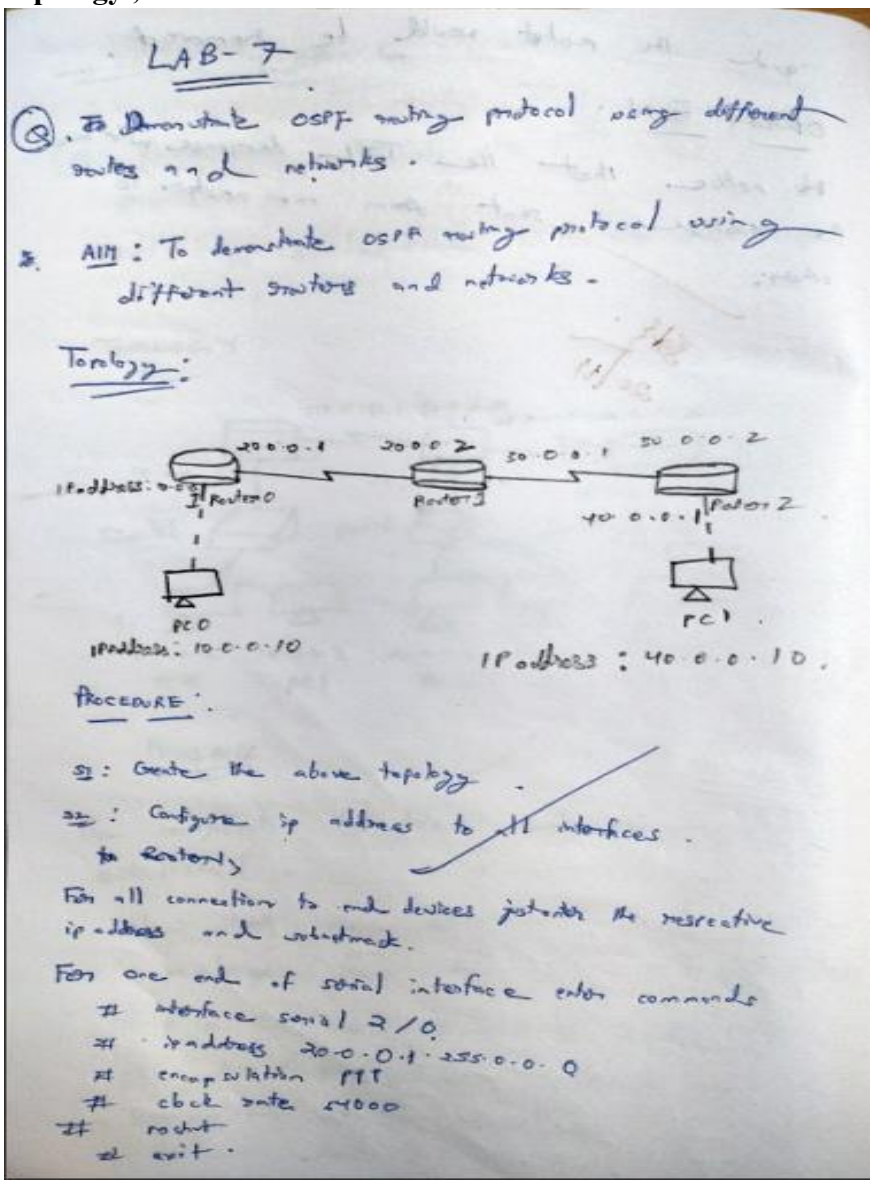
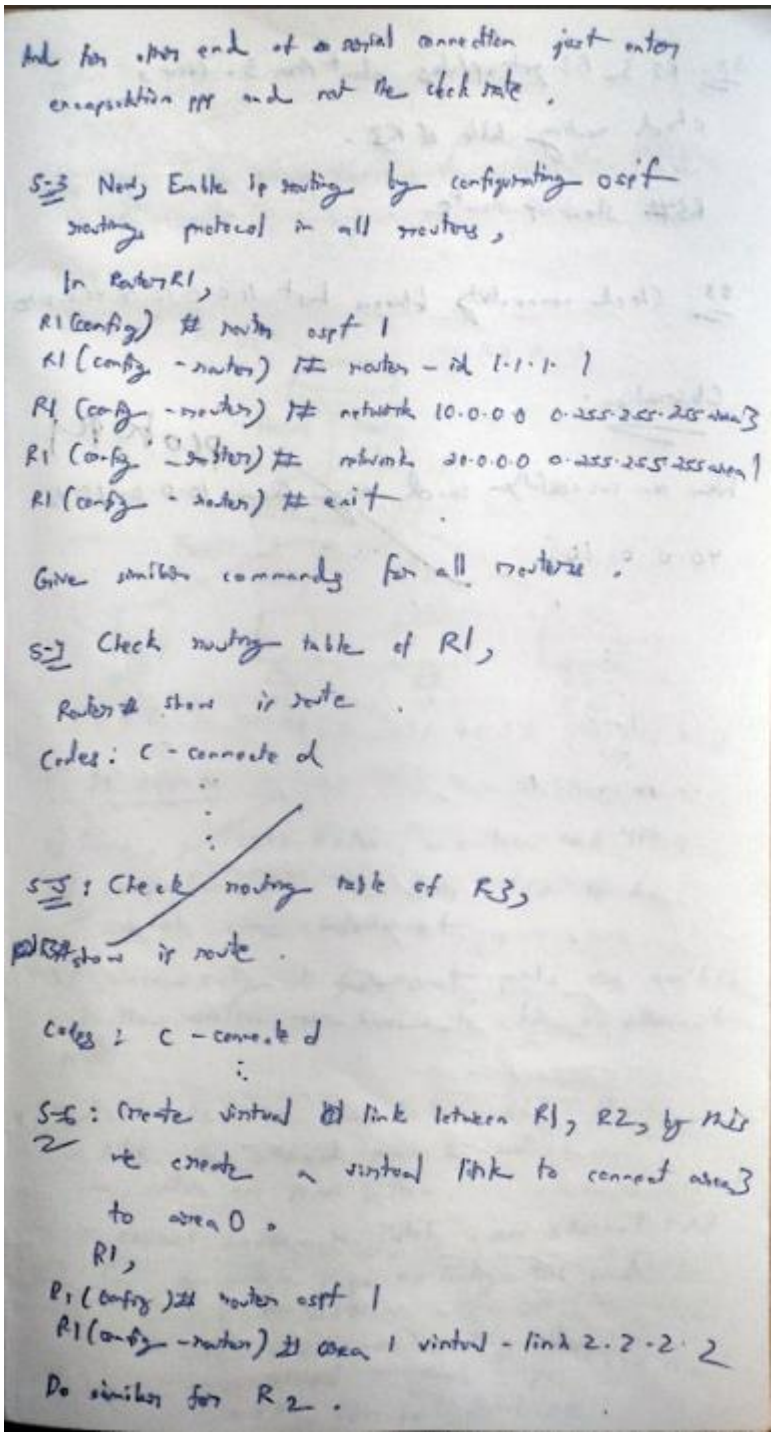
**Program 8**

**Aim:**Configure OSPF routing protocol .

**Topology , Procedure and Observation:**





Add for other end of a serial connection just enter encapsulation ppp and not the clock rate.

S-3 Now, Enable Ip routing by configuring ospf routing protocol in all routers,

In Router R1,

R1(config) # router ospf 1
R1(config-router) # router-id 1.1.1.1
R1(config-router) # network 10.0.0.0 0.255.255.255 area 3
R1(config-router) # network 20.0.0.0 0.255.255.255 area 1
R1(config-router) # exit

Give similar commands for all routers.

S-4 Check routing table of R1,

Router# show ip route

Codes: C - connected

S-5 : Check routing table of R3,

Router# show ip route

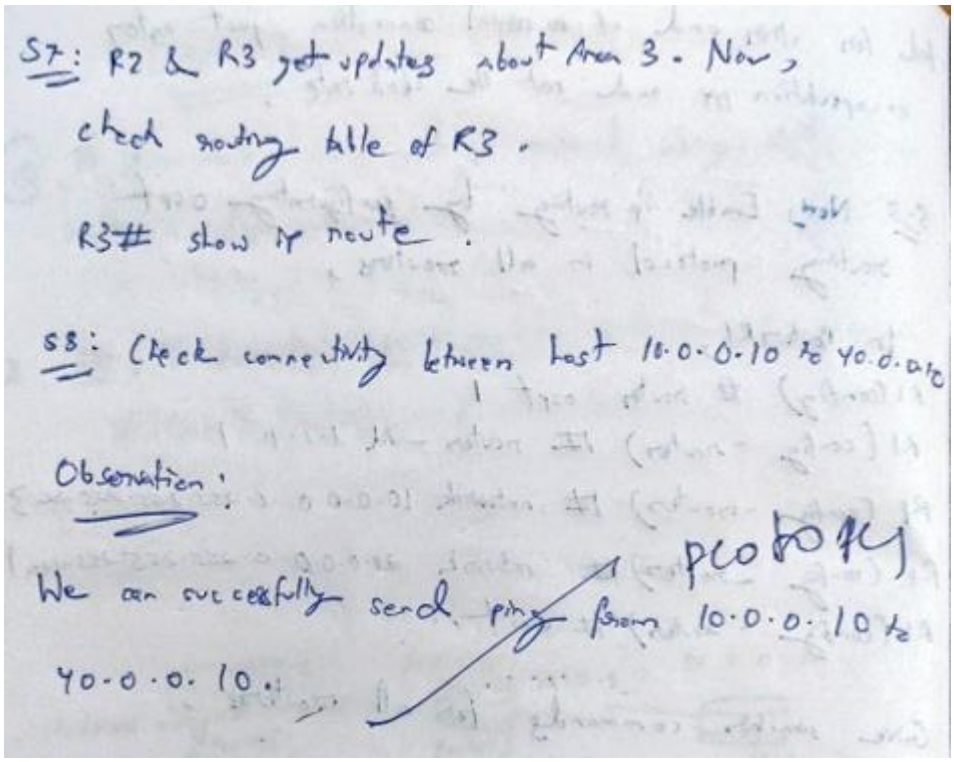
Codes : C - connected

S-6 : Create virtual link between R1, R2, by using we create a virtual link to connect area 3 to area 0.

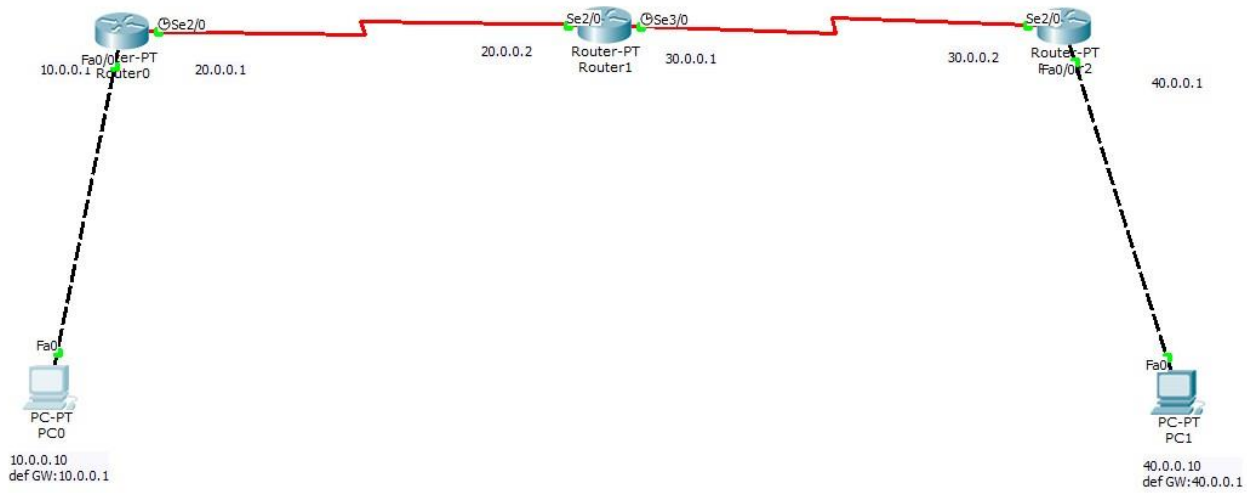
R1,

R1(config)# router ospf 1
R1(config-router)# area 1 virtual-link 2.2.2.2

Do similar for R2.




**Screen Shots:**




PC0

Physical | Config | Desktop | Custom Interface

**Command Prompt**

```
Pinging 40.0.0.10 with 32 bytes of data:

Request timed out.
Reply from 40.0.0.10: bytes=32 time=7ms TTL=125
Reply from 40.0.0.10: bytes=32 time=7ms TTL=125
Reply from 40.0.0.10: bytes=32 time=8ms TTL=125

Ping statistics for 40.0.0.10:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 7ms, Maximum = 8ms, Average = 7ms

PC>ping 40.0.0.10

Pinging 40.0.0.10 with 32 bytes of data:

Reply from 40.0.0.10: bytes=32 time=9ms TTL=125
Reply from 40.0.0.10: bytes=32 time=7ms TTL=125
Reply from 40.0.0.10: bytes=32 time=6ms TTL=125
Reply from 40.0.0.10: bytes=32 time=6ms TTL=125

Ping statistics for 40.0.0.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 6ms, Maximum = 9ms, Average = 7ms

PC>
```