Network Project

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Project Description:

The project is a college network.

The network consists of 6 internal networks which are 4 LAN networks (Network Lab, Computer Department, IT Department, and other departments) and 2 WAN networks between the three routers.
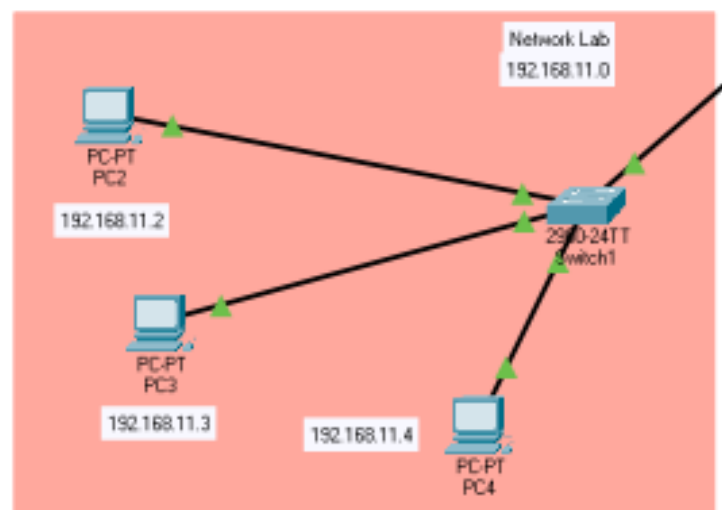
LANs:

1-Network Lab:

Putting the pcs (pc2, pc3, pc4) in network 192.168.11.0, their IPs are

  Pc2 → 192.168.11.2

  Pc3 → 192.168.11.3

  Pc4 → 192.168.11.4

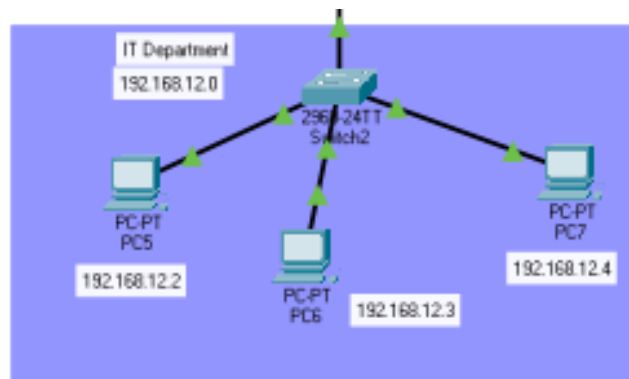*2-IT Department:*

Putting the pcs (pc5, pc6, pc7) in network 192.168.12.0, their IPs are

Pc5 →192.168.12.2
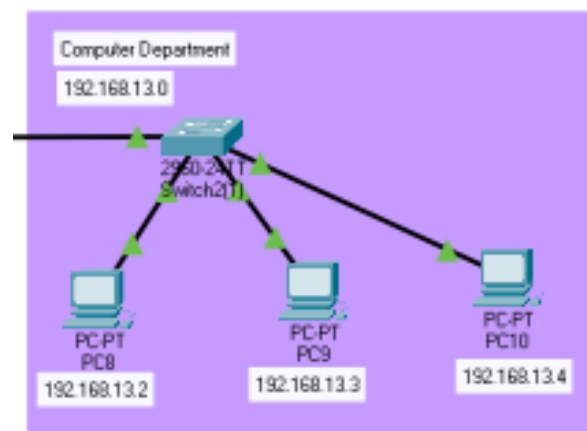
Pc6 →192.168.12.3

Pc7 →192.168.12.4

3-Computer Department:

Putting the pcs (pc8, pc9, pc10) in network 192.168.13.0, their IPs are

Pc8 →192.168.13.2

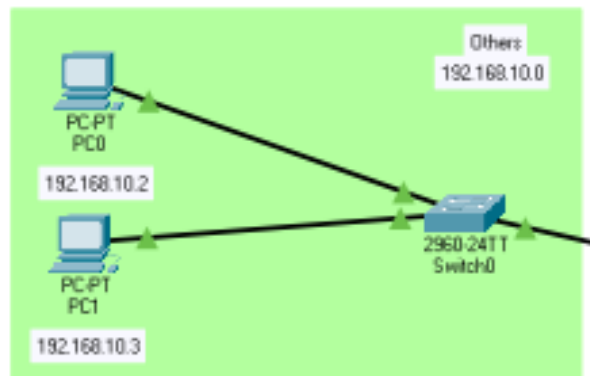*Pc9 →192.168.13.3*

Pc10 →192.168.13.4

4-Others:

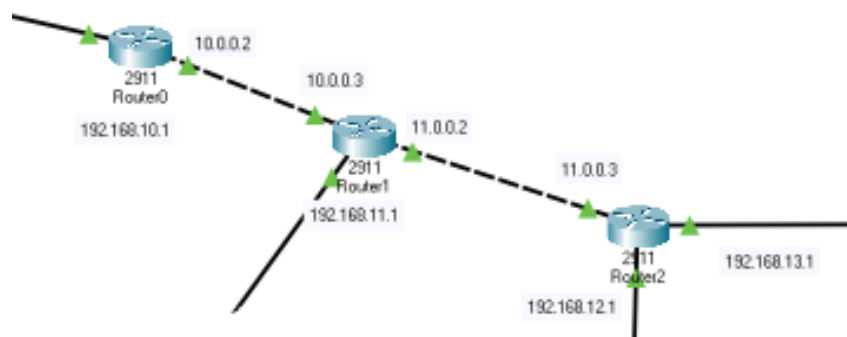*Putting the pcs (pc0, pc1) in network 192.168.10.0, their IPs are*

    Pc0 →192.168.10.2
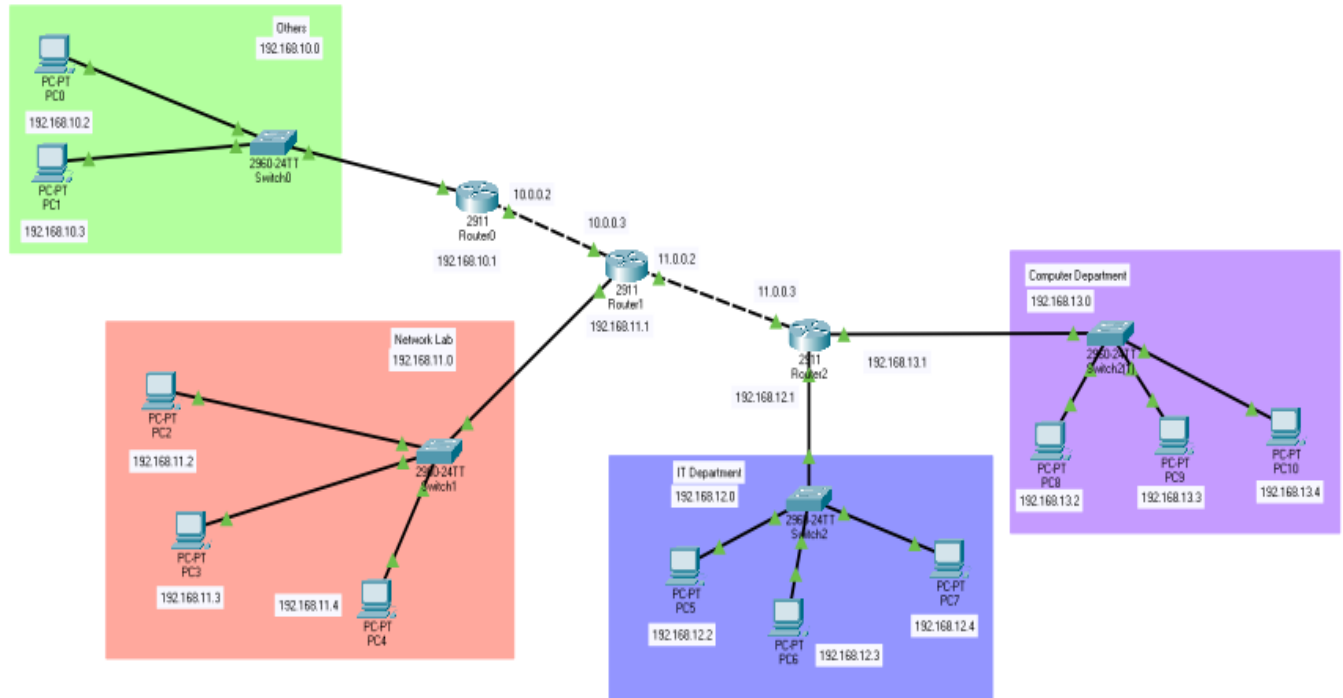
    Pc1 →192.168.10.3

WANS:

2 WANs between the three routers connecting the 4 LANs.

Picture of models:

Steps of work:

1. Connect pcs in switches:
   (pc0, pc1) in 1st switch, (pc2, pc3, pc4) in 2nd switch, (pc5, pc6, pc7) in 3rd switch and (pc8, pc9, pc10) in 4th switch,
2. Connect the 1st switch in Router0.
3. Connect the 2nd switch in Router1.
4. Connect the 3rd and 4th switch in Router2.
5. Put IPs for each pc in the network.
6. Configure Router0 for network 192.168.10.0 by first IP address: 192.168.10.1
7. Default Gateway 192.168.10.1 in pc0, pc1.
8. Configure Router1 for network 192.168.11.0 by first IP address: 192.168.11.1

9. Default Gateway 192.168.11.1 in pc2, pc3, pc4
10. Configure Router2 for network 192.168.12.0 by first IP address: 192.168.12.1
11. Default Gateway 192.168.12.1 in pc5, pc6, pc7
12. Configure Router2 for network 192.168.13.0 by first IP address: 192.168.13.1
13. Default Gateway 192.168.13.1 in pc8, pc9, pc10
14. Configure Router0 → static.
15. Add all the IPs, next hop to that router

    192.168.11.0/24 via 10.0.0.3

    192.168.12.0/24 via 10.0.0.3

    192.168.13.0/24 via 10.0.0.3
16. Configure Router1 → static.
17. Add all the IPs, next hop to that router

    192.168.10.0/24 via 10.0.0.2

    192.168.12.0/24 via 11.0.0.3

    192.168.13.0/24 via 11.0.0.3
18. Configure Router2 → static.
19. Add all the IPs, next hop to that router

    192.168.10.0/24 via 11.0.0.2

    192.168.11.0/24 via 10.0.0.2