A PROJECT WORK OF LAN CONNECTION

ADARSHA SECONDARY SCHOOL

Biratnagar-07, Morang

Subject: Networking

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Class: **IT (24 months)**

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Here are the key steps involved in designing a computer network infrastructure, write of each steps

1. **Identify Needs and Requirements**
2. **Analyze current Infrastructure**
3. **Create a Network Diagram**
4. **Choose Hardware & Software**
5. **Design the IP Addressing Scheme**
6. **Crate a Network Security Plan**
7. **Plan for Network Support & Maintenance**
8. **Document the Network**
9. **Test and Implement**
10. **Budget**

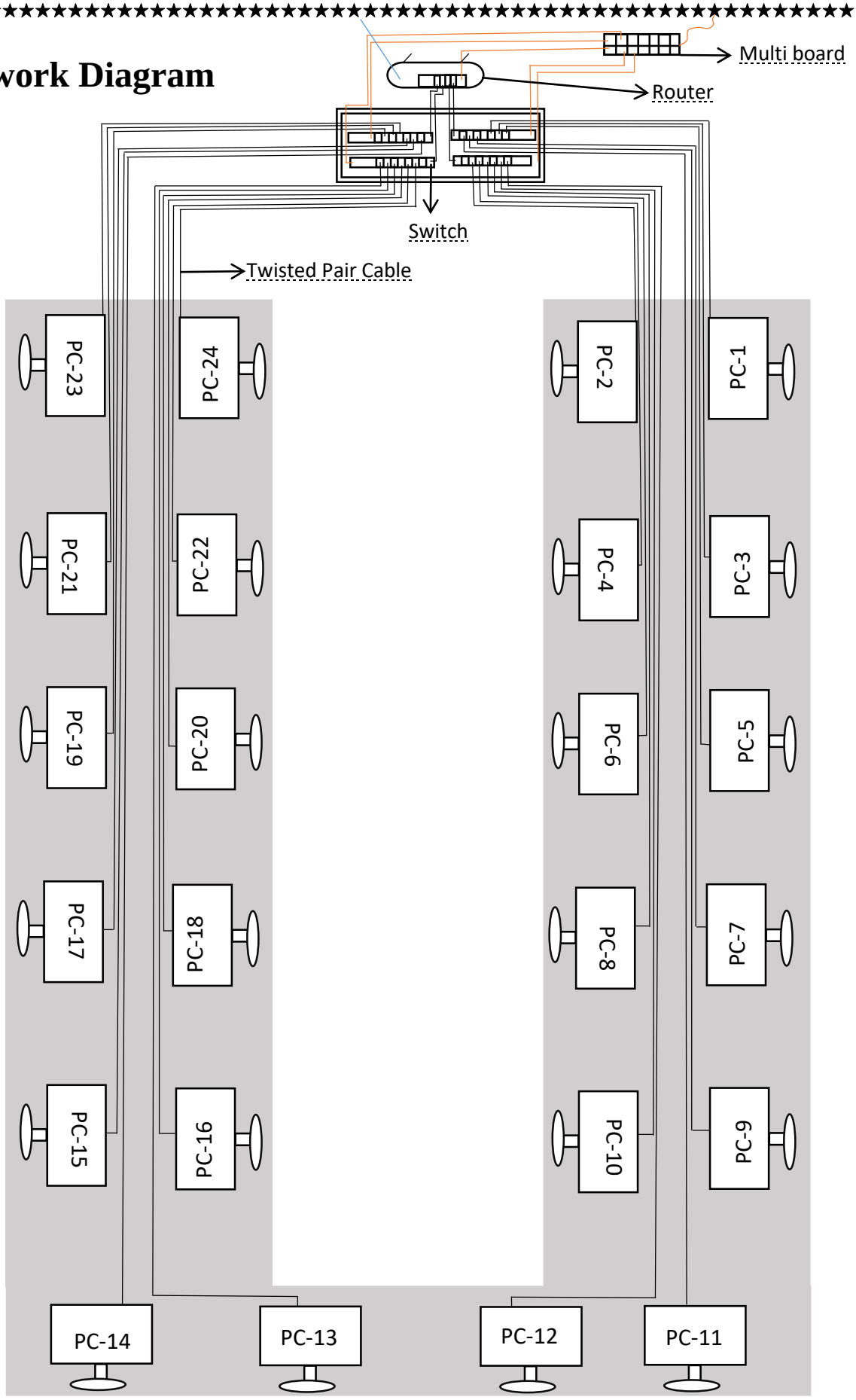
1. Identify Needs and Requirements

I. 24 Computers
II. Router
III. Switch (8 ports) - 4 pics
IV. Twisted pair Cable-300m
V. Rj45 Connector - 60pics
VI. Multi-board

2. Analyze current Infrastructure

I. 24 Computer
II. Router
III. Switch (8 ports) – 1 pics

3. Network Diagram



4. Choose Hardware & Software

. Switch . Modem
. Router . NIC
. Gateway . Hub .
. Antivirus

5. Design the IP Addressing Scheme

1. PC- 1:- 192.168.1.17
2. PC- 2:- 192.168.1.23
3. PC- 3:- 192.168.1.1
4. PC-4:- 192.168.1.21
5. PC-5:- 192.168.1.10
6. PC-6:- 192.168.1.19
7. PC-7:- 192.168.1.15
8. PC-8:- 192.168.1.24
9. PC-9:- 192.168.1.13
10. PC-10:- 192.168.1.2
11. PC-11:- 192.168.1.12
12. PC-12:- 192.168.1.9
13. PC-13:- 192.168.1.5
14. PC-14:- 192.168.1.8
15. PC-15:- 192.168.1.7
16. PC-16:- 192.168.1.6
17. PC-17:- 192.168.1.4
18. PC-18:- 192.168.1.20
19. PC-19:- 192.168.1.11
20. PC-20:- 192.168.1.3
21. PC-21:- 192.168.1.22
22. PC-22:- 192.168.1.14
23. PC-23:- 192.168.1.18
24. PC-24:- 192.168.1.16

6. Crate a Network Security Plan

1. Identify Network Entities.
2. Risk assessment.
3. Develop policies and procedures.
4. Implement tools and controls.
5. Create a firewall. Include a firewall in your security policy to filter traffic in and out of the network.
6. Isolate confidential information.
7. Network infrastructure security.
8. Monitoring and review.

7. Plan for Network Support & Maintenance

- ✓ Troubleshooting network issues.
- ✓ Installing or upgrading network equipment and software.
- ✓ Regularly monitoring the network for irregularities.
- ✓ Enforcing network security measures.
- ✓ Optimizing network performance.
- ✓ Regularly backing up data in the network.
- ✓ Creating and updating network usage policies and procedures.
- ✓ Ensuring network redundancy to prevent total shutdown in case an effective component fails.

8. Document the Network

. Identify network sites
. Types of links
. Speed
. Internet
. Network Devices
. Servers
. Routers
. Switch
. VPN appliance
. Firewall appliance
. Network protocols
. IPv4
. IPv6
. Servers
. Users
. Networking addressing

9. Test and Implement

1. Assess the project needs. Be the first to add your personal experience.
2. Design the logical network.
3. Design the physical network.
4. Implement the network.
5. Monitor and maintain the network.
6. Evaluate and improve the net.

10. Budget

Cable = 17,000
Switch (3) =10,500
Rj45 connector = 200
Multi-board = 800

Total = 28500