LAB: Assignment 4

Objective: To design Logical Networking.

Platform: E-Draw, Microsoft Visio or any Designing Tool

Instructions: The instructor is required to discuss the following questions with the students. Students are required to Design the Given Network Diagrams. The icons may vary according to tools.

Q1. Find a logical Network Diagram for the following Problem

A company XYZ needs to connect its three offices at three locations in a city. Each office has the following specifications:
1. A team of manager (Max: 5)
2. Clerks – 03
3. Store Incharge - 01
4. Finance Person- 02
5. Customers to visit
The network is firewall protected and customers are allowed to access internet with in the office. The three offices are assigned network addresses 192.168.1.0/24, 192.168.2.0/25 and 192.168.3.0/26. Draw the conceptual and network diagram for the company.

Q2. Find a logical Network Diagram for the following Problem

A company has a setup of 500 employees and 10 departments. Each department has interconnection with others and is high inter-dependency. The company has 100000 customers to support. The details are as follows:

Departments:

HR: Deals in public relation and has 50 employees.
Finance: Deals in salary, expenditure, sale and purchase and has 60 employees.
Store: Has 70 employees and keep track on stored items.
Customer Care: Having 50 employees to interact with customers.
Security: 70 security guards with smart phones for protection.
Library: Maintains the past ledgers and reports with online reading rooms and has 30 employees.
Accomodation: Having 20 employees to take care of visitors and guests.
Marketing: Having 80 persons to represent the company in the market.
Sales and Production: 40 peoples are working on sales and production part.
Managerial: Overall 30 governing managers are there in the company.

Everything in the company has to be automated. As a network administrator perform the following:

- List the stakeholders in the process.
- Suggest a structural diagram for the company for computerization (Use Visio/Edraw or any other tool for design).
- Label the above diagram in a meaningful way.
- Identify the requirement for the Networking devices for the automation.

- Identify the type of Link interface(s) required for the connections.
- Identify the LAN and WAN components for it.
- Identify the place to implement firewalls with justification

Q3. A University needs to connect its 7 departments at three locations in a city. Each department has the following specifications:

1. One HOD
2. Clerks and staff – 03
3. Faculties - 12
4. Finance Person- 01
5. Students

The network is firewall protected and eligible can access internet within the department. Make any suitable assumption to design network considering user mobility, network usage and IP address assignment to each department.