Building: Harper

• First Floor:

• Reception Area

• Waiting Room

• Coffee Shop

• Gym

• Restrooms

• Second Floor:

• Director's Room

• Administration Department

• Finance Department

• CTO Room

• Security

• Sales & Marketing Departments

Building: Cacis

• First Floor:

• Reception Area

• Waiting Room

• Coffee Shop

• Gym

• Restrooms

• Second Floor:

• R&D Department

• Development and Testing Center

• Business Analyst Office

• Server Room

• Technical Assistant Departments

• Staff’s Rest Area

• Conference Rooms

Now, you can use Word to create a visual representation of this layout. Follow these steps:

1. Open a new Word document.

2. Go to the "Insert" tab.

3. Choose "Shapes" and select the appropriate shapes for rooms and other areas.

4. Draw rectangles for each room, labeling them appropriately.

5. Use lines to represent corridors and other connections between rooms.

6. Add text boxes to label each area with its corresponding department or purpose.

7. You can use different colors to differentiate between departments or sections.

To make it more detailed, you can add icons or symbols to represent different devices, such as PCs, printers, and phones. The Word drawing tools will help you create a simple yet informative floor plan.

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Assigning suitable IP addresses requires careful planning to ensure that there's no conflict and that the network operates efficiently. Here is a suggestion for an IP addressing scheme based on the given scenario:

Subnetting:

• Since there are two buildings (Harper and Cacis), you can use separate subnets for each building.

• Subnetting allows efficient use of IP addresses and helps in better network management.

Building: Harper

• First Floor:

• Reception Area: 192.168.1.0/24

• Waiting Room: 192.168.1.1 - 192.168.1.10

• Coffee Shop: 192.168.1.11 - 192.168.1.20

• Gym: 192.168.1.21 - 192.168.1.30

• Restrooms: 192.168.1.31 - 192.168.1.40

• Second Floor:

• Director's Room: 192.168.1.41 - 192.168.1.50

• Administration Department: 192.168.1.51 - 192.168.1.100

• Finance Department: 192.168.1.101 - 192.168.1.150

• CTO Room: 192.168.1.151 - 192.168.1.200

• Security: 192.168.1.201 - 192.168.1.250

• Sales & Marketing Departments: 192.168.1.251 - 192.168.1.254

Building: Cacis

• First Floor:

• Reception Area: 192.168.2.0/24

• Waiting Room: 192.168.2.1 - 192.168.2.10

• Coffee Shop: 192.168.2.11 - 192.168.2.20

• Gym: 192.168.2.21 - 192.168.2.30

• Restrooms: 192.168.2.31 - 192.168.2.40

• Second Floor:

• R&D Department: 192.168.2.41 - 192.168.2.100

• Development and Testing Center: 192.168.2.101 - 192.168.2.150

• Business Analyst Office: 192.168.2.151 - 192.168.2.200

• Server Room: 192.168.2.201 - 192.168.2.250

• Technical Assistant Departments: 192.168.2.251 - 192.168.2.254

Justification:

• Subnetting by building allows for efficient addressing and management.

• Using a /24 subnet for each floor provides enough addresses for devices in each area.

• The last few addresses in each subnet are reserved for future expansion or special devices.

• Each department has a specific IP range for easy identification.

Remember that this is just a suggested IP addressing scheme. Actual requirements and size of the network may require adjustments. It's also important to consider scalability for future growth.