# Task A.3 - Network Topology Design

## Network Topology Overview:

The network topology for Rooman Technologies follows a three-layer model (Core, Distribution, and Access layers) to ensure high availability, scalability, and fault tolerance.  
This topology is designed to support 25 employees initially, with plans for expansion to 50 users in the future.

## Topology Layers and Components:

### 1. Core Layer:

- Two routers for redundancy.  
- Core Switch that connects the distribution switches and ensures high-speed traffic flow between different network segments.

### 2. Distribution Layer:

- Two distribution switches to manage traffic between the core and access layers.  
- Direct connections to critical servers (Web Server, Database Server, DNS Server, DHCP Server, File Server).

### 3. Access Layer:

- Four access switches providing connections for end-user devices across departments.

### 4. Servers:

- Web Server: Hosts the company’s websites and applications.  
- Database Server: Stores sensitive data with restricted access.  
- DNS Server: Resolves internal and external domain names.  
- DHCP Server: Dynamically allocates IP addresses to internal devices.  
- File Server: Provides centralized file storage for the company.

## Network Topology Diagram:

