

**Project Title: Basic Network Design for a Small Office**

**NAME** Antor Chakma.

**EMAIL:** antorntdiit@gmail.com

**DATE OF SUBMITS:** 29 October 2024.

# Project Title: Basic Network Design for a Small Office

---

## Objective:

To design and simulate a basic network for a small office that connects devices for efficient communication and internet access.

---

## Network Requirements:

### 1. Devices:

- 4 Computers (Workstations)
- 1 Modem
- 1 Printer
- 1 Wireless Access Point
- 1 Router
- 1 Switch



Modem



Routing processor



Cable



Central processing unit



Input port



NIC



Power Supply



Switches



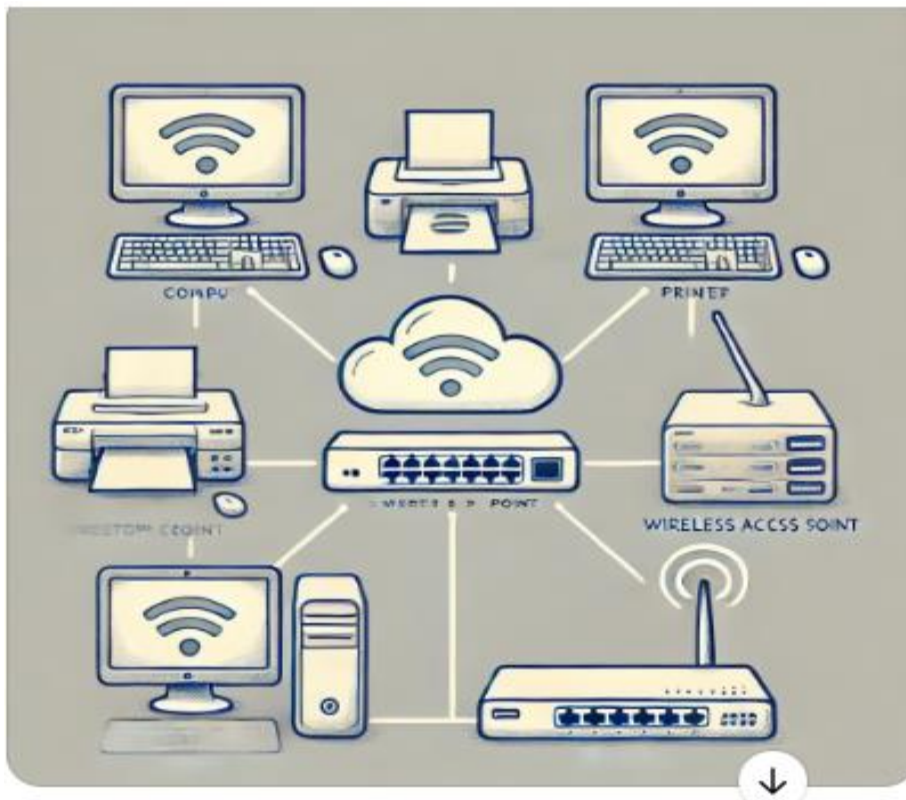
Flash memory

### 2. Network Configuration:

- IP addressing (Static or DHCP)
  - Basic security measures (Wi-Fi password, firewall)
  - Internet access
-

## Network Diagram:

Below is a visual representation of the network setup. (I'll generate this for you!)



## Components and Explanation:

### 1. Router:

- Connects the office network to the internet.
- Acts as the first line of defense with basic firewall settings.

### 2. Switch:

- Provides wired connections to all devices in the network.
- Ensures efficient data transfer between devices.

### 3. **Wireless Access Point (WAP):**

- Extends the network wirelessly for mobile devices or laptops.
- Configured with a secure password.

### 4. **Computers (Workstations):**

- Serve as the main devices for office work.

### 5. **Printer:**

- Shared among all users in the network.
- Configured with a static IP for easy identification.

### 6. **Internet Cloud:**

- Represents the connection to the internet.
- 

## **IP Addressing:**

- **Router:** 192.168.1.1
  - **Switch:** Not applicable (Layer 2 device)
  - **Access Point:** 192.168.1.2
  - **Workstations:** 192.168.1.10 - 192.168.1.13
  - **Printer:** 192.168.1.20
- 

## **Security Measures:**

1. Use WPA3 encryption for the wireless network.
2. Set up a strong admin password for the router.
3. Enable the firewall on the router.
4. Use antivirus software on all workstations.

END