

# **BASIC NETWORKING TECHNOLOGIES AND ITS USES**

**BY**

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This Report Presented in Partial Fulfillment of the Requirements for the  
Degree of Bachelor of Science in Computer Science and Engineering

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## APPROVAL

This Project titled “**Basic Networking Technologies And Its Uses**”, submitted by Raufuzzaman Samrat, ID No: **182-15-11523** to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on **13 January, 2025**.

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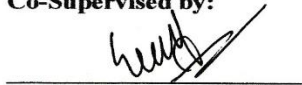
I hereby declare that, this project has been done by me under the supervision of **Abdus Sattar, Assistant Professor, Department of CSE** Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for the award of any degree or diploma.

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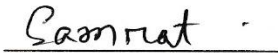
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Firstly, I am thankful to Almighty Allah for empowering me. I'm pleased that I was able to complete this project/internship in the designated time.

I am really appreciative and desire to express our deep gratitude to Sir **Abdus Sattar, Assistant Professor**, Department of CSE Daffodil International University, Dhaka. To finish this task, our supervisor has various knowledge and a best interest in the topic of "Basic Networking Technologies and its uses," Without his unending concern, educational direction, unwavering encouragement, proactive and ongoing oversight, practical counsel, and evaluation of numerous flawed designs and their revisions at every turn, this project might not have been finished.

I have great respect and gratitude for **Dr. Sheak Rashed Haider Noori**, the honorable head of the CSE department. I am appreciative of my university for giving me so many opportunities to work while I was a student.

I will be grateful to the excellent faculty of Daffodil International University for their constant assistance and collaboration throughout the remainder of my life and my academic career, as well as to Codeman BD, where I acquired a wealth of knowledge and real-world experience.

I would like to thank all my course mate at Daffodil International University, who took part in this conversation while finishing my coursework.

I would really like to sincerely thank to **Minhazul Aziiz** my supervisor." IT Director" of "Codeman BD," for giving me the chance to work and introducing me to a number of significant challenges. due to the assistance and clarification of several assignments provided by my fellow apprentices.

Finally, With all due respect, I have to thank my parents for their patience and continuous support. Above all, I want to thank all of the people who will read this report and gain knowledge from it, whether now or in the future.

## **ABSTRACT**

In addition to providing employment agency, consulting, and staffing services, Internal training in business analysis, project management system, the database administration, and the network administration was initiated by Codeman BD Ltd for its consultants and new hires. These skills are all directly applied in the job desks. Testing specialists person, the business analysts, project management system specialists, and Expert network administrators all are perform very good as a result of training's advantages. Learning operating system security, fundamental networking, and hardware troubleshooting are the objectives of this internship. I have made mistakes and attempted to fix network and hardware issues. How to set up the entire networking of this office and classroom arrangement is the primary subject of this paper. How are internal software and bandwidth management maintained, and which networking protocol takes advantage of this configuration and structure? For this internship report, I gathered material from interviews and personal observations as well as from the websites of a few informational organizations.

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# Chapter 1

## INTRODUCTION

### 1.1: Introduction

Nobody Can think of the present without an IT setup and networking. Anywhere we need a web connection. Relatively few offices, businesses, and establishments do not have internet access. PCs and specialized devices should be used in every workplace, industry, and organization. They communicate over the internet. They use a wide variety of hardware and special software to improve communication. We seldom think of doing anything in this day and age without websites. Every company, office, and organization need a large number of people who are proficient in networking and maintain various communication devices. An internship gives you the opportunity to get experience in a variety of professional disciplines, build your understanding of real-world situations, and decide whether or not to pursue a specialized career. I choose this entry-level position because I needed to create an experience. Under the supervision of my instructor, they enable me to keep an eye on the networking devices and research the networking infrastructure.

In full or in part, the aforementioned paper is really required for the participants' internship program at Daffodil International University (DIU). The author of this essay completed the four-month internship at Codeman BD Ltd. in accordance with the laws and conditions of the internship program.

### 1.2 Motivation

I am confident that an internship in the same industry would allow me to integrate academic research with practical experience, as I completed my studies in CSE with a concentration on networking. Also chose networking since I was interested in the CCNA course. Networking talent is highly prized in the job market. Compared to other occupations, networking knowledge offers significantly greater financial benefits.

Improvement and career path: With further experience, I may work in network security or other IT-related industries like consulting, project management, or information security.

**1.3: Internship Plan:** My internship goal is immediately enhance career strategies and abilities. Learning about an organization's culture, expertise, concepts, abilities, and strategies requires participation in an internship program. Through this internship program, I acquired useful real-world information, a strong work ethic, communication management abilities, and other attributes. It will be essential to my career, and I believe that career skills and techniques will enhance my sense of accountability and positive work habits. Because of this internship report, we have achieved more academically. After graduation, internship programs increase employment prospects. Students can thrive if they possess the following qualities: strength, teamwork, self-assurance, creativity, responsibility, and the ability to express their thoughts.

Conversely, practically to understand the general procedure for hardware troubleshooting, networking, and operating system security at Codeman BD offices. to be familiar with workplace security and networking procedures. to be familiar with bandwidth management, the routing protocol, and contemporary networking hardware. Additionally, be familiar with the fundamentals of AD DS in order to build and users.

#### **1.4: Organization Overview:**

Codeman BD the world leader in software development, outsourcing, and IT training. Top online IT training center is located in Dhaka. Since its founding in 2017, Codemanbd has trained more than one lac pupils. CodemanBD is a cutting-edge edtech leader and one of the leading worldwide centers for IT training and skill development. With the ambitious objective of making practical education affordable for the general population, CodemanBD was established in 2017 with the intention of removing barriers to remote learning and high-quality education.

#### **Origination Information**

Name: CodemanBD

Address: 295/JHA/8-B Sikder Real Estate, Tali Office Road, Rayer Bazar, Dhaka 1209, Bangladesh.

Phone: +8801315790449, Email: mia.309@codemanbd.com

Website: [https://](https://codemanbd.com/) <https://codemanbd.com/>



Figure 1.4: CodemanBD Logo

### **1.5: Layout of the Report**

I provided a report layout and an internship goal in this chapter. I covered the company's introduction, the market and technical environment, and its goals in chapter two. SWOT analysis was another topic I covered in this chapter. I discussed my internship's daily tasks and duties in chapter three, along with the events and activities that took place during the internship. In this chapter, I also described the project and activities of this company, along with the issues I encountered in my internship. Fourth chapter, talked about abilities I acquired, along with my astute plan and insights from my internship. I covered endings and future employment opportunities in chapter 5. Lastly, I included all references, appendices, and details about the company and the internship.

## CHAPTER 2

# Institution

### **2.1: Introduction:**

Its establishment in 2017, CodemanBD trained about 10,000 local and international students. Minhaz, the developer of Codeman BD, has devoted his professional life to changing people's lives and professions since the start. We at CodemanBD provide hands-on training based on ongoing projects. The rivalry we encounter in real life motivates us to create new strategies and concepts to improve our training. With decades of experience in database administration, business analysis, and software quality assurance. Every step learning process is attentively observed by our experienced teachers. CodemanBD Tali Office Road, Rayer Bazar, Dhaka 1209, Bangladesh. Offers many important training and has successfully completed more than 200 batches. At CodemanBD, we have a strong commitment to education and generate \$9.6 million in income from students.

#### **2.1.1 Mission:**

Practical education is highly valued by them so that they can provide an exceptional learning experience. They will continuously back our students up as they work to improve themselves and their knowledge. To ensure that people can keep up with the latest methods and technology, they aim to meet the growing need for IT training.

#### **2.1.2 Vision:**

**captivating educational experiences and for students of all ages who wish to improve their professional abilities. We provide the technological skills listed below to encourage students to make money virtually through global markets.**

## 2.2 Situation of the product and the market:

CodemanBD has developed a program for dividing up training for different occupations. For educational skills, they mostly provide instruction in a variety of technologies. Like:-

- Full Stack Web Development
- Ethical Hacking
- Creative Front End
- WordPress and eCommerce
- Elementor and Shopify
- Figma and WebFflow
- Graphic Design
- Lead Generation
- Wix and SquareSpace
- SEO Masterclass

These courses vary in length and are intended for different individuals. similar to - Additionally, CodemanBD offers offline batches. Students in the area can visit our facility in Dhanmondi, Dhaka, to learn in person, which will boost their confidence and provide them with daily, immediate support from our support staff.

Additionally, they offer H1B visas, and PeopleNTech is a corporation that sponsors H1B visas. Additionally, they offer IT services on:

- Global customer service
- Assistance in video communication with customers
- Support for Marketplace work
- Support for topics and content
- Assistance with assignments, midterms, and final exams

## 2.3 Target Group:

CodemanBD was the first to launch online and remote learning in Bangladesh in 2017. because, prior to five years ago, we saw the value of online education. Additionally,

CodemanBD offers offline batches. Students in the area can visit our facility in Dhanmondi, Dhaka, to study in person, which will boost their confidence and provide them with daily, immediate help from our support staff.

## **2.4 SWOT Analysis**

I have attempted to highlight CodemanBD's many features by utilizing the "SWOT Analysis"

### **2.4.1: CodemanBD Strengths**

- Verify offerings meet their established requirements.
- Monitor, evaluate, and continuously enhance our people, infrastructure, services, and business performance.
- We look recruit, develop, and retain highly qualified and driven workers.
- Every worker assumes responsibility and is held responsible for the caliber of their work and services.
- Motivate every employee to take the initiative to promote continuous improvement.
- Distance Learning / Online Learning
- Flexibility
- Reduced Costs

### **2.4.2: CodemanBD Frailty :**

- The pay rate for employees big amount.
- Demands a big rate from clients.
- An issue with transportation.

### **2.4.3 CodemanBD Chance:**

- A positive user review.
- Comprehend.
- place people in jobs, add value, and be environmentally friendly

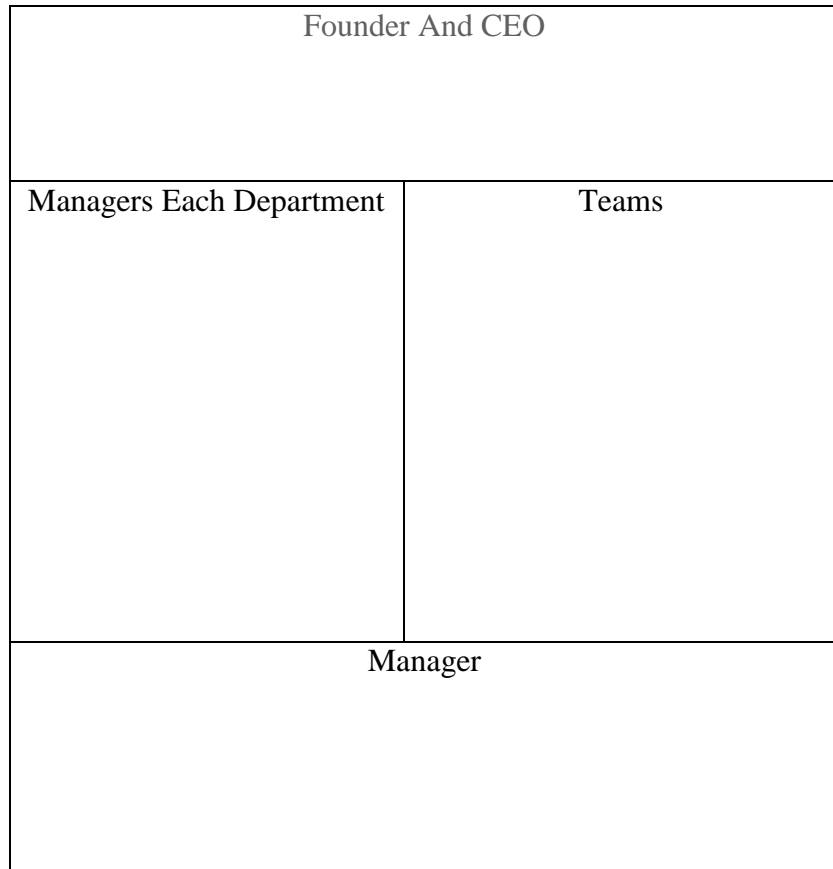
- Cooperative team.
- Any device, including laptops, desktops, tablets, and mobile phones, may be used by students to learn. Comprehend, communicate, place people in jobs, add value, and be environmentally friendly

#### **2.4.4 Threats of CodemanBD:**

This market may undergo changes beyond its capacity to adjust due to technological advancements. A small shift in a major competitor's strategy might negate whatever market advantage they gain. On addition, there are other competitors on the market. Moreover, among some of the problems, it is noteworthy that there are more online education programs than offline. Therefore, physical training is a big problem.

## 2.5 Structure of Organizations :

Table 2.5: Organization chart



## Chapter 3

### Activities and the Task Project

#### 3.1: Daily Assignments:

Worked on a variety of projects and tasks throughout my internship, such as setting up a study space and tackling different kinds of problems. Internally, networks, databases, and software are used on a daily basis. Commonplace methods offer assistance when faced with connected issues. I go over the software and hardware problems in this chapter. I will discuss the issues and potential solutions.

#### 3.1.1 Basic Hardware and Software Problem

A hardware fault occurs when a computer system's hardware component fails. The built-in error detection methods of the hardware components allow them to detect the existence of hardware defects. There are two types of hardware errors: repaired and unresolved.

- A corrected error is a hardware error scenario that, time the operating system detects it, resolved by the firmware or hardware.
- An unfixed error is a hardware error state that cannot be resolved by either the software or the hardware.

Errors fall into two groups:

1. **System Software:** Because it impacts both the operating system and all of the computer's programs, this type of flaw is referred to as a bug.

**2. App Software:** Applications help users with real-world chores Word processing programs, spreadsheets, and database management systems are examples of application software. These problems are also specific to the application. I made a few mistakes while I was an intern. Now I am talking those problems.

### **3.1.2 when pc is turned on not functioning:**

If the computer and its peripheral devices are getting power, there could be a problem. Beep codes are frequently used by the computer's POST to alert me to issues. I can solve typical PC hardware faults with the aid of beep codes. Here are some beep code samples.

- **No beep,** However, system powers on then normally functions. In this circumstances, It's usually make a single, brief beep when they are turned on. Without it, "beeper" might not exist.
- **Continuous, short beeps** - There might be a problem with the voltages or power supply. In most cases, a supplement would be necessary.

Try taking out one of the USB sticks if you have more than one installed to see if the computer will start. Try using the other stick if it does not work. This will let you know which rod has failed so you may upgrade or replace it as necessary. To solve the issue, you will need to upgrade or replace the single lever that is installed.

- **one lengthy and two short beeps** - There is a video card malfunction. I should attempt reinstalling the graphics card as a first step. Since the VGA/DVI/Video cable moves so often that the card might be gradually unplugged, connecting a computer to a projector frequently fixes the issue. Replace the graphics card if reseating does not resolve the issue.

### **3.1.3 Computer Has Short Memory Size**

**Removing superfluous windows to free up RAM is usually the solution to the "insufficient memory or disk space" problem notification, at least temporarily.** If you have tried everything else and the problem still exists, reopen computer and install the latest system update.

### **3.1.4 CMOS Error**

CMOS, an onboard chip who stores hardware settings and data like time and date. The motherboard's CMOS battery probably needs to be changed if you notice a CMOS warning message on the screen.

### **3.1.5: Error on the Blue Screen (BSOD)**

It's occurs when a significant, irreversible fault in Microsoft Windows causes a crash and data loss. Low-level Windows apps crashing could be the source of this. Thats primary cause problems is many.

The minidump file is created and the computer restarts itself when a BSOD occurs. Follow the on-screen directions to identify the error code and learn how to resolve the issue if the blue screen continues.

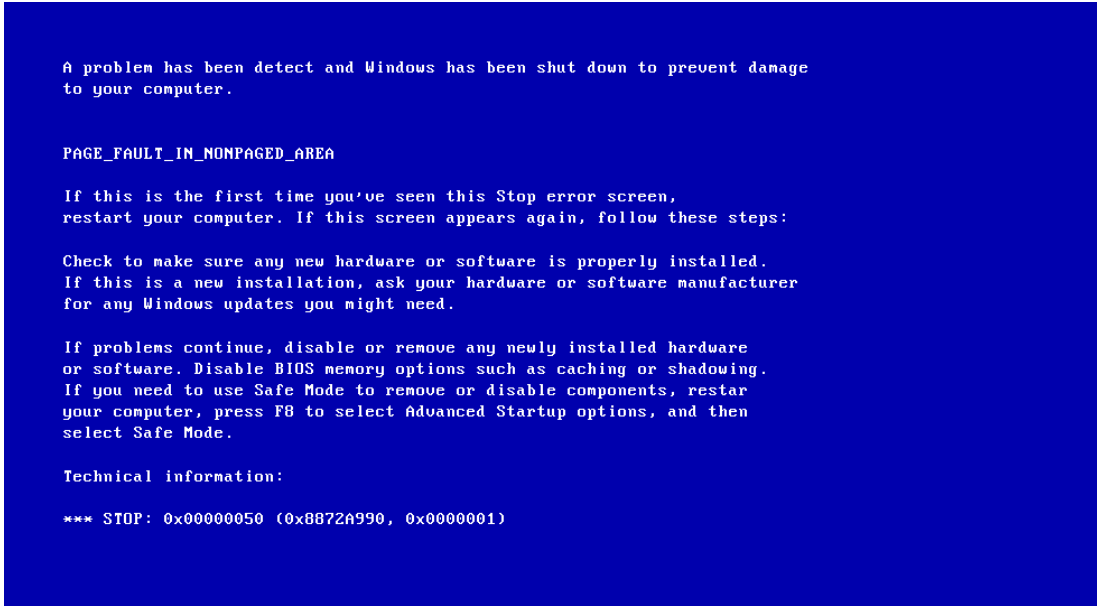


Figure 3.1.5 : Error on the Blue Screen

### 3.1.6 Motherboard Problem

The largest and most important part of a computer is the motherboard. In the absence of,

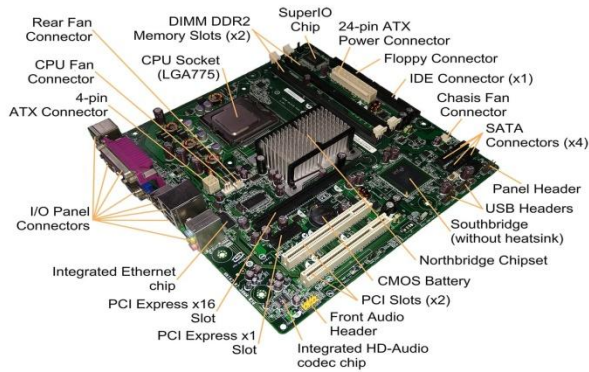


Figure 3.1.6: MotherBoard

Your PC would probably not turn on at all. It may be among the simplest to damage or destroy in spite of this. Damaged motherboard will be challenging, for some one without prior electronics repair skills.

### A Few More Motherboard Issues:

- In The power supply is damaged.
- Errors of during boot-up.
- Turn the motherboard's power on and off.
- An issue pertaining to the power button
- Unreliable and overheated.
- Synchronization of memory
- The motherboard is now shorting out after burning out.
- The auxiliary cable is now shorted out.
- The BIOS is having issues.
- An issue exists with a AGP.
- A short of circuit.

### 3.1.7 Issue with the Hard Drive



Figure 3.1.8:Hard-Disk Drive

The primary memory of the computer is the hard disk drive. It is the largest device for storing data. Computer's operating system, programs, files, and all of the items on this device. Here several system to pass data from a computer and a hard drive.

Hard disk issues are frequent occurrences.

- The computer would not boot up, even if the drive was operational.
- Drive malfunctions
- There is no rotation on the drive.
- The (Hard Disk) drives spin but are not detected by the system
- The C drive is messed up

### 3.1.8 Ram Problem

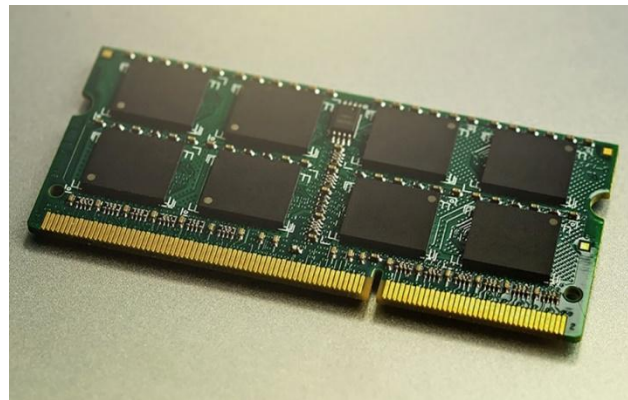


Figure 3.1.8: RAM

When we install new RAM, there is a problem if the system does not detect it or if beeps sound. Inaccurate, improper, and defective memory installation are the main causes of this problem.

Installing RAM correctly will fix this issue. First, turn off the display, computer, and all other peripherals. Next, switch off all of the accessories' electricity. Open the computer case with the proper tools. By applying pressure to the retention clips on the ends of the memory module and pulling it in your direction, you may remove the cover. If there are many available memory slots, locate the one with the lowest number. Install the memory in an available slot after removing the retaining clips, if required. After turning on the computer, make sure the RAM is visible screen.

### **3.1.9: Problems on Ports :**

There are four possible causes for a problem with a device that is attached to an I/O port.

- The software's port configuration is incorrect.
- Connecting the signal cord is not a smart idea.
- There is a broken port.
- The gadget you have connected is not working.

### 3.1.10 Power Supply Problems

One of the computer's biggest problems is the power supply.



Fig : Power Supply

These common power supply problems and how they could affect delicate equipment:

- Power surges,
- high voltage spikes,
- frequency variations
- transients and
- power line noise

### 3.1.11 Issues with Network Cards and Their Solutions

The most frequent problems that arises when a network is being established is cabling.

Is there a relationship?

Are the connectors all in excellent shape?

Are you use the correct cable?

Using a line tester is the most effective way to evaluate network cable performance.

### **3.2 Event and Activities**

During my entry-level job, I produced programs and attended all events. It greatly benefits me personally as well as my career. I have made hundreds of changes and resolved dozens of issues and frustrations. I gained knowledge on how to build routers, operate switches, and deliver internet in an appropriate way. But I take the workplace into account. Every helper needs it. Through this entry-level position, I was able to learn how to handle a workplace, office, and corporate work atmosphere.

I improved my skills in LAN, MAN, and WAN setup, PC inspection, and OS (Operating System) configuration. Devised a method for managing a CCTV.

They promise that any assistance will be able to swiftly adapt to the entire working strategy.. They also have the power to drastically change the workplace.

### **3.3 Project Task & Activities**

To send and receive data or content, a number of hosts—also referred to as gadgets—are connected via various channels. Numerous platforms or tools that enable communication between two or more computers may also be found in computer networks; these are known as network tools and include hubs, bridges, switches, routers, and more. It is now necessary to comprehend the many kinds of networking:

#### **Area-Based Categorization -**

1. Local Area Network, or LAN
2. Metropolitan Area Network, or MAN
  
3. Wide Area Network (WAN)

Categorization Using Computer Networking Guidelines:

1. Network of peer-to-peer
2. Network client-server

3. Relying on Internet Access

4. The Internet

5. Local Connectivity-Based Classification for the Internet

1. Cable

2. Wireless System

### 3.3.1 LAN

Local area networks (LANs), one of the most common, distinctive, and necessary types of networks, are also the most talked-about networks. In order to share resources and data, LANs connect groups of low-voltage devices over small distances. Businesses manage, maintain LANs on a regular basis. LANs can securely and swiftly transfer data by connecting to wide area networks via routers

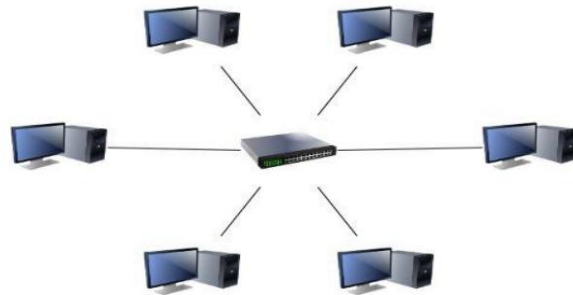


Figure 3.3.1:LAN Topology Design

### 3.3.2 Metropolitan Area Network

A computer network that links computers in a metropolitan region—which might be a single major metropolis, many cities and towns, or any specific large area with several buildings—is known as a metropolitan area network (MAN).

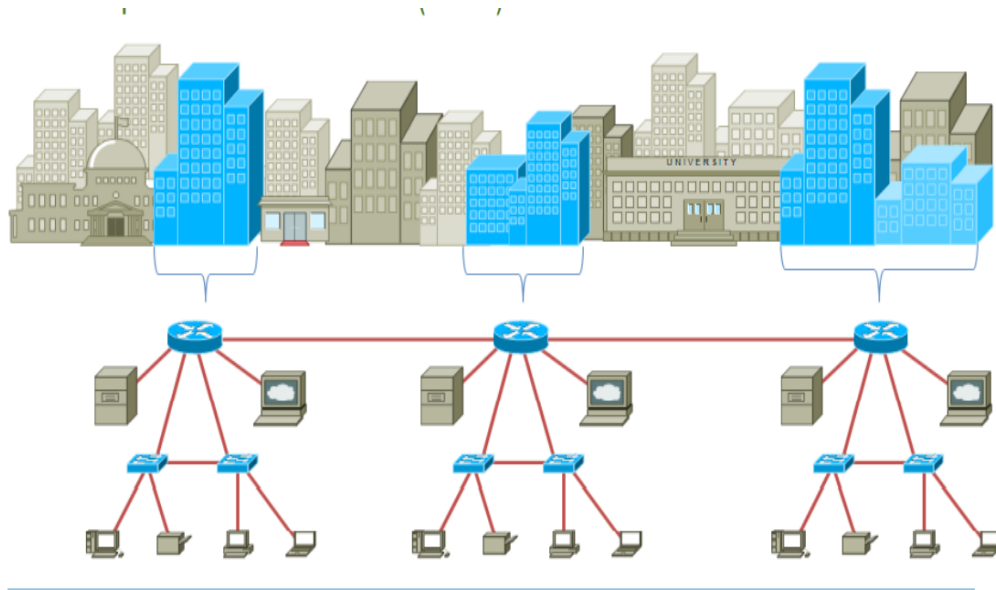
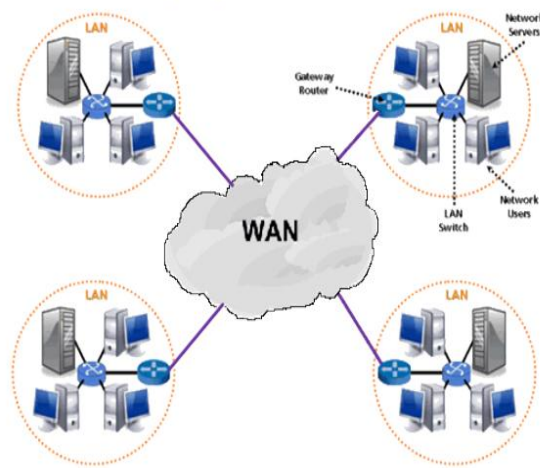


Fig : Topology of the MAN

MANs (usually a town or city, but occasionally a college) are common all across the world. One person or organization (a huge corporation, a municipal council, etc.) is in charge of ownership and maintenance.

Figure : Design of WAN



### 3.3.3: WAN :

Compared to LAN, a WAN connects devices over longer physical distances. It is a bit more difficult. The Internet, which connects every computer on the globe, is the most basic WAN. Because of its wide reach, a WAN is frequently owned and operated by a variety of administrators or members of the public.

### 3.3.4 Peer To Peer Network

A peer-to-peer network does not have a server connection. When two or more PCs are connected and exchange resources without the need for a separate server computer, a peer-to-peer (P2P) network is created. A P2P network is created when two computers connect ad hoc using a Universal Serial Bus to exchange data.

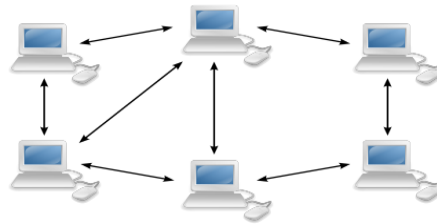


Figure 3.3.4 : P2P

**3.3.5 Clients servers networks :** Here, each computer linked to central server, which is a highly strong computer. The hub is connected to each PC.

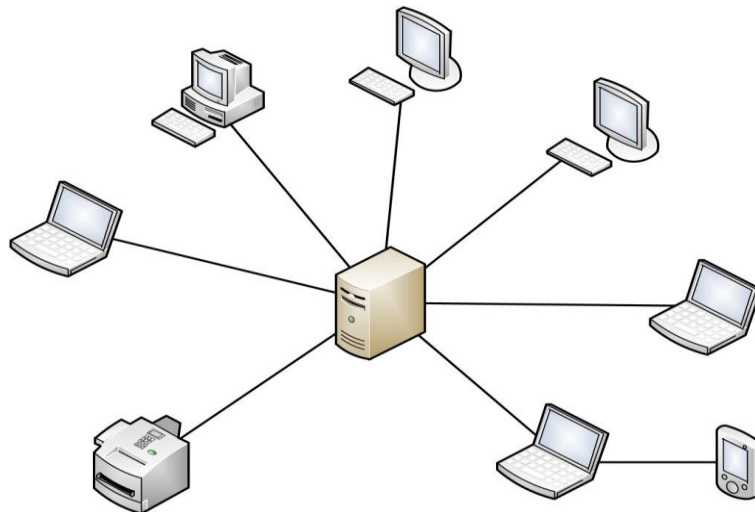


Fig : Client Server Network

**3.3.6: Protocols Of Network:**

A collection of guidelines known as a network protocol controls the flow of data between devices connected to the same network. Generally speaking, it enables communication



Result:

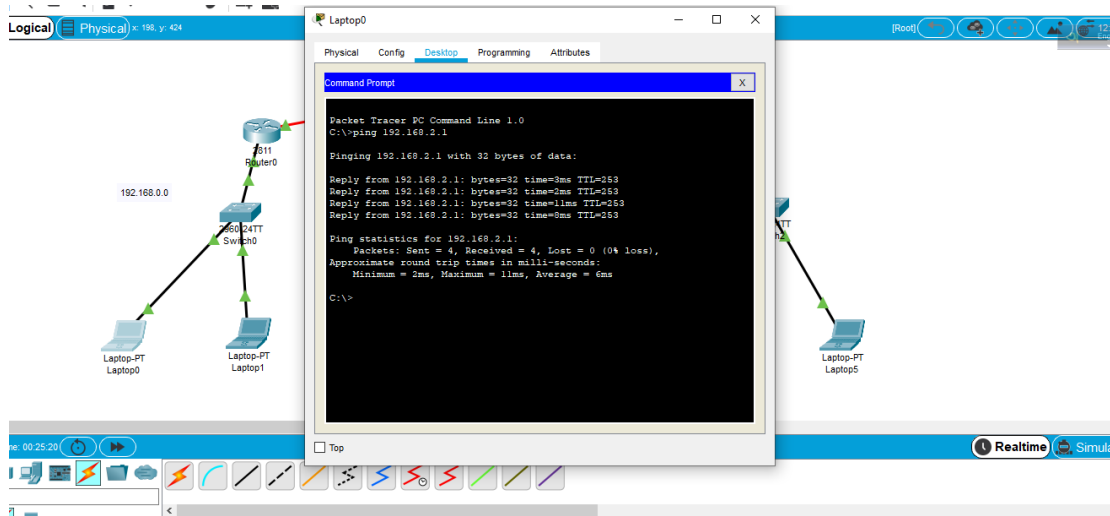


Figure 3.3.7.1 : Establish a Result for Packet Tracer Communication

The Use of Static Routing Protocol :

- Create a backup plan in case the main one fails.
- To connect a gadget to a certain network.
- To establish a connection with a proxy network or router.

Boundaries of Static Route:

- In large networks, adding a static route to the routing table and configuring it can be quite difficult.
- To set up static routes, the network administrator has to be familiar with the network topology beforehand.
- Errors are common with static routes.

### 3.3.8 Dynamic Routing Protocol

A router may add the optimal path to its routing database and learn about routing information on its own by using dynamic routing. When a router uses a dynamic routing protocol, it may keep the optimal route in its routing database and find a backup route in case the primary one fails. There are essentially two types of dynamic routing protocols. These are

1. IGP: Essentially, communication inside the same domain or group is accomplished by the Interior Gateway Protocol (IGP). Under IGP, the following procedures operate.
2. EGP: It's is mostly used for group or domain communication. The following protocols function under EGP:
  - a. Border Gateway Protocol, or BGP.

A system that is intermediate to another system is called IS-IS.

### **3.3 .9: Information Routing Protocol:**

LAN, WAN are make use of RIP. Additionally, That functions on the OSI architecture's Application layer. The Routing Information Protocol is the full name of this protocol. There are two versions of RIP: RIPv1 and RIPv2. The initial version, often known as RIPv1, supports network route determination based on IP destination and hop count travel. In order to communicate with the network, RIPv1 also broadcasts its IP table to each router. Because it transmits its routing table to a multicast address, RIPv2 is a little more advanced. In this lab, we will establish Rip connection. We connecting six hosts with Rip.

Instruments Three switches and six computers are needed.

Three Routers Using Copper Cable Straight Through

DCE serial

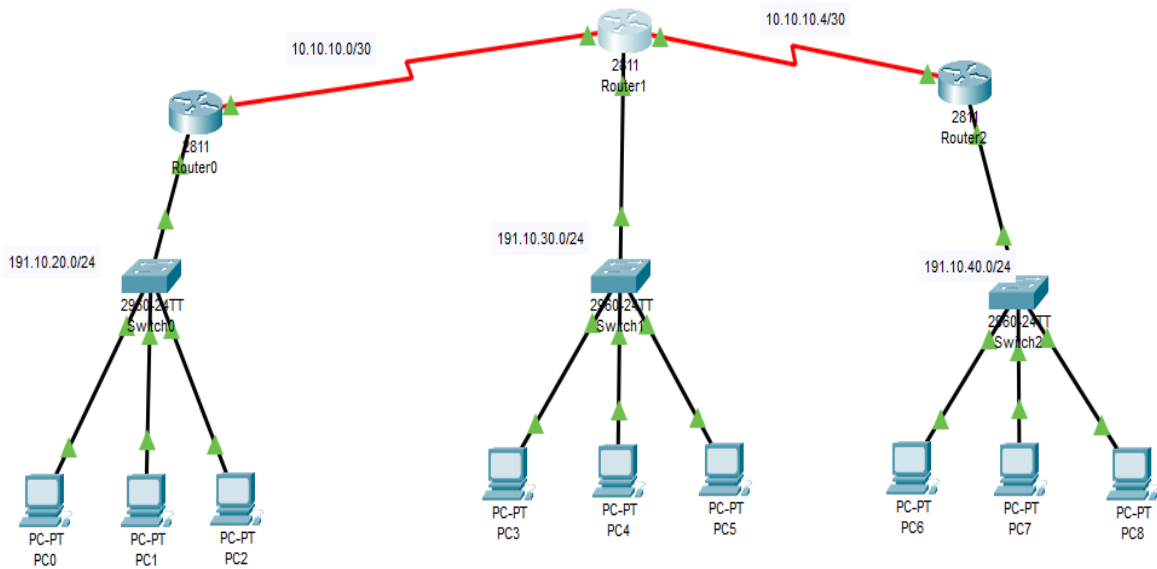


Figure:3.3 .9: RIP

Result:

Figure:3.3 .9: RIP Result

- **Benefits Of the RIP:** The main benefit RIP is how easy it is to set up and use. reliable routing tables. It is simple to set up and comprehend. It often has no loops. Smaller routing updates are sent and received in order to save bandwidth. In order to facilitate a faster lookup, the size of the routing database was reduced.
- **RIP Drawbacks:** The main disadvantage of RIP is that it is difficult to expand to huge or extremely large networks. 15 counts of hops Because RIP routers employ a maximum hop count, it is unable to manage interrupted networks. The lengthy recovery period is another drawback of RIP. The rate of convergence is sluggish in bigger networks.

### 3.3 .10: OSPF, or Open Shortest Path First:

#### OSPF Design Of Topology-

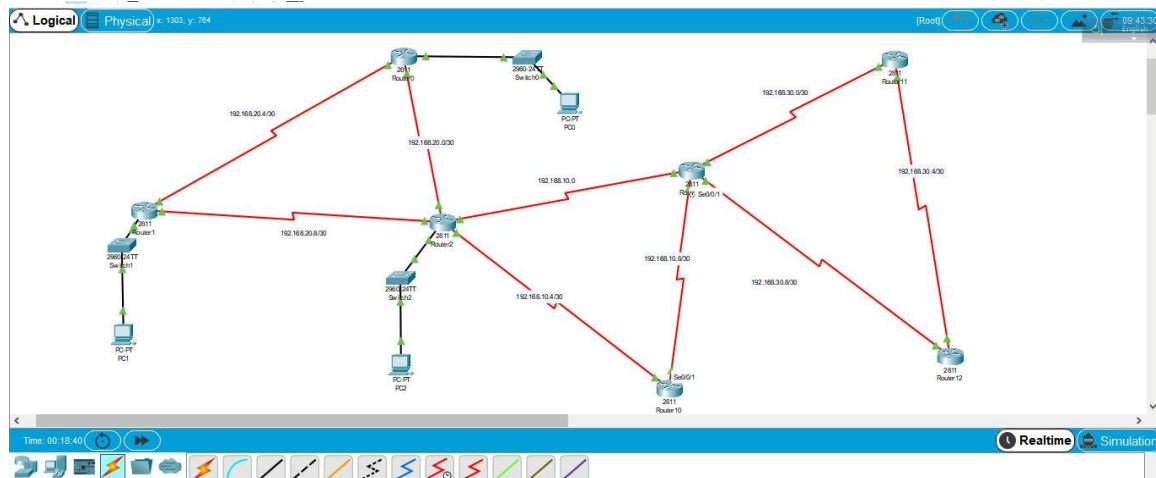


Figure:3.3 .10: OSPF Diagram

## Result:

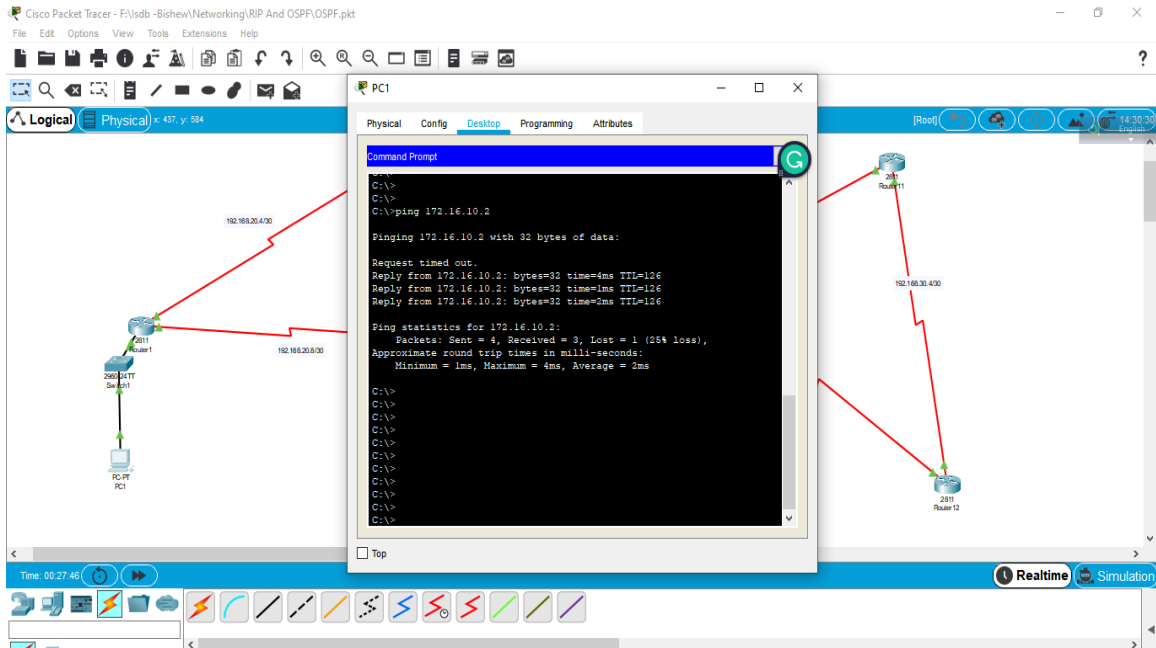


Figure:3.3 .10. 1:OSPF Result

### 3.3.11 DHCP

An IP host's IP address and other configuration information, such as the subnet mask and default gateway, are automatically assigned using the Dynamic Host Configuration Protocol (DHCP), a client/server protocol. DHCP needs to be set up in order to provide IP automatically, but since everyone has authorization to access the server, the IP address stays the same.

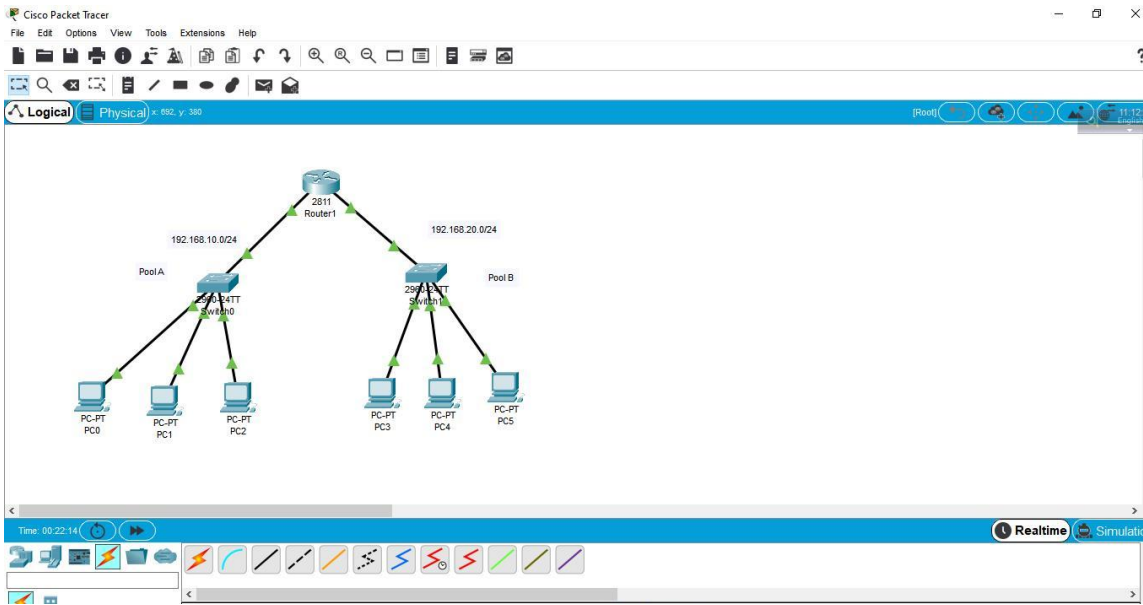


Figure:3.3 .11: DHCP Diagram

DHCP Automatic Result:

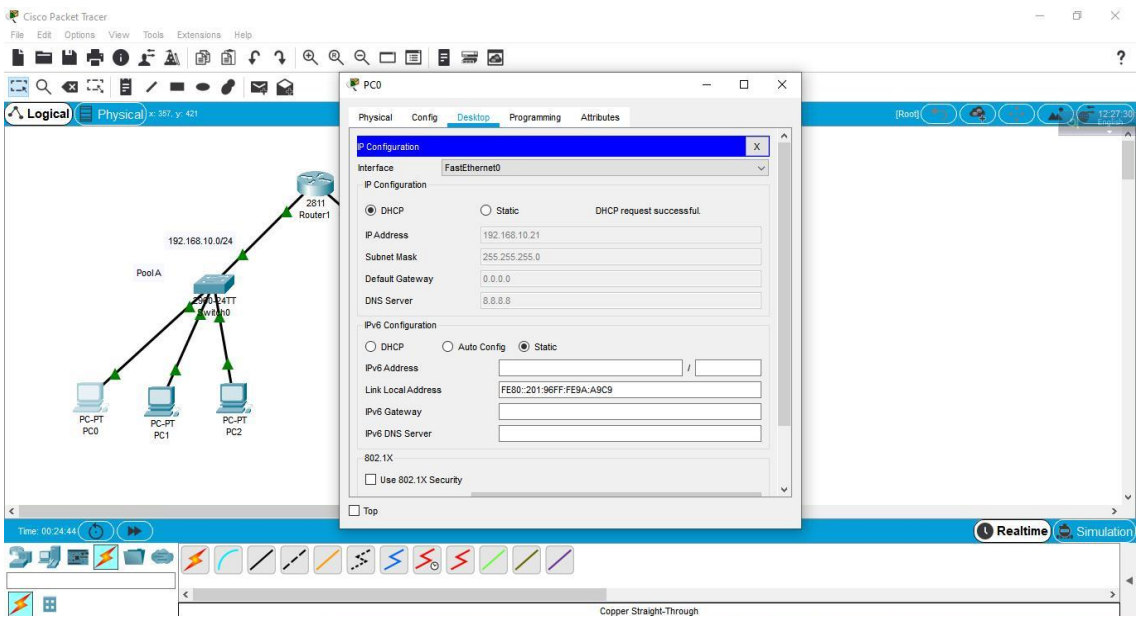


Figure:3.3 .11.1: DHCP Host Result

**3.3 .12: WLAN :** WLAN are carry out LAN-like tasks by utilizing WiFi and other wireless network technologies. These networks are commonly employed in LAN-like applications, don't require physical cables to connect devices to the network.

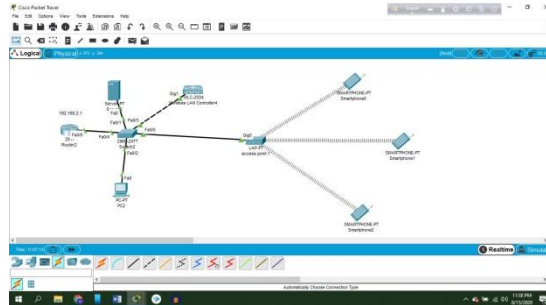


Figure:3.3 .12: WLAN

**Wlan Configuration Result:**

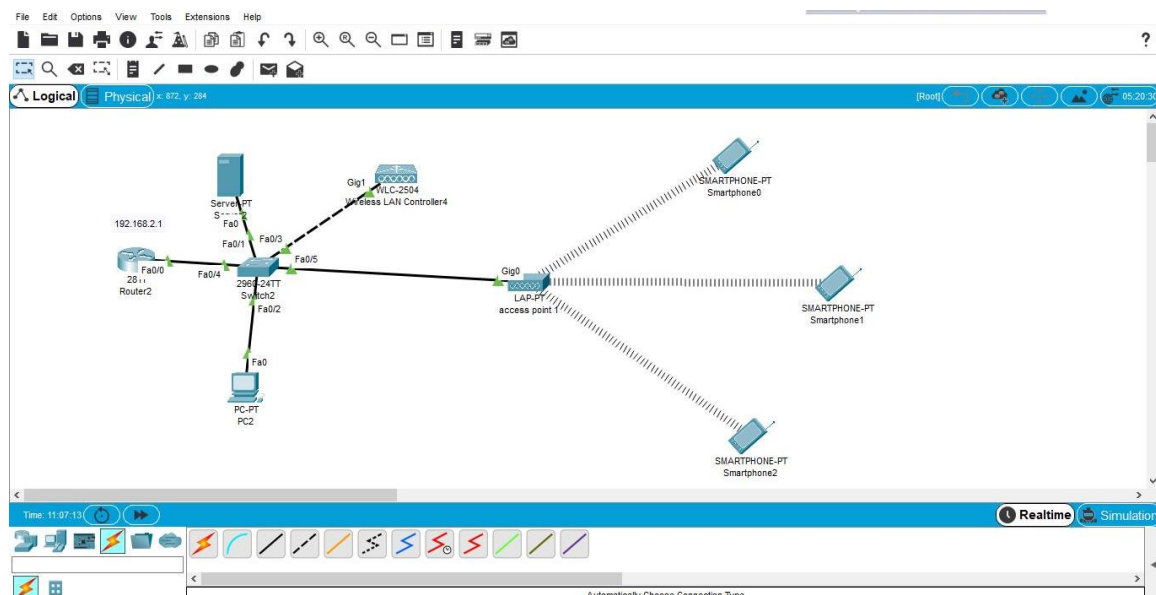


Figure:3.3 .12.1: WLAN Net

### 3.3.13 Tools For Trouble shoot :

**Throughput In Testers:** In reality, this technology that allows us to measure traffic and identify the kinds of traffic that are using bandwidth.

**Protocol Analyzer:** Data traveling over a communication channel is gathered and monitored by a device or measurement device called a protocol analyzer.

**If config or ip config:** Among Windows' most useful IP commands is this one. IPv4 and IPv6 addresses for each network interface card are among the many details about the device's current network configuration that are shown. DNS server, MAC address, subnet mask, default gateway, and DHCP details.

**Nslookup :** programs for quickly detecting name servers and figuring out which IP address goes with which name.

**Netstate:** to view on my PC TCP/IP connections, both inbound and outbound.

### 3.4 Challenges

Even though understudy internships might be challenging, I took advantage of the chance and made myself cooperate with the stream when it presented itself. I had never witnessed previously. I found many new technique for deal with issues and looking forward to next move. My superiors helped navigate every aspect of this entry-level position, teaching me better approaches to analyze challenges.

A group of individuals known as "Codeman BD" are renowned for their proficiency in system administration and investigation. Starting my days when I was new was therefore a test. But after just a few weeks, I discovered that accepting things as they are was easy and fairly natural. I have never voiced any complaints while working a temporary position. I managed to get through the problem and do the assignment.

I'll try to resolve the numerous networking, software, and hardware issues I'm having. Several issues with mailing setup were resolved by me.

## **Chapter : 4**

### **Competencies and Plan**

#### **4.1: Competencies:**

I want learn more in order to succeed in the contemporary workplace. I need to learn about and acquire experience in the present labor market in order to improve my talents. I need to know exactly how I'm going to run my business, especially when it comes to jobs and responsibilities that include making decisions. I should study more about management and supervisory methods. To broaden my skill set, I must improve skills.

#### **4.2: Plan**

Everyone has a plan, including me. I wish to work as a specialized system analyst or manager at a large company using my hardware and networking knowledge. I chose this field for further study after my internship.

#### **4.3: Reflection:**

Believe that professionalism and accuracy are important when I am dedicated to a task. It is the emotional attachment to the task.

Experience is crucial when we competently enter any sector of employment. I was also able to overcome some of my own faults when I was employed there. I can now say with confidence that I have a once-in-a-lifetime chance to show off my skills and hard work. Along with determining my goals for the future and establishing my profession, I have also got the chance to show my devotion.

It is impossible to overestimate the significance of collaboration and communication. To get better outcomes, it is essential to know how to interact with both senior and younger team members.

You must first understand the system in order to get greater results. The output of the system will be significantly affected. Our supervisors really aided us in comprehending the system; employees feel a sense of responsibility when they are able to solve major problems, maintain team unity, and comprehend the system.

## Chapter 5

### Conclusion and Future Career

#### 5.1 Discussion and Conclusion

Books are the most important source of information, as everyone is aware. But reading the book alone won't make you an expert in technical matters. Reading computer science books only provides us with theoretical information. But when we put what we've learned in class into practice, we get even more. I gained a great deal of fresh knowledge during my internship. That was something I had never done before. During that time, I accomplished all of my objectives and learned more about the business world. During my internship, I studied "Network Server, Hardware & Software, System Security Error Classification of Networking Systems". I've classified concerns into multiple groups and analyzed the data to resolve them. Most hardware troubles emerge when computer hardware becomes obsolete. This internship focuses on networking design and software proficiency. I wrote about my internship goals and viewpoint in my report. History and biography of the company will be reviewed. This internship taught me that "Network addresses various difficulties by splitting separate categories Server, Hardware & Software, System security." I've used distributive categories to solve several problems. Along with acquiring real-world business IT experience, I also learnt a lot about client support and firm sector IT management.

#### 5.2: Future Career:

I believe that from standing here, my internship has given me the useful knowledge I required. I can now confidently state that my internship has provided me with sufficient experience and that I am unique among recent graduates. I can now take on difficult networking and hardware chores. Because of my increasing practical competence, I was able to apply to a variety of reputable IT corporations, ISP companies, business-related IT organizations, schools, universities, and banks. But starting in primary schools, the government is investing in IT and English instruction more rapidly. strengthening

regulatory efforts; maintaining national security; implementing laws pertaining to accountability, transparency, and work ethics; improving communication, transportation, and the physical infrastructure of significant IT centers.

## Appendix

### Internship Reflection:

My report makes clear how much I had learnt in spite of my prior expertise. I have shared a few of my discoveries and encounters that have improved my life. A person should be able to perform their work effectively, and entry-level jobs may teach us what expertise is and how to apply it. The information we learn via firsthand experience, in my opinion, is as important to traditional schooling. Although we are constantly looking for ways to make things simpler, we did not anticipate that doing the interaction that the books describe would be challenging. Those are quite helpful at the moment. We have a lot of knowledge thanks to our foundations. I learned how to live a real life, deal with challenging circumstances, and follow through on goals from my temporary work. It also taught me a lot of other ways to solve problems. I was able to examine a range of situations that were not covered in class, which was a useful educational experience. We can effectively apply our extensive expertise and knowledge in temporary roles.

**Organization Details:** CodemanBD helps the poor and disadvantaged, particularly women and young people, acquire the greatest IT-related skills both physically and online, giving them the confidence to work as freelancers locally or abroad and generate income for both Bangladesh and themselves. Over time, our students generated \$9.6 million in revenue from global markets.

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## BASIC NETWORKING TECHNOLOGIES AND ITS USES

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