Lab 11: DNS and Web Server Configuration using Packet Tracer

Theory

a. DNS & Web Server:

- **DNS (Domain Name System):**

  DNS translates domain names (e.g., www.example.com) into IP addresses. It acts like a phonebook for the internet, ensuring that users can access websites using easy-to-remember domain names rather than numeric IP addresses.

- **Web Server:**

  A web server stores, processes, and delivers web pages to users over the internet. When a user requests a webpage, the web server fetches the requested data (HTML, CSS, images, etc.) and delivers it to the user's browser.
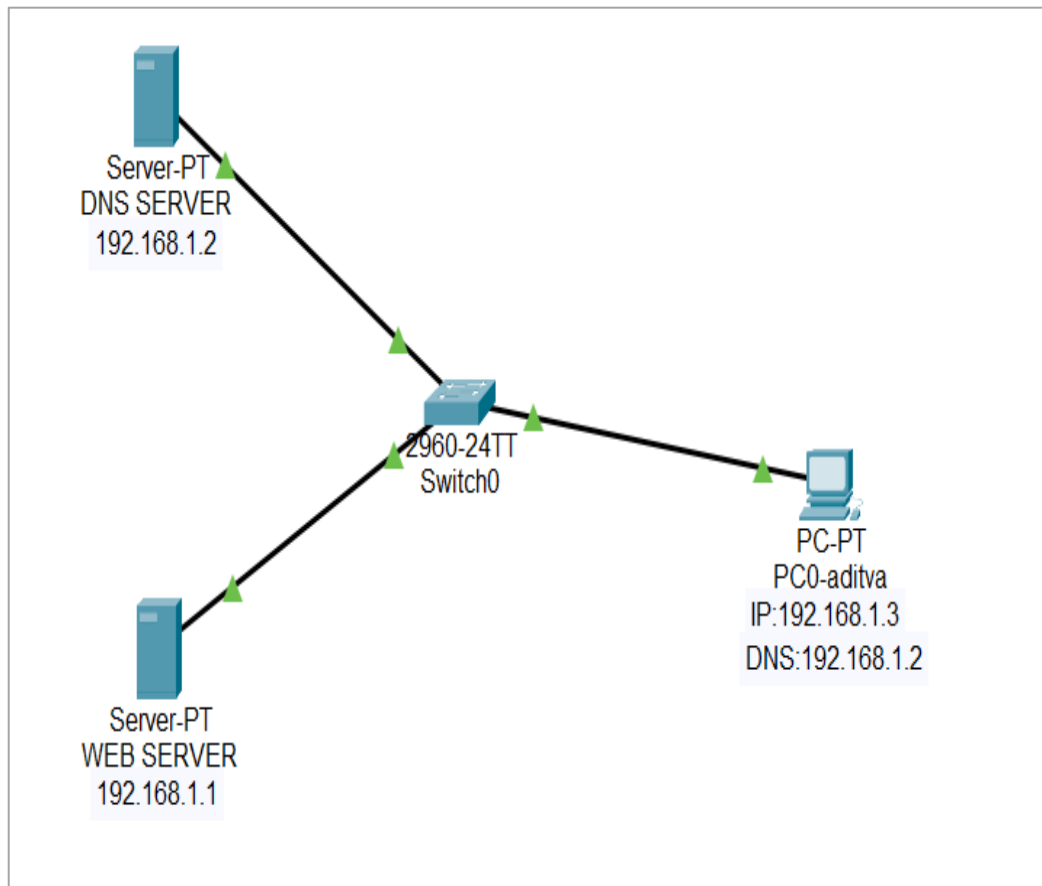
b. Network Diagram

Fig: Server configuration

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c. Implementation

1. **Drag and drop the required devices in the workspace and arrange them in following way.**
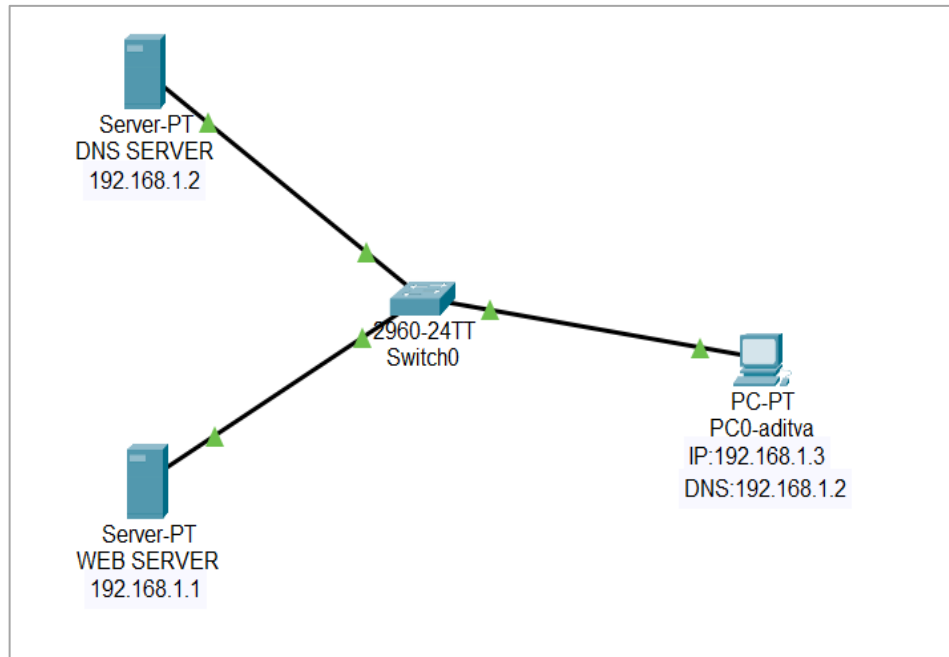

Fig: Network layout

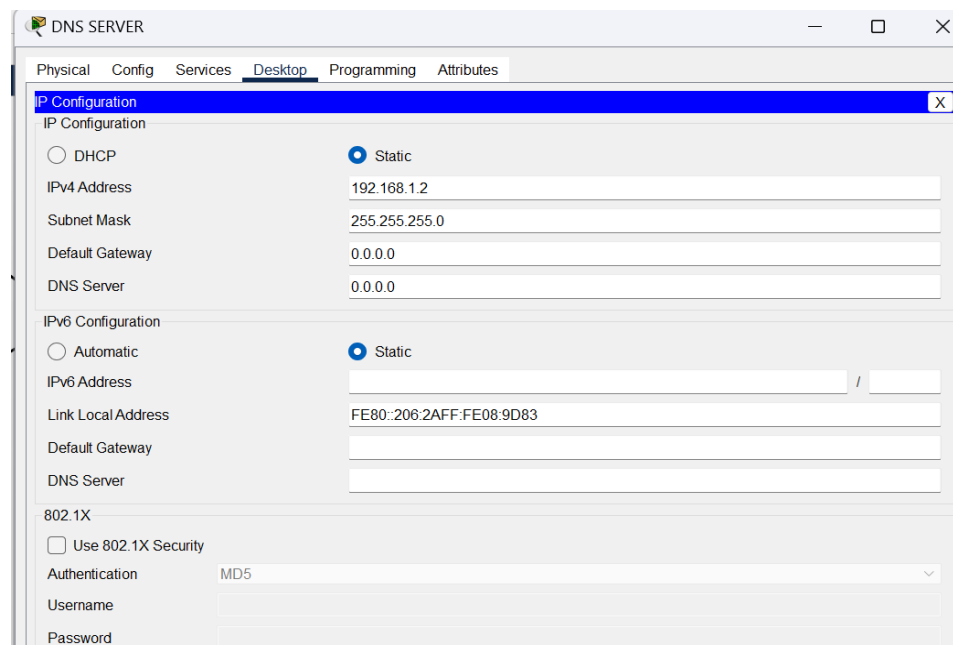2. **Go to the DNS server and set Ip address and subnet mask.**

Fig: DNS server Ip configuration

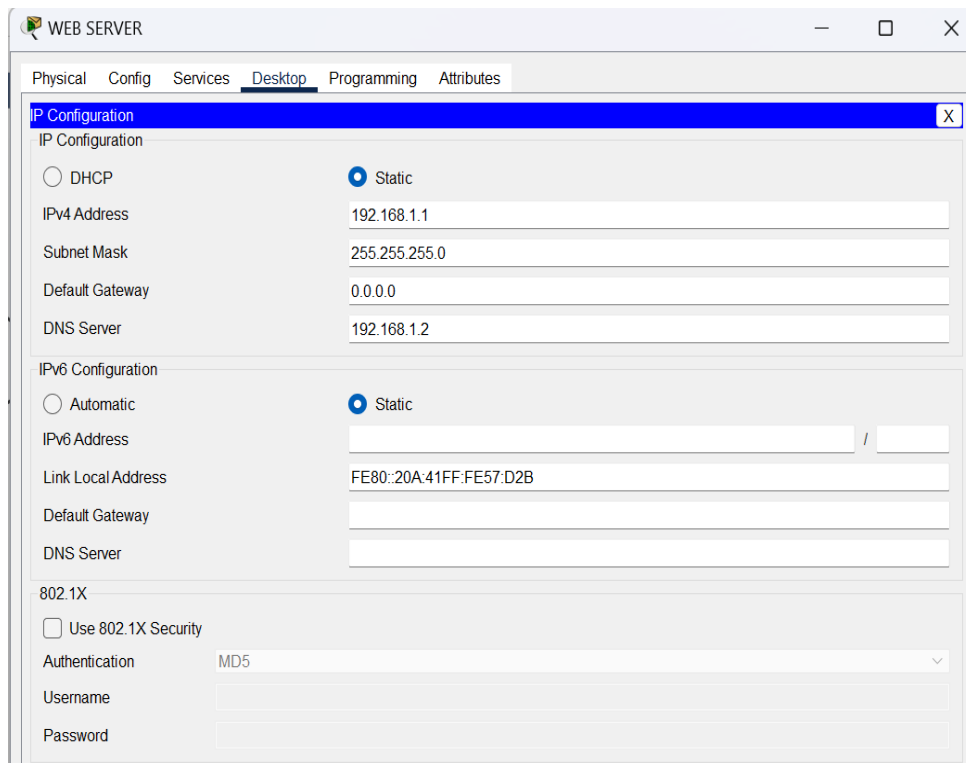**3. Now go to the web server and assign Ip address, subnet mask and DNS server.**

Fig: Web server Ip configuration

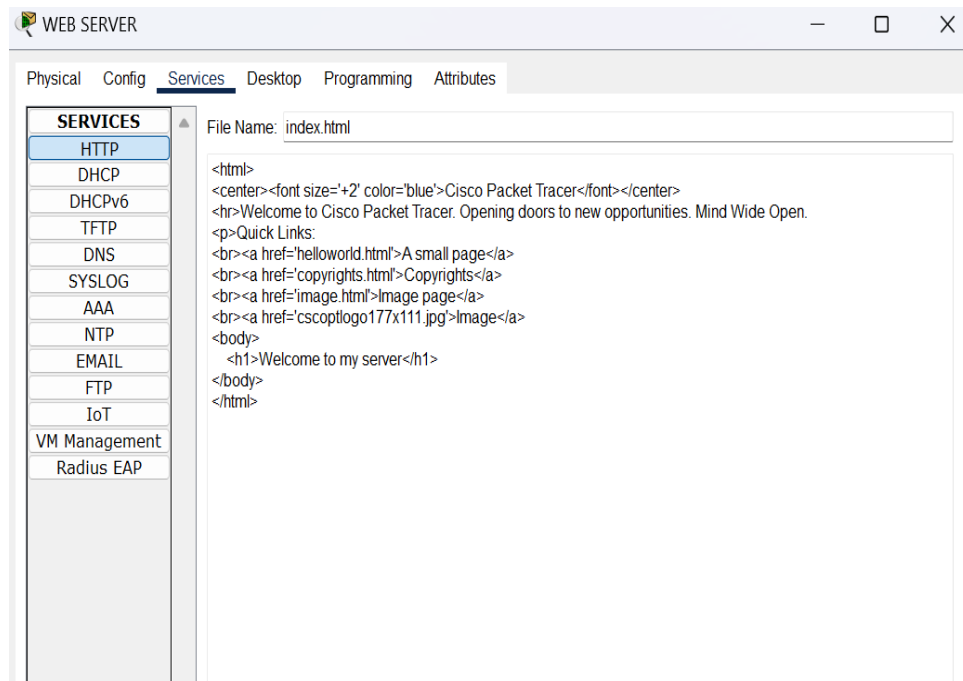**4. Go to services and edit the index.html to your liking.**

Fig: Editing index.html

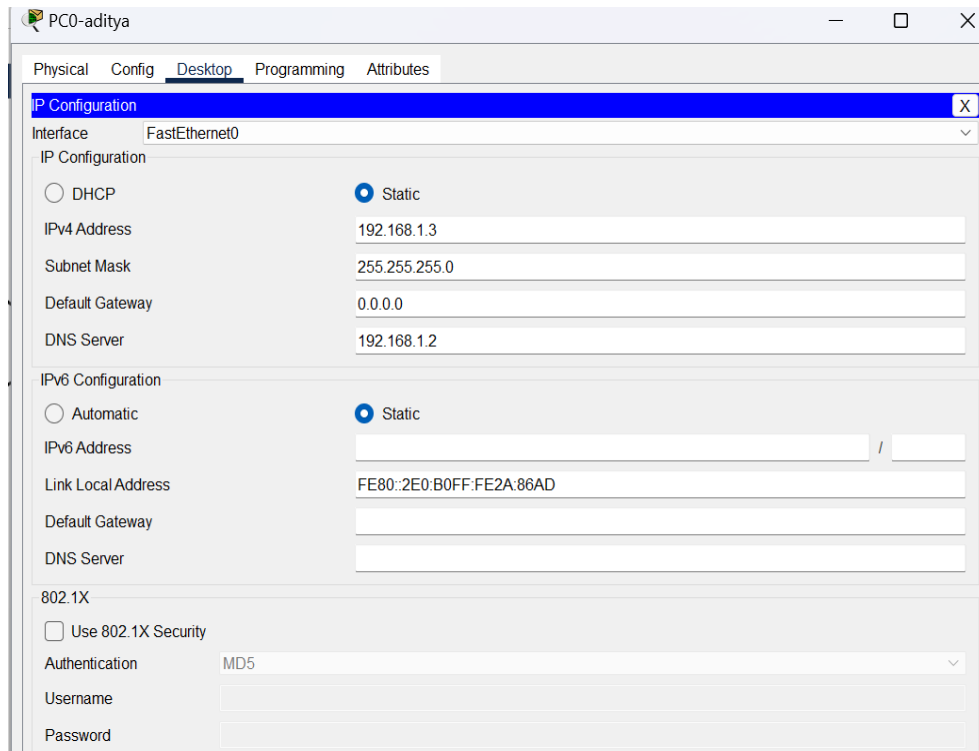**5. Now go to PC and assign Ip, DNS and subnet mask.**

Fig: Ip configuration in PC

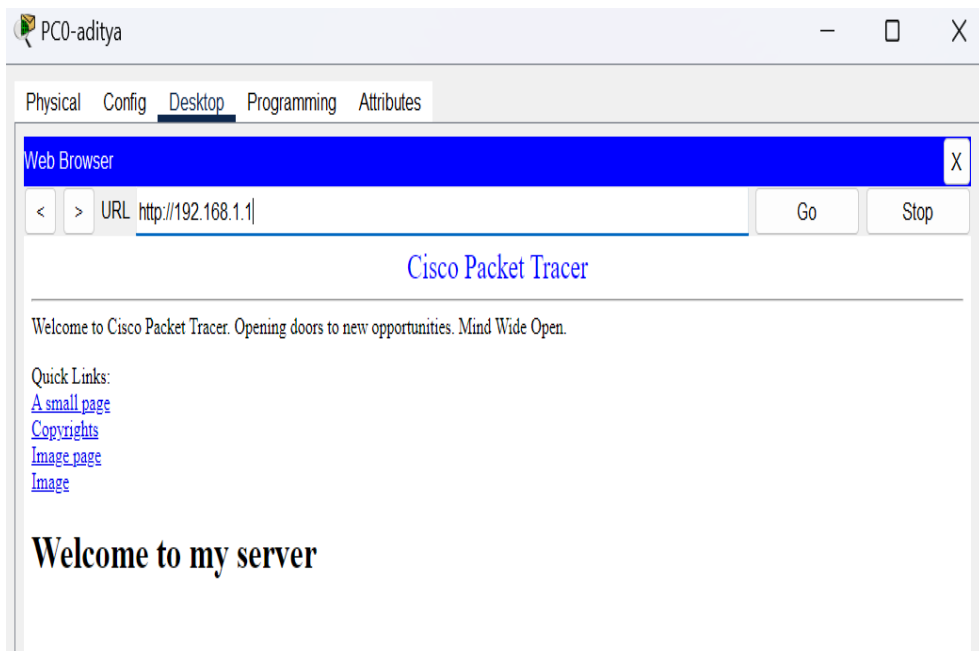**6. Now go to the web browser of the PC and search the Ip of the web server you created.**

Fig: Accessing web server using Ip address

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7. **Now to add web server to the DNS sever go to DNS server's services and add name and Ip of your web server.**
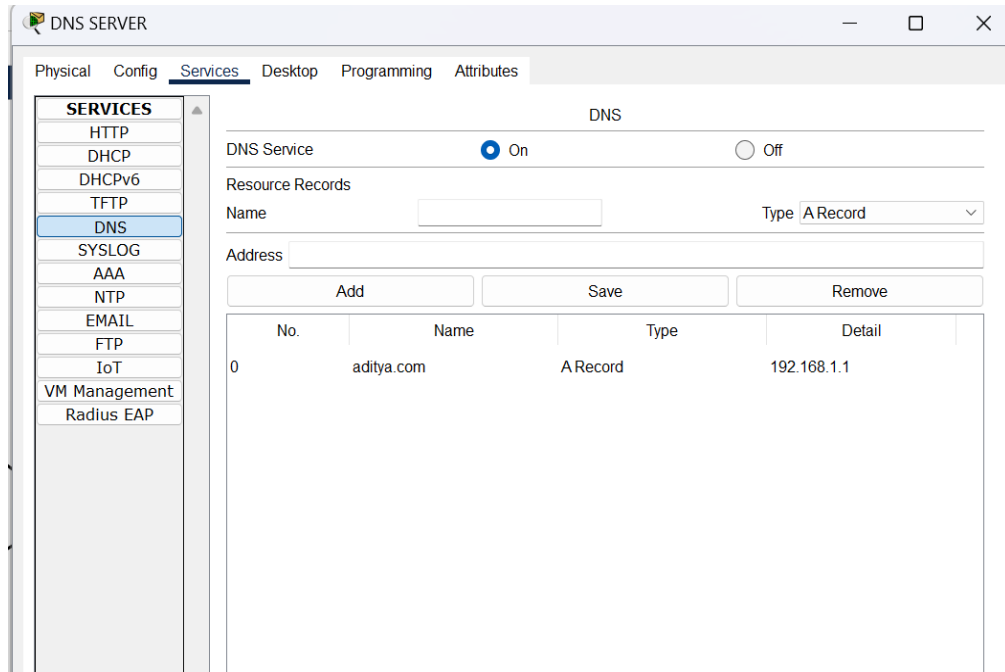

Fig: Adding web server to DNS server

8. **Now finally go to the PC and search with the DNS name you just assigned to your web server.**

Fig: Accessing the web server using DNS

As we can see that we can now access our web server using the DNS as well as Ip.

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Conclusion

In this lab, we configured a DNS server and web server using Cisco Packet Tracer. The DNS server successfully translated domain names into IP addresses, and the web server hosted and delivered a webpage when accessed by a client device. This setup demonstrated the importance of DNS in simplifying website access and the critical role of web servers in delivering content to users over a network.

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