GUJARAT TECHNOLOGICAL UNIVERSITY

Bhailalbhai & Bhikhabhai Institute Of Technology

A **MIRCO PROJECT [1 OF 2]** ON

CISCO PACKET TRACER

UNDER SUBJECT OF

COMPUTER NETWORKING (4340704)

C. E. 2nd Year , Semester 4th

(Computer Engineering Department - SFI)

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★ What is Cisco Packet Tracer :

➡ **Cisco Packet Tracer** as the name suggests, is a tool built by Cisco. This tool provides a network simulation to practice simple and complex networks.

➡ The main purpose of Cisco Packet Tracer is to help students learn the principles of networking with hands-on experience as well as develop Cisco technology specific skills.

➡ Since the protocols are implemented in software only method, this tool cannot replace the hardware Routers or Switches. Interestingly, this tool does not only include Cisco products but also many more networking devices

➡ Using this tool is widely encouraged as it is part of the curriculum like CCNA, CCENT where Faculties use Packet Trace to demonstrate technical concepts and networking systems.

➡ Engineers prefer to test any protocols on Cisco Packet Tracer before implementing them. Also, Engineers who would like to deploy any change in the production network prefer to use Cisco Packet Tracer to first test the required changes and proceed to deploy if and only if everything is working as expected.

➡ This makes the job easier for Engineers allowing them to add or remove simulated network devices, with a Command line interface and a drag and drop user interface.

★ Workspace :

1. **Logical –**

Logical workspace shows the logical network topology of the network the user has built. It represents the placing, connecting and clustering virtual network devices.

2. **Physical –**
   Physical workspace shows the graphical physical dimension of the logical network. It depicts the scale and placement in how network devices such as routers, switches and hosts would look in a real environment. It also provides geographical representation of networks, including multiple buildings, cities and wiring closets

Web Server in Cisco Packet Tracer :

★ Tools:

-Router (ISR331)

-Switch(2960-24TT)

-PC_PT (3)

-Server_PT (3)

⟶ Uses of Tools:

1) Router(ISR331) :

The Cisco ISR331 is part of Cisco's Integrated Services Router (ISR) series, which is a family of routers designed for small to medium-sized businesses (SMBs) and enterprise branch offices. Here are some specific details about the ISR331:

Performance: The ISR331 is engineered to deliver high-performance routing, switching, security, and application services. It's capable of handling the demands of modern networking environments, including data, voice, and video traffic.

Security Features: Like other routers in the ISR series, the ISR331 comes equipped with comprehensive security features to protect the network and data. This includes firewall capabilities, VPN (Virtual Private Network) support for secure remote access, intrusion prevention, and advanced threat defense.

2) Switch(2960-24TT):

The Cisco Catalyst 2960-24TT is a member of Cisco's Catalyst 2960 Series of fixed-configuration, standalone switches. Here's some information about it:

Port Density: The "24" in its name indicates that it has 24 Ethernet ports. These are typically 10/100 Mbps Fast Ethernet ports, providing connectivity for devices such as computers, printers, and IP phones.

Port Types: The "TT" designation signifies that it has two Gigabit Ethernet (10/100/1000) uplink ports. These uplink ports allow for high-speed connections to other network devices or to the network backbone.

3) PC_PT :

It seems like you're referring to "Packet Tracer" with "PC_PT". Cisco Packet Tracer (PT) is a simulation tool used for teaching and learning networking concepts and skills. Here's some information about Packet Tracer:

Simulation Environment: Packet Tracer provides a simulated environment where users can design, configure, troubleshoot, and experiment with network topologies, devices, and protocols without the need for physical hardware.

Device Support: It includes a wide range of networking devices such as routers, switches, PCs, servers, IP phones, and more, allowing users to create complex network setups.

4) Server_PT :

In networking, a server refers to a computer system or software application that provides services or resources to other computers, known as clients, over a network. Servers are fundamental components of network infrastructure and play various roles in facilitating communication, data storage, and resource sharing within a network. Here are some common types of servers in networking:

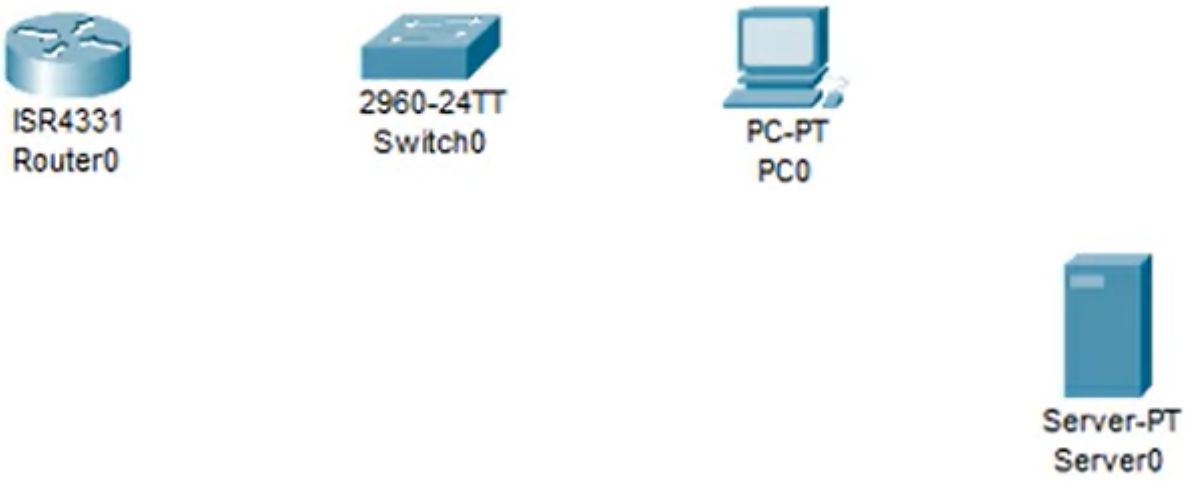
File Server: A file server is a computer or storage device that stores and manages files accessible to network users. It allows users to store, retrieve, and share files over the network, providing centralized file storage and access control.

Web Server: A web server is a computer system that hosts websites and web applications accessible via the internet or an intranet. It serves web pages to clients' web browsers in

response to HTTP requests, delivering web content such as HTML pages, images, videos, and other resources.

Build Up Web Sever Steps:

Step 1: Use Tools of need able Web Sever.



-A Router is a networking device that forwards data packets between computer networks.

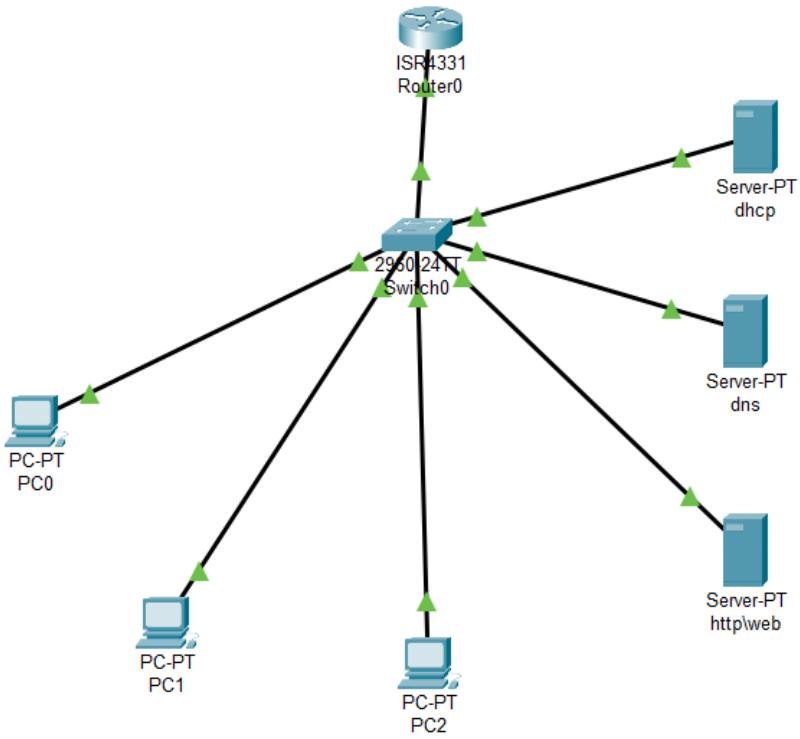
-A network switch connects devices within a network (often a local area network, or LAN *) and forwards data packets to and from those devices.

-A computer network is a system that connects numerous independent computers in order to share information (data) and resources.

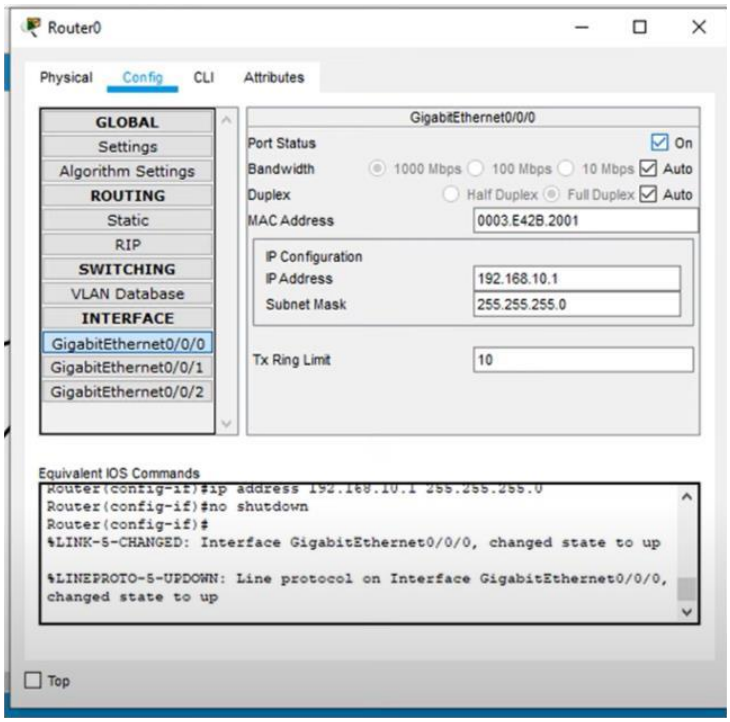
-A Server is a program or a device that provides functionality for called clients which are other programs or devices.

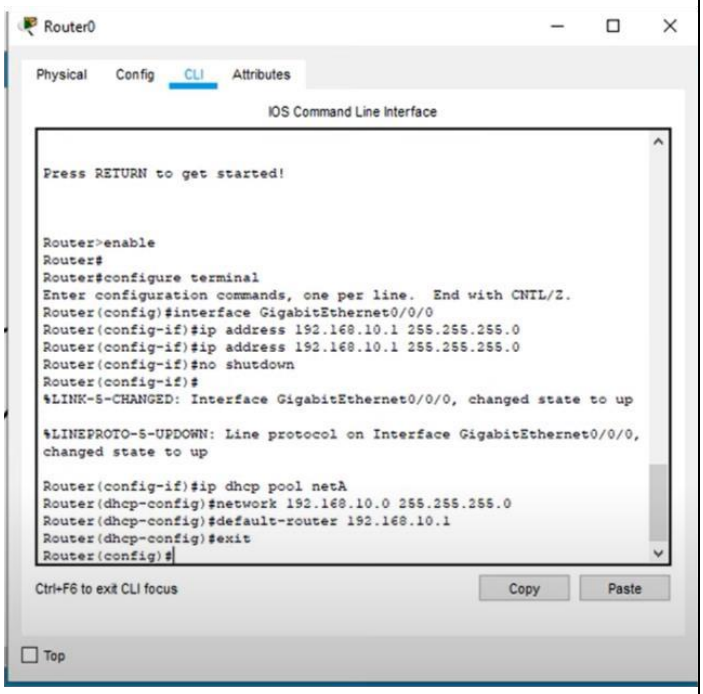
Step 2:Connecting all devices to each other with Copper Straight Wire .

Copper Straight Wire

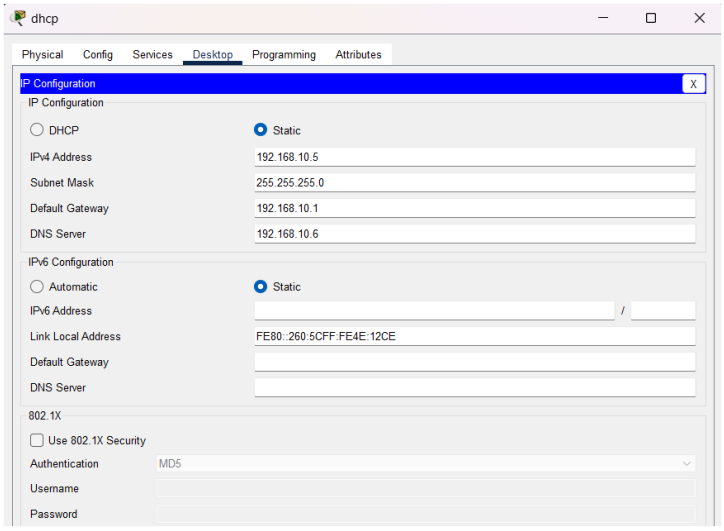


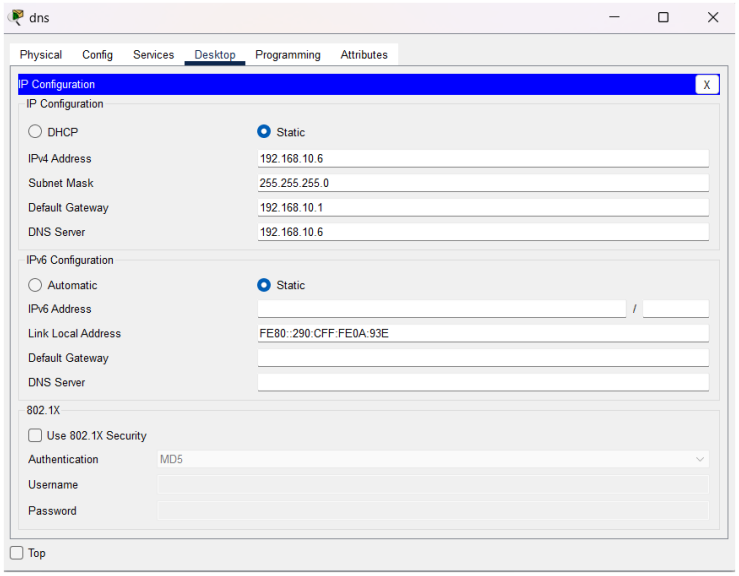
Step 3: Go to router and configure Ip address and CLU .

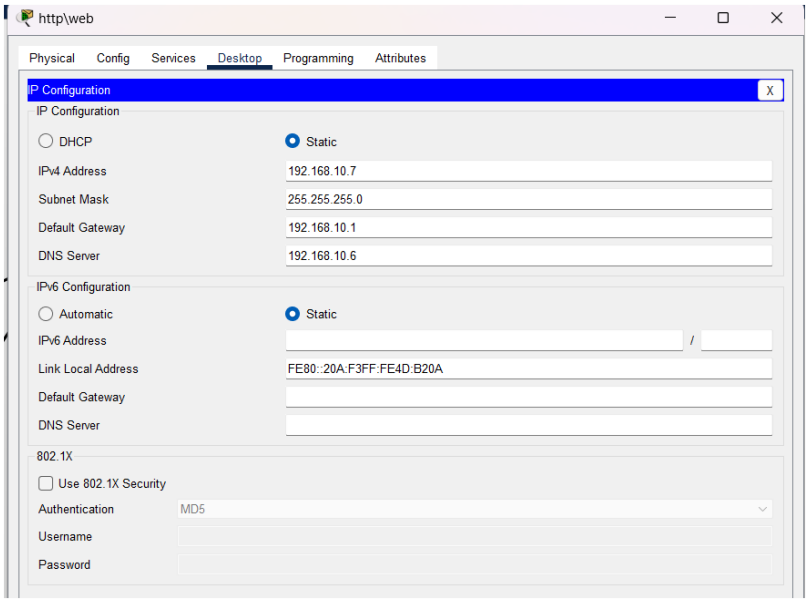




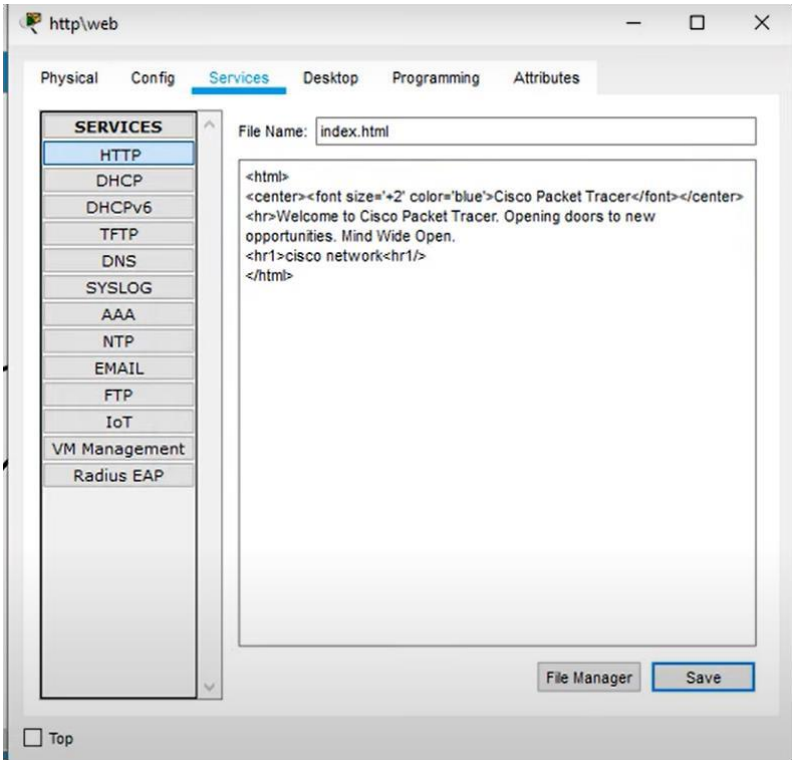
Step 4: Give to all Server IP Configurations Static.

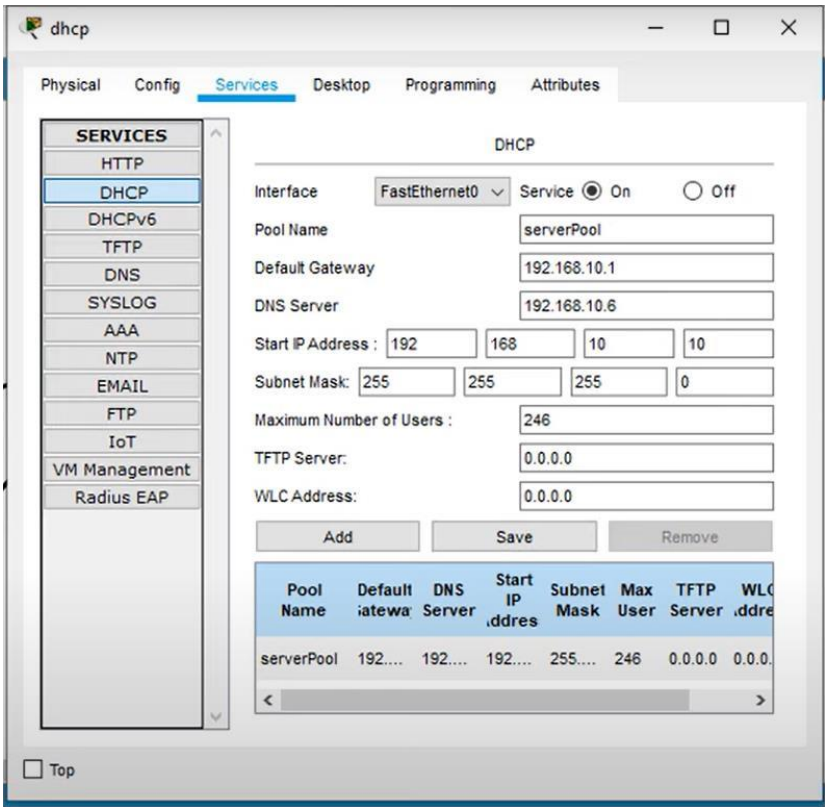




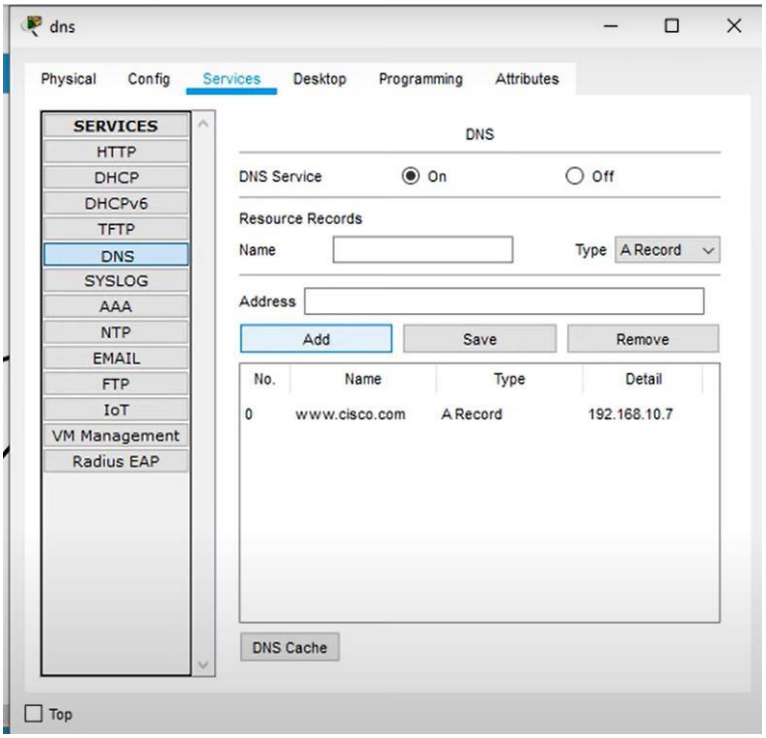


Step 5: Go for http\web for sevices HTTP in index.html and go to dhcp server services on.

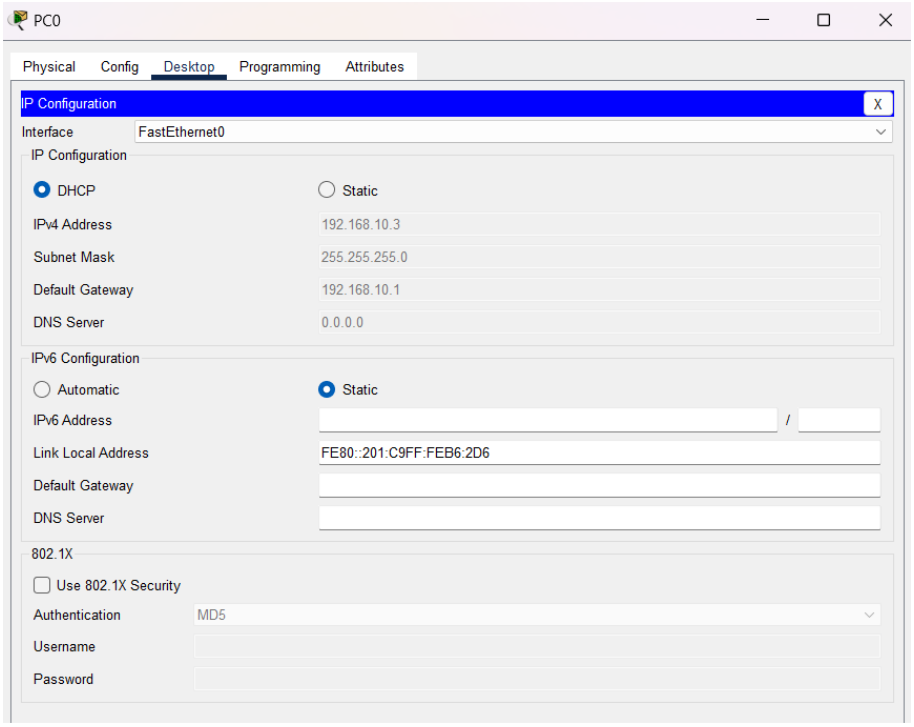


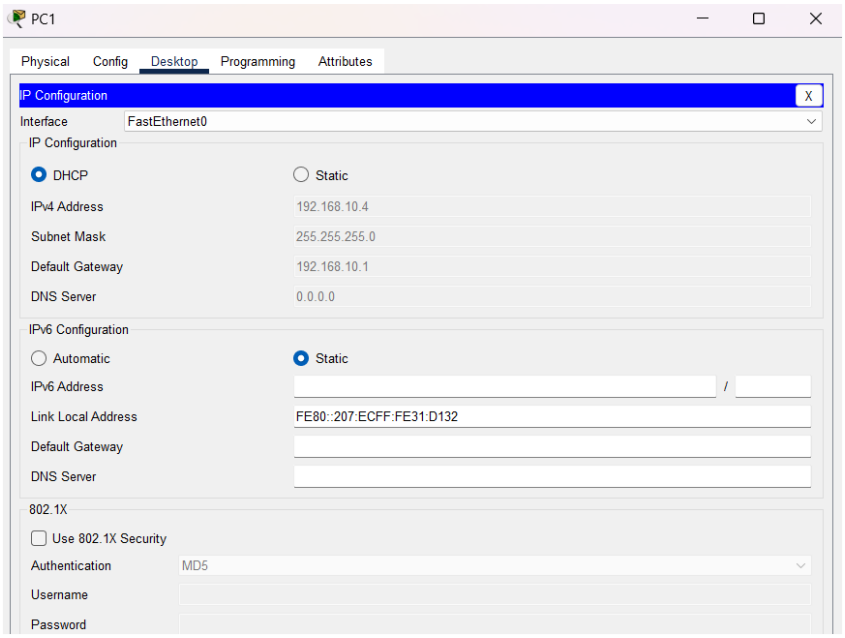


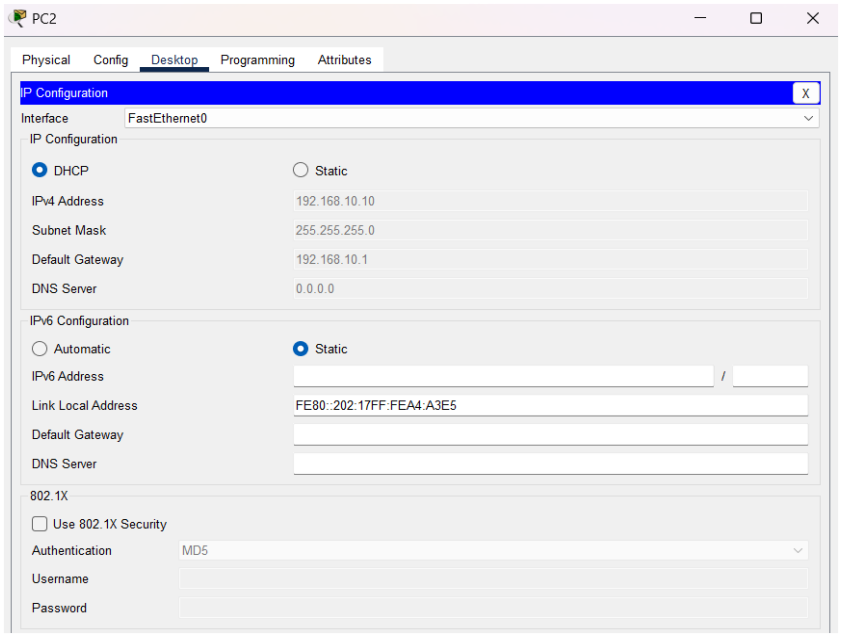
Step 6: In dns Server go DNS Services and add Name & Address.



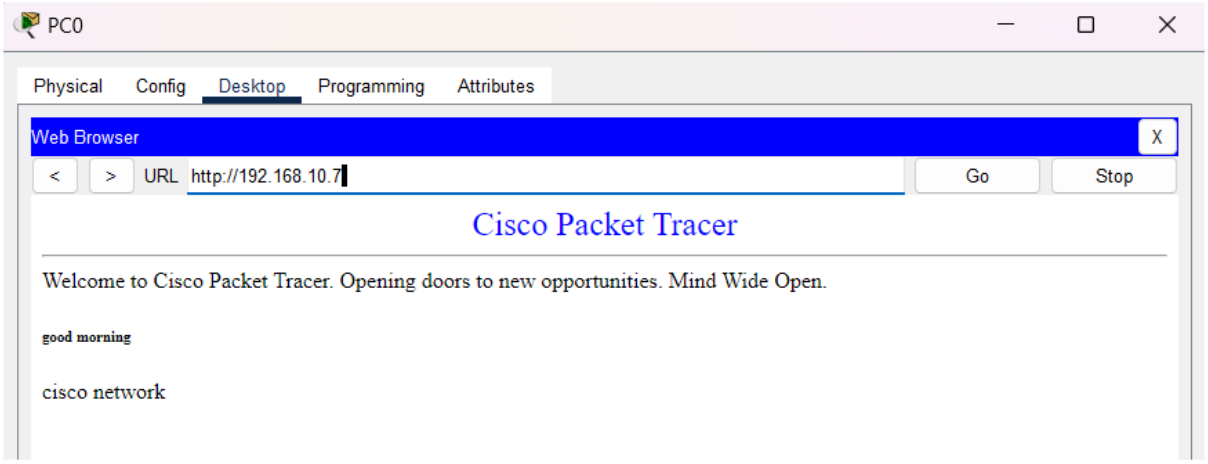
Step 7: In all PC go desktop in IP Configuration on DCHP.







Step 8: For checking web sever is successful.


PC0
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://192.168.10.7
Go
Stop
Cisco Packet Tracer
Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
good morning
cisco network