CN LAB 6

Name : Mohith Jain USN: 1BM22CS162

AIM: TO CONFIG IP ADDRESSES OF HOST USING DHCP SERVER PRESENT WITHIN SAME LAN

OBSERVATION:

12/11/24

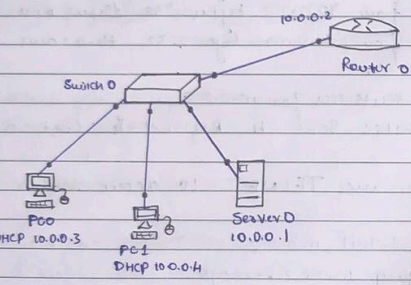
Lab-06

AIM: (A) To configure ip addresses of the Host using DHCP server present within the ~~the~~ LAN.

(B) To configure ip addresses of the Host using DHCP server present outside the ~~the~~ LAN

A: DHCP - Dynamic Host configuration Protocol - helps to do configuration of host automatically.

~~Conf~~ Topology with Network 10.0.0.0



Configuration

- Assign ip address manually to Server PT-Server 0 as 10.0.0.1
- Configure Router 0 & assign ip address 10.0.0.2 using CLI commands.
- Set gateway for the server-0 to be 10.0.0.2
- Now, select server-0, select services & click on DHCP, set service to be ON.
- Set PoolName as ServerPool1
- Default gateway to server as 10.0.0.2 & DNS server as 10.0.0.1 (temporarily) & SAVE.

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- Now DHCP server is ready & have been assigned to server 0
- Now, host devices can automatically get assigned to ip address by DHCP server.
- Select PC0 & PC1 & check DHCP to automatically assign ip address.
- Now, the network is ready to communicate.

Output

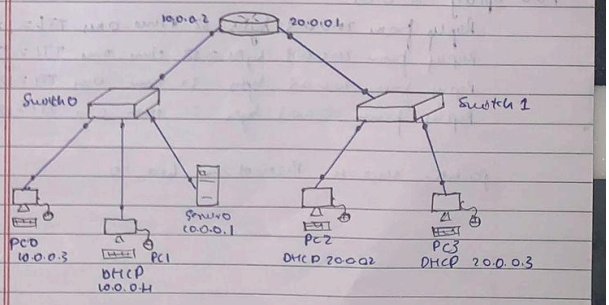
- ping 10.0.0.4

```
Pinging 10.0.0.4 with 32 bytes of data
Reply from 10.0.0.4 bytes=32 time=0ms TTL=128
Reply from 10.0.0.4 bytes=32 time=0ms TTL=128
Reply from 10.0.0.4 bytes=32 time=0ms TTL=128
Reply from 10.0.0.4 bytes=32 time=0ms TTL=128
```

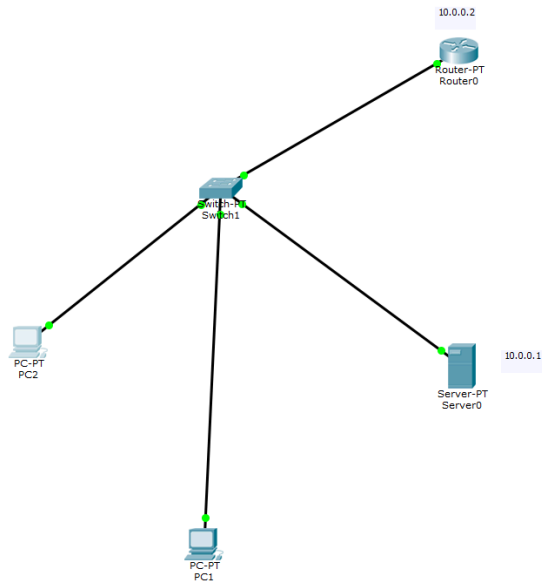
packets: sent=4 Received=4 lost=0

B) Outside the LAN

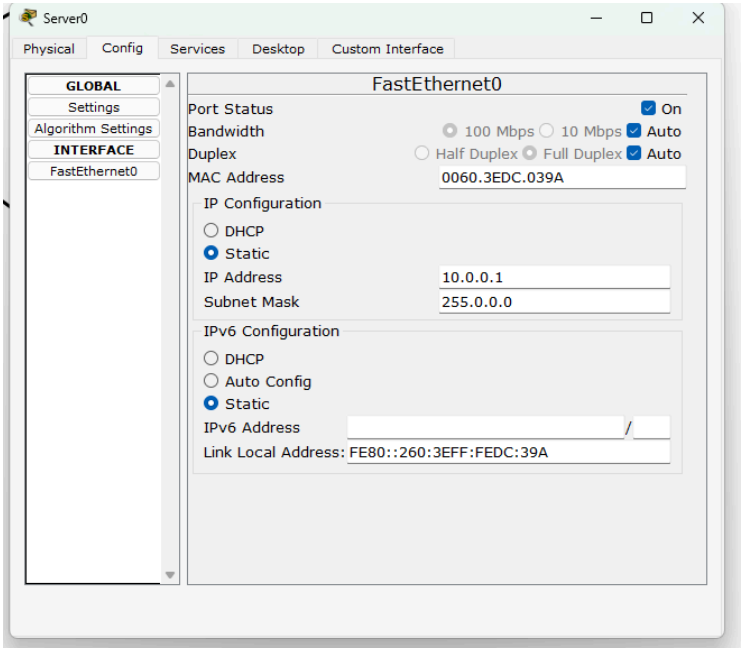
Topology



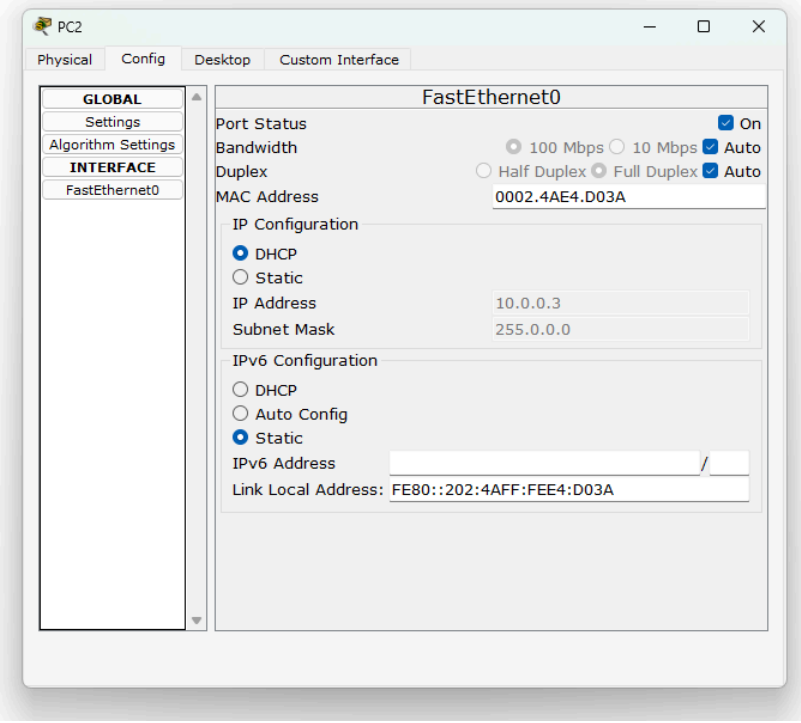
TOPOLOGY



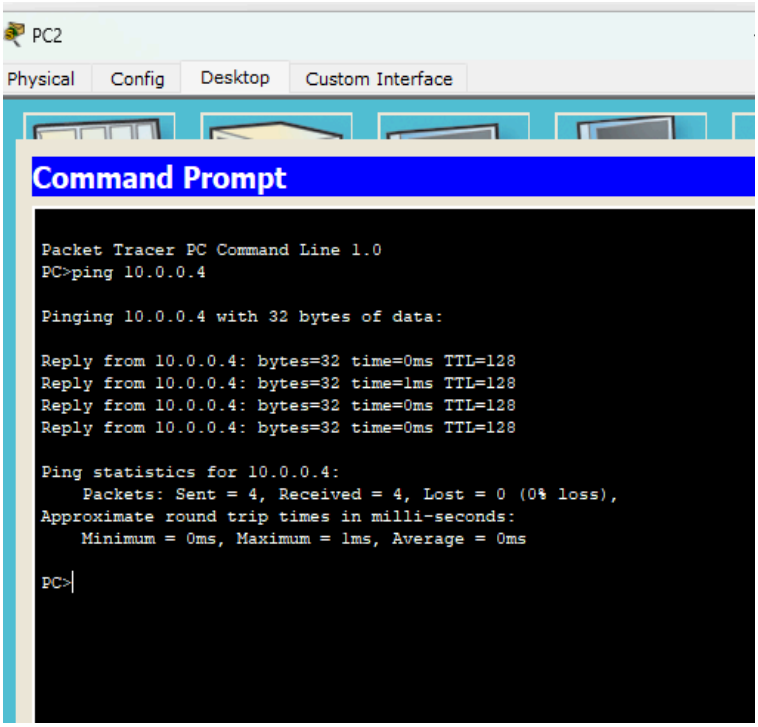
SERVER CONFIG



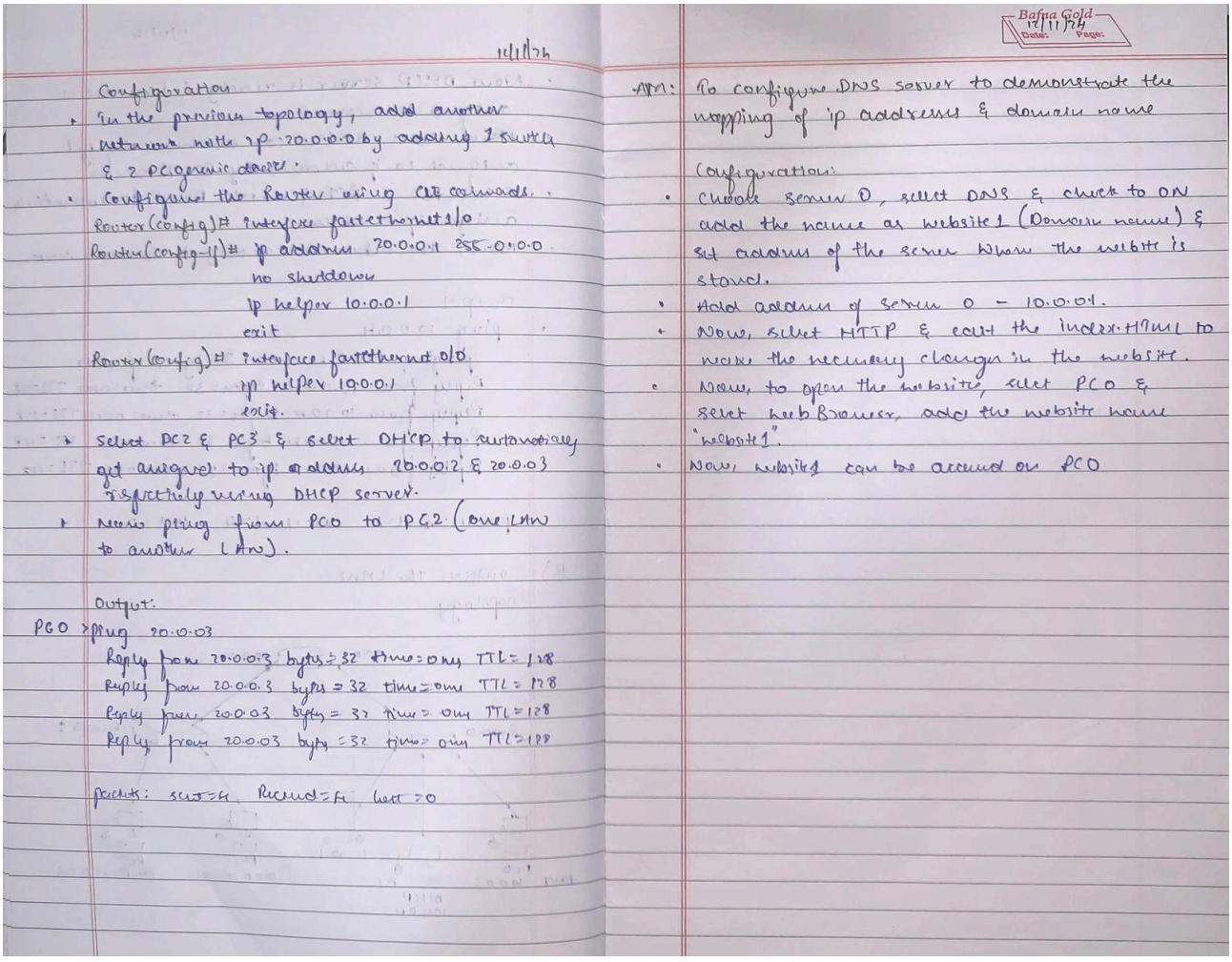
PC CONFIG



PING COMMAND



AIM: TO CONFIG IP ADDRESSES OF HOST USING DHCP SERVER PRESENT OUTSIDE SAME LAN



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Configuration

- In the previous topology, add another network with ip 20.0.0.0 by adding 1 switch & 2 PC (generic device).
- Configure the Router using CLI commands.

Router(config)# interface fastethernet 1/0
Router(config-if)# ip address 20.0.0.1 255.0.0.0
no shutdown
ip helper 10.0.0.1
exit

Router(config)# interface fastethernet 0/0
ip helper 10.0.0.1
exit

- Select PC2 & PC3 & select DHCP to automatically get assigned to ip address 20.0.0.2 & 20.0.0.3 respectively using DHCP server.
- Now ping from PC0 to PC2 (one LAN to another LAN).

Output:

PC0 > ping 20.0.0.3

Reply from 20.0.0.3 bytes=32 time=0ms TTL=128
Reply from 20.0.0.3 bytes=32 time=0ms TTL=128
Reply from 20.0.0.3 bytes=32 time=0ms TTL=128
Reply from 20.0.0.3 bytes=32 time=0ms TTL=128

packets: sent=4 Received=4 lost=0

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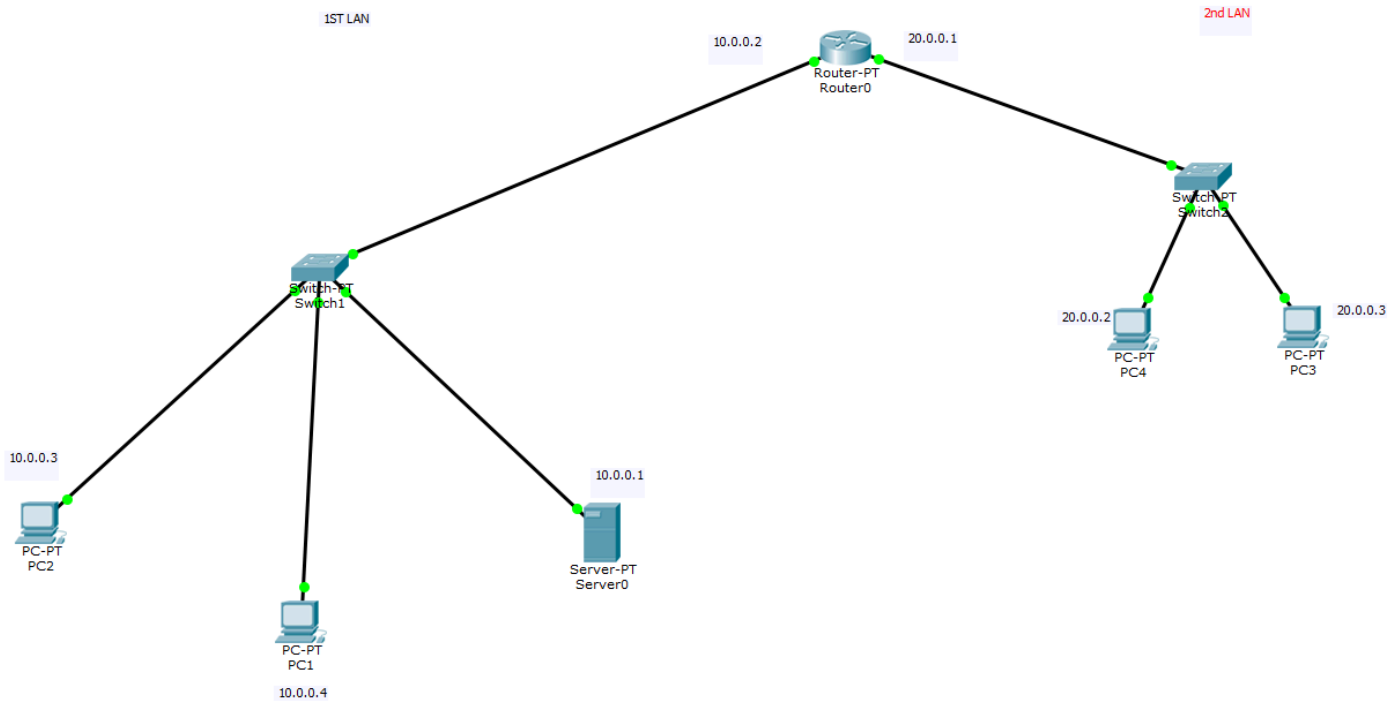
AIM: To configure DNS server to demonstrate the mapping of ip addresses & domain name

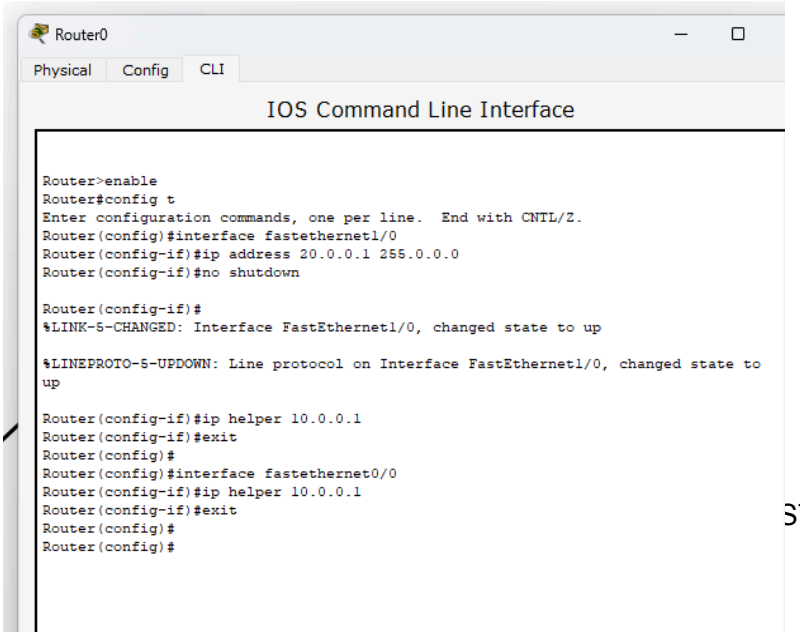
Configuration:

- Choose server 0, select DNS & check to ON add the name as website1 (Domain name) & set address of the server where the website is stored.
- Add address of server 0 - 10.0.0.1.
- Now, select HTTP & edit the index.html to make the necessary changes in the website.
- Now, to open the website, select PC0 & select Web Browser, add the website name "website1".
- Now, website1 can be accessed on PC0

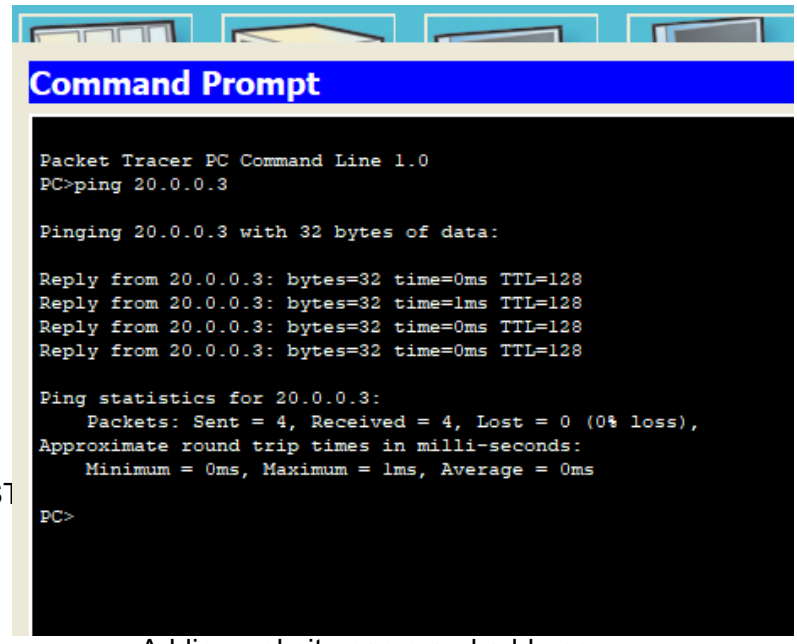
TOPOLOGY:



ROUTER CONFIG



PING COMMAND



DNS SERVER CONFIG

Adding website name and address

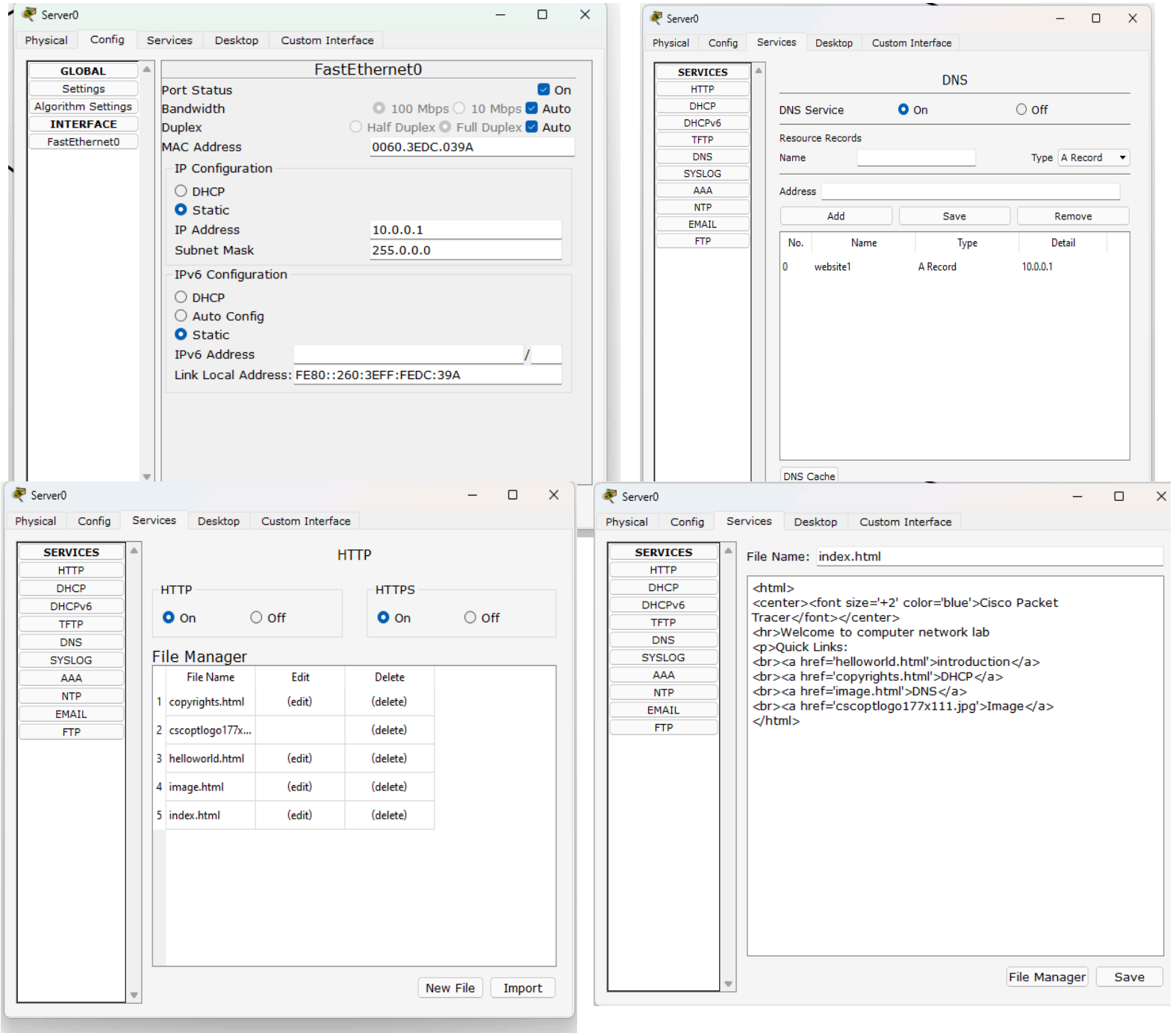


Fig: Accessing and changing index.html

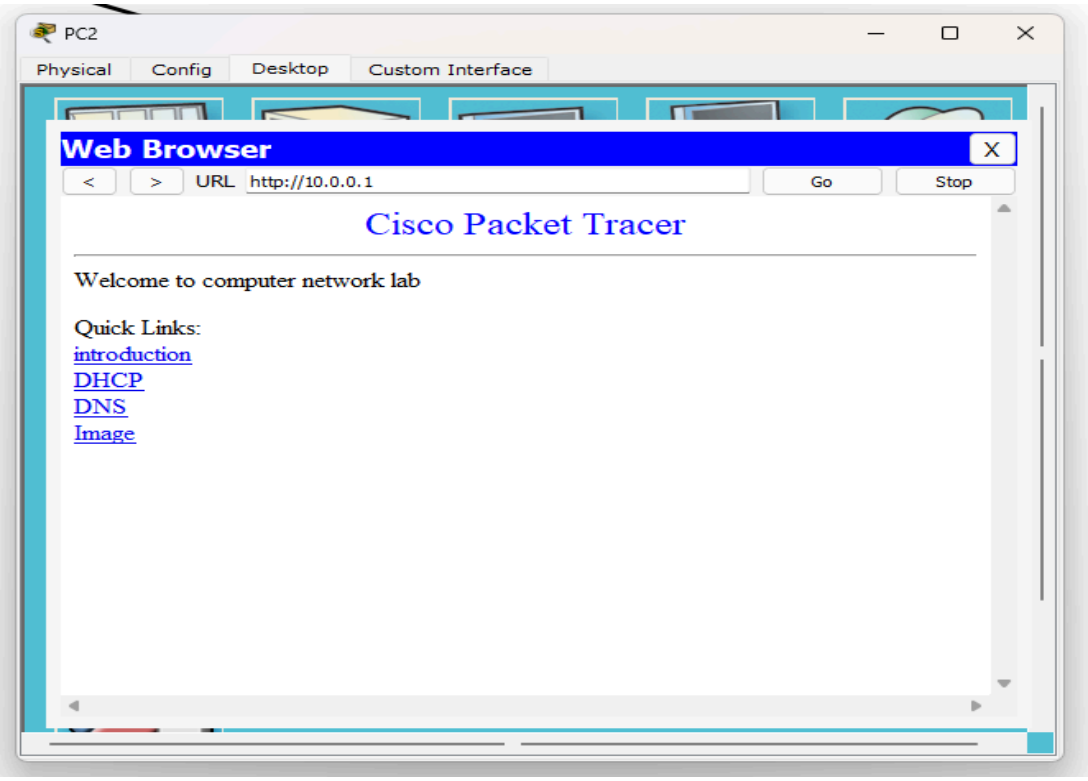


Fig : webBrowser output