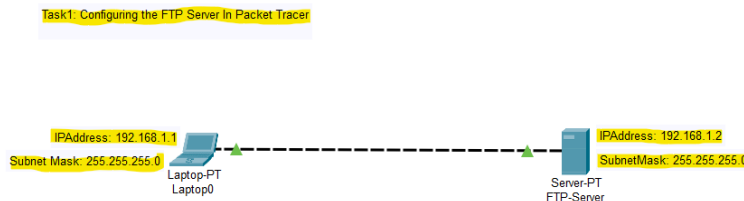


Name	:	Jawad Ahmed
Roll No	:	20P-0165
Section	:	BCS-5A

Lab Task 6

Task 1: Configuring an FTP server in Packet Tracer

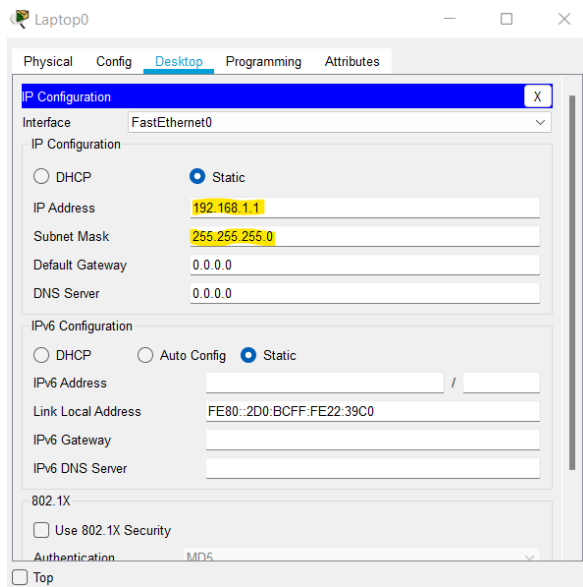
Step1: Build the Network Topology.



Step2: Assign IP Addresses to the Node and the Server.

1. For Laptop Assign IP address =>
192.168.1.1 with subnet mask =>
255.255.255.0.
2. For the Server Assign IP address =>
192.168.1.2 with subnet mask =>
255.255.255.0.

Laptop IP Configuration:

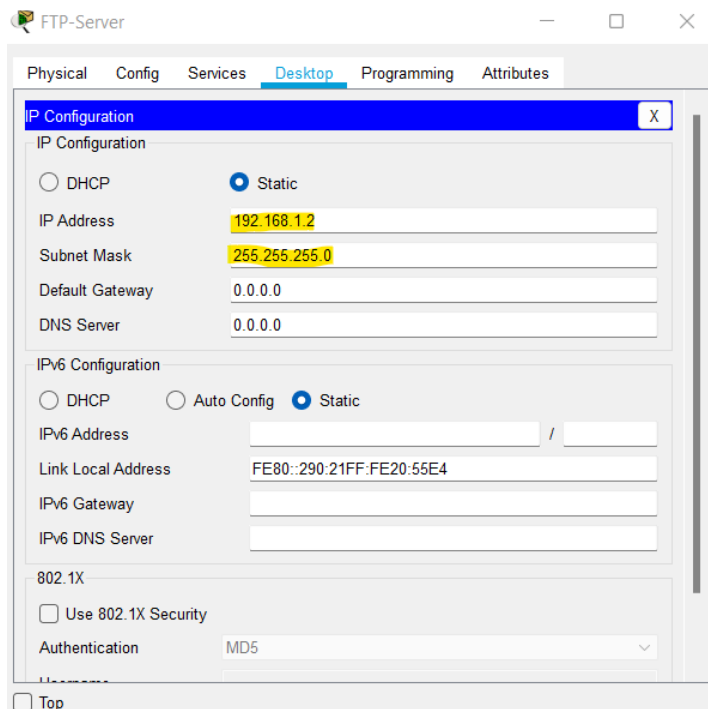


The screenshot shows the 'IP Configuration' window for 'Laptop0'. The 'Desktop' tab is selected. The 'Interface' is 'FastEthernet0'. Under 'IP Configuration', 'Static' is selected. The 'IP Address' is '192.168.1.1', 'Subnet Mask' is '255.255.255.0', 'Default Gateway' is '0.0.0.0', and 'DNS Server' is '0.0.0.0'. Under 'IPv6 Configuration', 'Static' is selected. The 'IPv6 Address' is empty, 'Link Local Address' is 'FE80::2D0:BCFF:FE22:39C0', 'IPv6 Gateway' is empty, and 'IPv6 DNS Server' is empty. The '802.1X' section has 'Use 802.1X Security' unchecked. The 'Authentication' dropdown is set to 'MD5'. A 'Top' button is at the bottom left.

IP Configuration	
Interface	FastEthernet0
IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IP Address	192.168.1.1
Subnet Mask	255.255.255.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0
IPv6 Configuration	
<input type="radio"/> DHCP	<input type="radio"/> Auto Config <input checked="" type="radio"/> Static
IPv6 Address	
Link Local Address	FE80::2D0:BCFF:FE22:39C0
IPv6 Gateway	
IPv6 DNS Server	
802.1X	
<input type="checkbox"/> Use 802.1X Security	
Authentication	MD5

☐ Top

Server IP Configuration:

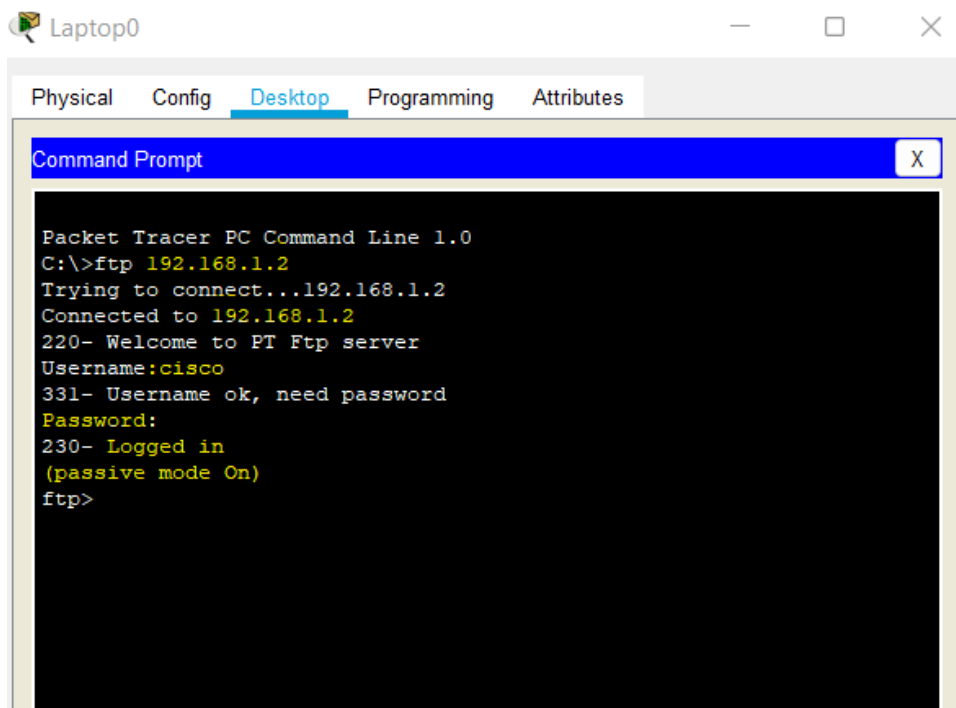


Step3: Now try using an FTP client built in the laptop to send files to an FTP server configured in the Server.

Connect with the server by using the **ftp** command.

=> ftp 192.168.1.2

Provide the username(cisco) and password(cisco) [which are the defaults] for ftp login.

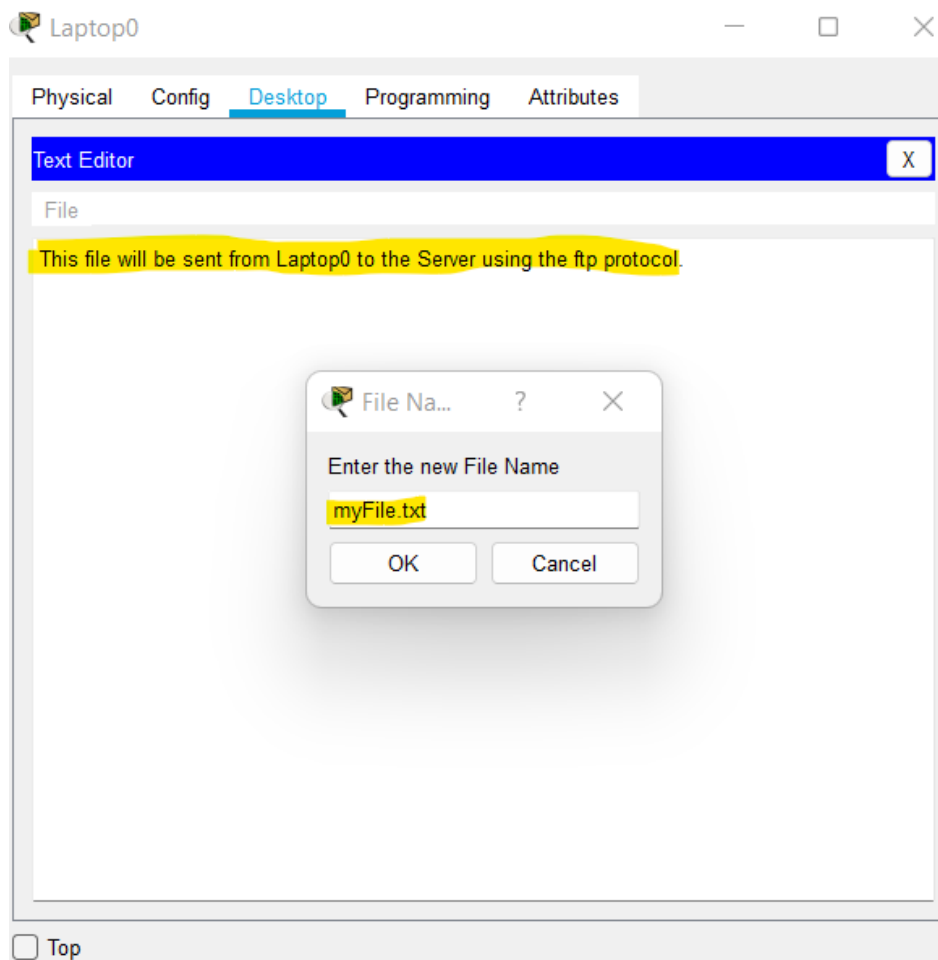


You are now in the FTP prompt.

Laptop0 has an FTP client which can be used to read, write, delete and rename files present in the FTP server.

Step4: Create a file in the Laptop then upload it to the server using FTP.

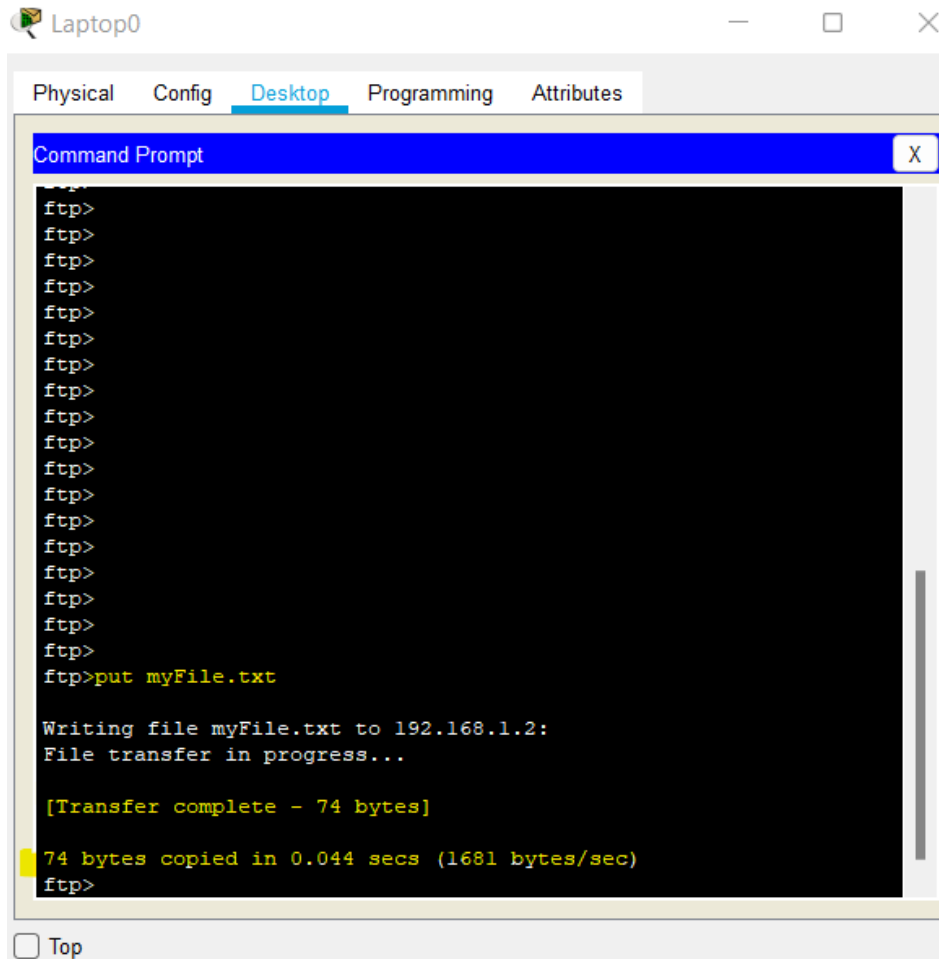
Open the Text Editor from **Desktop** and then create a new file with the name myFile.txt.



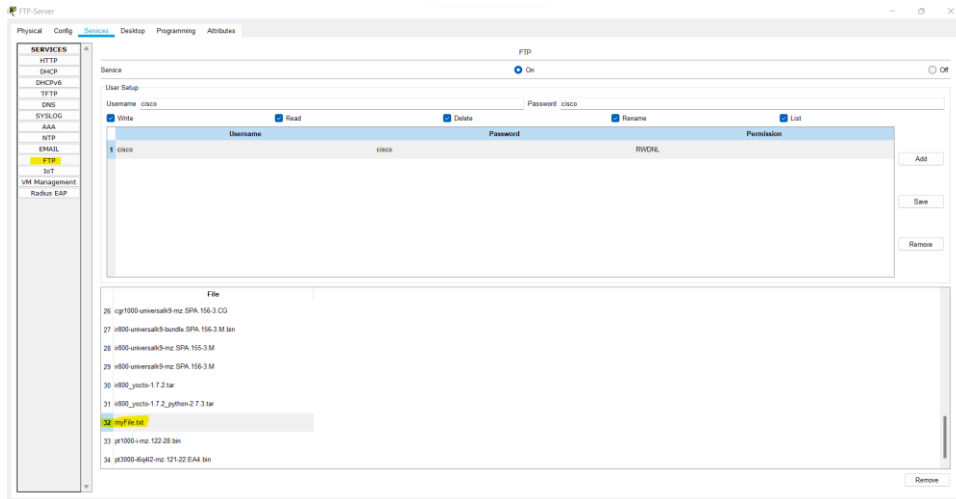
Step5: Upload the file using the **put** command.

We are in the /ftp directory of server so when we upload the file that will goes into that directory.

```
=> put myFile.txt
```



Let's cross check this by going into the server configuration. Go Into the **Services->FTP**. Slide down you will find a **myFile.txt** that you uploaded.



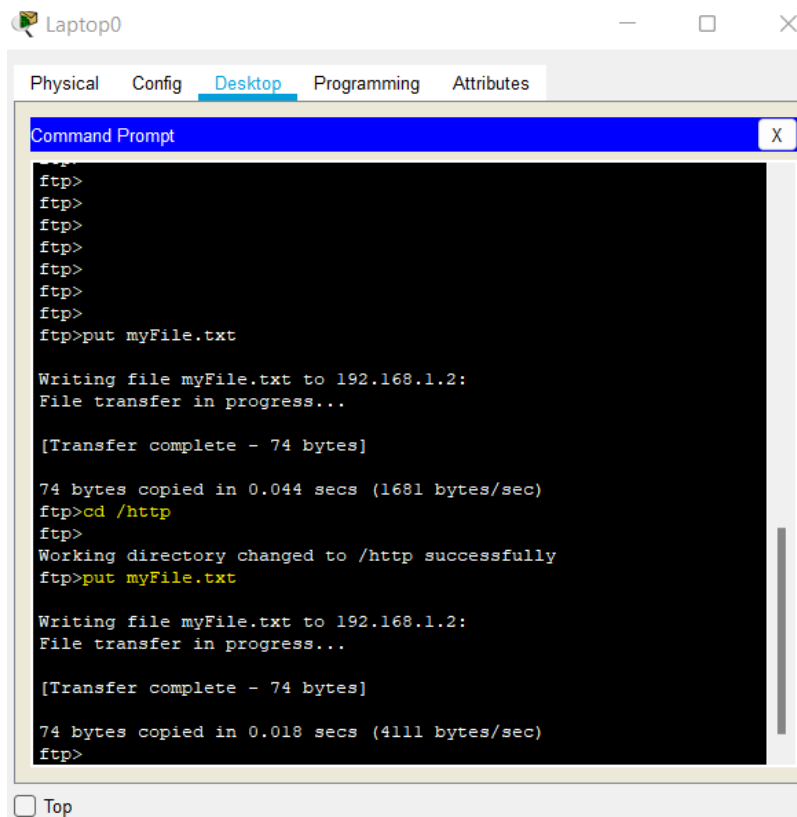
Uploading the File to the Http Directory

We are directed to the **ftp** directory. Let's say we want to add another page to our website. So, for that we may want to upload that page index file to the http directory so that http can access it and show that page on screen. So, let's upload the file into the http directory.

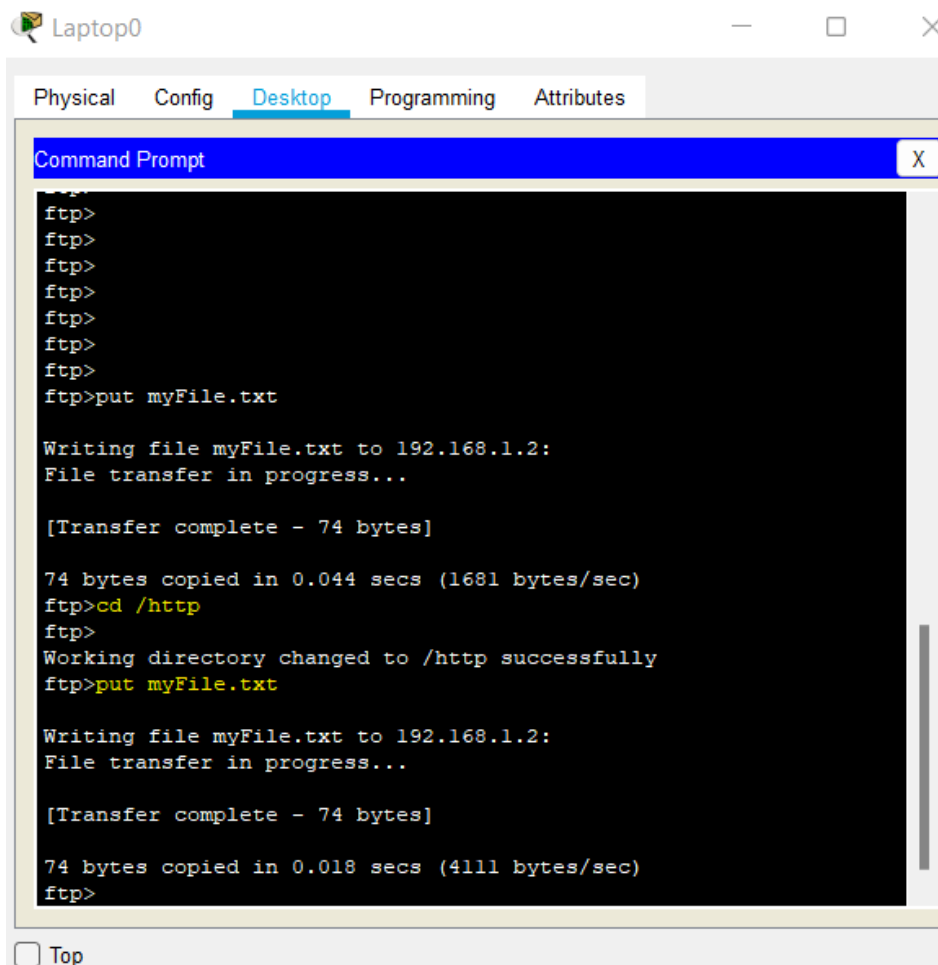
Type the following Commands in the command Prompt.

=> cd /http

=> put myFile.txt



Now go the **FTP-Server->Services->HTTP**. You will find the myFile.txt there.



```
ftp>
ftp>
ftp>
ftp>
ftp>
ftp>
ftp>
ftp>put myFile.txt

Writing file myFile.txt to 192.168.1.2:
File transfer in progress...

[Transfer complete - 74 bytes]

74 bytes copied in 0.044 secs (1681 bytes/sec)
ftp>cd /http
ftp>
Working directory changed to /http successfully
ftp>put myFile.txt

Writing file myFile.txt to 192.168.1.2:
File transfer in progress...

[Transfer complete - 74 bytes]

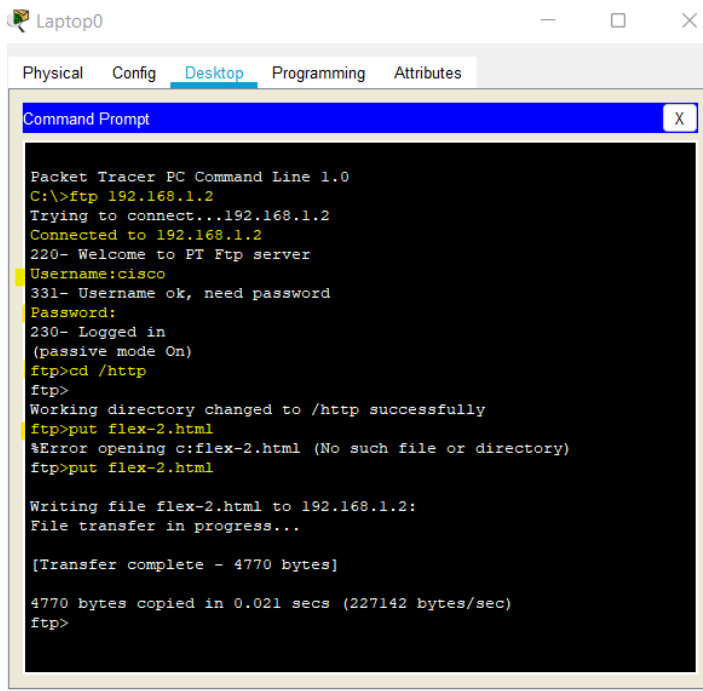
74 bytes copied in 0.018 secs (4111 bytes/sec)
ftp>
```

Task: Create and Upload html file to HTTP server directory Using FTP.

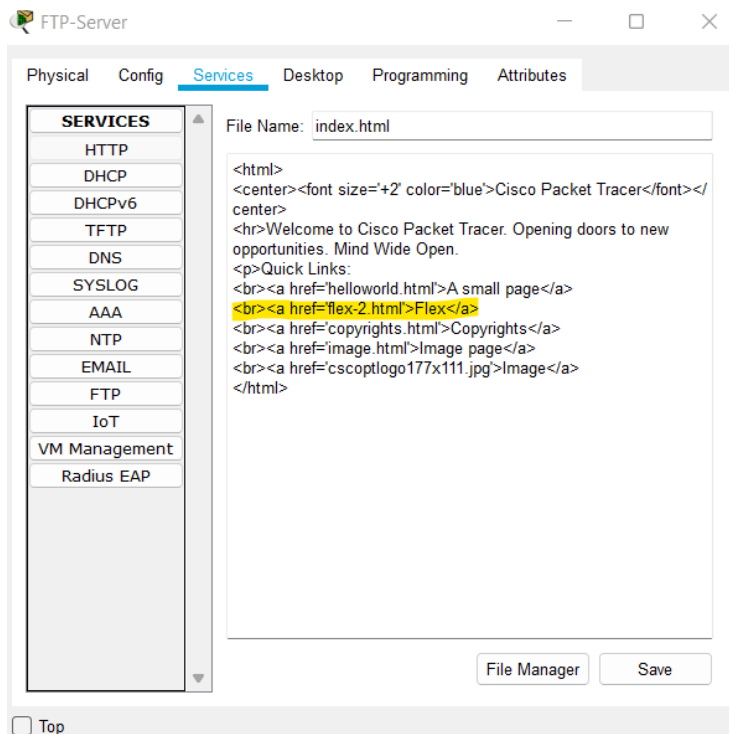
Now let's take a scenario that we want to add a new page. So, for that let's upload the **HTML** file to the **HTTP** and then add that file to the **index.html**.

So we are in the http directory.

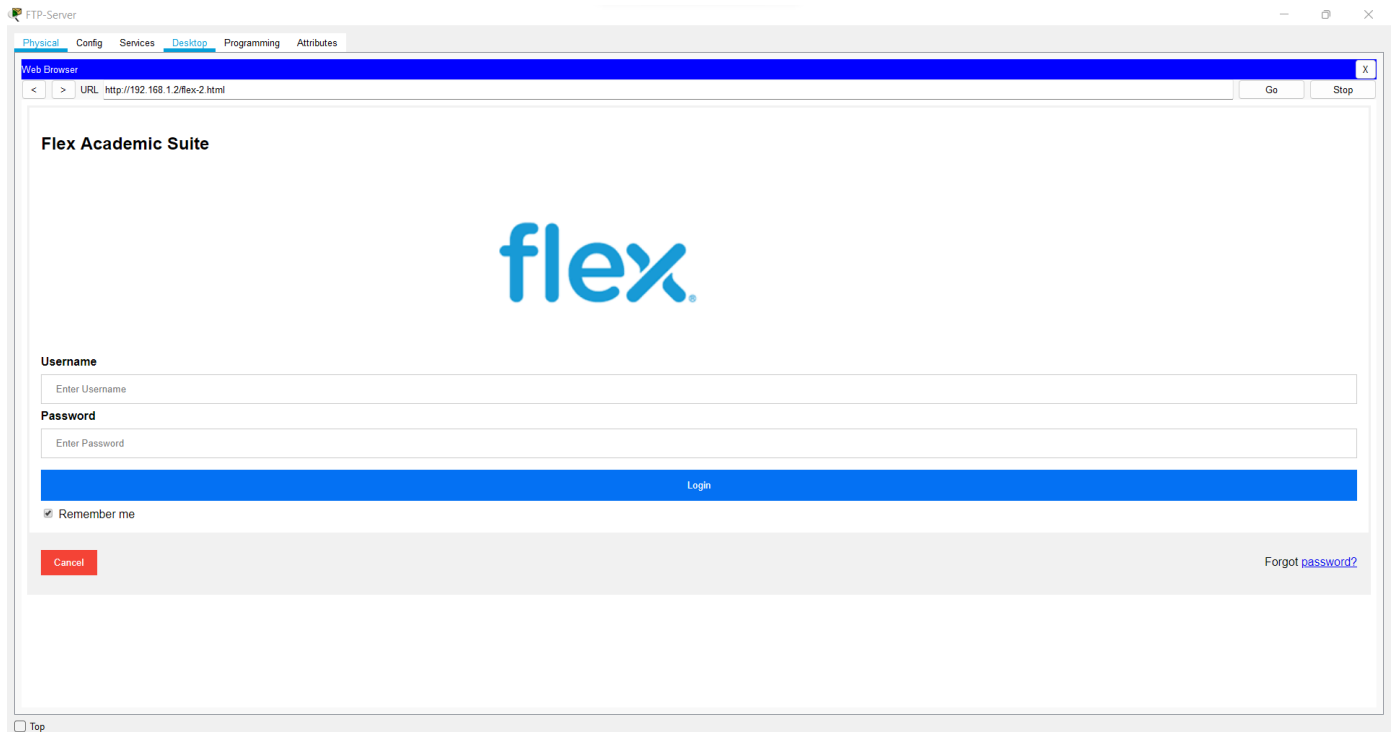
Step1: Create the HTML file with the name **flex-2.html** and put some html code in their and put that file into the http directory using the steps shown above.



Check File Uploaded Successfully or Not. Then add that file link to the **index.html** file.



Let's see if the page is visible or not. Open the **Web Browser** and then type the server IP address. You will find the link with the name **Flex** just click on it you will be redirected the Flex page and all the code you written the **flex-2.html** will be shown to you.

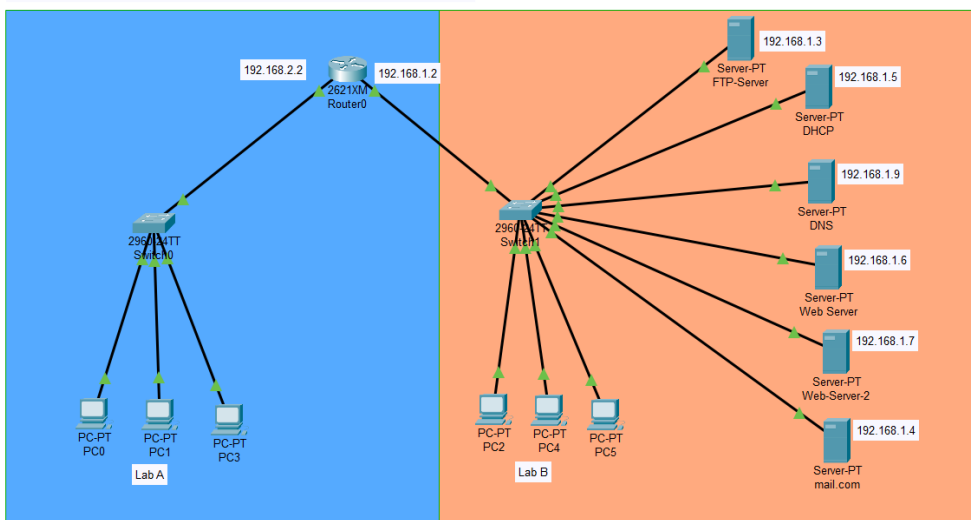


Task: Configure Mail server, Ftp Server, DHCP Server, DNS Server and web Server in a single topology, use router and switch.

Scenario: We have two labs and there are three PC's in both the Labs A and B. We want three websites to be accessed on both of these Lab PC's and network IP of both the Labs are different. We want Email communication between both the Lab PC's and also All the PC's can transfer file to the server called FTP and other PC's can get these files from their. All the PC's will get assigned IP's using the DHCP Server.

Step1: Create This Topology.

Task: Configure Mail server, Ftp Server, DHCP Server, DNS Server and web Server in a single topology, use router and switch.

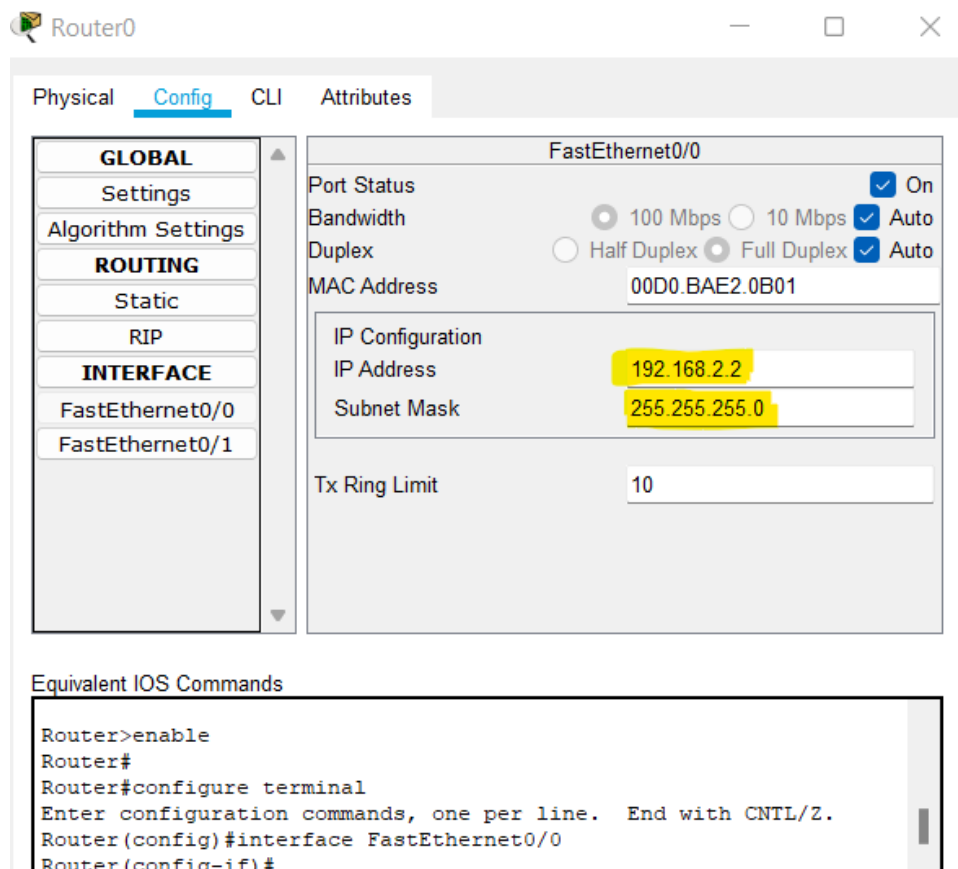


First of all I am going to setup folowing server

1. DHCP
2. DNS
3. Web Server

After Setting up all these servers then I will setup the Mail Server and FTP server.

Step2: Assign Ip Addresses to the Router.



The screenshot shows the configuration window for Router0 in Cisco Packet Tracer. The 'Config' tab is selected, and the 'FastEthernet0/0' interface is chosen from the left-hand menu. The interface configuration is displayed on the right, showing the following settings:

- Port Status: ☒ On
- Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto
- MAC Address: 00D0.BAE2.0B01
- IP Configuration:
 - IP Address: 192.168.2.2
 - Subnet Mask: 255.255.255.0
- Tx Ring Limit: 10

Below the configuration window, the 'Equivalent IOS Commands' section shows the following commands:

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

Step3: Go to router CLI and Add Pool P1 and P2.

```
Router#  
Router#  
Router#configure terminal  
Enter configuration commands, one per line. End with CNTL/Z.  
Router(config)#  
Router(config)#ip dhcp pool P1  
Router(dhcp-config)#network 192.168.1.0 255.255.255.0  
Router(dhcp-config)#default-router 192.168.1.2  
Router(dhcp-config)#ip dhcp pool P2  
Router(dhcp-config)#network 192.168.2.0 255.255.255.0  
Router(dhcp-config)#default-router 192.168.2.2  
Router(dhcp-config)#%DHCPD-4-PING_CONFLICT: DHCP address  
conflict: server pinged 192.168.2.2.
```

Step4: We need three servers to have three websites. Assign the given IP addresses to the three servers and edit the index file as per your need.

First Edit DHCP server 192.168.1.5 => slate

DHCP

Physical Config Services **Desktop** Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IP Address 192.168.1.5

Subnet Mask 255.255.255.0

Default Gateway 192.168.1.2

DNS Server 192.168.1.9

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::201:42FF:FE05:3889

IPv6 Gateway

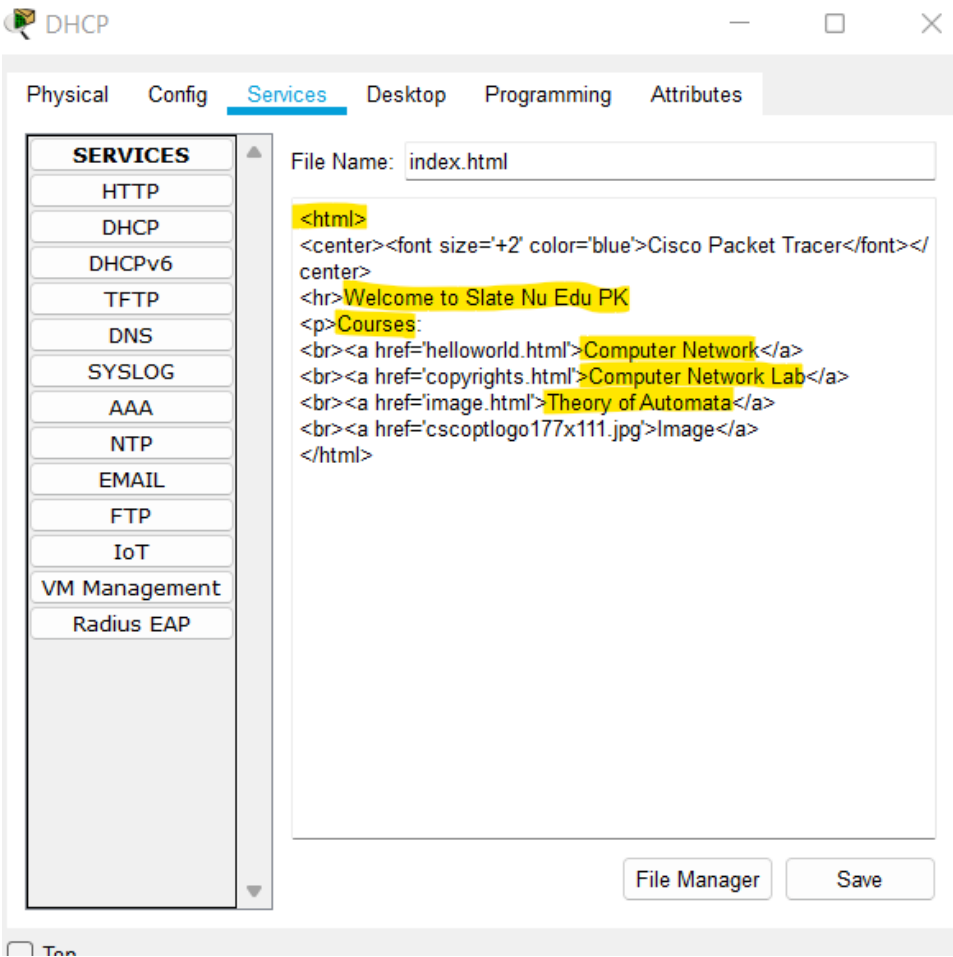
IPv6 DNS Server

802.1X

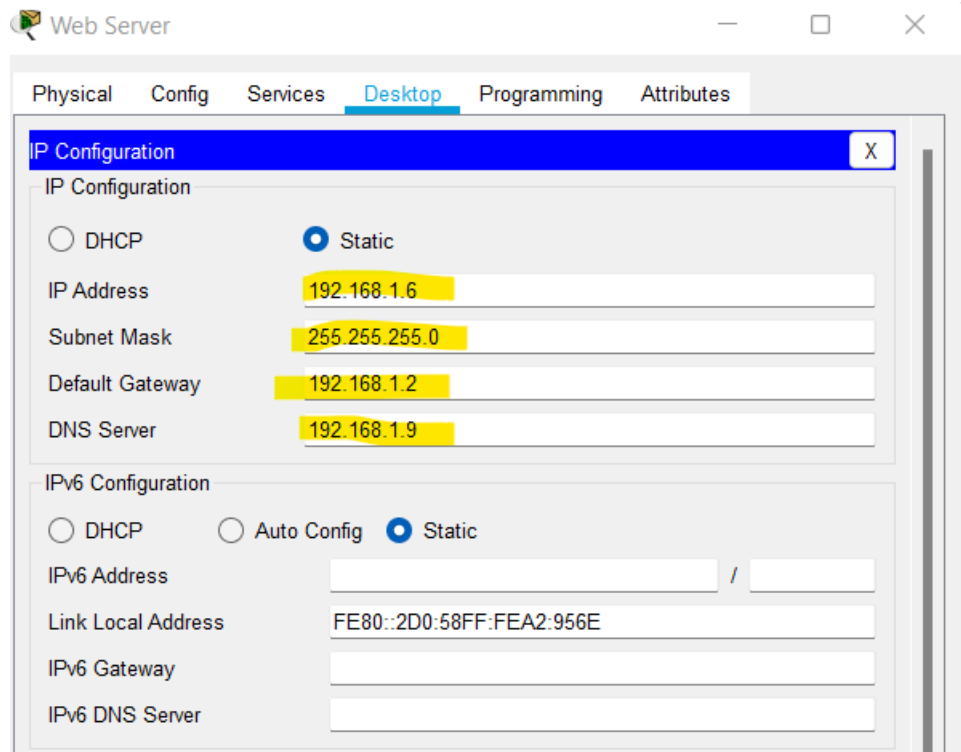
☐ Use 802.1X Security

Authentication MD5

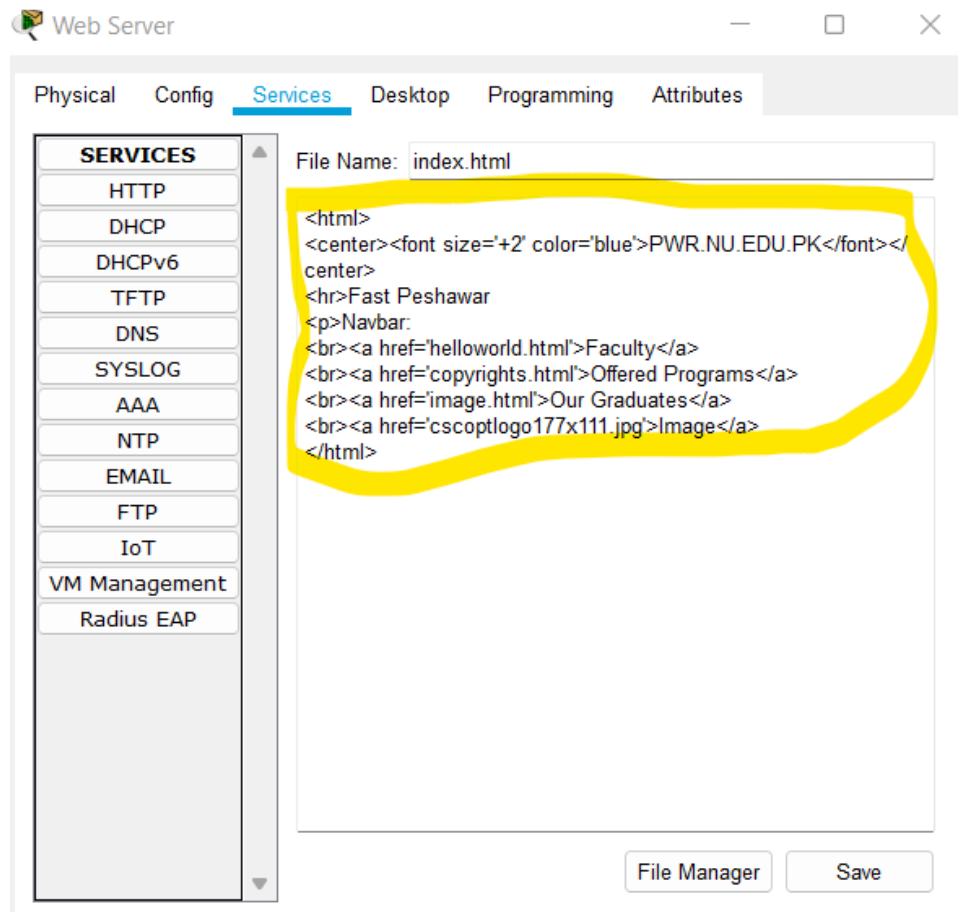
Go to the services and then Edit the index.html file.



Second Edit Web Server server 192.168.1.6 => pwr .



Go to the Services Tab and Edit the index.html file as per your need.



Third Edit Web Server-2 server 192.168.1.7 => flex.

Web-Server-2

Physical Config Services **Desktop** Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IP Address 192.168.1.7

Subnet Mask 255.255.255.0

Default Gateway 192.168.1.2

DNS Server 192.168.1.9

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

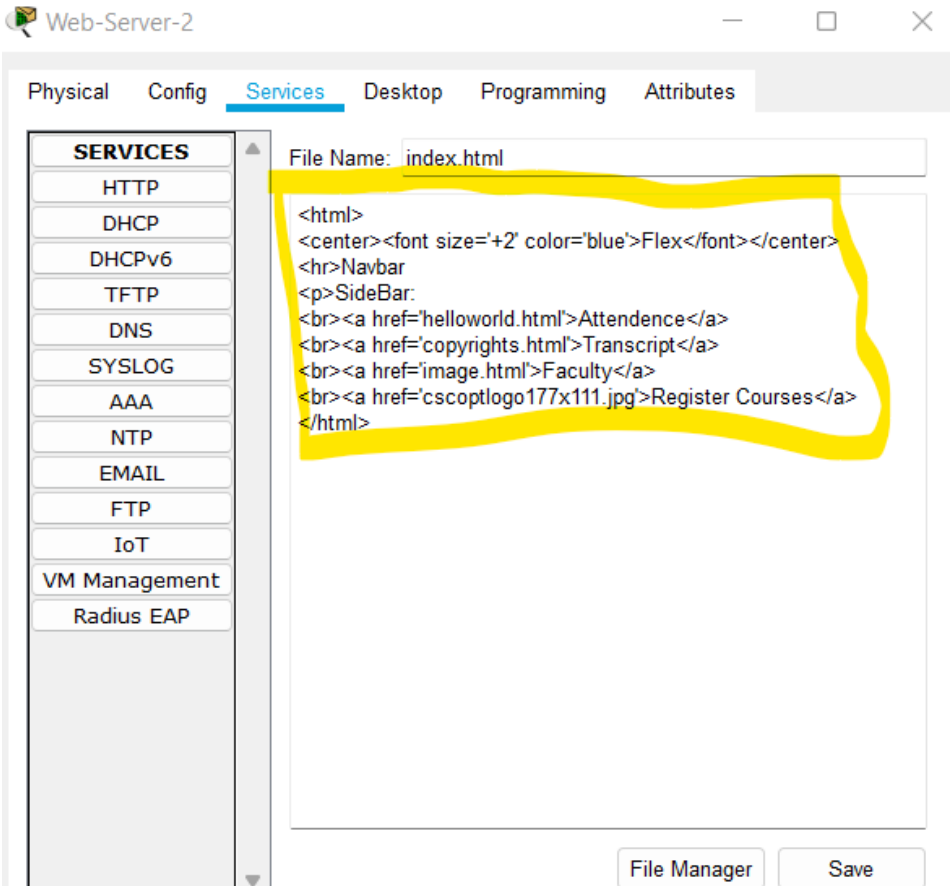
Link Local Address FE80::2E0:A3FF:FE2C:B518

IPv6 Gateway

IPv6 DNS Server

802.1X

Then Edit the index.html file.



After All this done now On the http and https service in the DNS server and then add the websites and the servers IP addresses.

DNS Service ☒ On ☐ Off

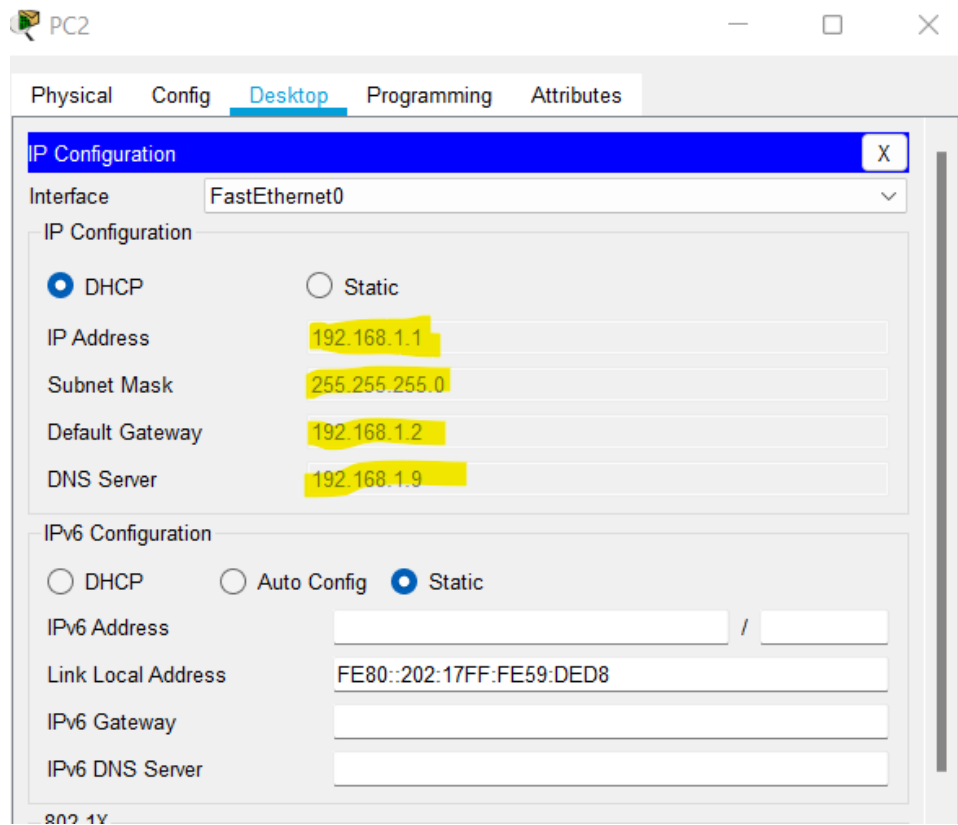
Resource Records

Name Type A Record

Address

No.	Add	Name	Type	Remove	Detail
0	www.state.mt.edu.pk/		A Record		192.168.1.5
1	www.flex.mtu.edu.pk/		A Record		192.168.1.7
2	www.pwr.mtu.edu.pk/		A Record		192.168.1.6

Now to Go the any Lab PC and then assign IP using the option DHCP.



Now open the browser and enter the website url.

PC2



Physical Config **Desktop** Programming Attributes

Web Browser

X



URL

Go

Stop

Flex

Navbar

SideBar:

[Attendance](#)

[Transcript](#)

[Faculty](#)

[Register Courses](#)

PC2



Physical Config Desktop Programming Attributes

Web Browser

X

< > URL Go Stop

PWR.NU.EDU.PK

Fast Peshawar

Navbar:

[Faculty](#)

[Offered Programs](#)

[Our Graduates](#)

[Image](#)

PC2



Physical Config Desktop Programming Attributes

Web Browser

X

< > URL Go Stop

Cisco Packet Tracer

Welcome to Slate Nu Edu PK

Courses:

[Computer Network](#)

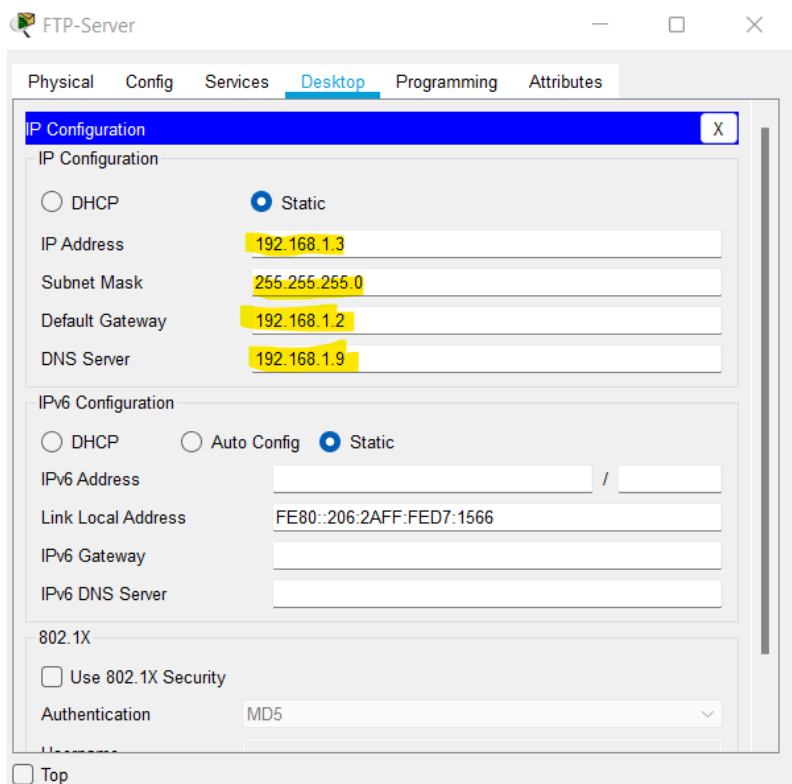
[Computer Network Lab](#)

[Theory of Automata](#)

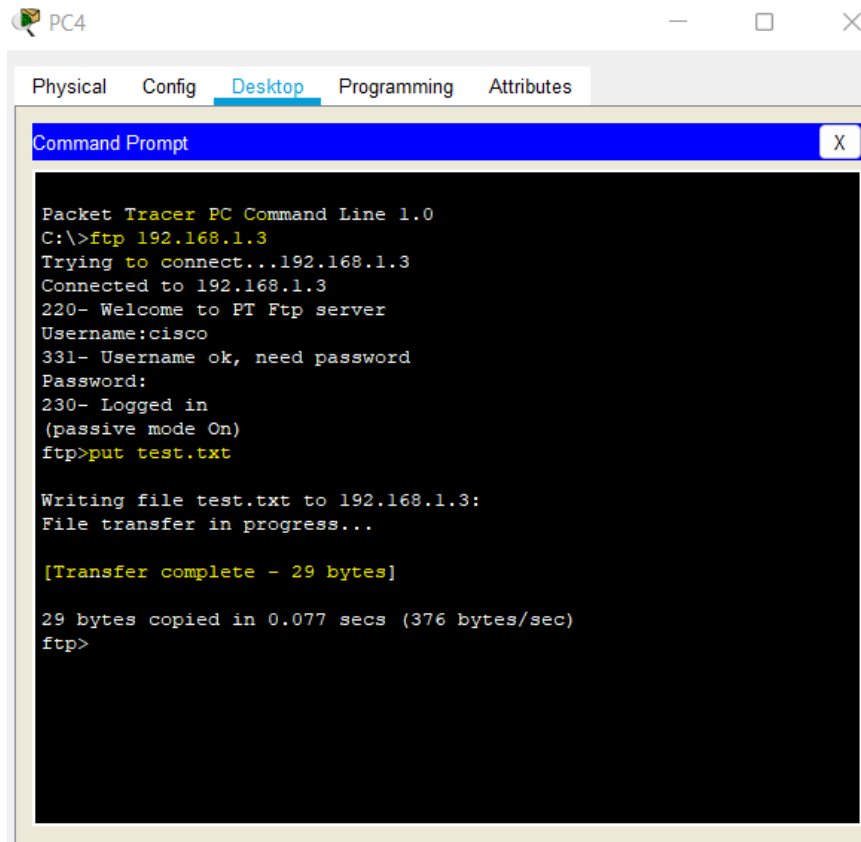
[Image](#)

After successfully completed the DNS, Web and DHCP Server Now create the ftp server.

1. First of all go to the configuration of the ftp server and assign IP address, subnet mask, default gateway and then DNS server Ip address.
2. The Ftp server IP address will needs the same network to which end of the router it is connected. Like In my case the ftp server connected to the **Fa0/1** so the network will be 192.168.1.0. So, the IP address you are assigning must have to same network.



Let's connect to the ftp server and then upload the file from PC4.



The screenshot shows a Packet Tracer PC Command Line window for PC4. The window has tabs for Physical, Config, Desktop, Programming, and Attributes, with Desktop selected. The Command Prompt shows the following sequence of commands and responses:

```
Packet Tracer PC Command Line 1.0
C:\>ftp 192.168.1.3
Trying to connect...192.168.1.3
Connected to 192.168.1.3
220- Welcome to PT Ftp server
Username:cisco
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp>put test.txt

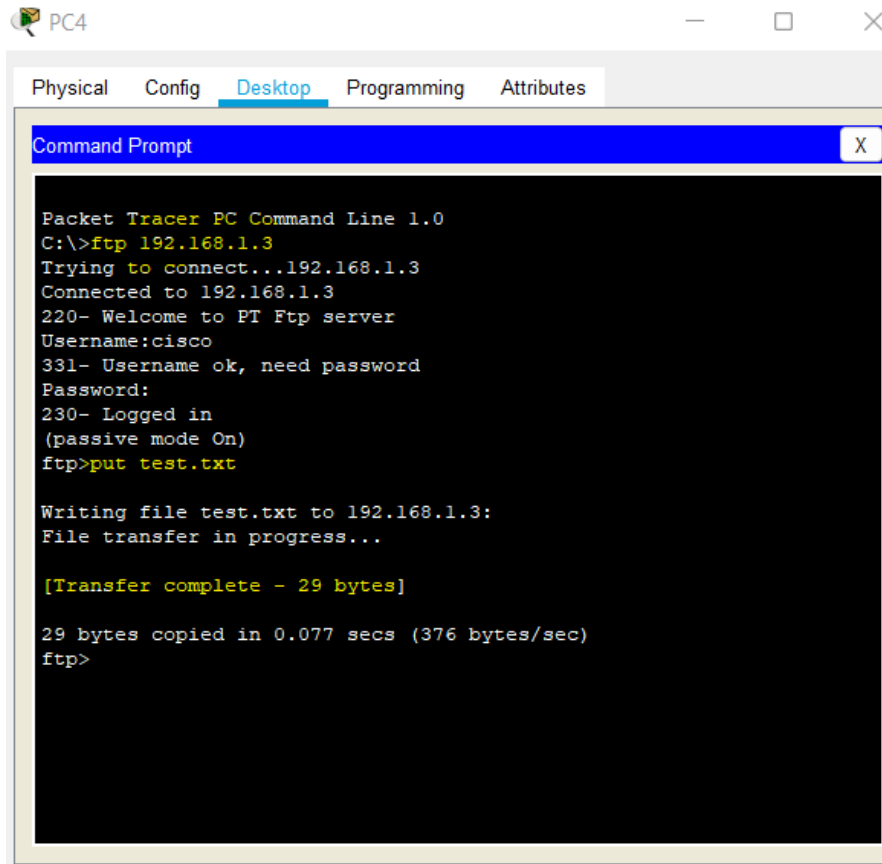
Writing file test.txt to 192.168.1.3:
File transfer in progress...

[Transfer complete - 29 bytes]

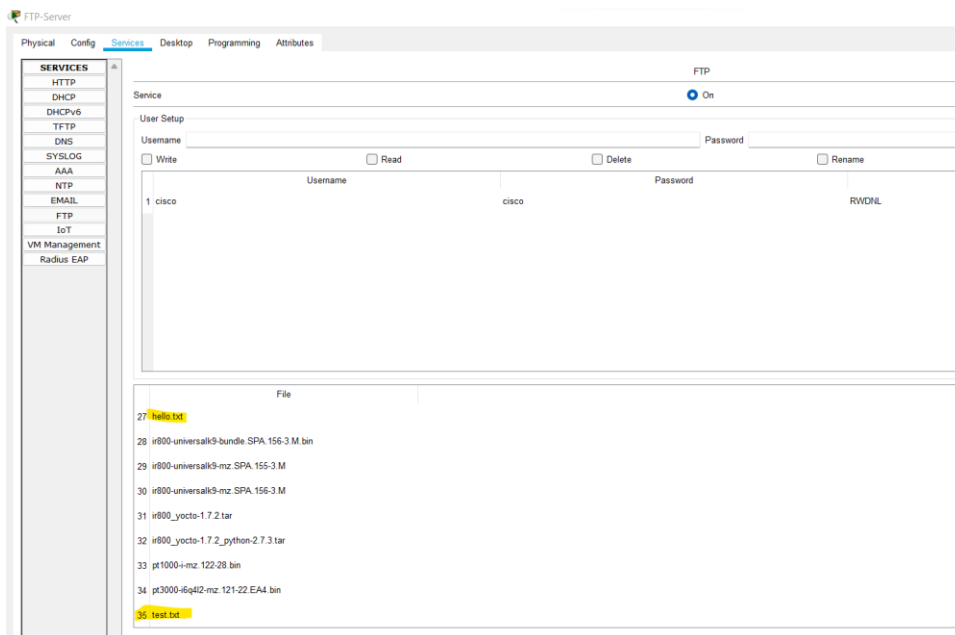
29 bytes copied in 0.077 secs (376 bytes/sec)
ftp>
```

File Transfer successfully done.

Let's try from another PC.



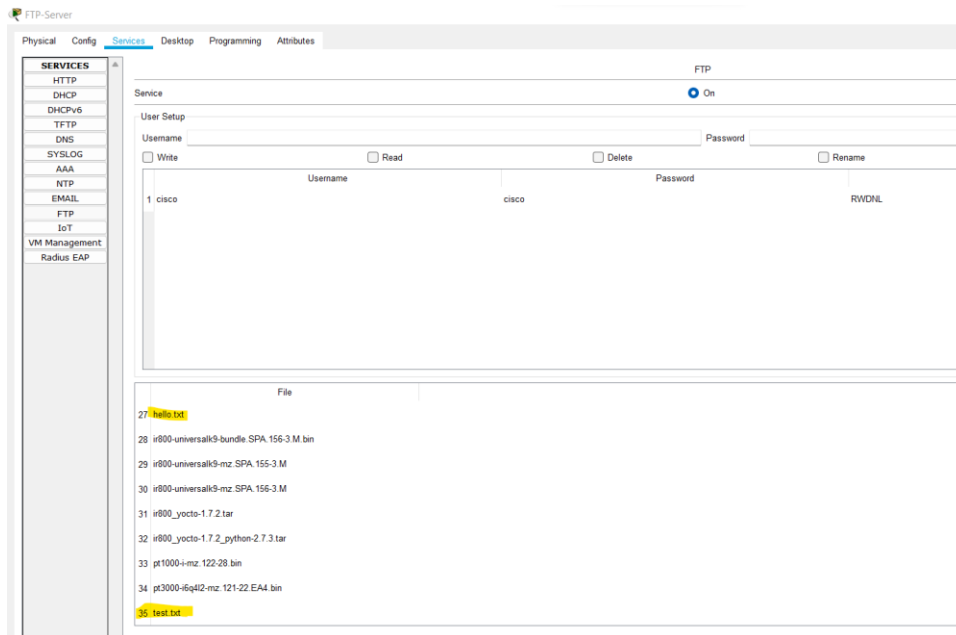
GO to the FTP server -> Services -> FTP. Then you will find these putted files their.



Mail Server Configuration.

Step1: Configure IP addresses on the PCs, DNS Server and the Mail Server

We have already done the DNS server configuration and for the PC's we have already done the DHCP Server. So now configure the Mail Server.



Step2: Configure mail clients on the PCs and mail service on the generic server.

I am doing for PC0 same goes for all the other PC's.

Click on PC -> Desktop -> Email -> Configure Email.

Add username, password and mail server. We are using the **mail.com** server.

The screenshot shows a window titled 'PC0' with tabs for Physical, Config, Desktop, Programming, and Attributes. The 'Desktop' tab is active, and a 'Configure Mail' dialog box is open. The dialog has three sections: User Information, Server Information, and Logon Information. In the User Information section, 'Your Name' is 'pc0' and 'Email Address' is 'pc1@mail.com'. In the Server Information section, both 'Incoming Mail Server' and 'Outgoing Mail Server' are 'mail.com'. In the Logon Information section, 'User Name' is 'pc0' and 'Password' is masked with dots. At the bottom are 'Save', 'Clear', and 'Reset' buttons.

Section	Field	Value
User Information	Your Name	pc0
	Email Address	pc1@mail.com
Server Information	Incoming Mail Server	mail.com
	Outgoing Mail Server	mail.com
Logon Information	User Name	pc0
	Password

Do it same for all the other PC's. Now let's add all these users in the mail server with the passwords.

Go to Mail Server -> Services -> EMAIL.

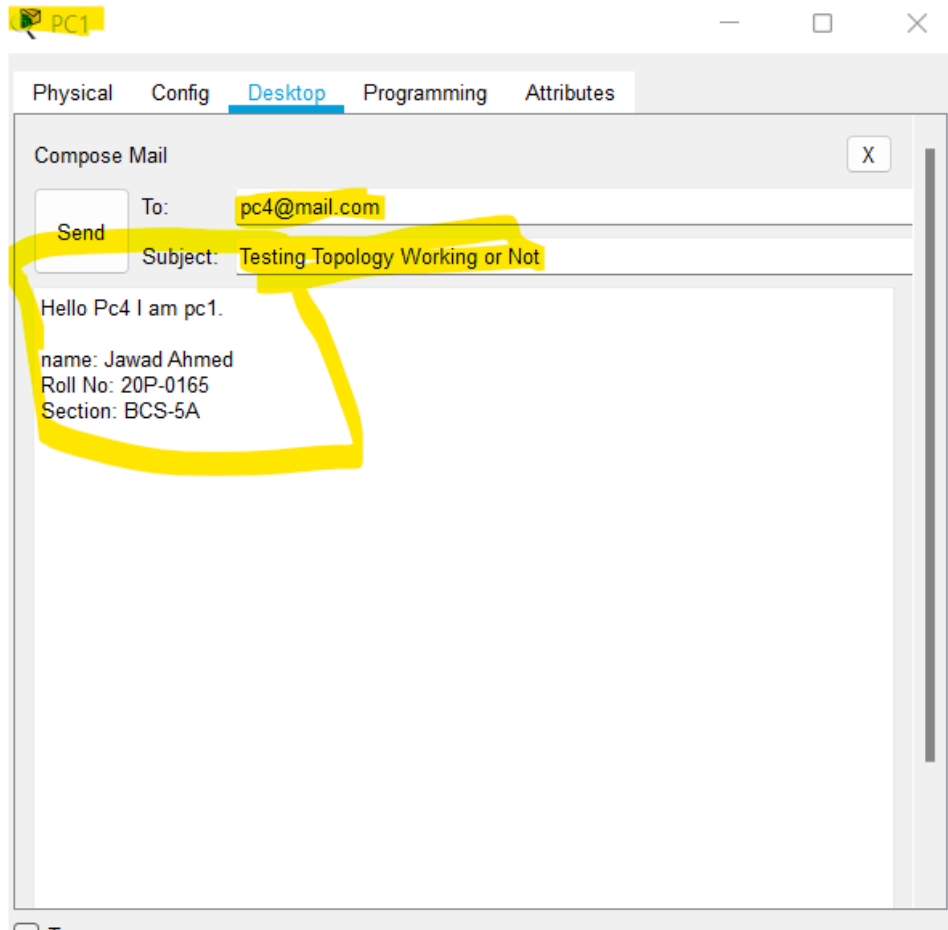
Then add all username and passwords responding to the users.

The screenshot shows the 'mail.com' configuration window with the 'Services' tab selected. The 'EMAIL' service is configured with 'SMTP Service' and 'POP3 Service' both set to 'ON'. Under 'User Setup', the 'Domain Name' is 'mail.com'. A list of users is shown: pc0, pc1, pc2, pc3, pc4, and pc5. The 'Password' field is set to 'pc1023'. On the right side, there are buttons for '+', '-', 'Change', and 'Password'.

Service	Status
SMTP Service	ON
POP3 Service	ON

Domain Name	User	Password
mail.com	pc1	pc1023
mail.com	pc0	
mail.com	pc1	
mail.com	pc2	
mail.com	pc3	
mail.com	pc4	
mail.com	pc5	

Step5: Let's test this by sending email from PC1 to PC4.



Step6: Verify Email received at the PC4 end or not.

