Green University of Bangladesh
Department of Computer Science and Engineering (CSE)

Faculty of Sciences and Engineering

Semester: (Fall, Year:2024), B.Sc. in CSE (Day)

Lab Report NO : 01

Course Title: Computer Networking Lab

Course Code: CSE 312 **Section:** 221_D16

Lab Experiment Name: Configuration of SMTP and FTP Servers in a Network

Student Details

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Lab Date : 14/9/2024
Submission Date : 16/9/2024
Course Teacher's Name : Ms. Maisha Muntaha

Lab Report Status

Marks: …… **Signature:.....**
Comments:..... **Date:.....**

1. TITLE OF THE LAB REPORT EXPT

Configuration of SMTP and FTP Servers in a Network.

2. OBJECTIVES

- Implement SMTP Server Configuration to facilitate seamless email transmission and reception within the confines of a local network.

- Establish an FTP server infrastructure to enable efficient file sharing among interconnected devices in the network.

- Ensure optimal communication within the network by leveraging the functionalities of the configured SMTP and FTP servers.

3. PROCEDURE

a. **Cisco Packet Tracer Simulation Software**: Employed for network modeling and simulation to replicate real-world networking scenarios.

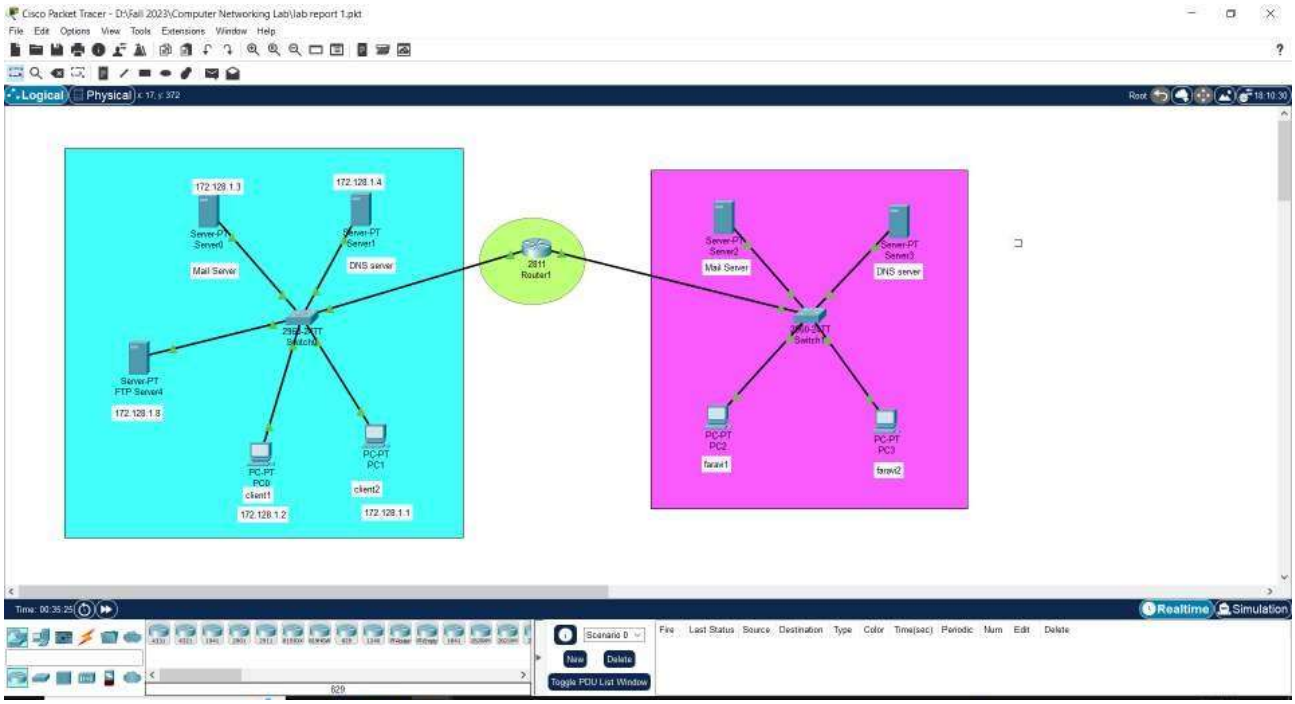
b. **Virtual PCs for Servers and Clients**: Utilize virtual machines to emulate server and client functionalities, ensuring a controlled and scalable environment.

c. **Network Switches and Routers:** Employed to manage and direct data traffic within the simulated network, facilitating efficient communication between devices.

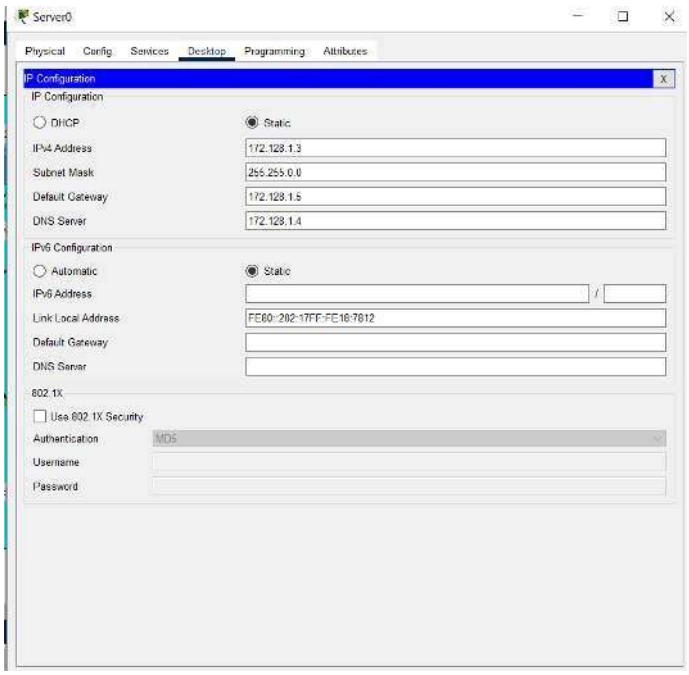
d. **Connection Ware:** The connecting element instrumental in establishing and maintaining network connections, ensuring the seamless flow of data across the simulatedenvironment.

4. IMPLEMENTATION [3 marks]

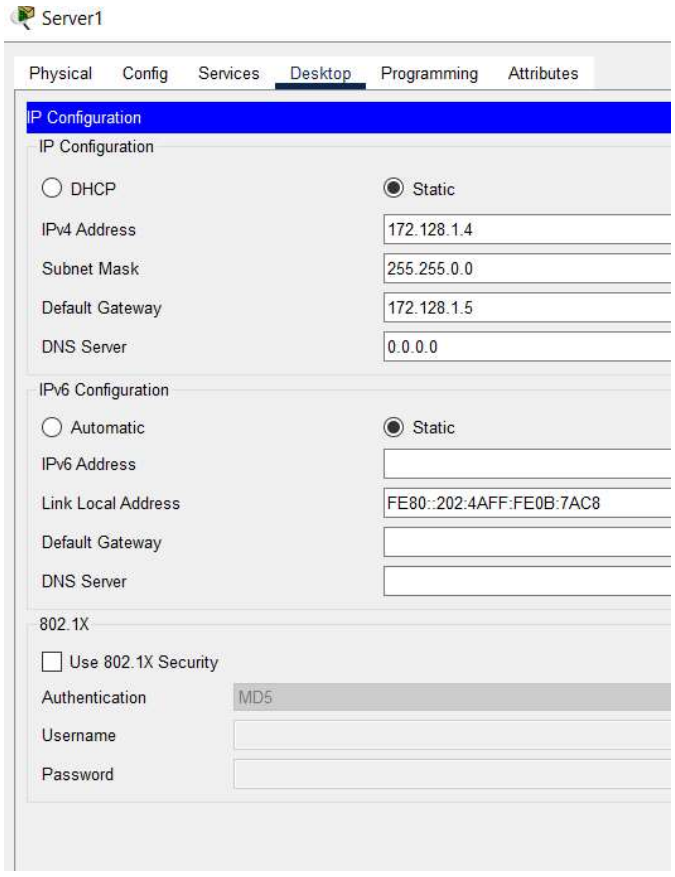
Model:

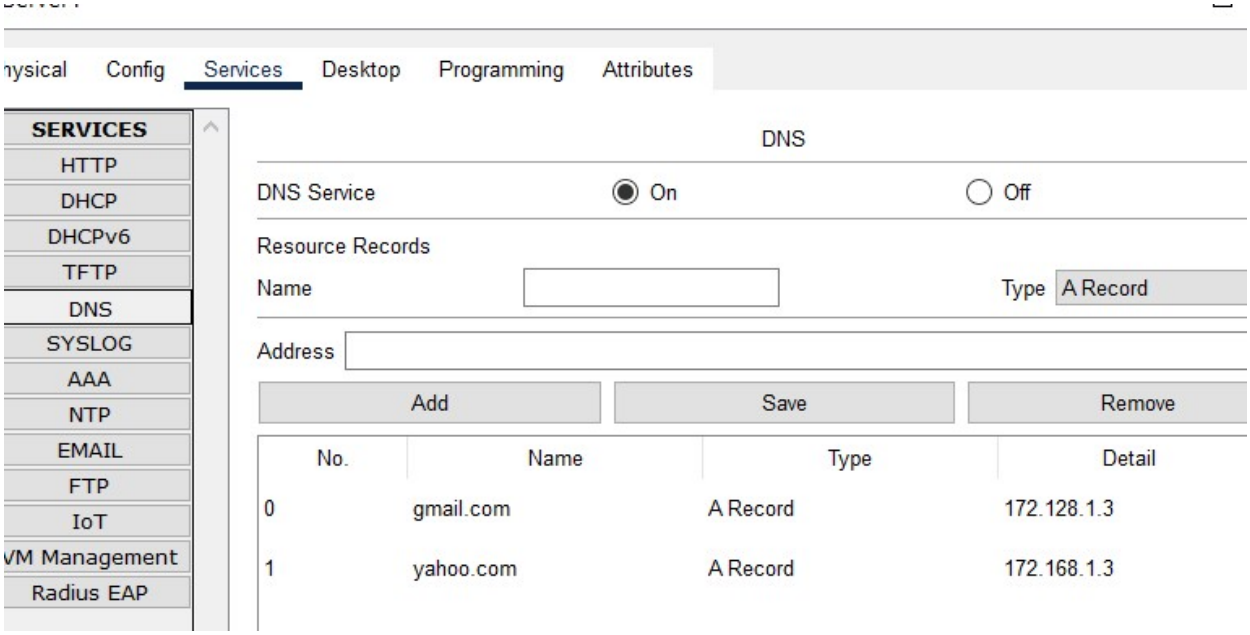


Server configuration :

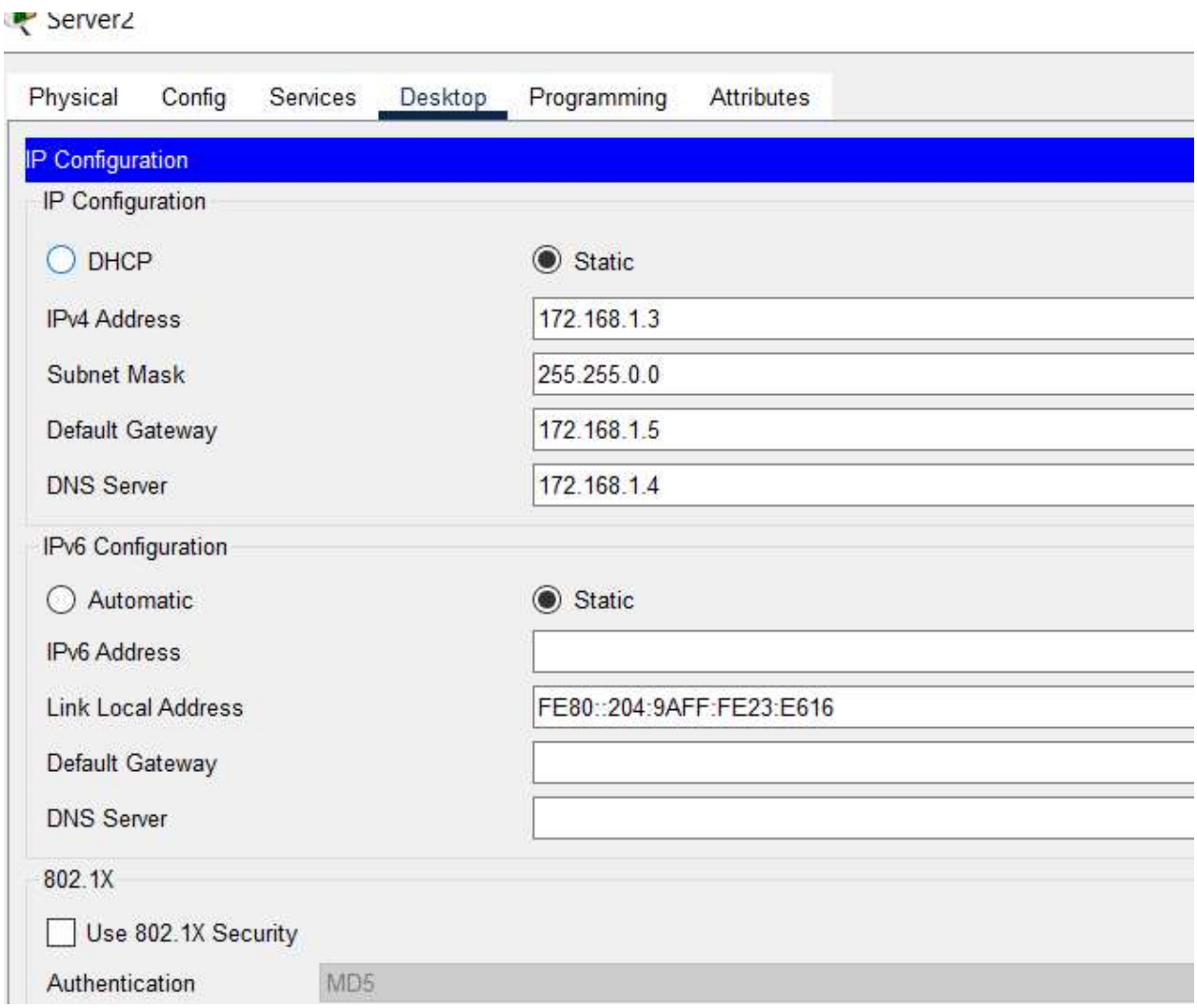


Mail server (gmail.com)

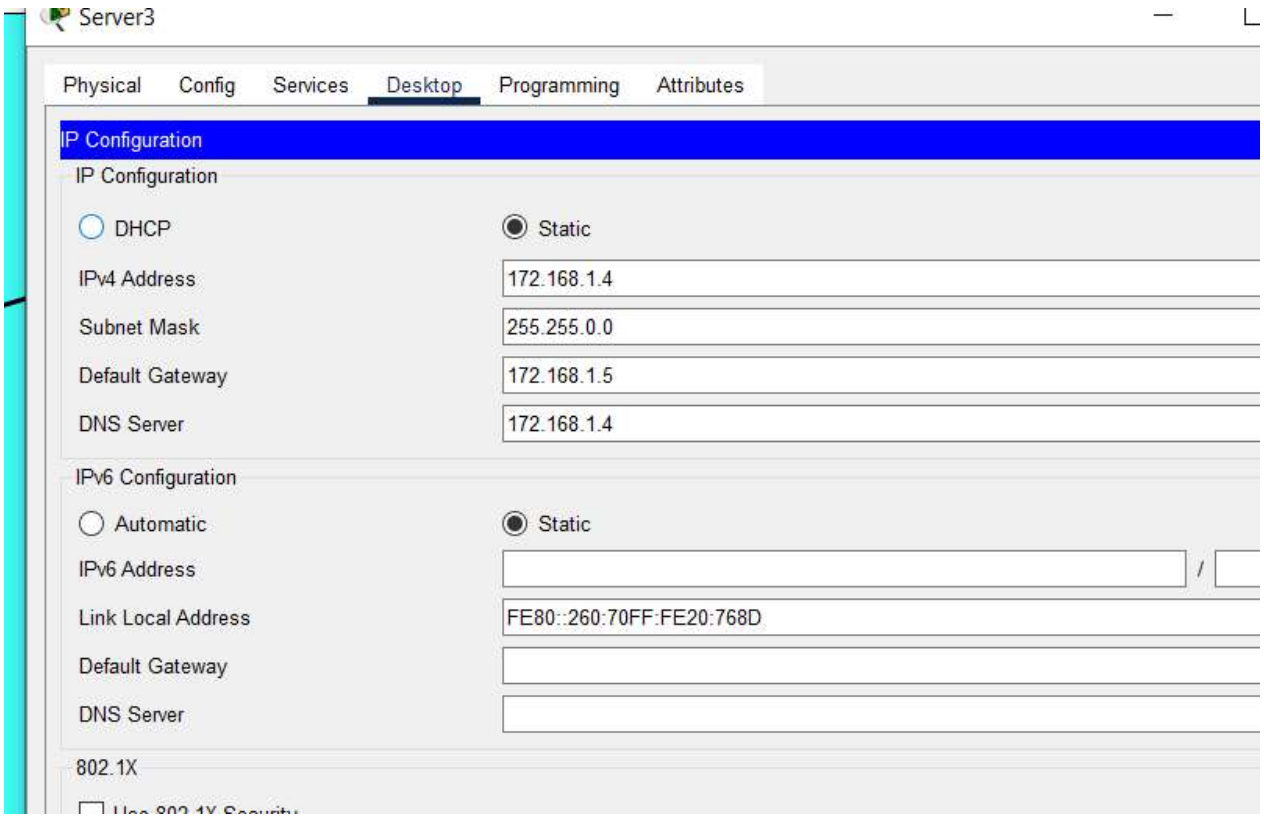


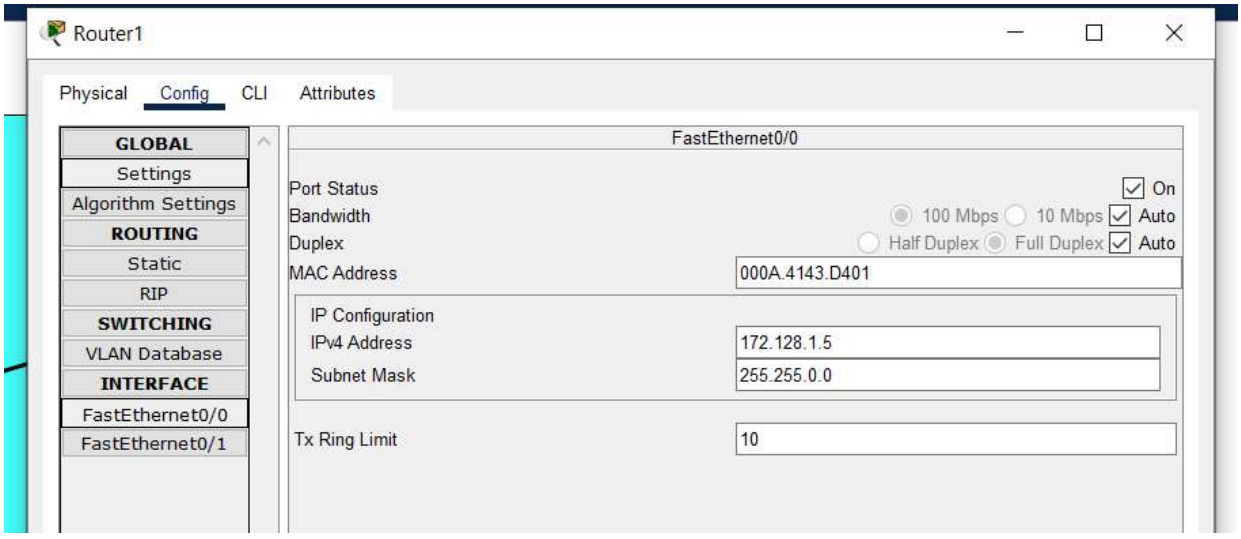


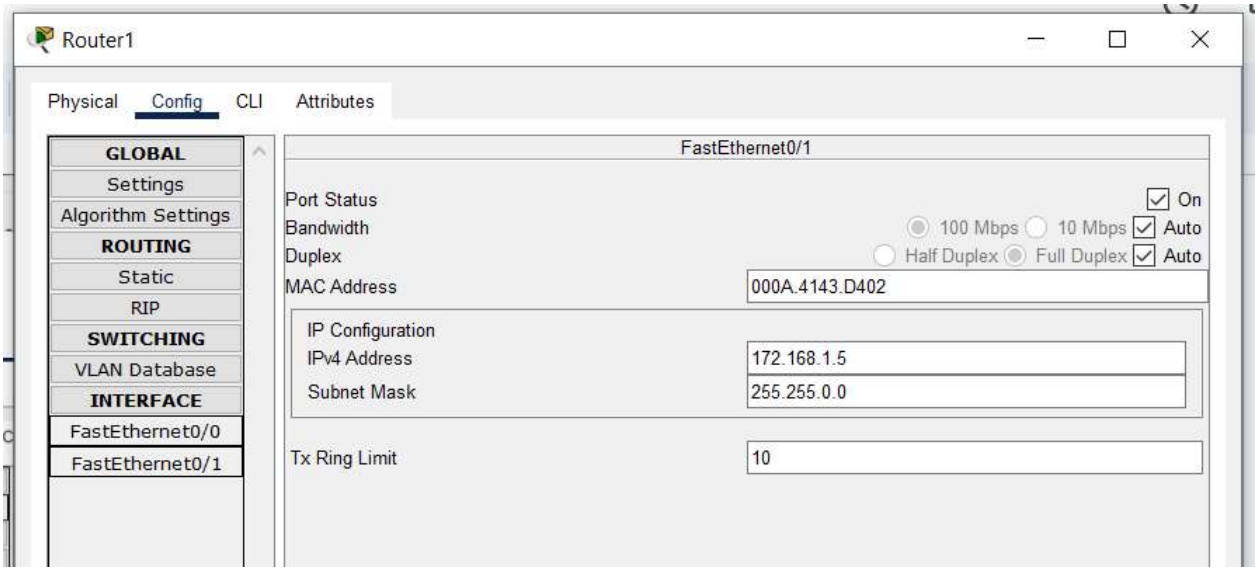
DNS server (gmail.com)



Mail server (yahoo.com)


Server3
Physical
Config
Services
Desktop
Programming
Attributes
IP Configuration
IP Configuration
DHCP
Static
IPv4 Address
172.168.1.4
Subnet Mask
255.255.0.0
Default Gateway
172.168.1.5
DNS Server
172.168.1.4
IPv6 Configuration
Automatic
Static
IPv6 Address
Link Local Address
FE80::260:70FF:FE20:768D
Default Gateway
DNS Server
802.1X

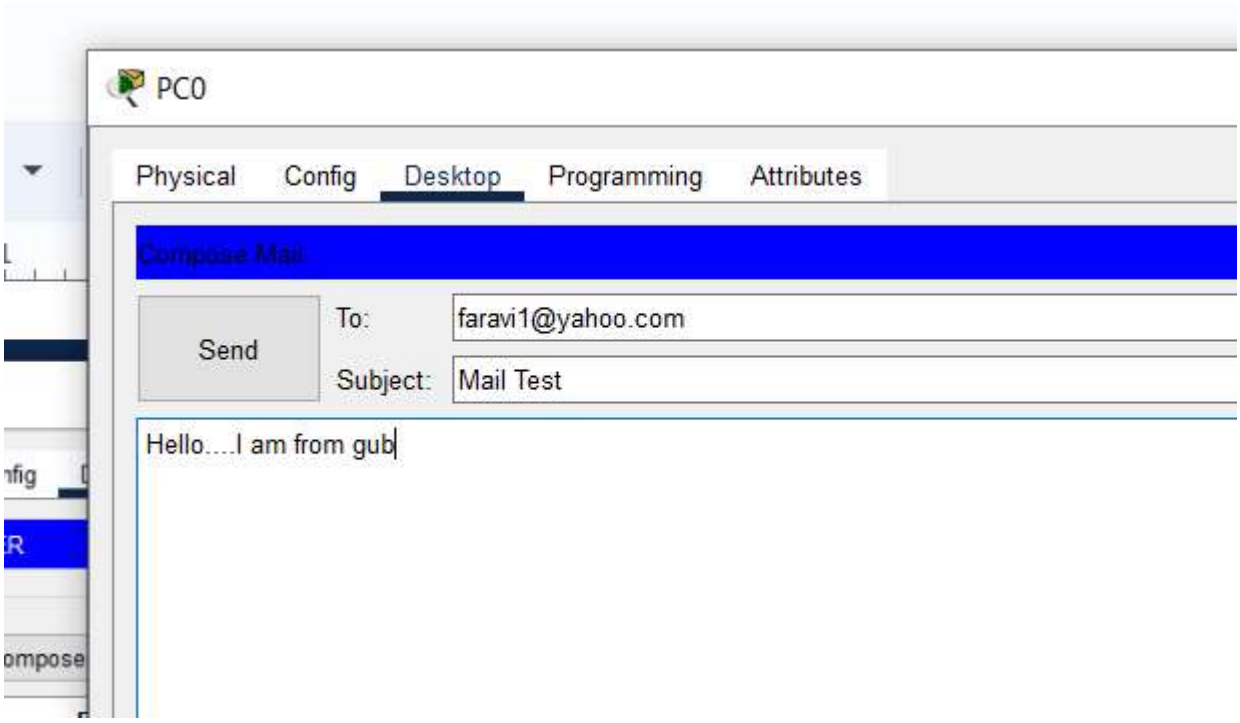

Router1
Physical
Config
CLI
Attributes
GLOBAL
Settings
Algorithm Settings
ROUTING
Static
RIP
SWITCHING
VLAN Database
INTERFACE
FastEthernet0/0
FastEthernet0/1
FastEthernet0/0
Port Status
On
Bandwidth
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
000A.4143.D401
IP Configuration
IPv4 Address
172.128.1.5
Subnet Mask
255.255.0.0
Tx Ring Limit
10



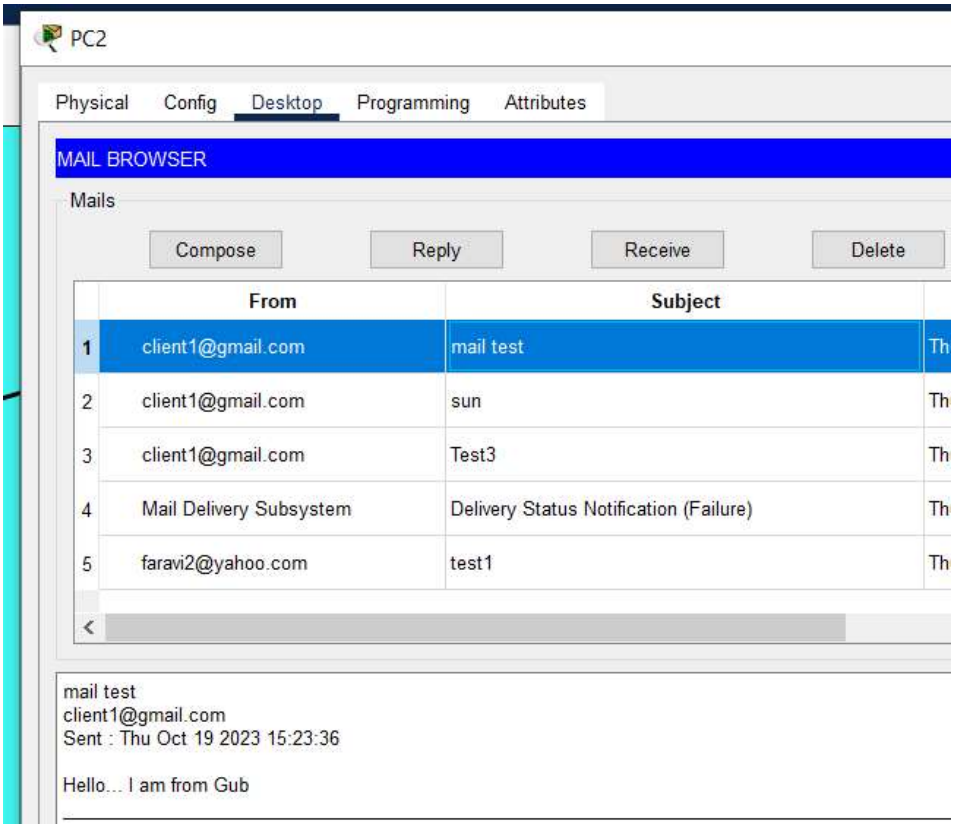
Router Config

5. TEST RESULT

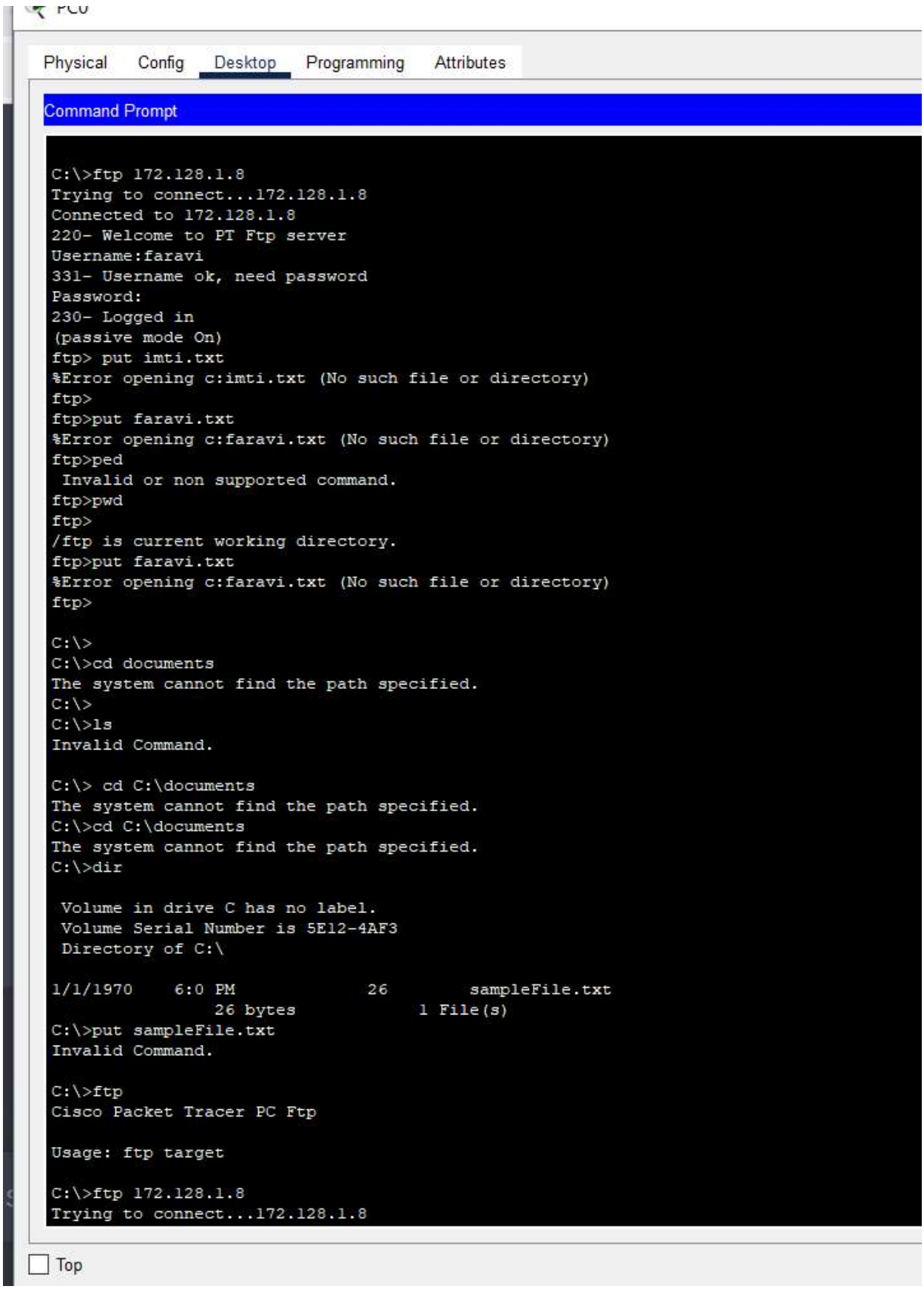
Mail Sending test:



(client1 pc from gmail.com services)



(faravi1 pc receive a mail from client1 pc)


PC0
Physical
Config
Desktop
Programming
Attributes
Command Prompt
C:\>ftp 172.128.1.8
Trying to connect...172.128.1.8
Connected to 172.128.1.8
220- Welcome to PT Ftp server
Username:faravi
331- Username ok, need password
Password:
230- Logged in
(passive mode On)
ftp> put imti.txt
%Error opening c:imti.txt (No such file or directory)
ftp>
ftp>put faravi.txt
%Error opening c:faravi.txt (No such file or directory)
ftp>ped
Invalid or non supported command.
ftp>pwd
ftp>
/ftp is current working directory.
ftp>put faravi.txt
%Error opening c:faravi.txt (No such file or directory)
ftp>
C:\>
C:\>cd documents
The system cannot find the path specified.
C:\>
C:\>ls
Invalid Command.
C:\> cd C:\documents
The system cannot find the path specified.
C:\>cd C:\documents
The system cannot find the path specified.
C:\>dir
Volume in drive C has no label.
Volume Serial Number is 5E12-4AF3
Directory of C:\
1/1/1970 6:0 PM 26 sampleFile.txt
26 bytes 1 File(s)
C:\>put sampleFile.txt
Invalid Command.
C:\>ftp
Cisco Packet Tracer PC Ftp
Usage: ftp target
C:\>ftp 172.128.1.8
Trying to connect...172.128.1.8
Top

6. ANALYSIS AND DISCUSSION [3 marks]

The experiment was a success in terms of configuring FTP servers for secure file transfers. Configuring SMTP servers for Gmail and Yahoo presented difficulties, notably in enabling seamless connection with many email clients.

The FTP server configuration was efficient, giving a simple option for secure file transfers. In contrast, the SMTP setting, particularly for interoperability with Gmail and Yahoo, provided complexity that needed precise attention.

Despite the difficulties, the hands-on experience enhanced practical knowledge by providing useful insights into the complexities of server settings. Notably, the assignment allowed for the actual application of academic principles.

The intricacies of SMTP server configuration provided opportunities for problem-solving, which contributed to a better grasp of network administration abilities. The experiment was useful in mapping objectives since it successfully configured FTP servers for efficient use.

7. SUMMARY:

Successfully configured FTP servers for secure file transfers. Challenges in SMTP setup for Gmail and Yahoo highlighted complexities. Hands-on experience enhanced practical knowledge, applying theoretical concepts. Overall, the experiment achieved FTP objectives, emphasizing challenges in SMTP integration.