



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

**Faculty of Sciences and Engineering**  
**Semester: (Spring , Year:2024), B.Sc. in CSE (Day)**

**LAB REPORT NO #01**

**Course Title: Computer Networking Lab**

**Course Code: CSE - 312**

**Section: 213\_D5**

**Lab Experiment Name: Configuration of SMTP Server.**

**Student Details**

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**Submission Date : 23– 03 - 2024**

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<b><u>Lab Report Status</u></b>	
<b>Marks: .....</b>	<b>Signature:.....</b>
<b>Comments:.....</b>	<b>Date:.....</b>

# 1. TITLE OF THE LAB EXPERIMENT

- Configuration of SMTP Server.

## 2. OBJECTIVES/AIM

- To build and design a network using Cisco Packet Tracer
- To learn about step-by-step configuration of SMTP Server using Cisco Packet Tracer
- To learn how to transfer mail from one client to another client.

## 3. PROCEDURE / ANALYSIS / DESIGN

1. Create a network topology by setting up all the necessary devices in Cisco Packet Tracer.
2. Configure static IP addresses on PC, Laptop, Mail server, DNS Server, & other devices.
3. For SMTP Server Configuration, click on the Server and go to the EMAIL option then at the right side click On to enable the SMTP and POP3. Then, set the domain name and create a user with a password.
4. Notice that a domain name is set for the mail server. For that reason, a DNS server is required for resolving this domain name to IP address. For DNS server configuration, click on the Server. Then select the DNS option and at the right side turn On the DNS. After that, set the domain name and IP address. Finally, add them to the server.
5. Now, configure the mail client on the PCs. Click PC and click the Desktop tab > Email. Enter your Name, Email address, incoming Mail Server, outgoing Mail Server, user Name, & Password. Finally, save the information. After completing the process, the Mail Browser window displays. Now, the client can compose, reply, delete, and receive email.

## 4. IMPLEMENTATION

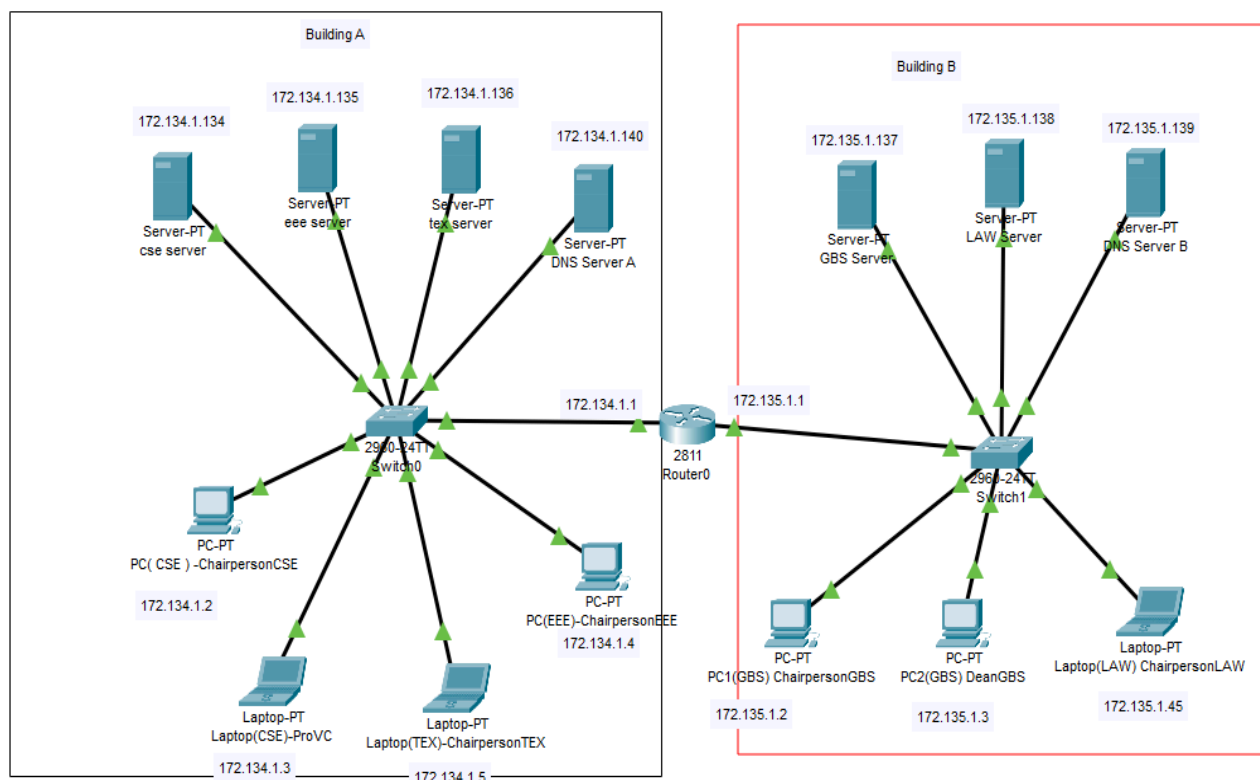


Figure 1 : A network for the green university of Bangladesh.

## 4.1 IP Configuration

Configure static IP addresses on the PC, Laptop, Mail server, and DNS server.

a) Click the device and go to the Desktop tab > IP Configuration.

- I. For PC( CSE ) -ChairpersonCSE: Set 172.134.1.2 as IP address , 255.255.0.0 as Subnet Mas & Gateway is 172.134.1.1 (Figure 2).
- II. For Laptop(CSE)-ProVC: Set 172.134.1.3 as IP address and 255.255.0.0 as Subnet Mask & Gateway is 172.134.1.1.
- III. For Laptop(TEX)-ChairpersonTEX: Set 172.134.1.5 as IP address and 255.255.0.0 as Subnet Mask & Gateway is 172.134.1.1.
- IV. For PC(EEE)-ChairpersonEEE: Set 172.134.1.4 as IP address and 255.255.0.0 as Subnet Mask & Gateway is 172.134.1.1.
- V. For cse Server (gmail.com): Set 172.134.1.134 as IP address and 255.255.0.0 as Subnet Mask & Gateway is 172.134.1.1 (Figure 3).
- VI. For eee Server (gmail.com): Set 172.134.1.135 as IP address and 255.255.0.0 as Subnet Mask & Gateway is 172.134.1.1.
- VII. For tex Server (gmail.com): Set 172.134.1.136 as IP address and 255.255.0.0 as Subnet Mask & Gateway is 172.134.1.1.
- VIII. For DNS Server: Set 172.134.1.136 as IP address and 255.255.255.0 as Subnet Mask & Gateway is 172.134.1.1 (Figure 4).
- IX. For router configuration, click on the Router and then select the “Config” tap.  
(a) Click on the INTERFACE option then fastEthernet 0/0 Set 172.134.1.1 as IP address , 255.255.0.0 as Subnet Mask (Figure 5).

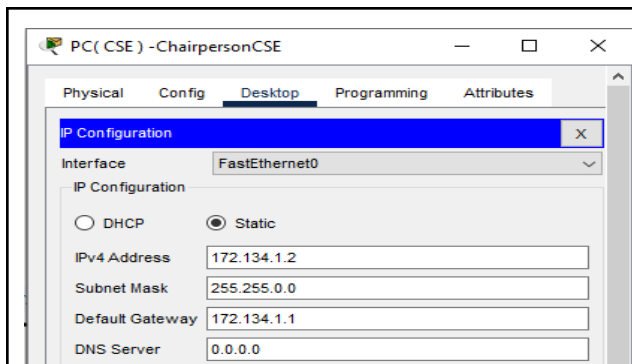


Figure 2 : IP configure PC( CSE )-ChairpersonCSE.

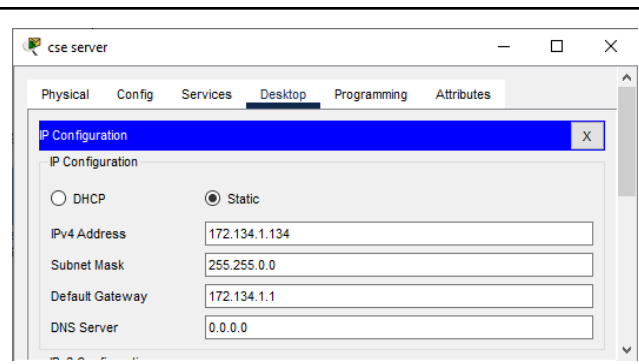


Figure 3 : IP configure for cse server.

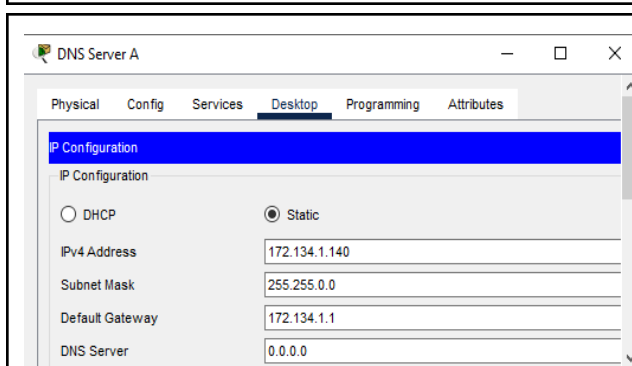


Figure 4 : IP configure Building A DNS server.

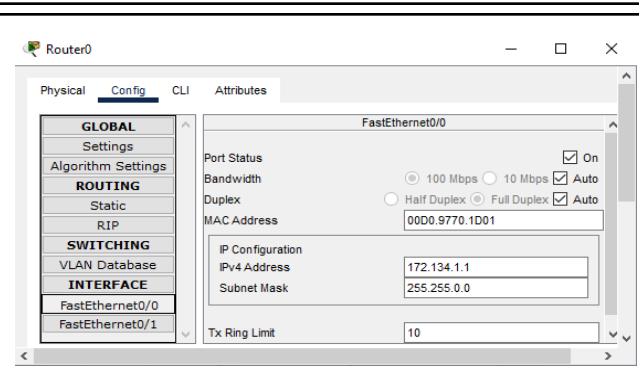


Figure 5 : IP configure for router .

## 4.2 Server Configuration

1. Click on Server & then clicking on “Services” option to mail server configuration (Figure 6).
  - (a) Click on the EMAIL option then at the right side click On to enable the SMTP and POP3.
  - (b) Set the domain name to gmail.com and click Set.
  - (c) Create users with password. Click “+” to add the user.
2. For DNS server configuration, click on the Server and then select the “Services” tap.
  - (a) Click on the DNS option then at the right side turn On the DNS.
  - (b) Set name to cse,green.edu.bd and address to 172.134.1.134 (IP address of mail server). Finally, add them to the server (Figure 7).

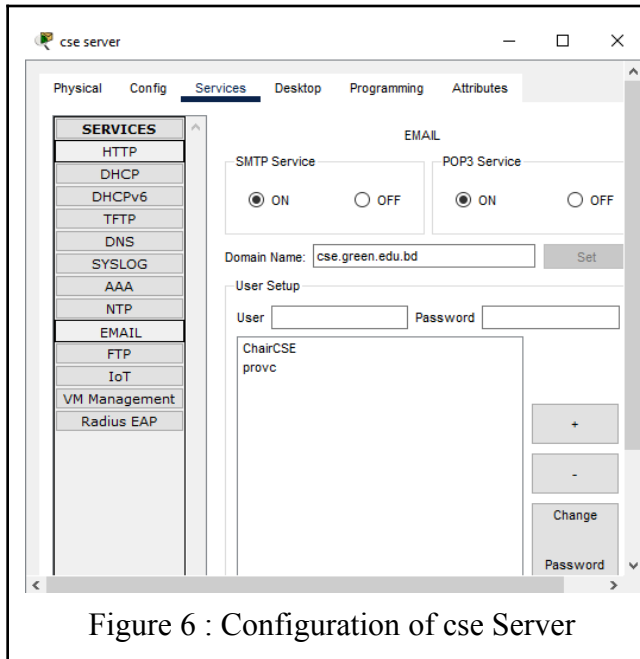


Figure 6 : Configuration of cse Server

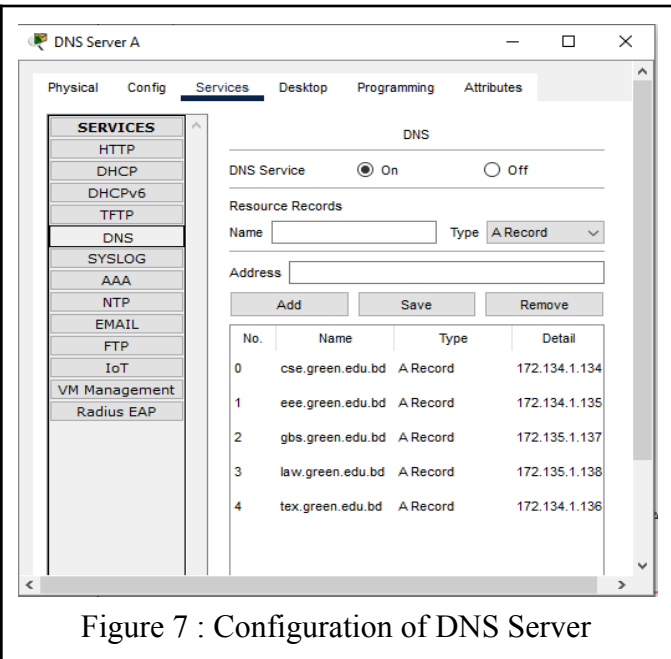


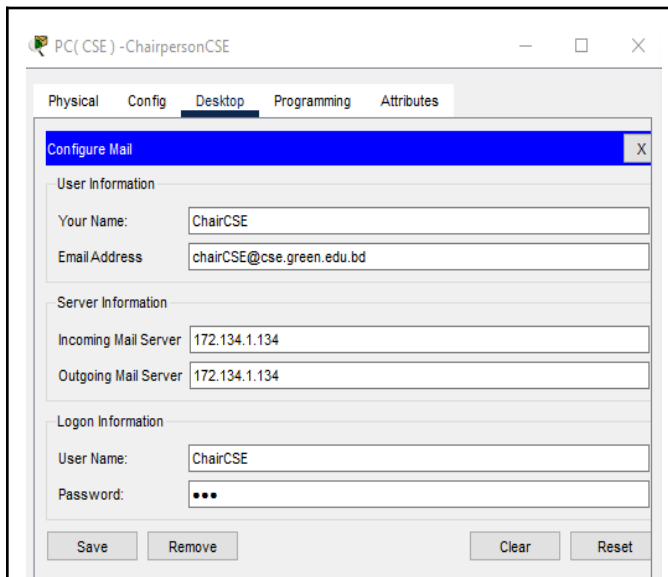
Figure 7 : Configuration of DNS Server

## 4.3 Create Mail Address

1. Configure PC( CSE ) -ChairpersonCSE to use the cse service of the Mail server (Figure 8).
  - (a) Click PC( CSE ) -ChairpersonCSE and click the Desktop tab > Email.
  - (b) Enter the following values into their respective fields:
    - i. Your Name:ChairCSE
    - ii. Email Address: chairCSE@cse.green.edu.bd
    - iii. Incoming Mail Server: 172.134.1.134
    - iv. Outgoing Mail Server: 172.134.1.134
    - v. User Name: ChairCSE
    - vi. Password: 123 & (c) Click Save.
2. Configure PC1(GBS) ChairpersonGBS to use the gbs service of the Mail server(Figure 9).
  - (a) Click PC1(GBS) ChairpersonGBS and click the Desktop tab > Email.
  - (b) Enter the following values into their respective fields:
    - i. Your Name:chairGBS
    - ii. Email Address: chairGBS@gbs.green.edu.bd
    - iii. Incoming Mail Server: 172.135.1.137
    - iv. Outgoing Mail Server: 172.135.1.137

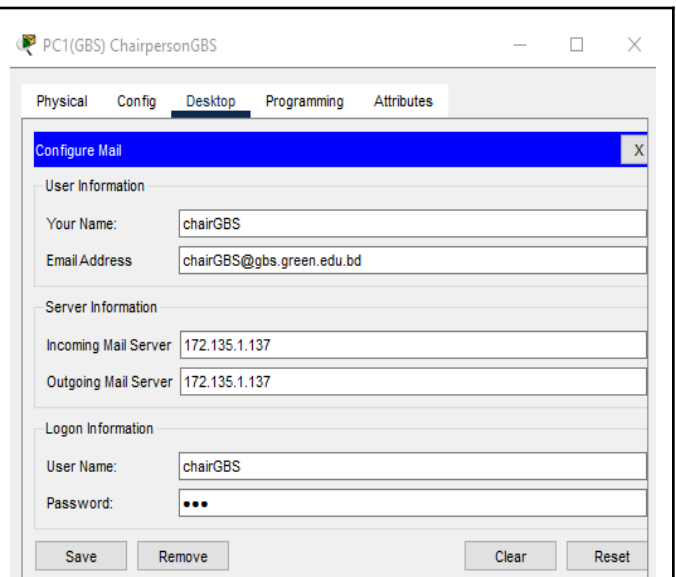
v. User Name: chairGBS

vi. Password: 123 & (c) Click Save.



The screenshot shows a window titled "PC( CSE ) -ChairpersonCSE" with tabs for Physical, Config, Desktop, Programming, and Attributes. The "Desktop" tab is active, and a "Configure Mail" dialog box is open. The dialog box has three sections: "User Information" with fields for "Your Name" (ChairCSE) and "Email Address" (chairCSE@cse.green.edu.bd); "Server Information" with fields for "Incoming Mail Server" (172.134.1.134) and "Outgoing Mail Server" (172.134.1.134); and "Logon Information" with fields for "User Name" (ChairCSE) and "Password" (masked with dots). At the bottom are buttons for "Save", "Remove", "Clear", and "Reset".

Figure 8 : Create mail address for PC( CSE ) - ChairpersonCSE



The screenshot shows a window titled "PC1(GBS) ChairpersonGBS" with tabs for Physical, Config, Desktop, Programming, and Attributes. The "Desktop" tab is active, and a "Configure Mail" dialog box is open. The dialog box has three sections: "User Information" with fields for "Your Name" (chairGBS) and "Email Address" (chairGBS@pbs.green.edu.bd); "Server Information" with fields for "Incoming Mail Server" (172.135.1.137) and "Outgoing Mail Server" (172.135.1.137); and "Logon Information" with fields for "User Name" (chairGBS) and "Password" (masked with dots). At the bottom are buttons for "Save", "Remove", "Clear", and "Reset".

Figure 9 : Create mail address for PC1(GBS) ChairpersonGBS

## 5. TEST RESULT / OUTPUT

### 5.1 Sent Mail & Reply

1. From ChairCSE Mail Browser window, click Compose for sending an mail.

(a) Enter the following values into their respective fields:

i. To: chairGBS@pbs.green.edu.bd

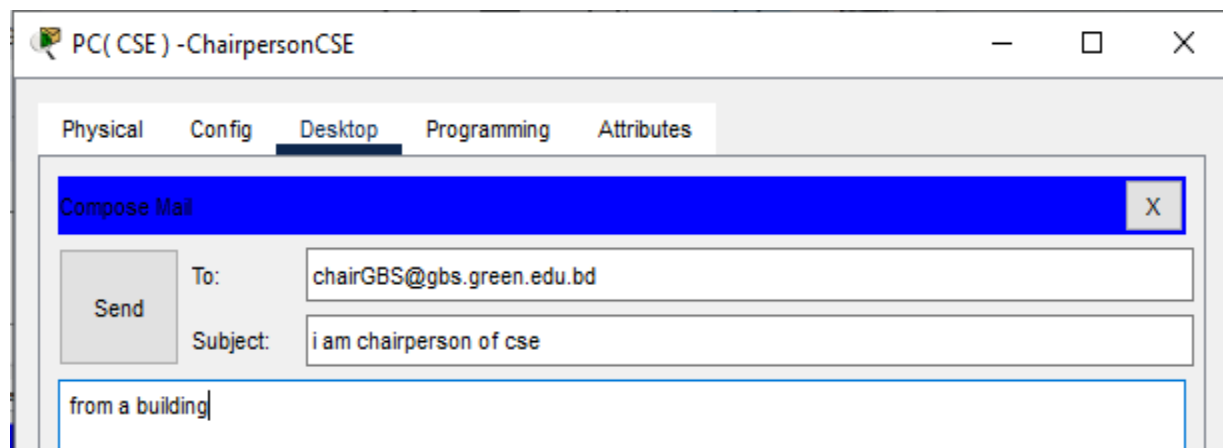
ii. Subject: i am chairperson of cse

iii. Email Body: from a building & (b) Click Send.(Figure 10).

2. If chairGBS wants to reply to the mail to ChairCSE. Double-click the email.

(a) i. Subject: i am chairperson of gbs

ii. Email Body: from b building & (b) Click Send.(Figure 11).



The screenshot shows a window titled "PC( CSE ) -ChairpersonCSE" with tabs for Physical, Config, Desktop, Programming, and Attributes. The "Desktop" tab is active, and a "Compose Mail" dialog box is open. The dialog box has a "Send" button on the left and two input fields on the right: "To:" (chairGBS@pbs.green.edu.bd) and "Subject:" (i am chairperson of cse). Below these fields is a text area containing the text "from a building".

Figure 10 : ChairCSE mail to chairGBS just click send and mail sent this time.

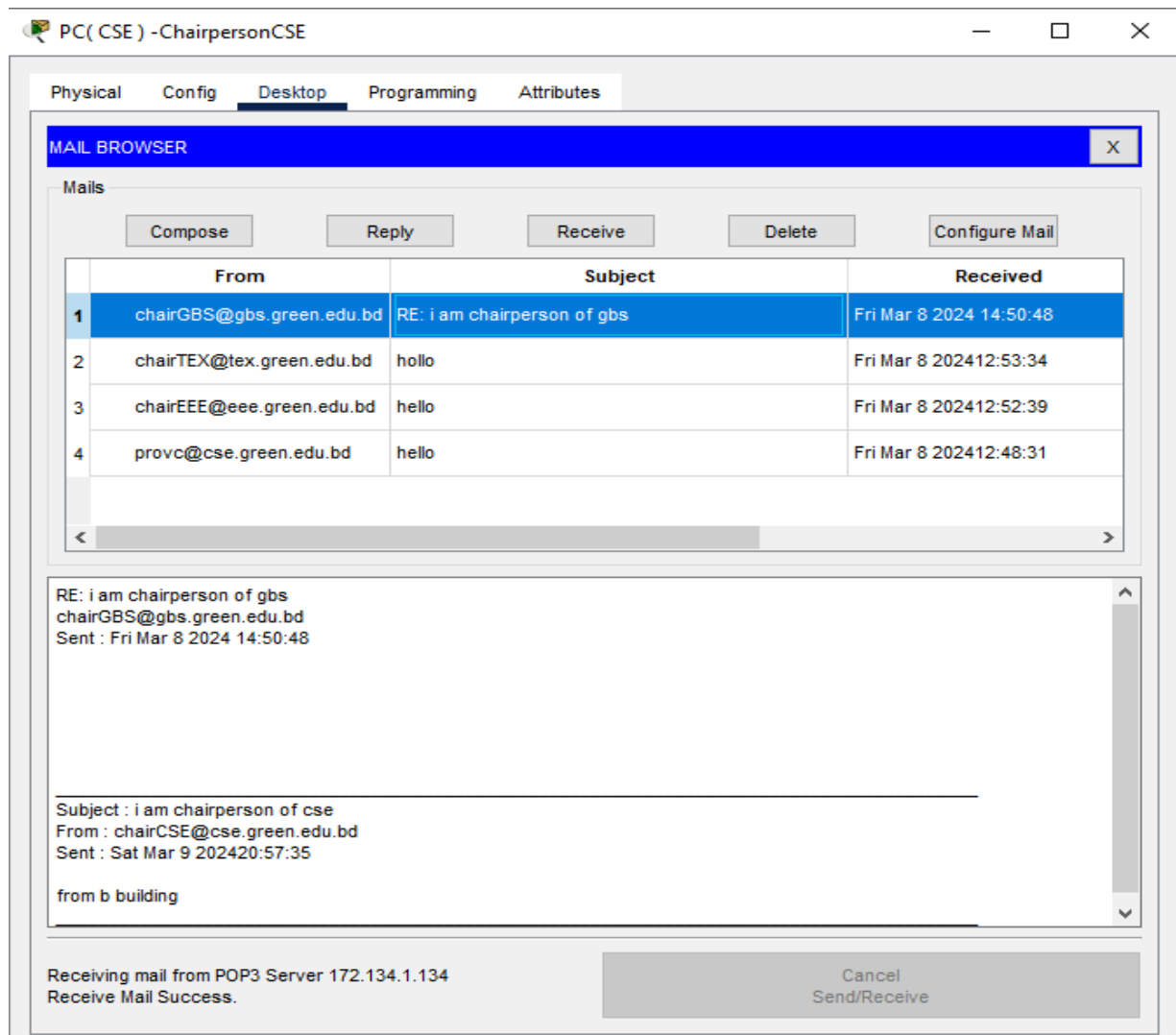


Figure 11 : chairGBS received mail from ChairCSE successfully . Reply this mail .also reply successfully . so tell that our network work properly .

## 6. ANALYSIS AND DISCUSSION

In this task, servers such as mail stores handle sending and receiving mail messages for clients within the same network and across different networks. Each building (A and B) hosts necessary mail and DNS servers. A switch connects departments within each building, while a router facilitates communication between Building A and Building B. Configuration involves setting up mail and DNS servers in both buildings. Mail messages are routed through the appropriate servers based on sender and recipient addresses, ensuring seamless communication between clients in different departments and buildings.