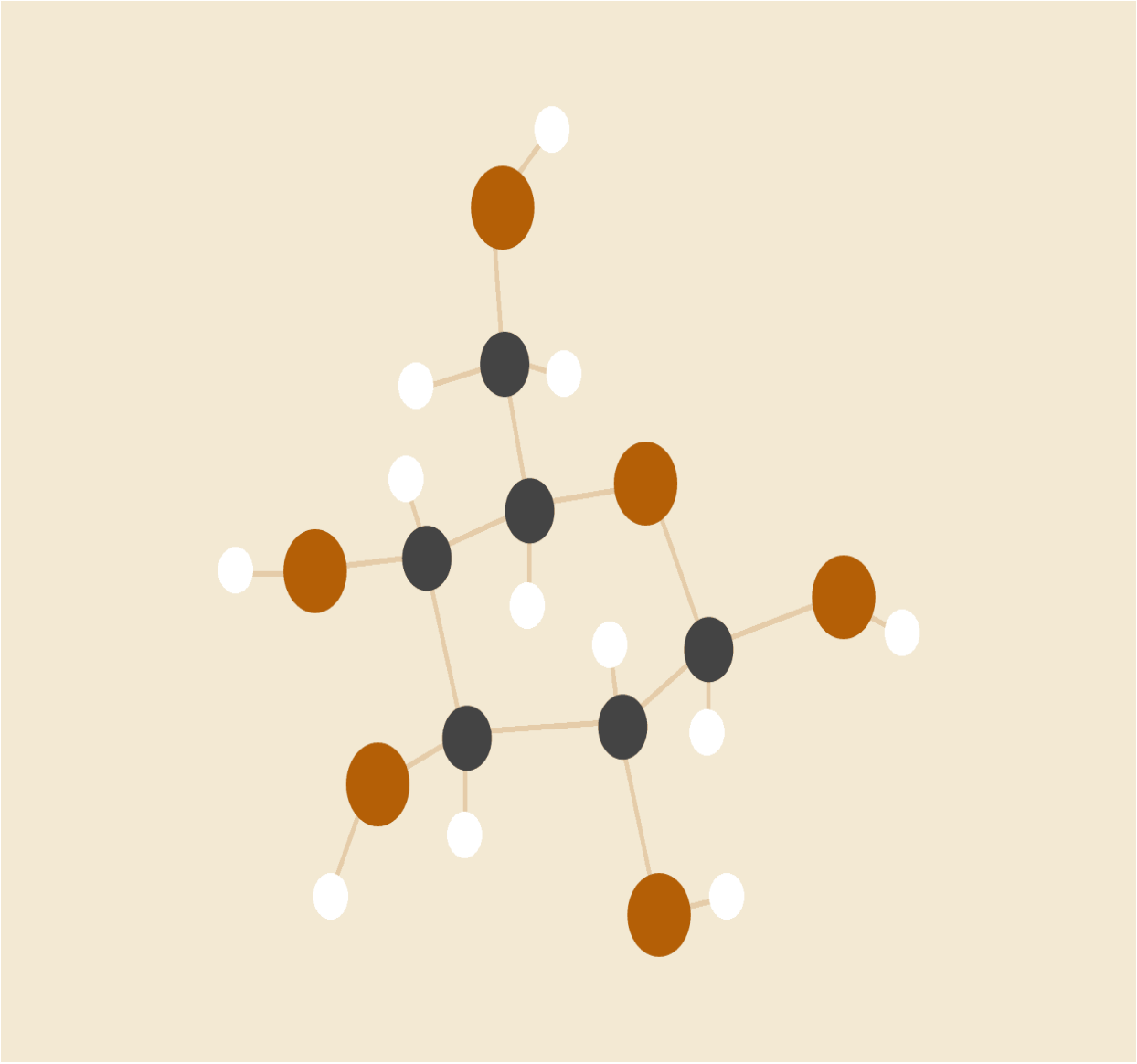
CS361 Computer Network



Name Kaishav Basodiya

202051094

Section 1

1) **Define and differentiate between a server and a router.**

Server:-A server is a computer program or device that provides a service to another computer program and its user, also known as the client. In a data center, the physical computer that a server program runs on is also frequently referred to as a server. That machine might be a dedicated server or it might be used for other purposes.

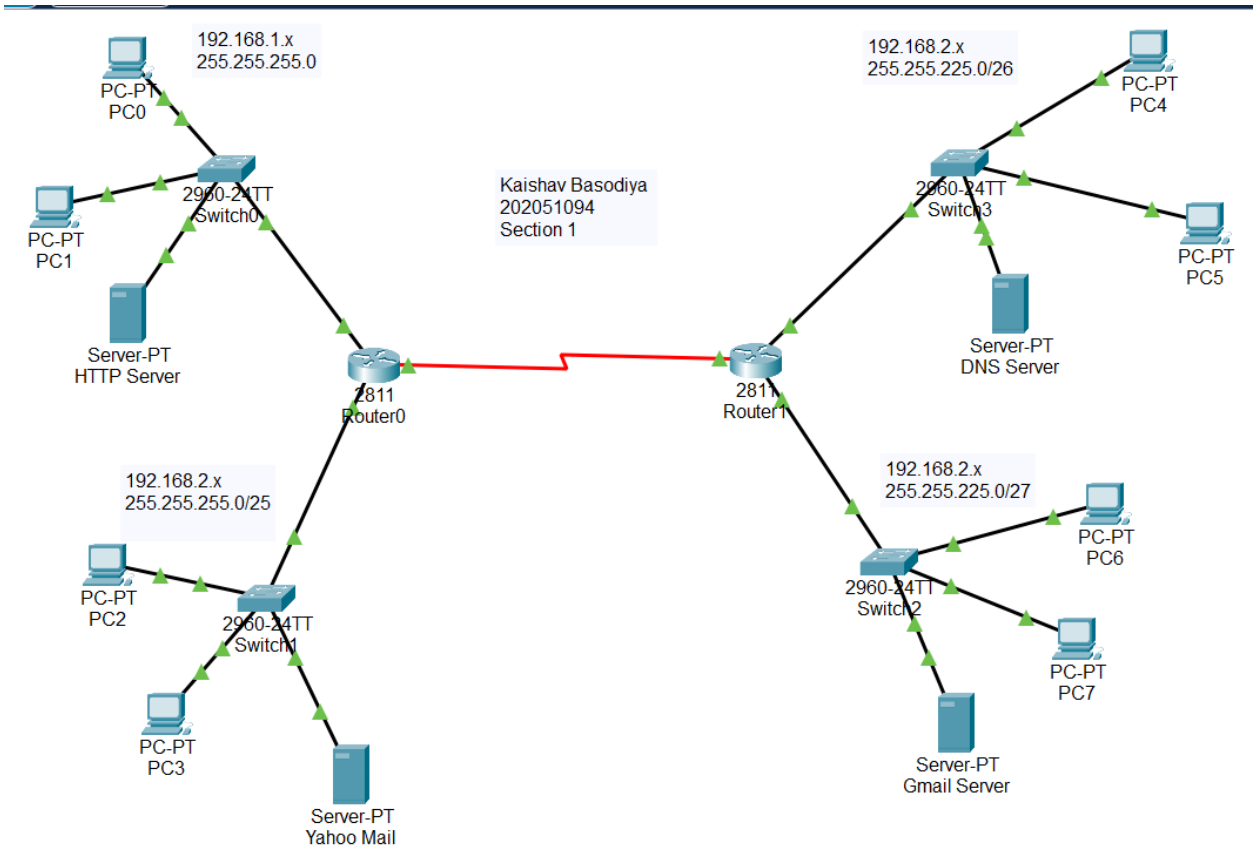
Router:-The router is a physical or virtual internetworking device that is designed to receive, analyze, and forward data packets between computer networks. A router examines a destination IP address of a given data packet, and it uses the headers and forwarding tables to decide the best way to transfer the packets. There are some popular companies that develop routers; such are Cisco, 3Com, HP, Juniper, D-Link, Nortel, etc. Some important points of routers are given below:

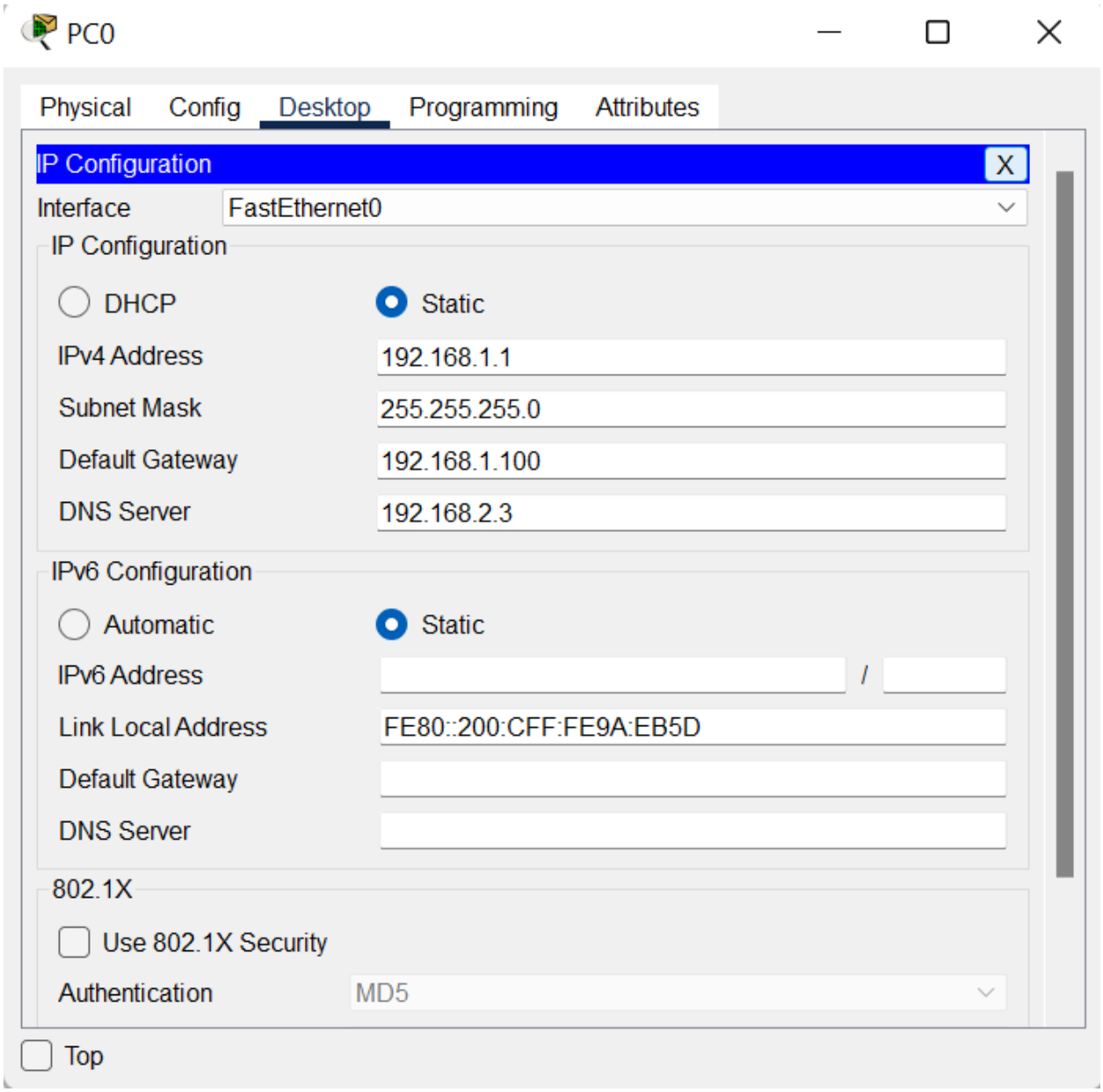
A Server is a large storage device connected in a network which delivers & receives user requests. Eg:- A download server contains all files to be downloaded,Mail server keeps record of your mail ,etc While

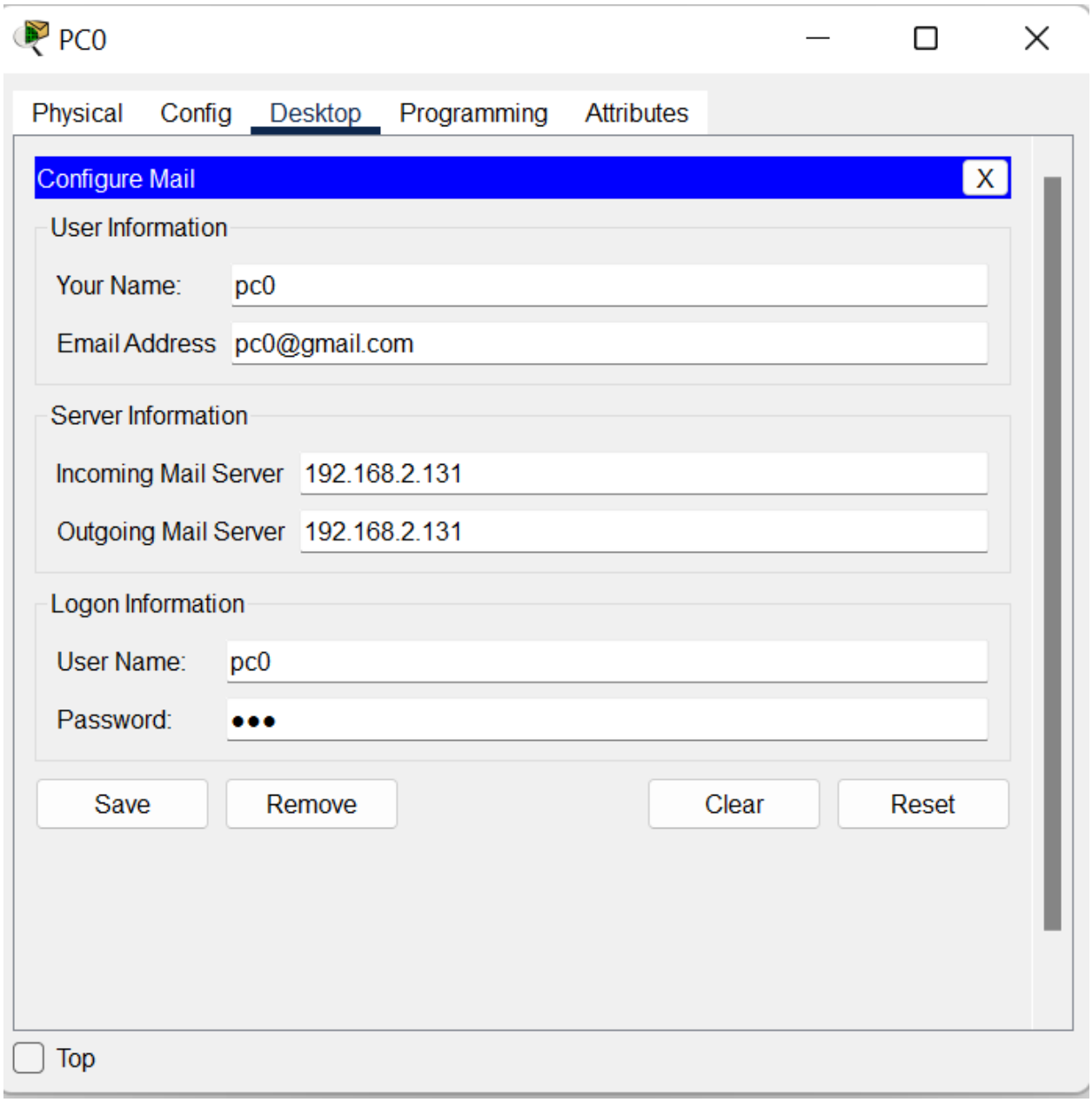
A Router is a device that transmits & receives information from the network in a controlled manner.i.e a router has the ability to route information to specific devices connected in the network ,it does so with the help of a routing table which contains all the information about the systems connected to the network. A router sometimes

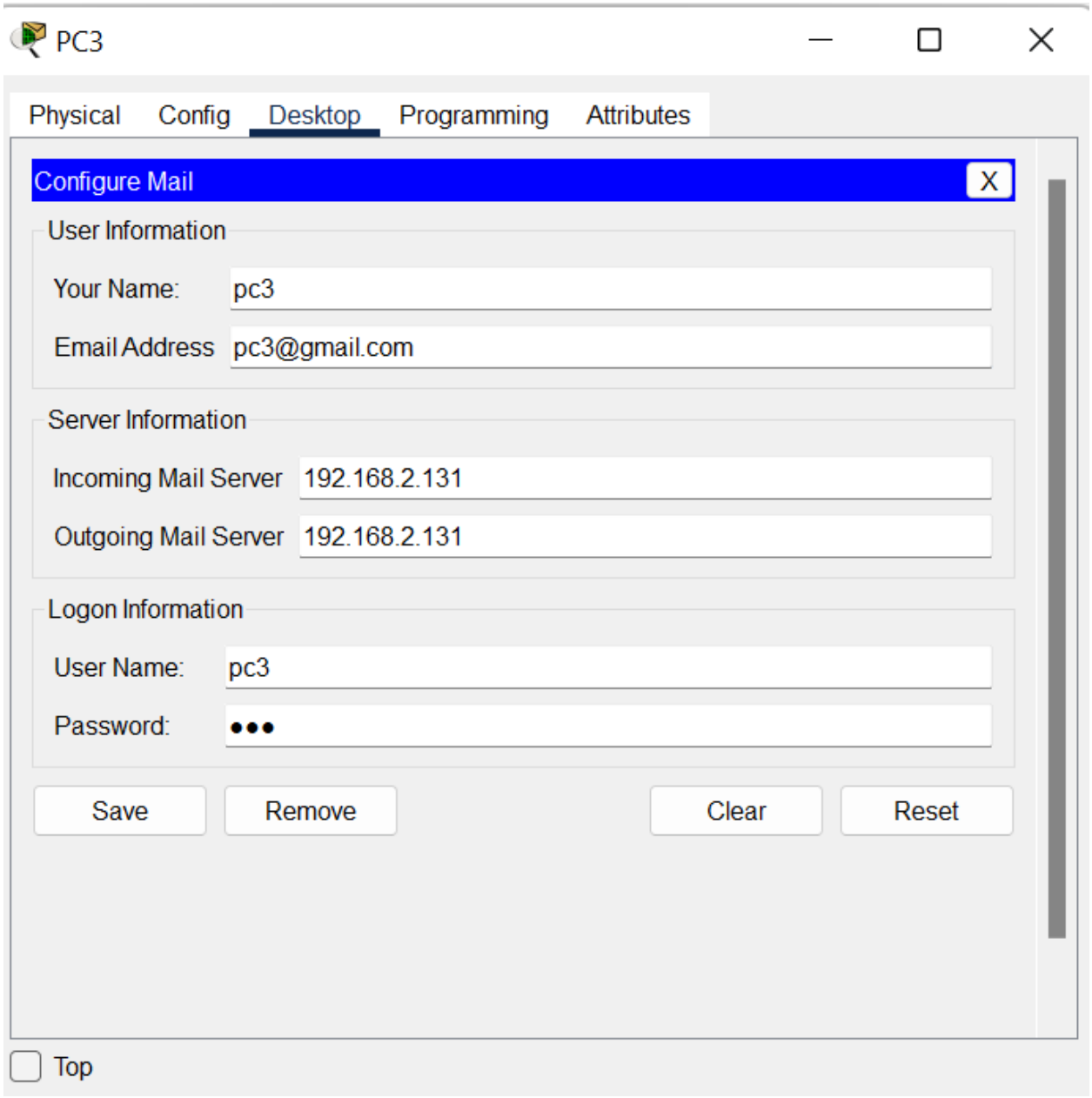
works as a Firewall Also, it controls traffic,rejects unwanted packets.But, it's actually not a Firewall device

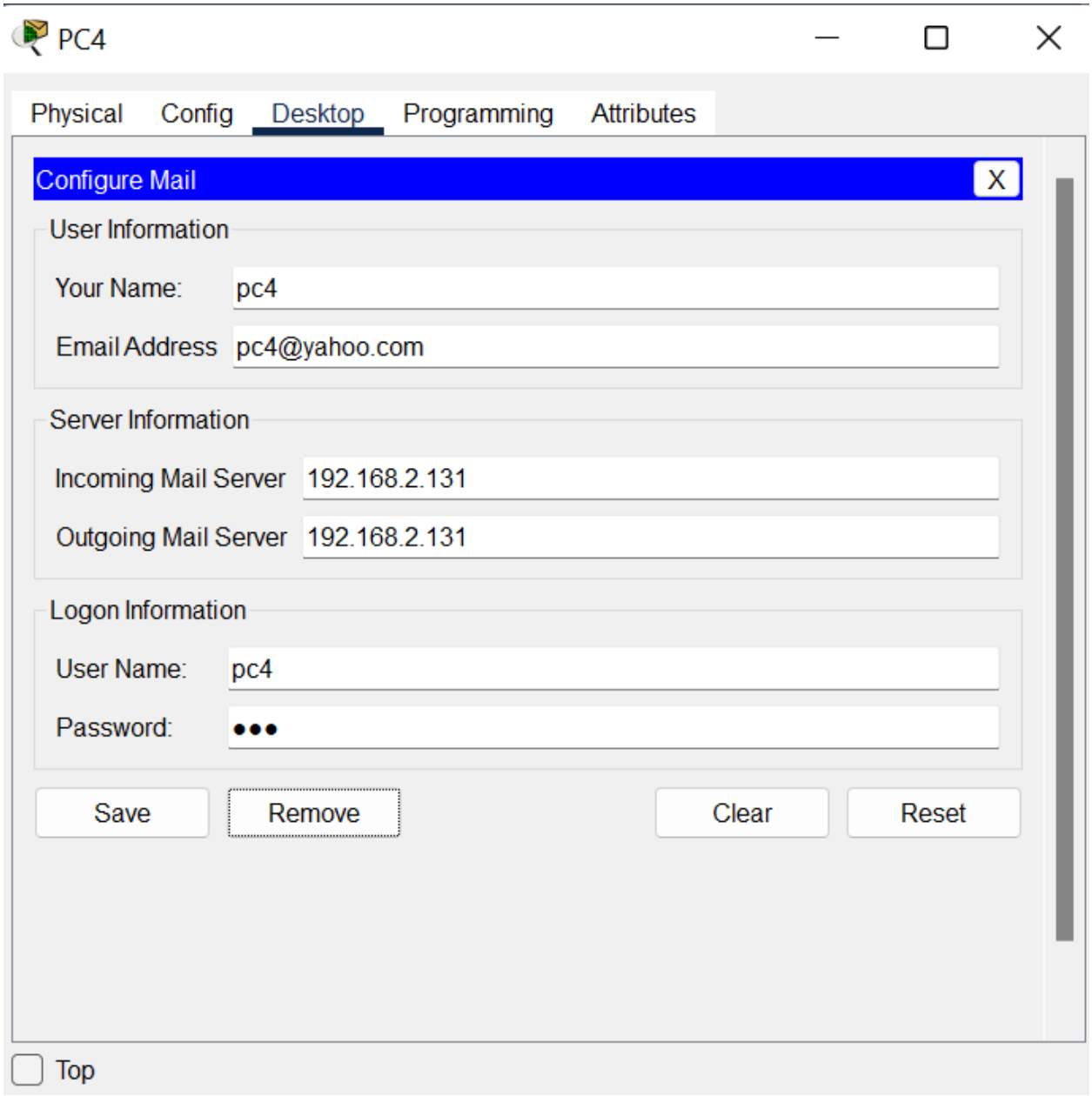
(2) Make a complex network (as discussed in lab) with multiple PCs, servers (HTTP and Mail), switches and routers. The network should have a minimum of 4 subnets with IP address subnetting. Each server may be in different subnet. Demonstrate transfer of emails between two different domains (eg: gmail and yahoo). Also show the response of HTTP request from a PC that is in different subnet from the HTTP server.

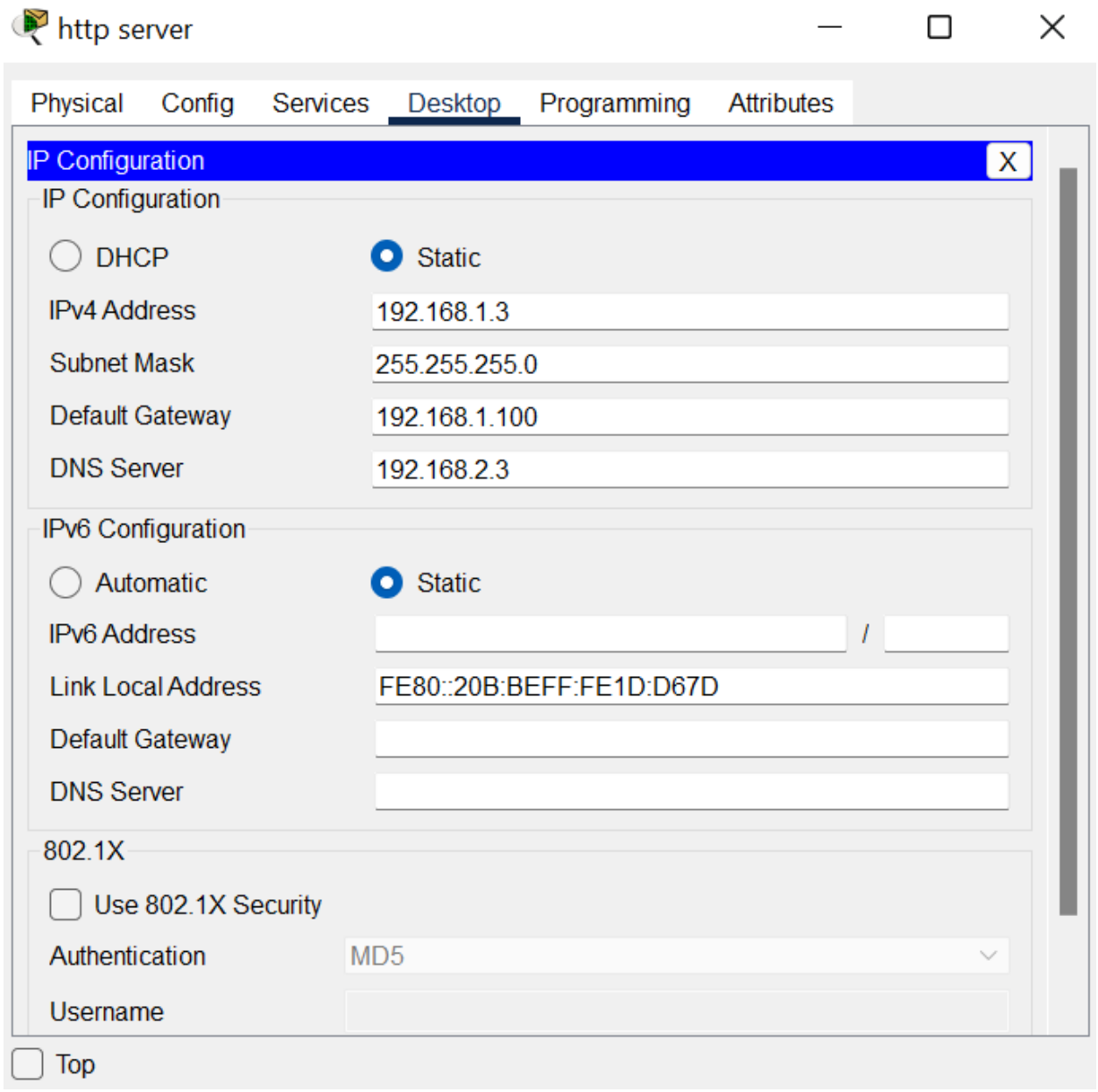


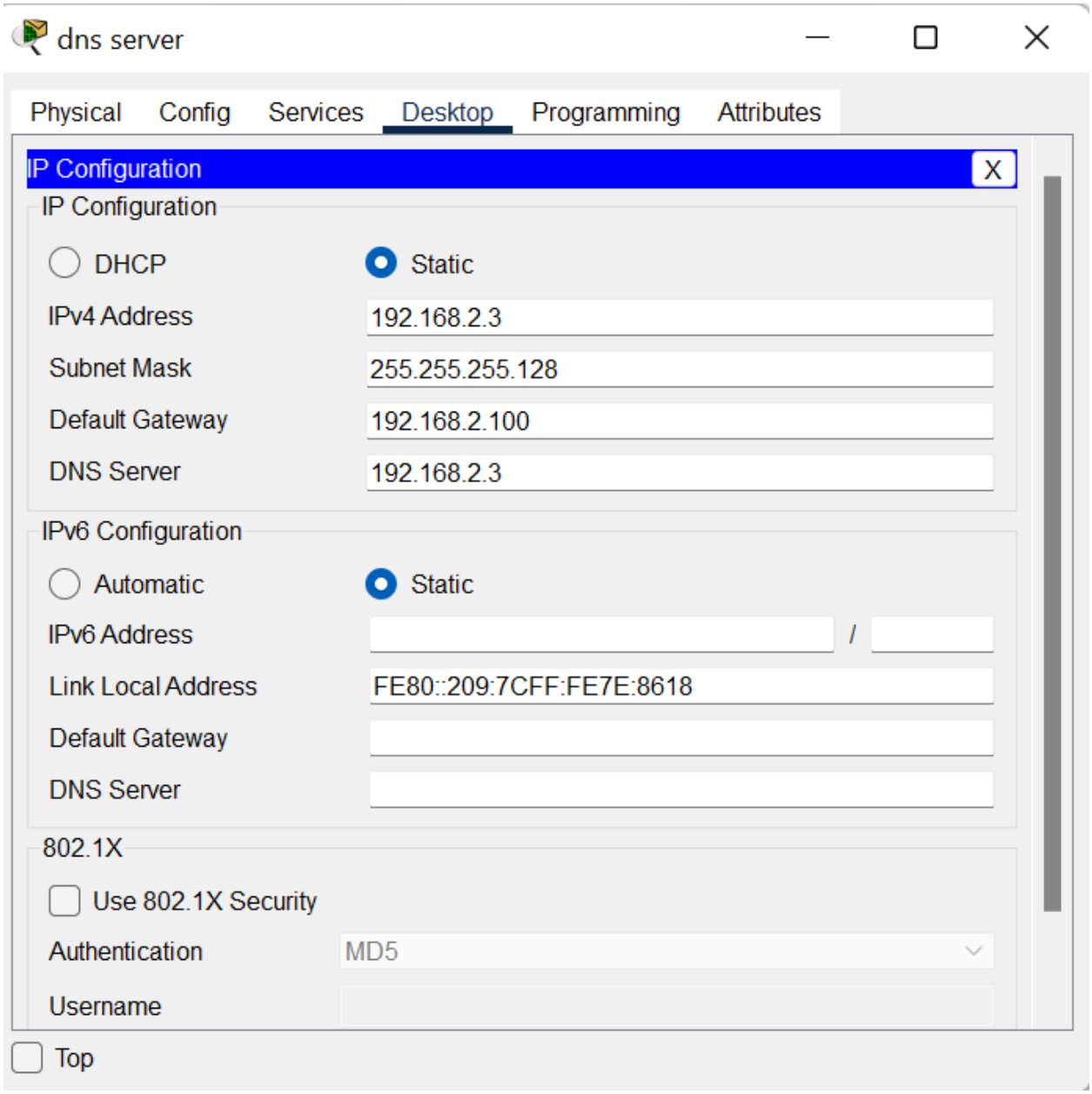

PC0
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.1
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.100
DNS Server
192.168.2.3
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::200:CFF:FE9A:EB5D
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Top

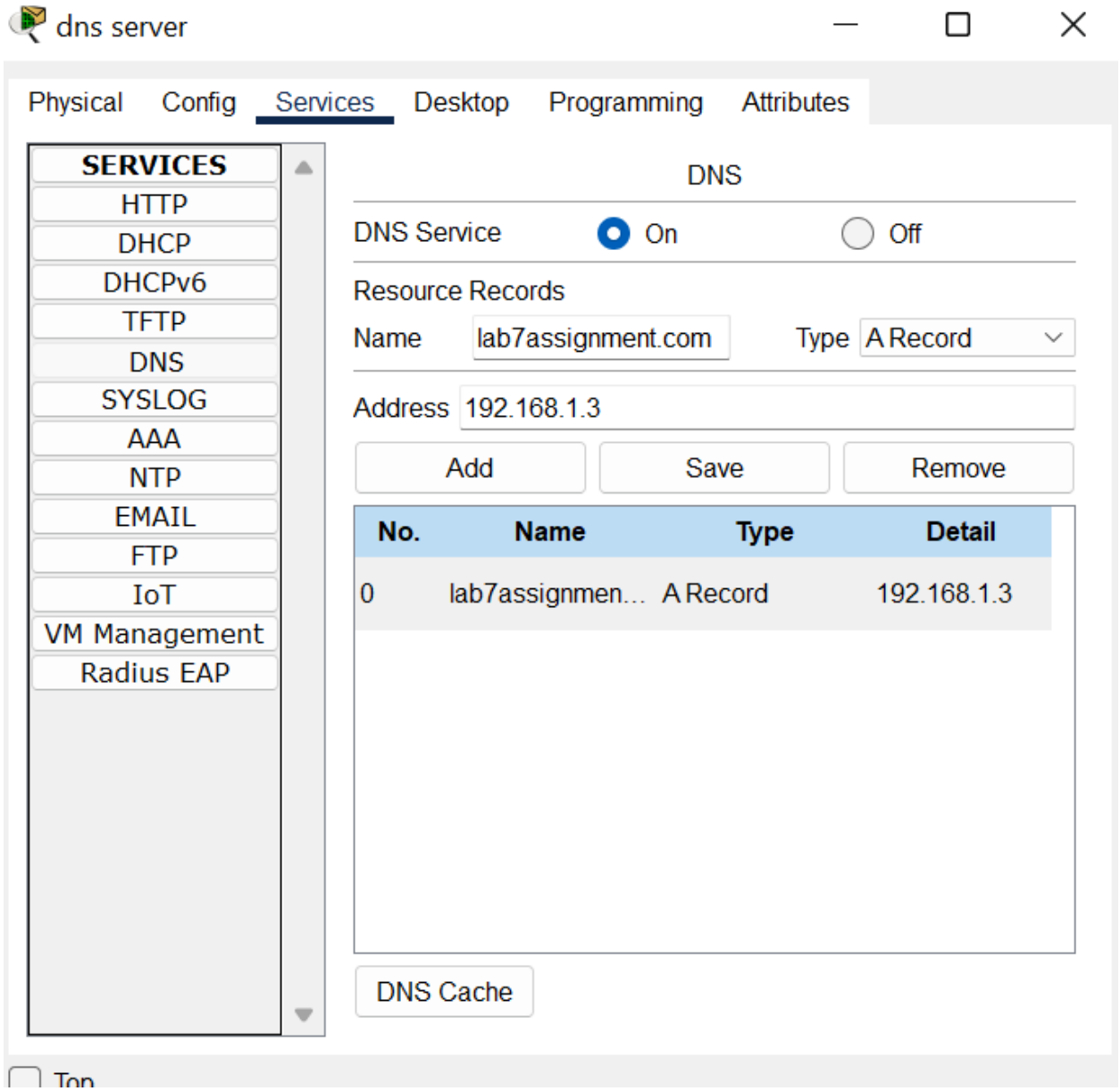

PC0
Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
pc0
Email Address
pc0@gmail.com
Server Information
Incoming Mail Server
192.168.2.131
Outgoing Mail Server
192.168.2.131
Logon Information
User Name:
pc0
Password:
Save
Remove
Clear
Reset
Top

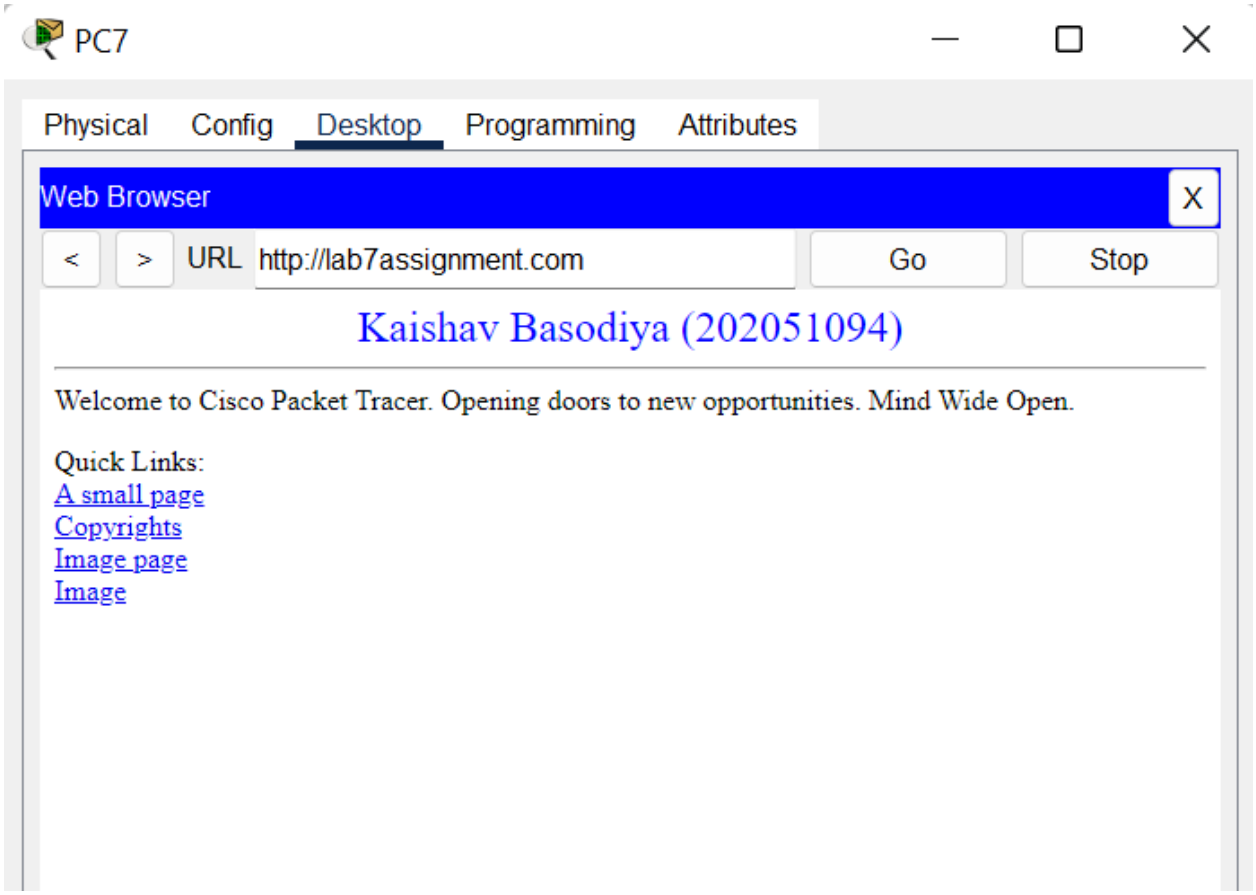

PC3
Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
pc3
Email Address
pc3@gmail.com
Server Information
Incoming Mail Server
192.168.2.131
Outgoing Mail Server
192.168.2.131
Logon Information
User Name:
pc3
Password:
Save
Remove
Clear
Reset
Top

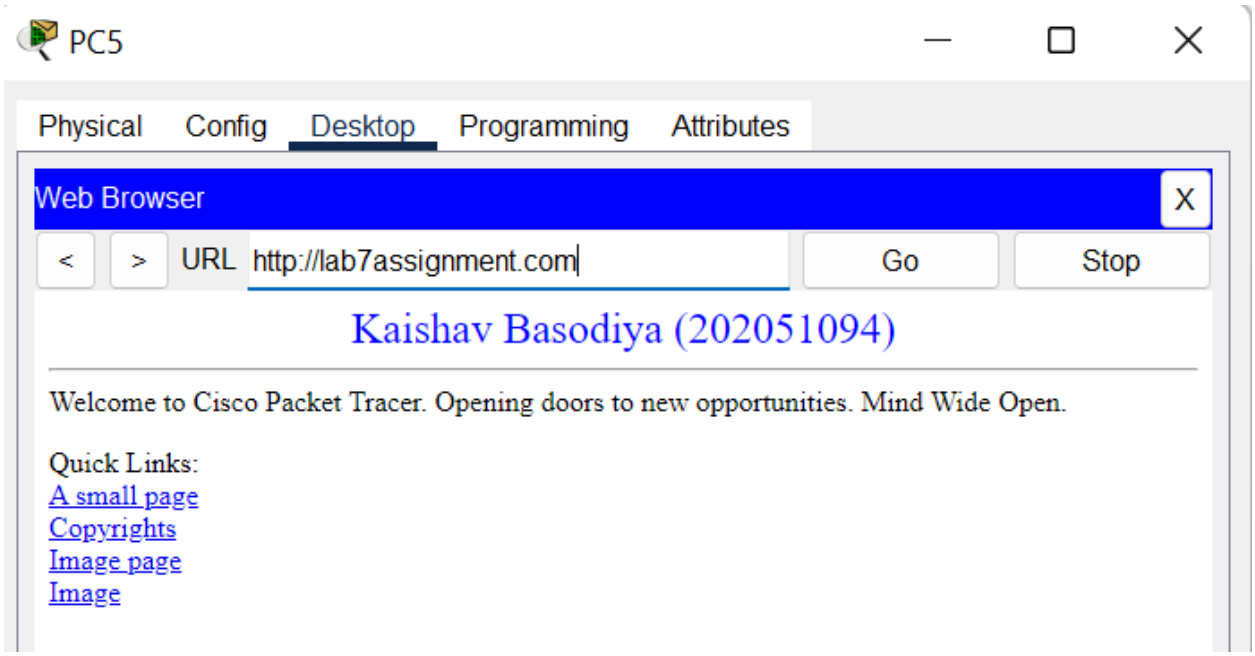

PC4
Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
pc4
Email Address
pc4@yahoo.com
Server Information
Incoming Mail Server
192.168.2.131
Outgoing Mail Server
192.168.2.131
Logon Information
User Name:
pc4
Password:
Save
Remove
Clear
Reset
Top

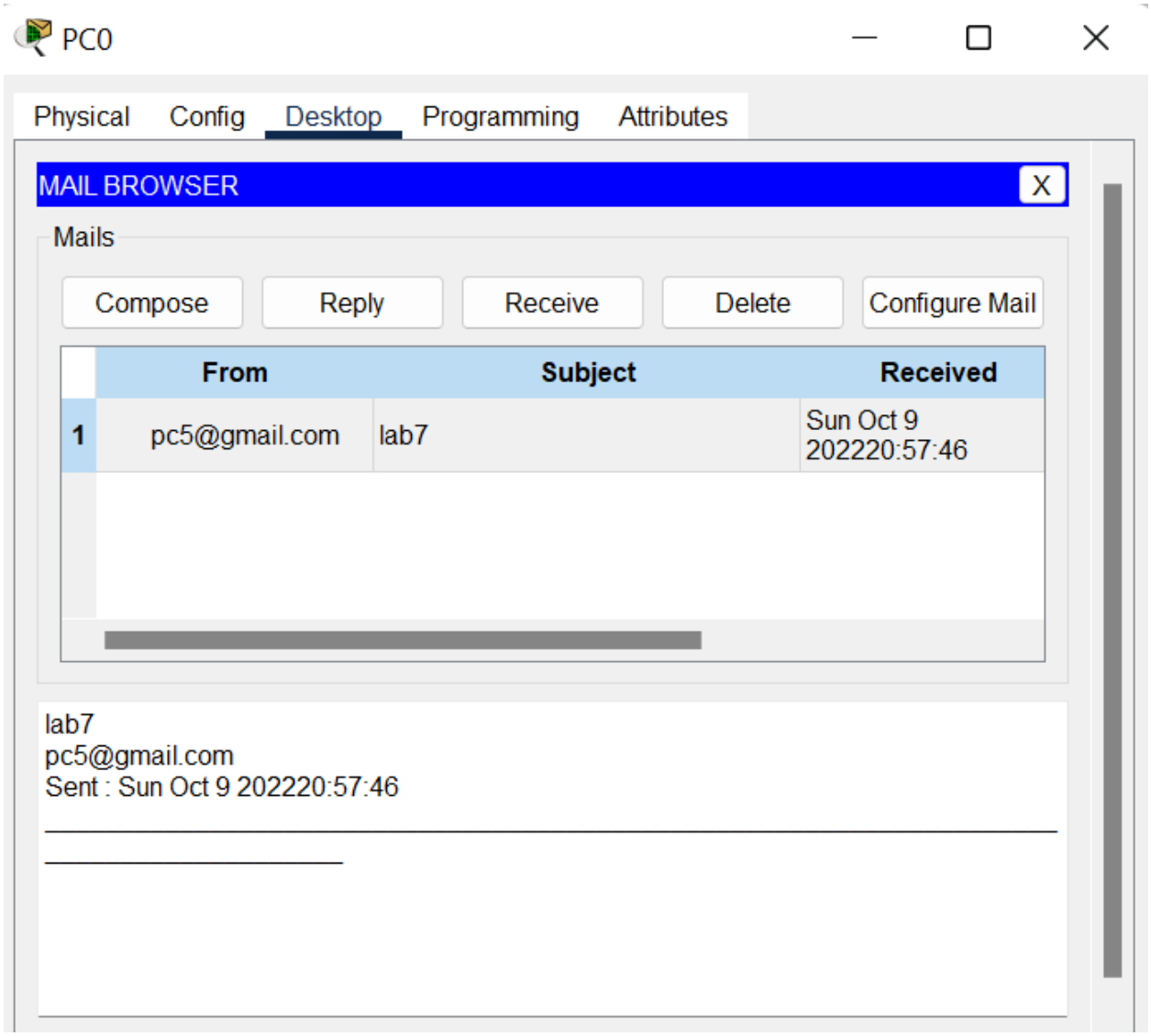

http server
Physical
Config
Services
Desktop
Programming
Attributes
IP Configuration
X
IP Configuration
DHCP
Static
IPv4 Address
192.168.1.3
Subnet Mask
255.255.255.0
Default Gateway
192.168.1.100
DNS Server
192.168.2.3
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::20B:BEFF:FE1D:D67D
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Top

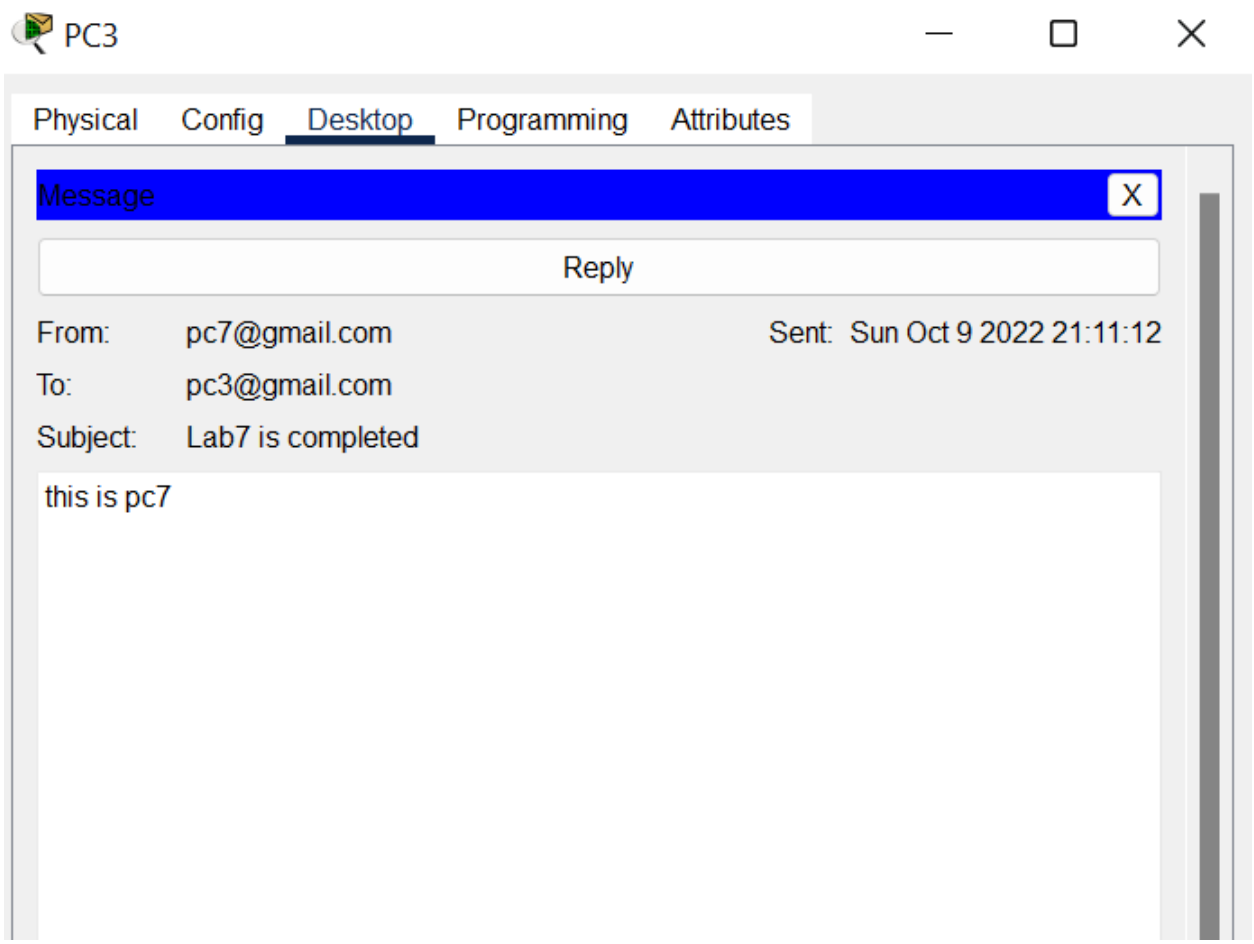

dns server
Physical
Config
Services
Desktop
Programming
Attributes
IP Configuration
X
IP Configuration
DHCP
Static
IPv4 Address
192.168.2.3
Subnet Mask
255.255.255.128
Default Gateway
192.168.2.100
DNS Server
192.168.2.3
IPv6 Configuration
Automatic
Static
IPv6 Address
/
Link Local Address
FE80::209:7CFF:FE7E:8618
Default Gateway
DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Top

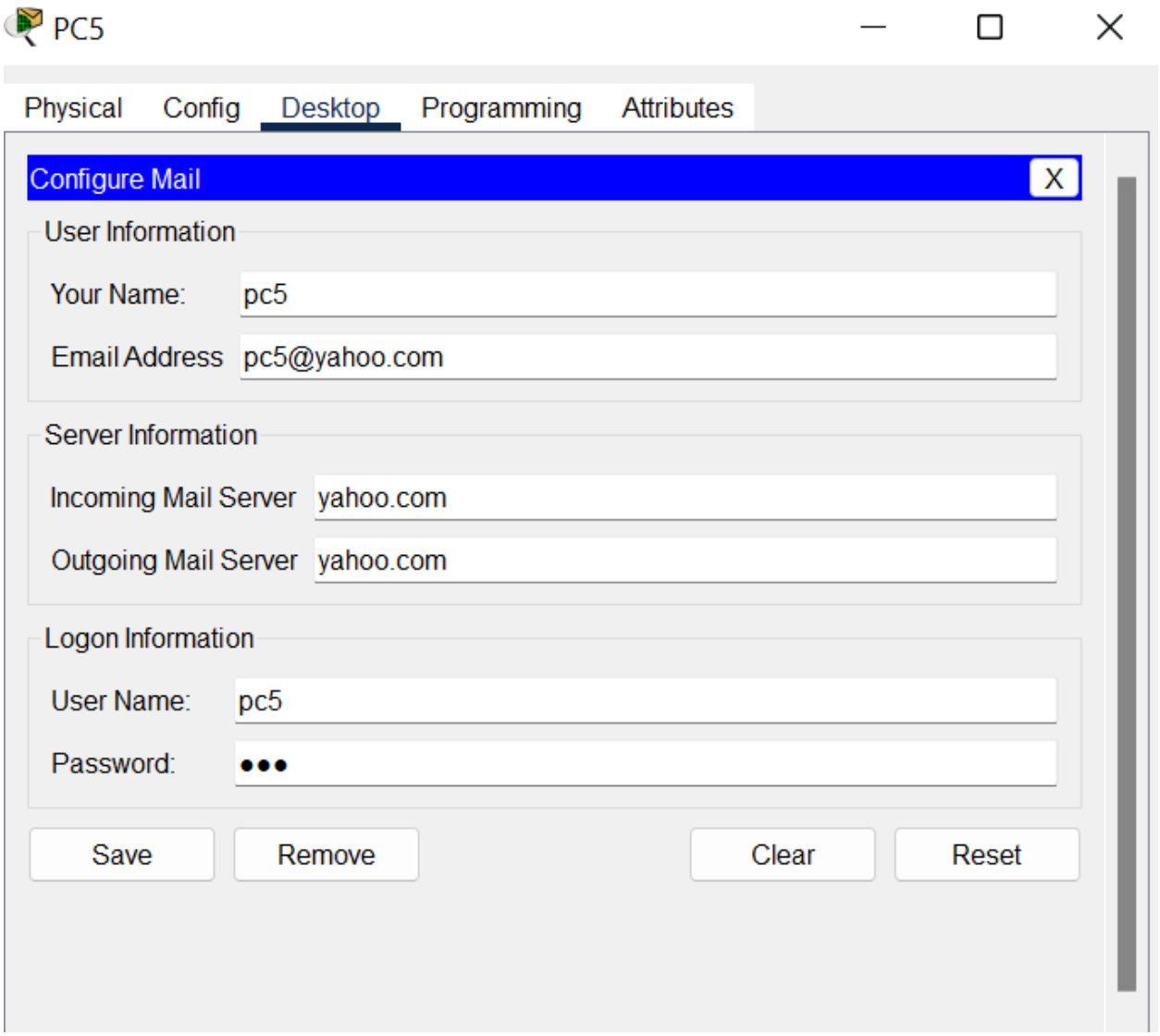

dns server
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP
DNS
DNS Service
On
Off
Resource Records
Name
lab7assignment.com
Type
A Record
Address
192.168.1.3
Add
Save
Remove
No.
Name
Type
Detail
0
lab7assignmen...
A Record
192.168.1.3
DNS Cache
Top

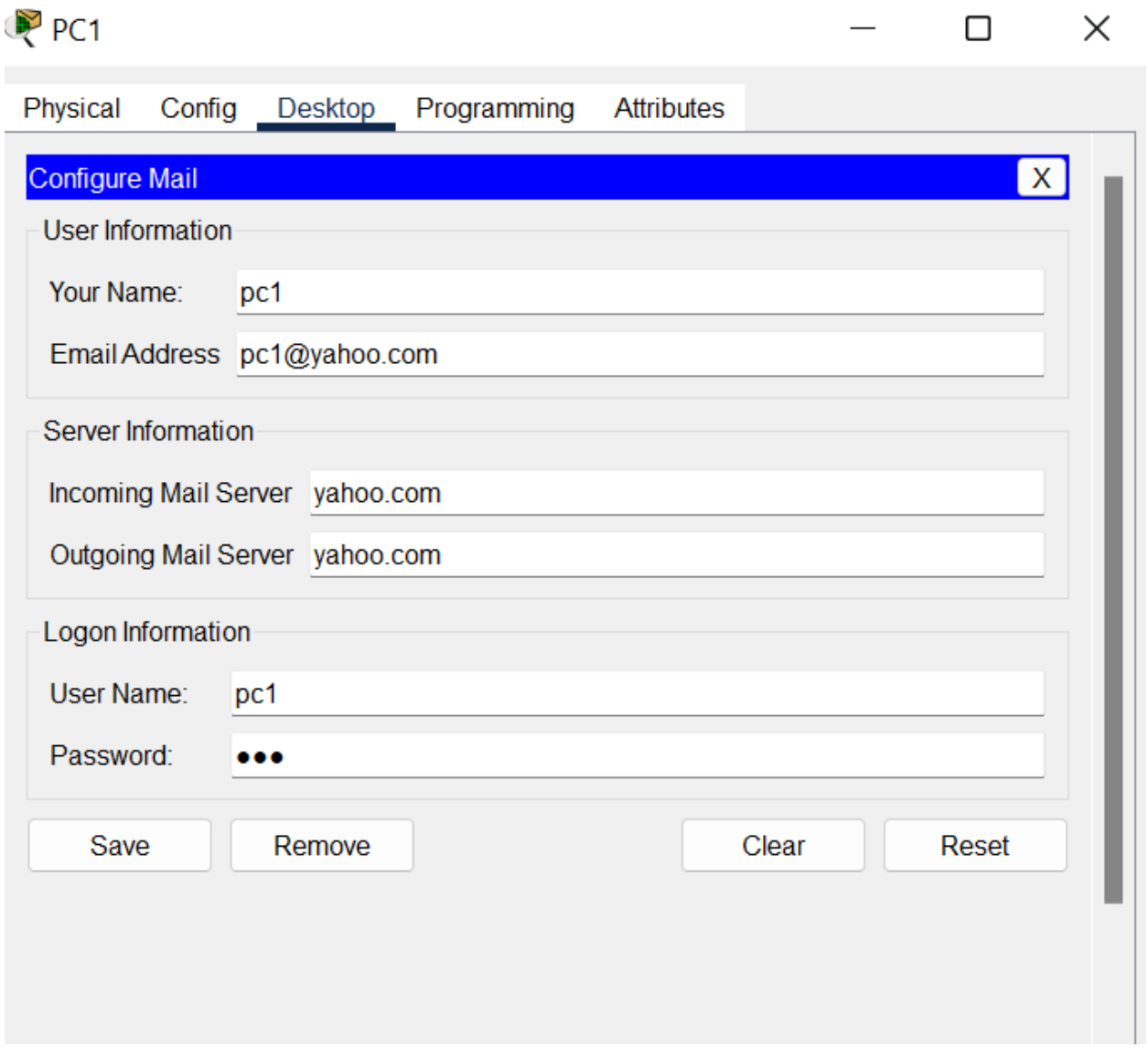

PC7
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://lab7assignment.com
Go
Stop
Kaishav Basodiya (202051094)
Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
Quick Links:
A small page
Copyrights
Image page
Image

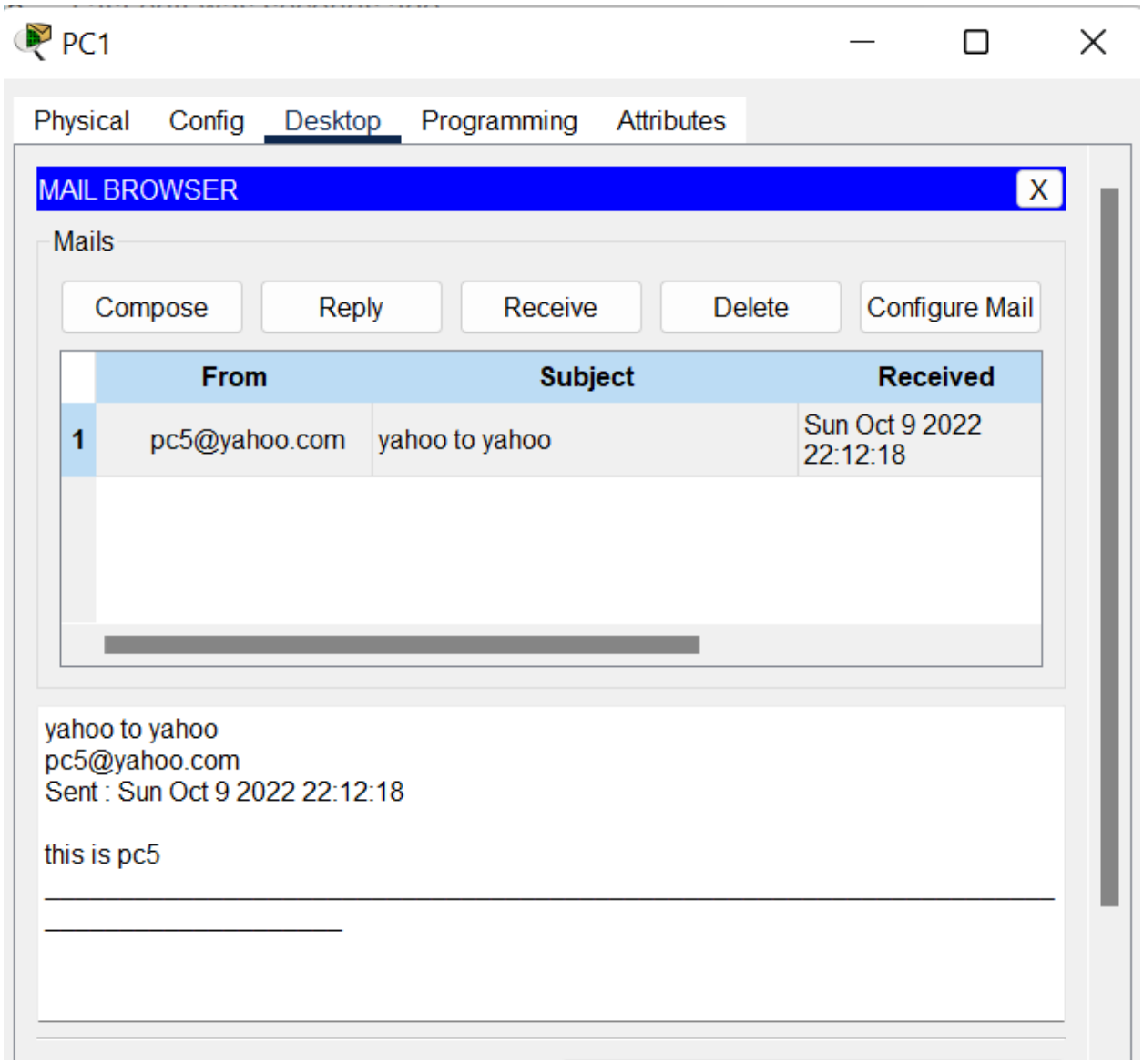

PC5
Physical
Config
Desktop
Programming
Attributes
Web Browser
X
<
>
URL
http://lab7assignment.com
Go
Stop
Kaishav Basodiya (202051094)
Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
Quick Links:
A small page
Copyrights
Image page
Image

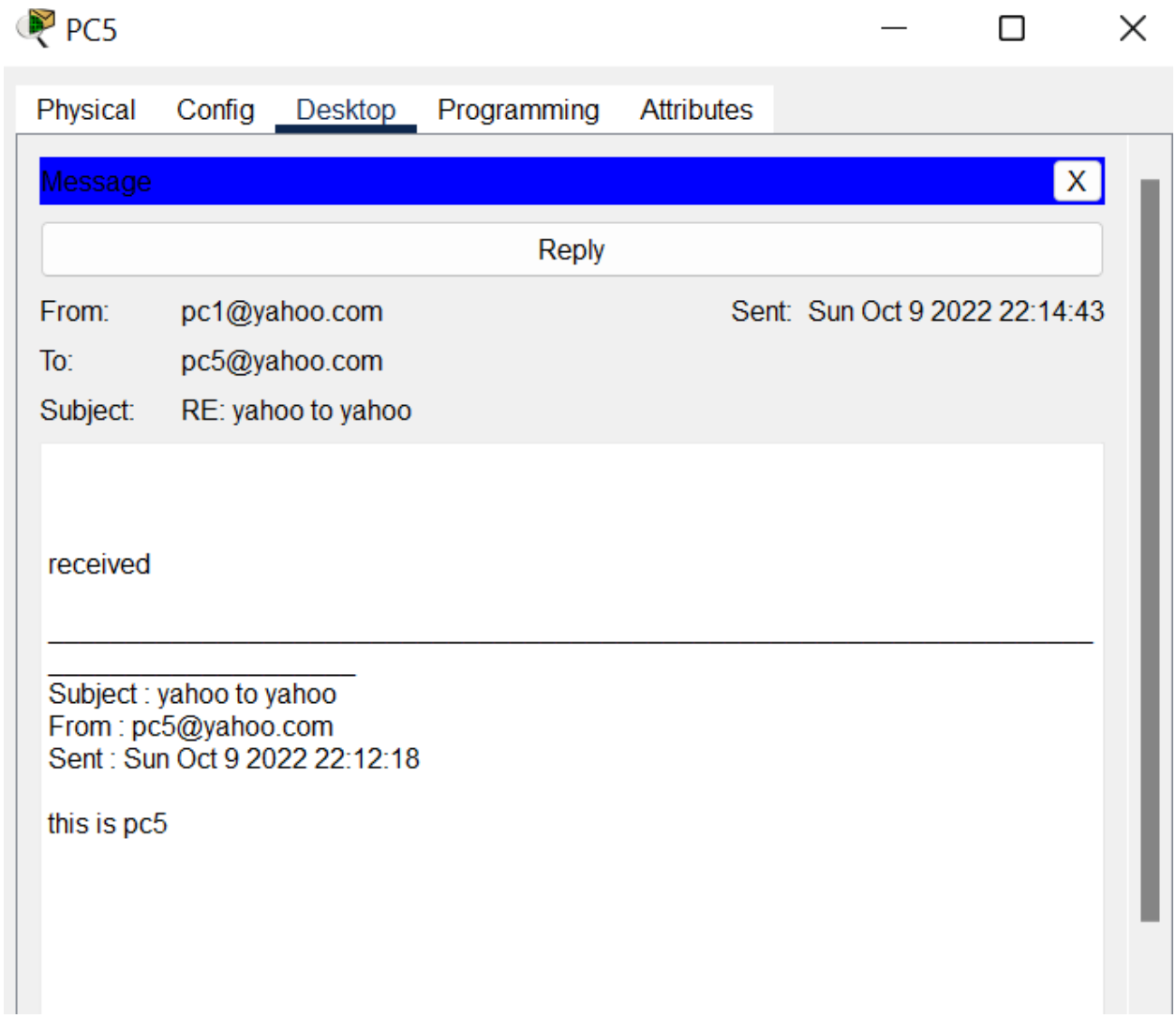

PC0
Physical
Config
Desktop
Programming
Attributes
MAIL BROWSER
X
Mails
Compose
Reply
Receive
Delete
Configure Mail
From
Subject
Received
1
pc5@gmail.com
lab7
Sun Oct 9 202220:57:46
lab7
pc5@gmail.com
Sent : Sun Oct 9 202220:57:46

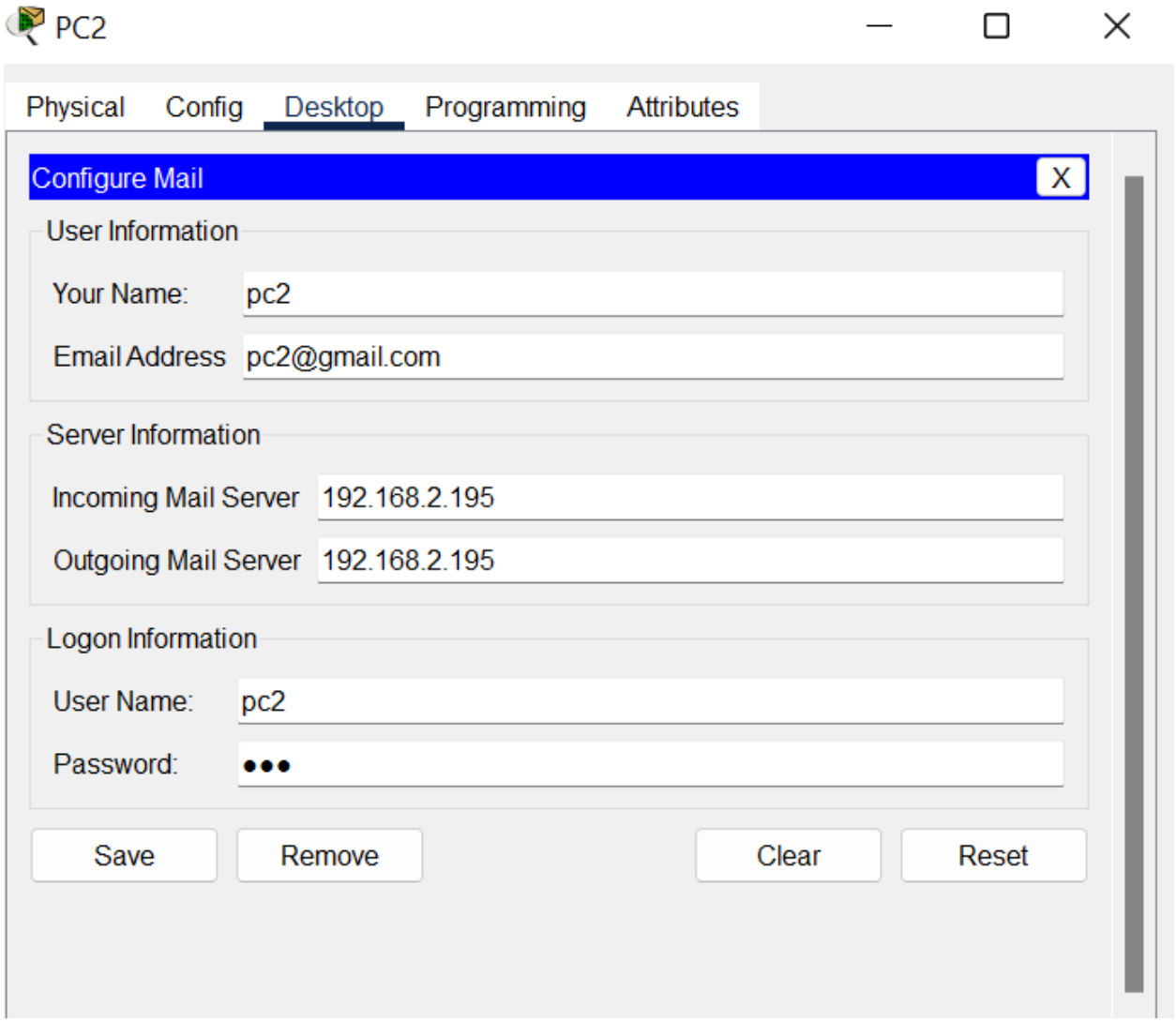

PC3
Physical
Config
Desktop
Programming
Attributes
Message
X
Reply
From: pc7@gmail.com
Sent: Sun Oct 9 2022 21:11:12
To: pc3@gmail.com
Subject: Lab7 is completed
this is pc7

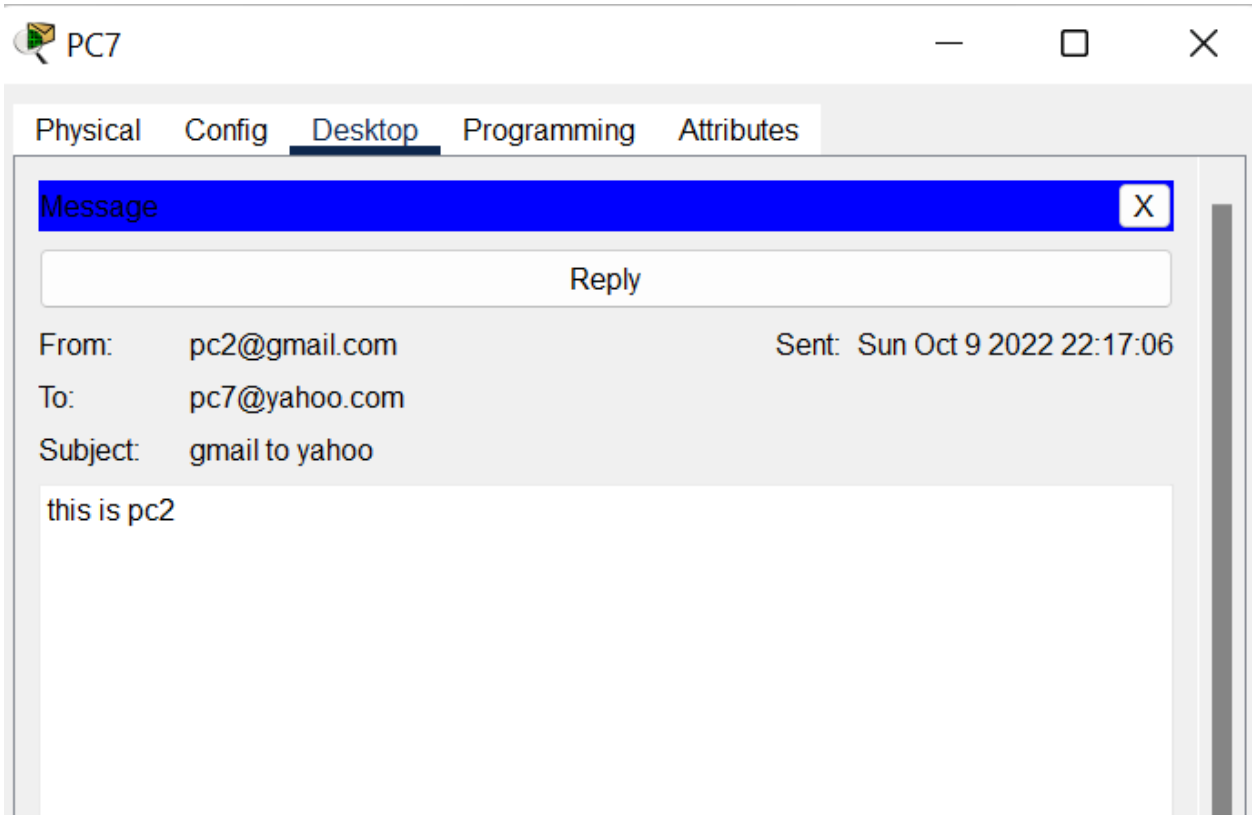

PC5
Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
pc5
Email Address
pc5@yahoo.com
Server Information
Incoming Mail Server
yahoo.com
Outgoing Mail Server
yahoo.com
Logon Information
User Name:
pc5
Password:
Save
Remove
Clear
Reset


PC1
Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
pc1
Email Address
pc1@yahoo.com
Server Information
Incoming Mail Server
yahoo.com
Outgoing Mail Server
yahoo.com
Logon Information
User Name:
pc1
Password:
Save
Remove
Clear
Reset


PC1
Physical
Config
Desktop
Programming
Attributes
MAIL BROWSER
X
Mails
Compose
Reply
Receive
Delete
Configure Mail
From
Subject
Received
1
pc5@yahoo.com
yahoo to yahoo
Sun Oct 9 2022 22:12:18
yahoo to yahoo
pc5@yahoo.com
Sent : Sun Oct 9 2022 22:12:18
this is pc5


PC5
Physical
Config
Desktop
Programming
Attributes
Message
X
Reply
From: pc1@yahoo.com
Sent: Sun Oct 9 2022 22:14:43
To: pc5@yahoo.com
Subject: RE: yahoo to yahoo
received
Subject : yahoo to yahoo
From : pc5@yahoo.com
Sent : Sun Oct 9 2022 22:12:18
this is pc5


PC2
Physical
Config
Desktop
Programming
Attributes
Configure Mail
X
User Information
Your Name:
pc2
Email Address
pc2@gmail.com
Server Information
Incoming Mail Server
192.168.2.195
Outgoing Mail Server
192.168.2.195
Logon Information
User Name:
pc2
Password:
Save
Remove
Clear
Reset


PC7
Physical
Config
Desktop
Programming
Attributes
Message
X
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Sent: Sun Oct 9 2022 22:17:06
To: pc7@yahoo.com
Subject: gmail to yahoo
this is pc2