

PANGASINAN STATE UNIVERSITY
Urdaneta Campus, Urdaneta City Pangasinan
College of Engineering and Architecture
Computer Engineering Department



Elective 1 – Systems and Network Administration 1

Evaluation: Assignment 1

Topic: Setup Mail Server

Score: _____

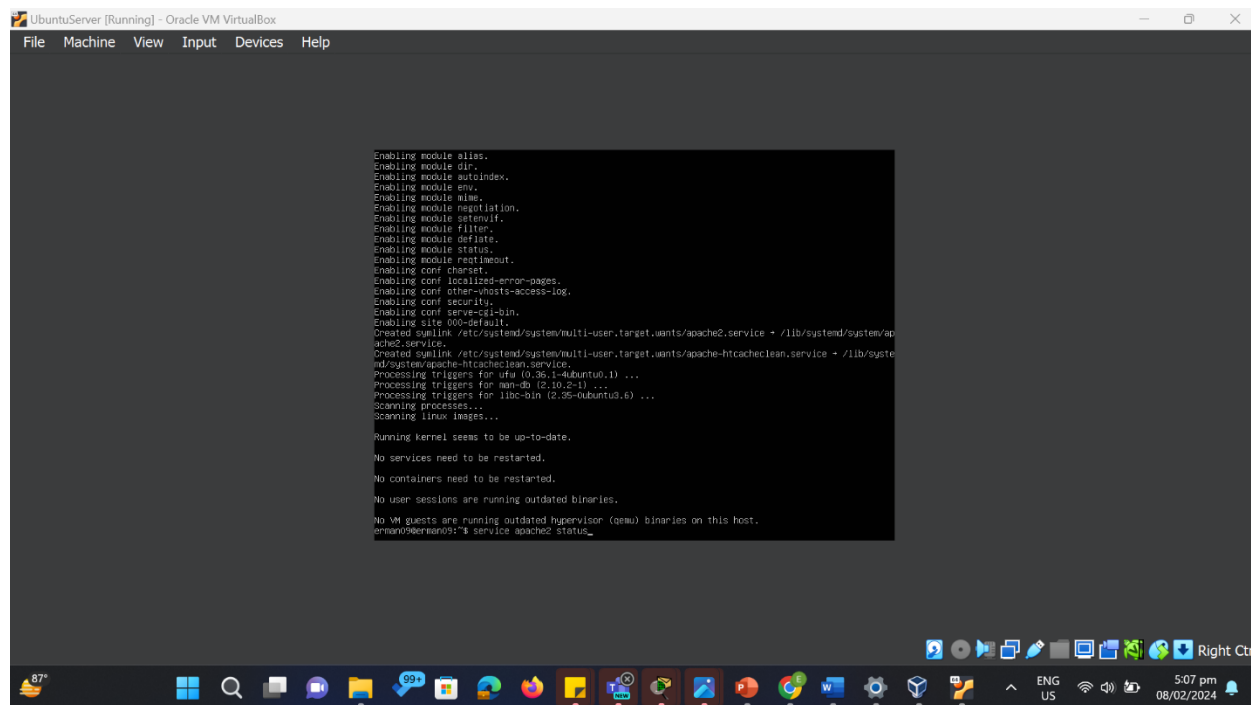
Date: February 20, 2024

Name: _____
 Cerujano Erman Ace Morales
 (Family Name) (Given Name) (Middle)

INSTRUCTIONS:

1. Setup any Mail server, such as but not limited to "postfix+mailutils" or any mail server of your choice in your Virtual Machine using any linux distros of your choice.
2. Use your date of birth as the ip address of your web server mm.dd.yy.1. If your birthday is June 12, 2007 then your web server's ip address should be 06.12.07.1.
3. Use appropriate subnet mask for your respective ip address.
4. Your hostname (e.g. @gmail.com) should be your Given name and Family name, no spaces. If your name is Kenneth Oliver S. Lopez, the host name for your mail server should be @kennethlopez.com
5. Test and make sure you can send and receive messages using several accounts. When everything is working, show to your instructor that everything is working properly.
6. After physical checking, create and submit a step by step procedure how did you set up your mail server on the space provided below. Please make sure that when copying a screen shot of a terminal window, use white background and black foreground.

STEP 1: Open your ubuntu server in Virtual Box.



STEP 2: Update your ubuntu server using the command "sudo apt update."

```
erman09@erman09:~$ sudo apt update
[sudo] password for erman09:
Hit:1 http://ph.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://ph.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Hit:3 http://ph.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:4 http://ph.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1,371 kB]
Get:5 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:6 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1,144 kB]
Get:7 http://ph.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [273 kB]
Get:8 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [211 kB]
Get:9 http://ph.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [1,421 kB]
Get:10 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [1,369 kB]
Get:11 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [224 kB]
Get:12 http://ph.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [234 kB]
Get:13 http://ph.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1,046 kB]
Get:14 http://ph.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [236 kB]
Fetched 7,758 kB in 24s (328 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
50 packages can be upgraded. Run 'apt list --upgradable' to see them.
erman09@erman09:~$
```

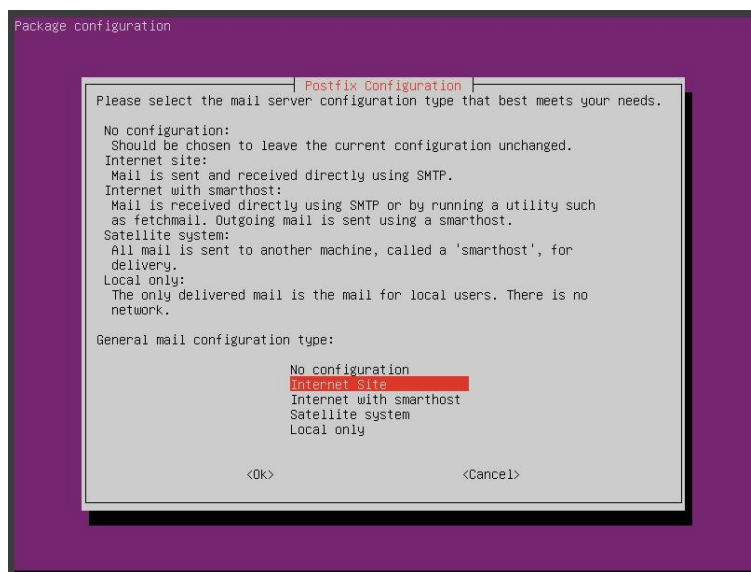
STEP 3: Install the “postfix” into your ubuntu server. Postfix is a open-source mail transfer agent that delivers electronic mail. We will use this as our mail server. To install this, you need to follow the command below.

```
erman09@erman09:~$ sudo apt-get install postfix
```

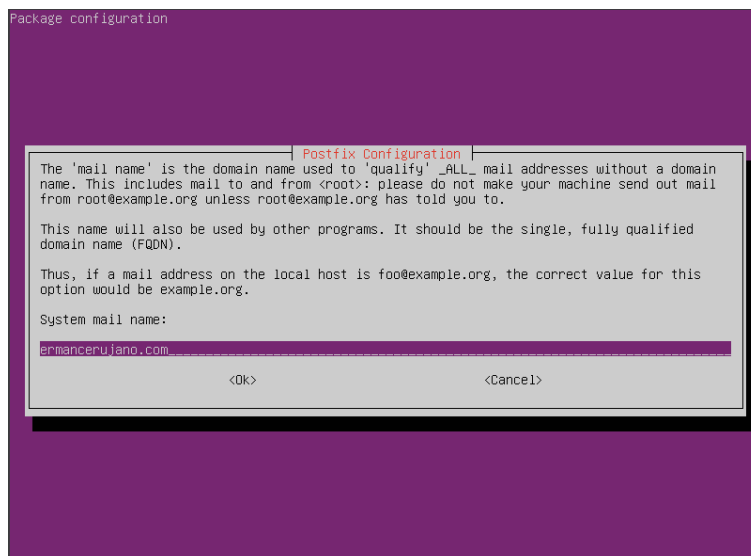
Enter your password.

```
erman09@erman09:~$ sudo apt-get install postfix
[sudo] password for erman09: _
```

Then wait for it to download. After downloading the “Postfix.” You will be going to setup some configuration. For the General mail configuration type, select “Internet Site”



Select your System mail name then click “Ok.”



You are now done installing and configuring your Postfix. You can now be able to send some email to your users in your ubuntu server.

STEP 4: Create a user. You need to create a user in which you can send these emails. For this we are going to create 3 users which is "ermanace01," "ermanace02," and "ermanace03."

Adding "ermanace01" user

```
erman09@ermancerujano:~$ sudo useradd ermanace01
```

Adding "ermanace02" user

```
erman09@ermancerujano:~$ sudo useradd ermanace02
```

Adding "ermanace03" user

```
erman09@ermancerujano:~$ sudo useradd ermanace03
```

To verify if we successfully add these three users. Use the command below.

```
erman09@ermancerujano:~$ sudo cat /etc/passwd
```

As you can see, we successfully add the three users.

```
erman09@ermancerujano:~$ sudo cat /etc/passwd
erman03:x:1003:1003:erman02,,,:/home/erman03:/bin/bash
ermanace:x:1004:1004::/home/ermanace:/bin/bash/
erman:x:1006:1006::/home/erman:/bin/sh
ermanace01:x:1007:1007::/home/ermanace01:/bin/sh
ermanace02:x:1008:1008::/home/ermanace02:/bin/sh
ermanace03:x:1009:1009::/home/ermanace03:/bin/sh
erman09@ermancerujano:~$ _
```

STEP 5: Install "mailutils" into your ubuntu server. We will use this to create an email and send it into our users. To install it, use the command below.

```
erman09@erman09:~$ sudo apt-get install mailutils_
```

Select "Y"

```
erman09@erman09:~$ sudo apt-get install mailutils
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  gsasl-common guile-3.0-libs libgc1 libgsasl7 libidn12 libltdl7 libmailutils8 libmysqlclient21
  libntlm0 libpq5 mailutils-common mysql-common
Suggested packages:
  mailutils-mh mailutils-doc
The following NEW packages will be installed:
  gsasl-common guile-3.0-libs libgc1 libgsasl7 libidn12 libltdl7 libmailutils8 libmysqlclient21
  libntlm0 libpq5 mailutils mailutils-common mysql-common
0 upgraded, 13 newly installed, 0 to remove and 50 not upgraded.
Need to get 10.4 MB of archives.
After this operation, 67.3 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

Wait for it to download.

```

erman09@erman09:~$ sudo apt-get install mailutils
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  gsasl-common guile-3.0-libs libgc1 libgsasl7 libidn12 libltd17 libmailutils8 libmysqlclient21
  libntlm0 libpq5 mailutils-common mysql-common
Suggested packages:
  mailutils-mh mailutils-doc
The following NEW packages will be installed:
  gsasl-common guile-3.0-libs libgc1 libgsasl7 libidn12 libltd17 libmailutils8 libmysqlclient21
  libntlm0 libpq5 mailutils mailutils-common mysql-common
0 upgraded, 13 newly installed, 0 to remove and 50 not upgraded.
Need to get 10.4 MB of archives.
After this operation, 67.3 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://ph.archive.ubuntu.com/ubuntu jammy/universe amd64 gsasl-common all 1.10.0-5 [59.8 kB]
Get:2 http://ph.archive.ubuntu.com/ubuntu jammy/main amd64 libgc1 amd64 1:8.0.6-1.1build1 [96.8 kB]
Get:3 http://ph.archive.ubuntu.com/ubuntu jammy/universe amd64 guile-3.0-libs amd64 3.0.7-1 [7,538 k
B]
57% [3 guile-3.0-libs 6,920 kB/7,538 kB 92%]_

```

You are now done installing the mailutils. You can now send and receive email in your ubuntu server.

STEP 6: Creating and sending email. Now that we successfully setup the mail server (Postfix) and we have now the mailing application (mailutils), we can now send mail into the different users of your ubuntu server. To start accessing the mailutils, use the following command.

"mail <user's email>"

```
erman09@ermancerujano:~$ mail erman01@ermancerujano.com
```

Then you are going to fill in some information like the "CC," "Subject," and the message itself like you do in gmail.

```

erman09@ermancerujano:~$ mail erman01@ermancerujano.com
Cc: erman09
Subject: SNA - Mail Server
Testing Mail Server

```

STEP 7: Login to your user (erman01) to check if it receives the email that you send.

```

erman09@ermancerujano:~$ su erman01
Password:

```

Use the mail command to check the mail box.

```
$ mail
"/var/mail/erman01": 10 messages 10 new
>N 1 Erman Ace M. Ceruj Thu Feb 15 09:57 15/507 reggggerg
N 2 Erman Ace M. Ceruj Thu Feb 15 09:57 15/489 reggggerg
N 3 erman01@ermanceruj Mon Feb 19 05:30 18/687 Re: reggggerg
N 4 erman02@ermanceruj Mon Feb 19 05:32 15/470 SNA
N 5 erman01@ermanceruj Mon Feb 19 05:32 18/655 Re: SNA
N 6 Erman Ace M. Ceruj Mon Feb 19 05:33 15/501 SNA
N 7 erman01@ermanceruj Mon Feb 19 05:33 18/681 Re: SNA
N 8 Erman Ace M. Ceruj Mon Feb 19 05:34 15/499 SNA
N 9 erman01@ermanceruj Mon Feb 19 05:34 18/685 Re: SNA
N 10 Erman Ace M. Ceruj Mon Feb 19 07:12 15/522 SNA - Mail Server
? _
```

Then select the email that you want to see by simply entering its number.

```
? 10
Return-Path: <erman09@ermancerujano>
X-Original-To: erman01@ermancerujano.com
Delivered-To: erman01@ermancerujano.com
Received: by ermancerujano (Postfix, from userid 1000)
        id 6855D803DD; Mon, 19 Feb 2024 07:12:27 +0000 (UTC)
To: <erman01@ermancerujano.com>
Cc: erman09@ermancerujano.com
Subject: SNA - Mail Server
User-Agent: mail (GNU Mailutils 3.14)
Date: Mon, 19 Feb 2024 07:12:27 +0000
Message-Id: <20240219071227.6855D803DD@ermancerujano>
From: "Erman Ace M. Cerujano" <erman09@ermancerujano>

Testing Mail Server

?
```

As you can see, erman01 receives the message that we send which is "Testing Mail Server."

STEP 8: Now we are going to try to reply a message to the sender. Use the command "re" then the number of email.

```
? re 10
To: "Erman Ace M. Cerujano" <erman09@ermancerujano>, <erman01@ermancerujano.com>
Cc: <erman09@ermancerujano.com>
Subject: Re: SNA - Mail Server
```

Then enter the message that you want to reply. Then ctrl D.

```
? re 10
To: "Erman Ace M. Cerujano" <erman09@ermancerujano>, <erman01@ermancerujano.com>
Cc: <erman09@ermancerujano.com>
Subject: Re: SNA - Mail Server

I receive your message!

? _
```

STEP 9: Check the replied message. Go back to your admin user and check the email if you received the reply message.

```

You have new mail.
erman09@ermancerujano:~$ mail
"/var/mail/erman09": 14 messages 2 new 11 unread
U   1 Mail Delivery Syst Thu Feb 15 06:02 106/4013 Undelivered Mail Returned to Sender
U   2 Mail Delivery Syst Thu Feb 15 06:03 106/3986 Undelivered Mail Returned to Sender
U   3 Mail Delivery Syst Thu Feb 15 06:06 86/2785 Undelivered Mail Returned to Sender
U   4 Mail Delivery Syst Thu Feb 15 06:10 87/2792 Undelivered Mail Returned to Sender
U   5 Mail Delivery Syst Thu Feb 15 07:08 88/2781 Undelivered Mail Returned to Sender
U   6 Mail Delivery Syst Thu Feb 15 09:51 74/2341 Undelivered Mail Returned to Sender
   7 erman02@ermanceruj Thu Feb 15 10:01 17/494 bis
U   8 erman02@ermanceruj Mon Feb 19 05:32 17/472 SNA
U   9 erman01@ermanceruj Mon Feb 19 05:32 20/675 Re: SNA
U  10 Erman Ace M. Ceruj Mon Feb 19 05:33 17/503 SNA
U  11 erman01@ermanceruj Mon Feb 19 05:33 20/701 Re: SNA
U  12 Erman Ace M. Ceruj Mon Feb 19 05:34 17/501 SNA
>N 13 Erman Ace M. Ceruj Mon Feb 19 07:12 15/504 SNA - Mail Server
   N 14 erman01@ermanceruj Mon Feb 19 07:20 18/712 Re: SNA - Mail Server
? _

```

Open the email by entering its number.

```

? 14
Return-Path: <erman01@ermancerujano>
X-Original-To: erman09@ermancerujano.com
Delivered-To: erman09@ermancerujano.com
Received: by ermancerujano (Postfix, from userid 1001)
        id 96830803DD; Mon, 19 Feb 2024 07:20:47 +0000 (UTC)
To: "Erman Ace M. Cerujano" <erman09@ermancerujano>, <erman01@ermancerujano.com>
Cc: <erman09@ermancerujano.com>
Subject: Re: SNA - Mail Server
In-Reply-To: Your message of Mon, 19 Feb 2024 07:12:27 +0000
        <20240219071227.6855D803DD@ermancerujano>
References: <20240219071227.6855D803DD@ermancerujano>
User-Agent: mail (GNU Mailutils 3.14)
Date: Mon, 19 Feb 2024 07:20:47 +0000
Message-Id: <20240219072047.96830803DD@ermancerujano>
From: erman01@ermancerujano

I receive your message!
?

```

As you can see, we successfully received the reply from erman01.