CYB613: Operating Systems Theory and Administration
Lab3

Objective

To learn about managing user accounts in Linux OS.

Lab 7.1

Chapter 7. Managing User Accounts

These labs should be performed on the Ubuntu operating system that you installed in Chapter 1, "Distributions and Key Components." Before you begin this lab, log in to the student account that you created during the installation process.

Lab 7.1 Managing User Accounts

STEP 1. Open a terminal window.

_____

STEP 2. Execute the correct command to display user account information (including the login shell and home directory) for the bin account.

_____

STEP 3. Execute the correct command to display user password information (including the encrypted password and password aging) for the bin account.

_____

STEP 4. The command in step 3 should have failed. Execute the correct su command to change your account so the command from step 3 will be successful when executed.

_____

STEP 5. Create a new user named jake and explicitly use options to create the home directory /home/jake for this user.

_____

STEP 6. Set a password for the jake user to a password of your choosing.

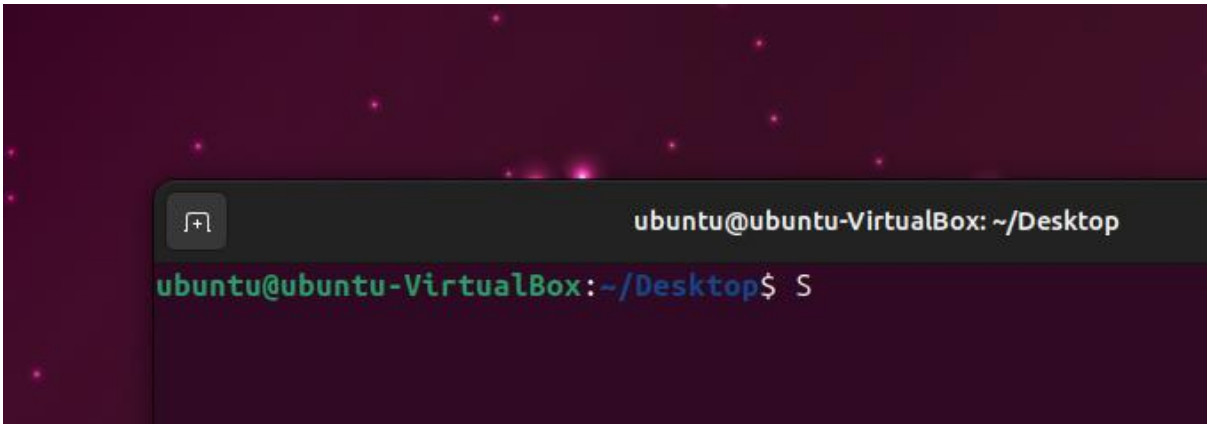
_____

_____

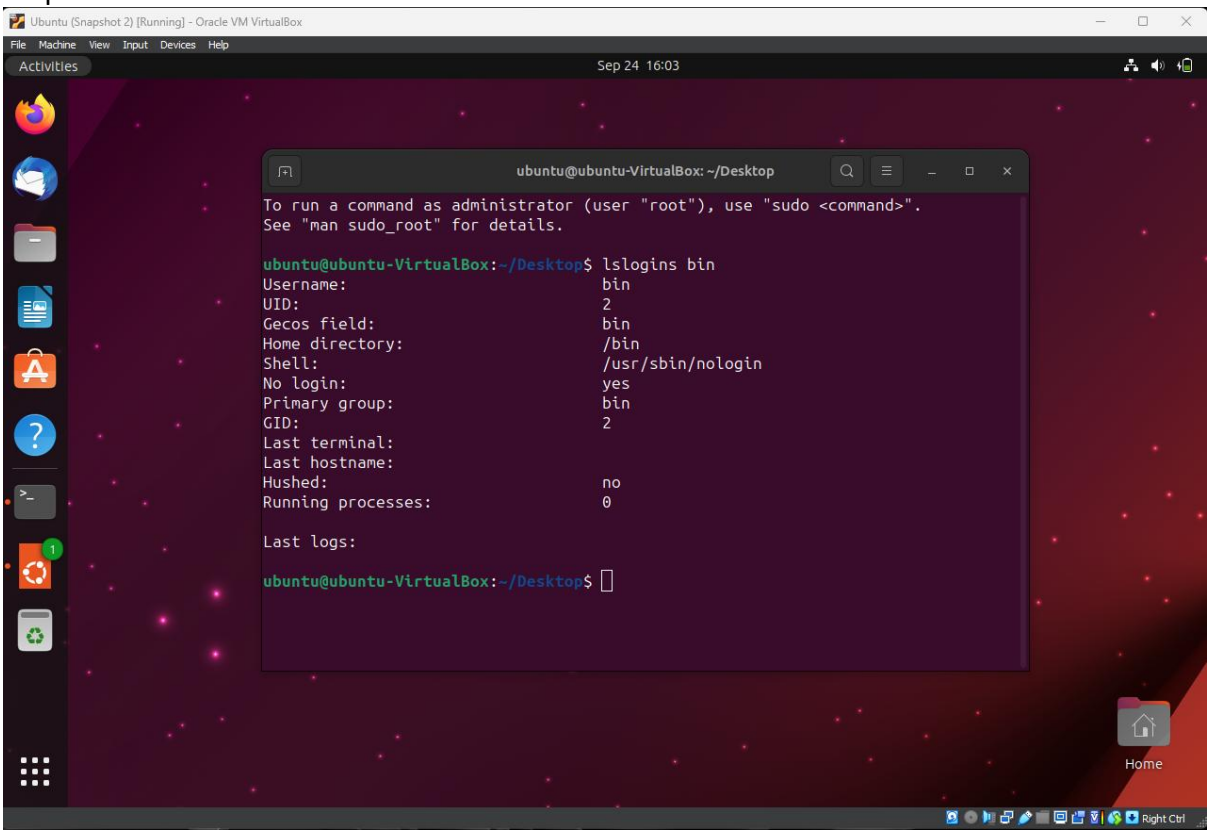
STEP 7. Run the correct command to display the default values used when a new account is created.

_____

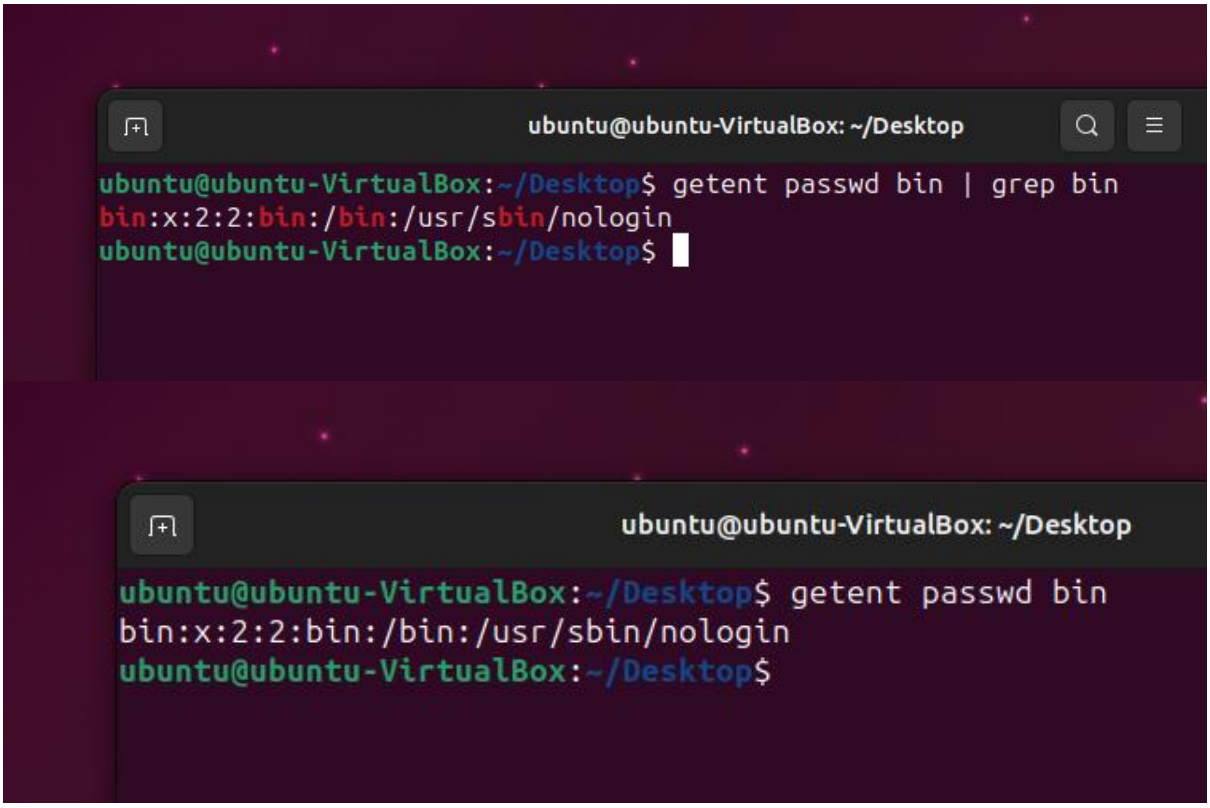
Step 1


ubuntu@ubuntu-VirtualBox: ~/Desktop
ubuntu@ubuntu-VirtualBox:~/Desktop$ S

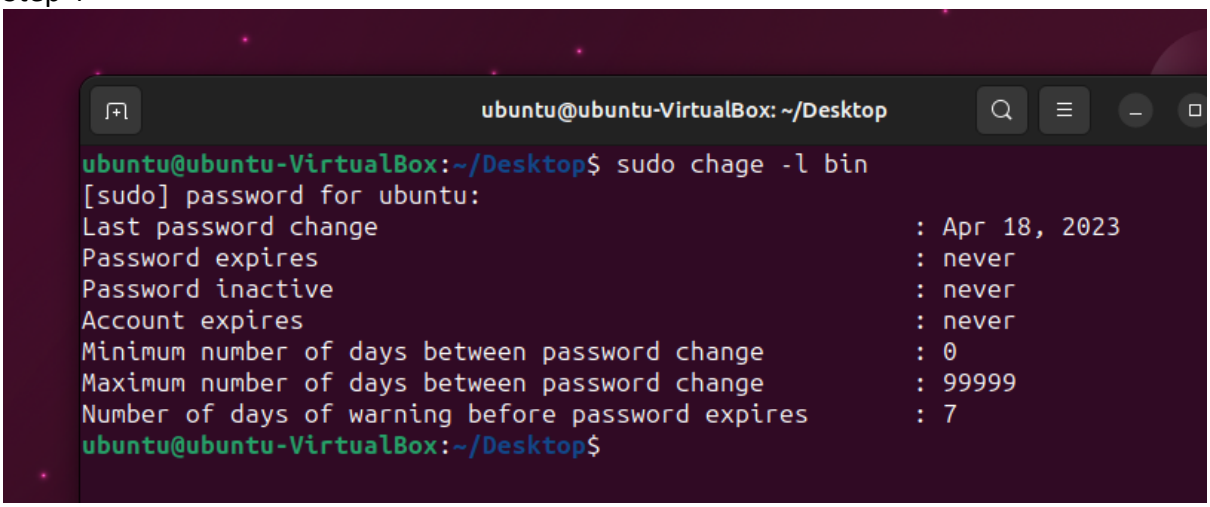
Step 2


Ubuntu (Snapshot 2) [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities
Sep 24 16:03
ubuntu@ubuntu-VirtualBox: ~/Desktop
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
ubuntu@ubuntu-VirtualBox:~/Desktop$ lslogins bin
Username: bin
UID: 2
Gecos field: bin
Home directory: /bin
Shell: /usr/sbin/nologin
No login: yes
Primary group: bin
GID: 2
Last terminal:
Last hostname:
Hushed: no
Running processes: 0
Last logs:
ubuntu@ubuntu-VirtualBox:~/Desktop$
Home
Right Ctrl

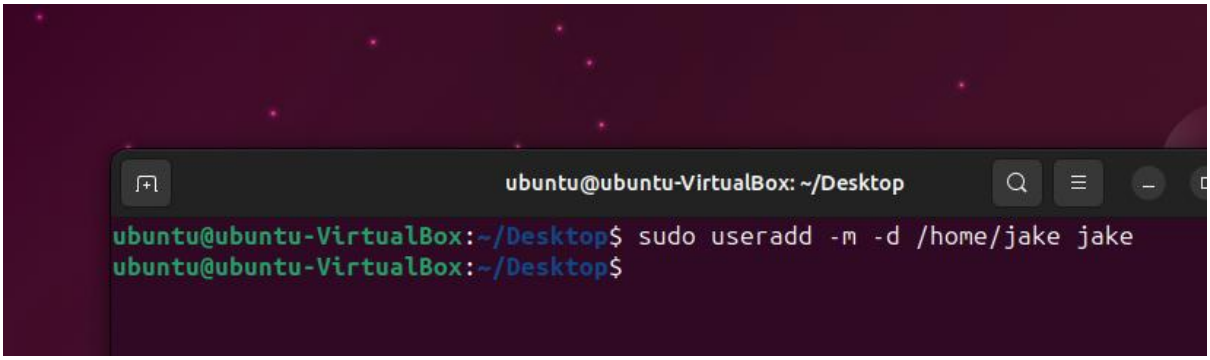
Step 3


ubuntu@ubuntu-VirtualBox: ~/Desktop
ubuntu@ubuntu-VirtualBox:~/Desktop$ getent passwd bin | grep bin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
ubuntu@ubuntu-VirtualBox:~/Desktop$
ubuntu@ubuntu-VirtualBox: ~/Desktop
ubuntu@ubuntu-VirtualBox:~/Desktop$ getent passwd bin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
ubuntu@ubuntu-VirtualBox:~/Desktop$

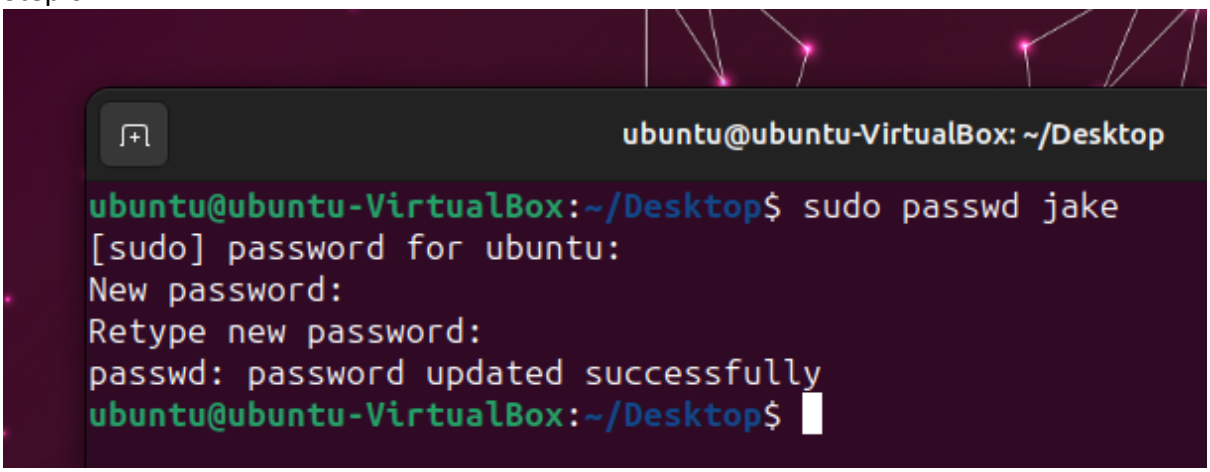
Step 4


ubuntu@ubuntu-VirtualBox: ~/Desktop
ubuntu@ubuntu-VirtualBox:~/Desktop$ sudo chage -l bin
[sudo] password for ubuntu:
Last password change : Apr 18, 2023
Password expires : never
Password inactive : never
Account expires : never
Minimum number of days between password change : 0
Maximum number of days between password change : 99999
Number of days of warning before password expires : 7
ubuntu@ubuntu-VirtualBox:~/Desktop$

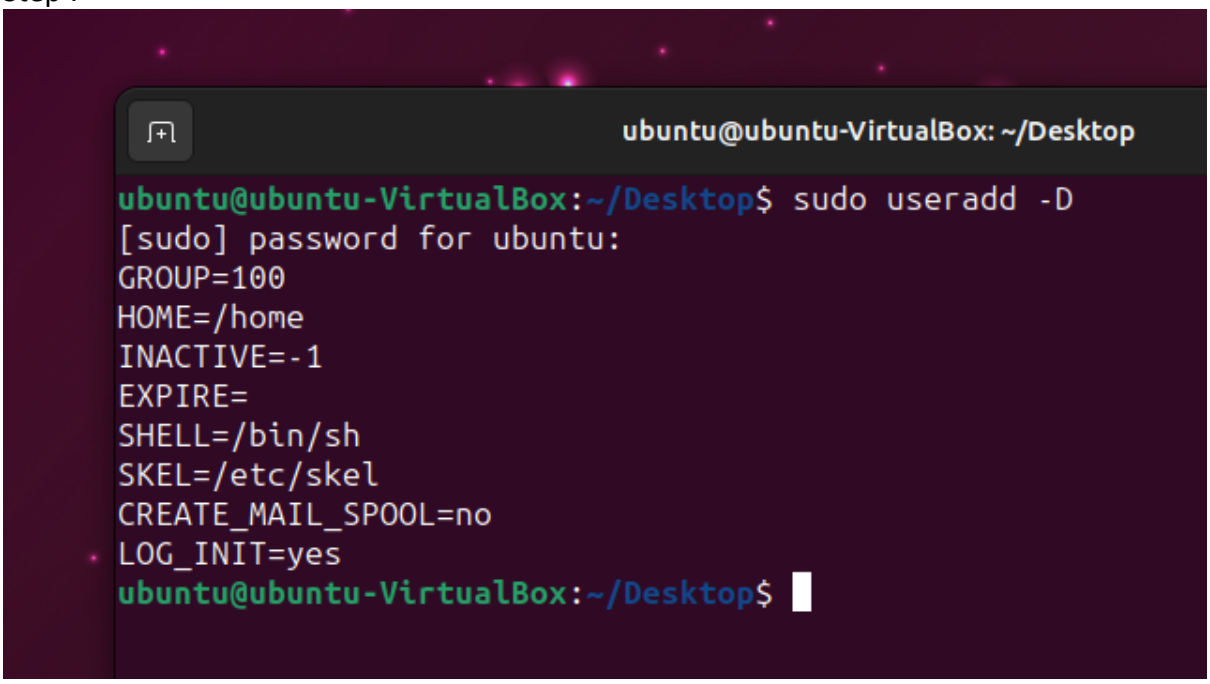
Step 5



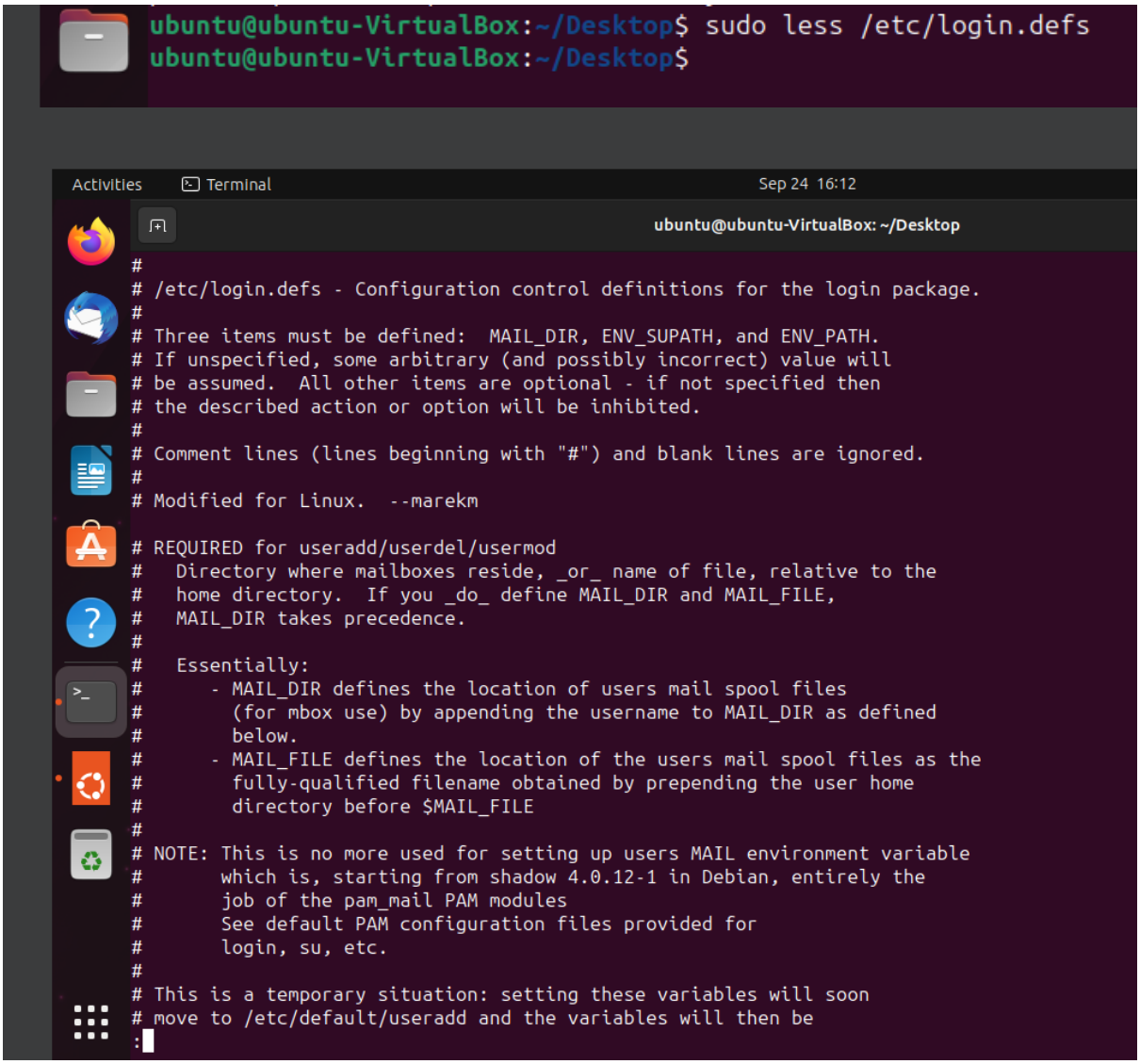
Step 6



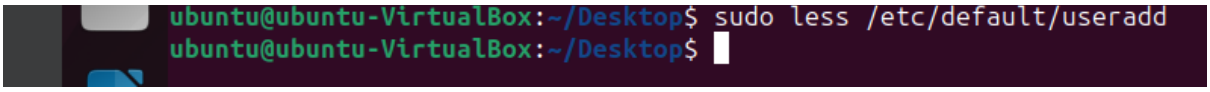
Step 7

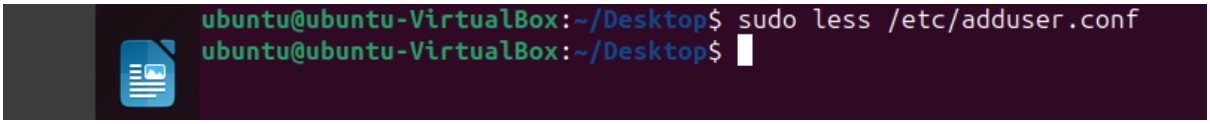


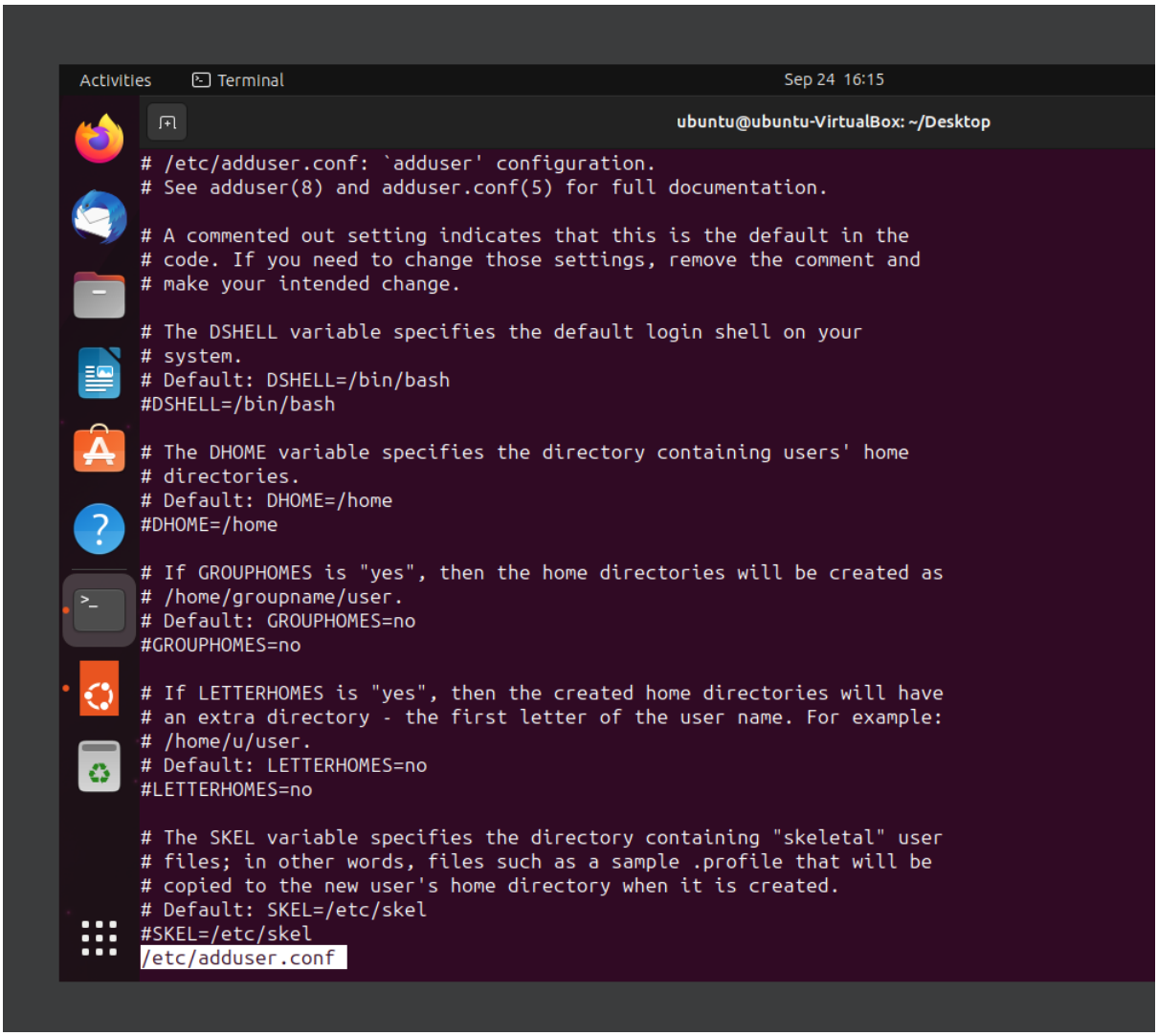
Step 8


ubuntu@ubuntu-VirtualBox:~/Desktop$ sudo less /etc/login.defs
ubuntu@ubuntu-VirtualBox:~/Desktop$
Activities
Terminal
Sep 24 16:12
ubuntu@ubuntu-VirtualBox: ~/Desktop
/etc/login.defs - Configuration control definitions for the login package.
Three items must be defined: MAIL_DIR, ENV_SUPATH, and ENV_PATH.
If unspecified, some arbitrary (and possibly incorrect) value will
be assumed. All other items are optional - if not specified then
the described action or option will be inhibited.
Comment lines (lines beginning with "#") and blank lines are ignored.
Modified for Linux. --marekm
REQUIRED for useradd/userdel/usermod
Directory where mailboxes reside, _or_ name of file, relative to the
home directory. If you _do_ define MAIL_DIR and MAIL_FILE,
MAIL_DIR takes precedence.
Essentially:
- MAIL_DIR defines the location of users mail spool files
(for mbox use) by appending the username to MAIL_DIR as defined
below.
- MAIL_FILE defines the location of the users mail spool files as the
fully-qualified filename obtained by prepending the user home
directory before $MAIL_FILE
NOTE: This is no more used for setting up users MAIL environment variable
which is, starting from shadow 4.0.12-1 in Debian, entirely the
job of the pam_mail PAM modules
See default PAM configuration files provided for
login, su, etc.
This is a temporary situation: setting these variables will soon
move to /etc/default/useradd and the variables will then be
:

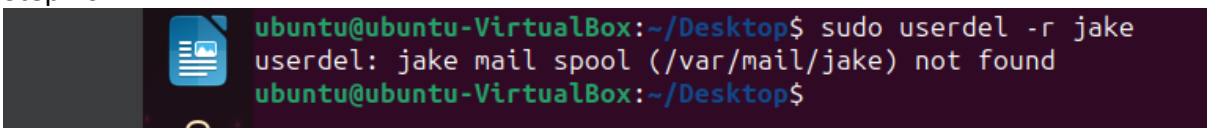
Step 9


ubuntu@ubuntu-VirtualBox:~/Desktop$ sudo less /etc/default/useradd
ubuntu@ubuntu-VirtualBox:~/Desktop$


ubuntu@ubuntu-VirtualBox:~/Desktop$ sudo less /etc/adduser.conf
ubuntu@ubuntu-VirtualBox:~/Desktop$



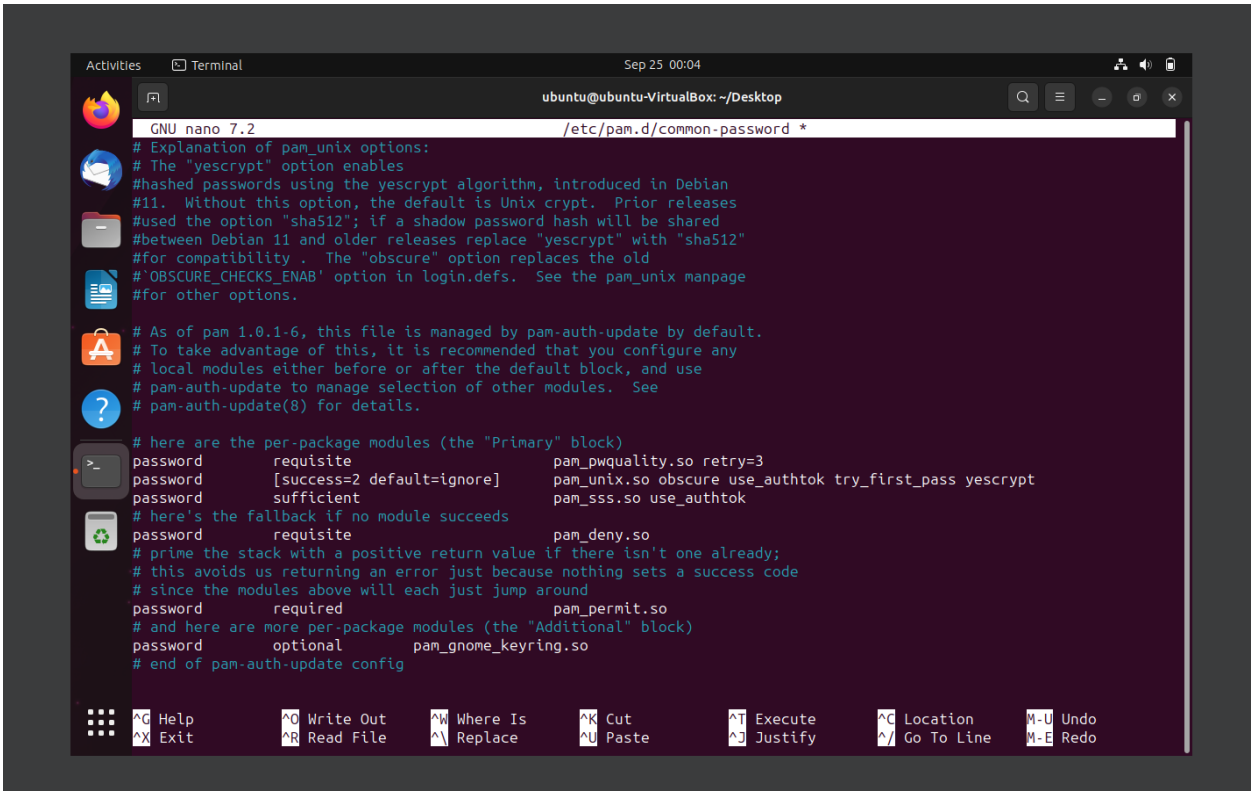
Step 10

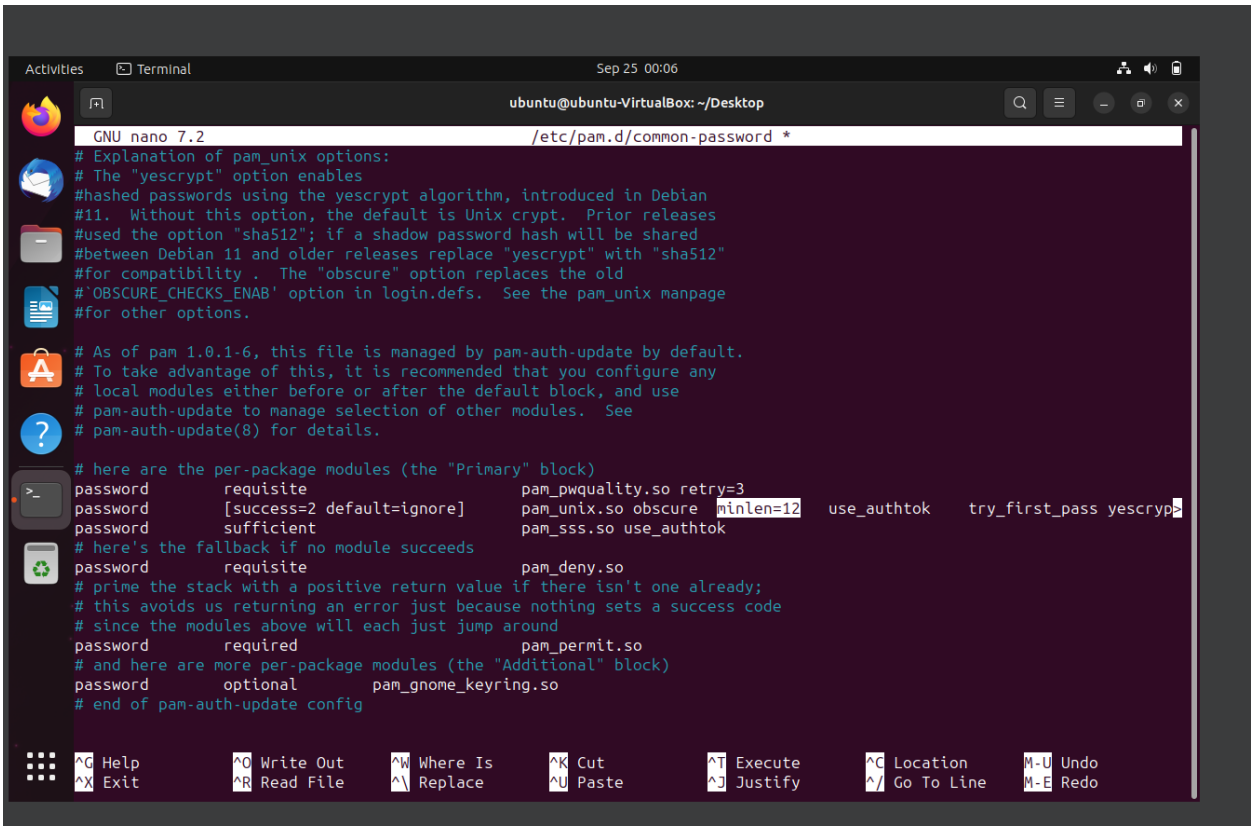


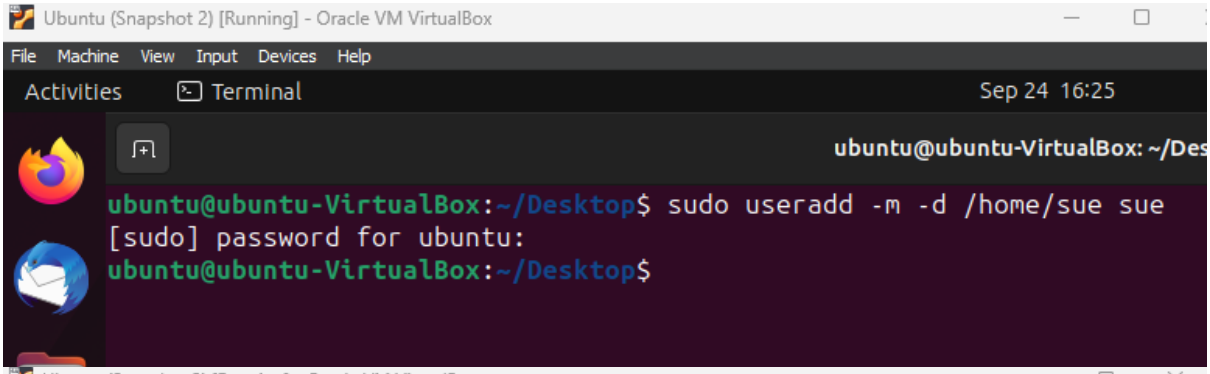
Lab 7.2

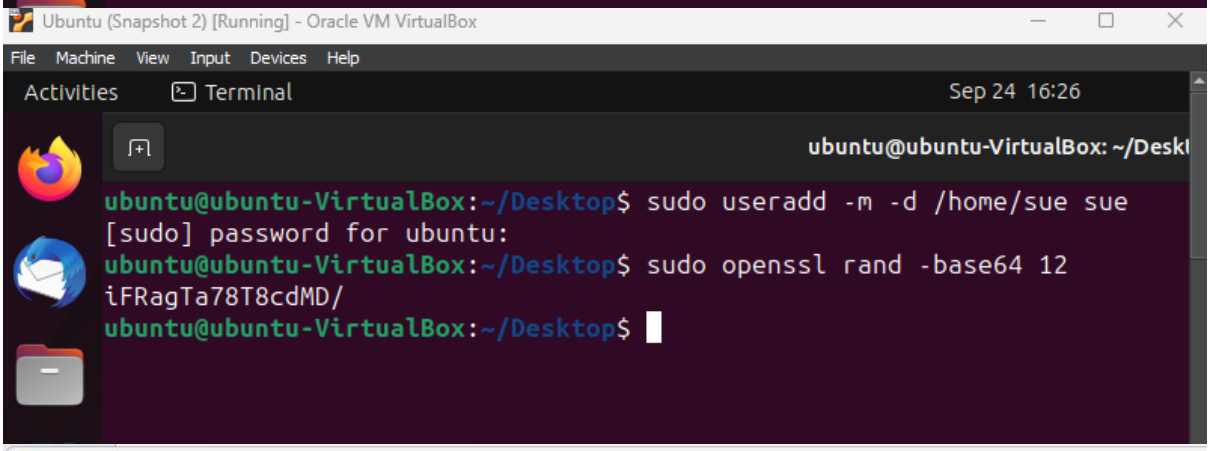
List the commands you used also you will need to edit file

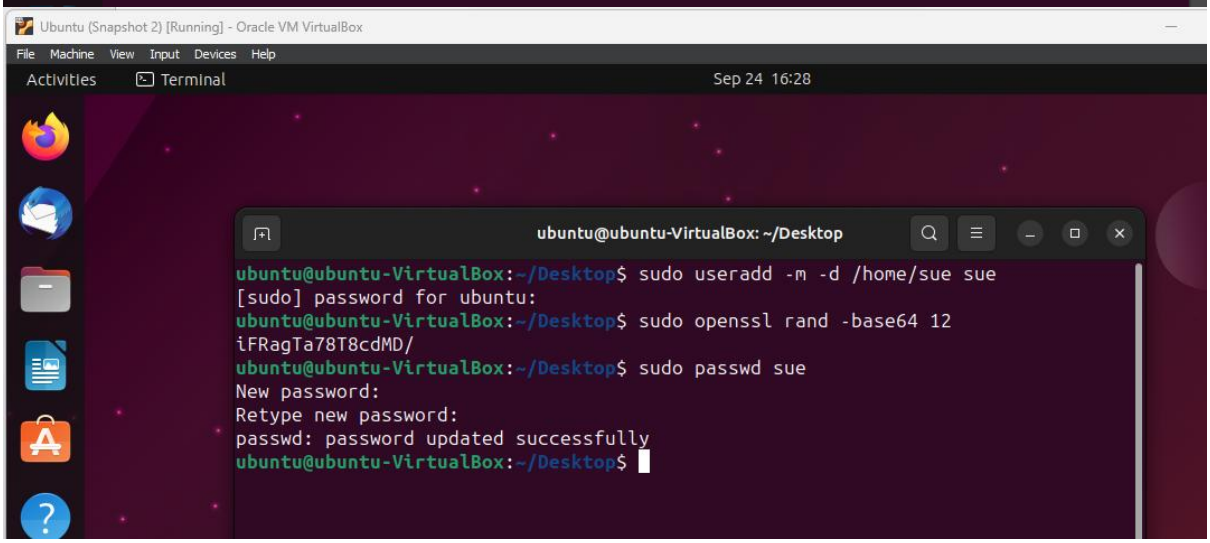
`/etc/pam.d/common-password and` change the **minlen=** value on the **pam_cracklib.so** line to 12

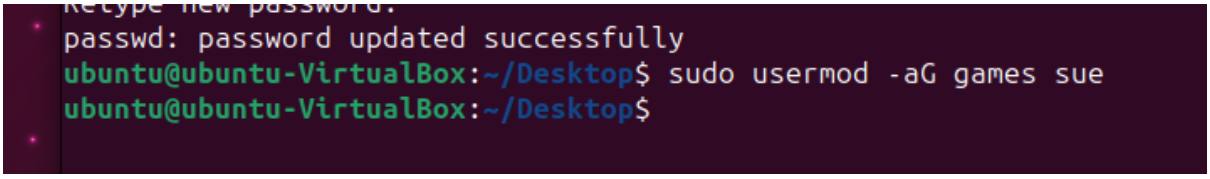

Activities
Terminal
Sep 25 00:04
ubuntu@ubuntu-VirtualBox: ~/Desktop
GNU nano 7.2 /etc/pam.d/common-password *
Explanation of pam_unix options:
The "yescrypt" option enables
#hashed passwords using the yescrypt algorithm, introduced in Debian
#11. Without this option, the default is Unix crypt. Prior releases
#used the option "sha512"; if a shadow password hash will be shared
#between Debian 11 and older releases replace "yescrypt" with "sha512"
#for compatibility . The "obscure" option replaces the old
#`OBSCURE_CHECKS_ENAB' option in login.defs. See the pam_unix manpage
#for other options.
As of pam 1.0.1-6, this file is managed by pam-auth-update by default.
To take advantage of this, it is recommended that you configure any
local modules either before or after the default block, and use
pam-auth-update to manage selection of other modules. See
pam-auth-update(8) for details.
here are the per-package modules (the "Primary" block)
password requisite pam_pwquality.so retry=3
password [success=2 default=ignore] pam_unix.so obscure use_authtok try_first_pass yescrypt
password sufficient pam_sss.so use_authtok
here's the fallback if no module succeeds
password requisite pam_deny.so
prime the stack with a positive return value if there isn't one already;
this avoids us returning an error just because nothing sets a success code
since the modules above will each just jump around
password required pam_permit.so
and here are more per-package modules (the "Additional" block)
password optional pam_gnome_keyring.so
end of pam-auth-update config
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo

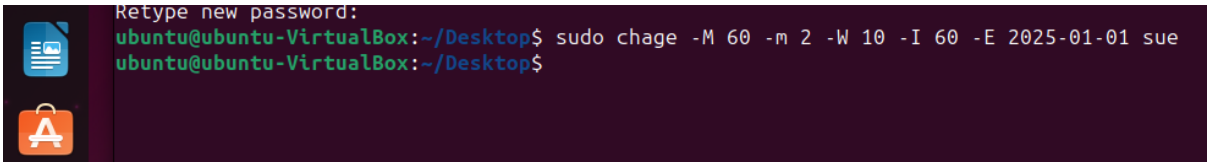

Activities
Terminal
Sep 25 00:06
ubuntu@ubuntu-VirtualBox: ~/Desktop
GNU nano 7.2 /etc/pam.d/common-password *
Explanation of pam_unix options:
The "yescrypt" option enables
#hashed passwords using the yescrypt algorithm, introduced in Debian
#11. Without this option, the default is Unix crypt. Prior releases
#used the option "sha512"; if a shadow password hash will be shared
#between Debian 11 and older releases replace "yescrypt" with "sha512"
#for compatibility . The "obscure" option replaces the old
#`OBSCURE_CHECKS_ENAB' option in login.defs. See the pam_unix manpage
#for other options.
As of pam 1.0.1-6, this file is managed by pam-auth-update by default.
To take advantage of this, it is recommended that you configure any
local modules either before or after the default block, and use
pam-auth-update to manage selection of other modules. See
pam-auth-update(8) for details.
here are the per-package modules (the "Primary" block)
password requisite pam_pwquality.so retry=3
password [success=2 default=ignore] pam_unix.so obscure minlen=12 use_authtok try_first_pass yescryp>
password sufficient pam_sss.so use_authtok
here's the fallback if no module succeeds
password requisite pam_deny.so
prime the stack with a positive return value if there isn't one already;
this avoids us returning an error just because nothing sets a success code
since the modules above will each just jump around
password required pam_permit.so
and here are more per-package modules (the "Additional" block)
password optional pam_gnome_keyring.so
end of pam-auth-update config
^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo

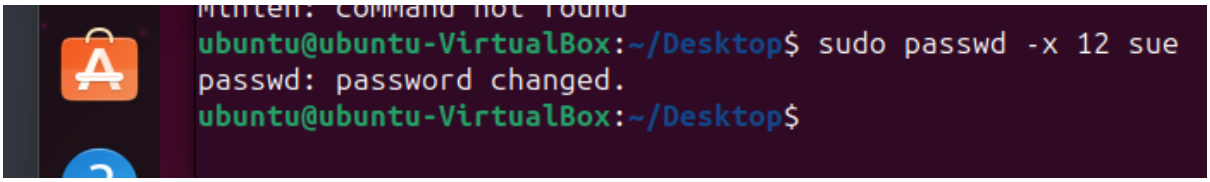

Ubuntu (Snapshot 2) [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Sep 24 16:25
ubuntu@ubuntu-VirtualBox: ~/Des
ubuntu@ubuntu-VirtualBox:~/Desktop$ sudo useradd -m -d /home/sue sue
[sudo] password for ubuntu:
ubuntu@ubuntu-VirtualBox:~/Desktop$


Ubuntu (Snapshot 2) [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Sep 24 16:26
ubuntu@ubuntu-VirtualBox: ~/Deskt
ubuntu@ubuntu-VirtualBox:~/Desktop$ sudo useradd -m -d /home/sue sue
[sudo] password for ubuntu:
ubuntu@ubuntu-VirtualBox:~/Desktop$ sudo openssl rand -base64 12
iFRagTa78T8cdMD/
ubuntu@ubuntu-VirtualBox:~/Desktop$


Ubuntu (Snapshot 2) [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal Sep 24 16:28
ubuntu@ubuntu-VirtualBox: ~/Desktop
ubuntu@ubuntu-VirtualBox:~/Desktop$ sudo useradd -m -d /home/sue sue
[sudo] password for ubuntu:
ubuntu@ubuntu-VirtualBox:~/Desktop$ sudo openssl rand -base64 12
iFRagTa78T8cdMD/
ubuntu@ubuntu-VirtualBox:~/Desktop$ sudo passwd sue
New password:
Retype new password:
passwd: password updated successfully
ubuntu@ubuntu-VirtualBox:~/Desktop$


passwd: password updated successfully
ubuntu@ubuntu-VirtualBox:~/Desktop$ sudo usermod -aG games sue
ubuntu@ubuntu-VirtualBox:~/Desktop$

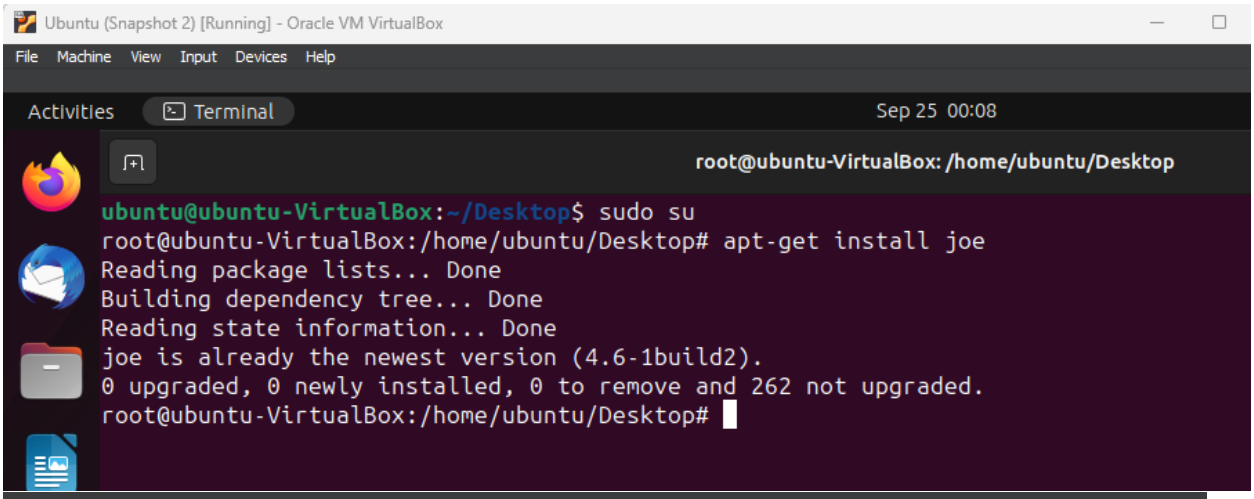


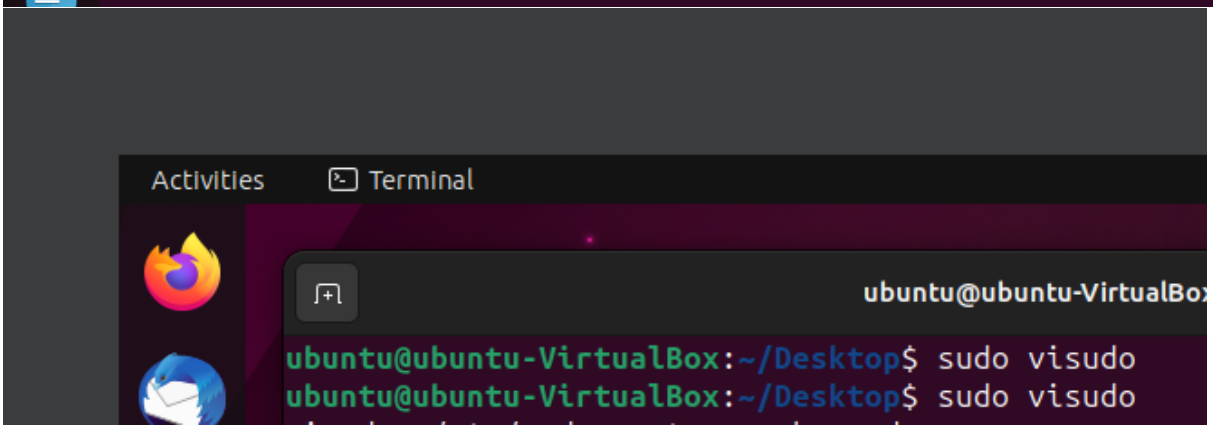


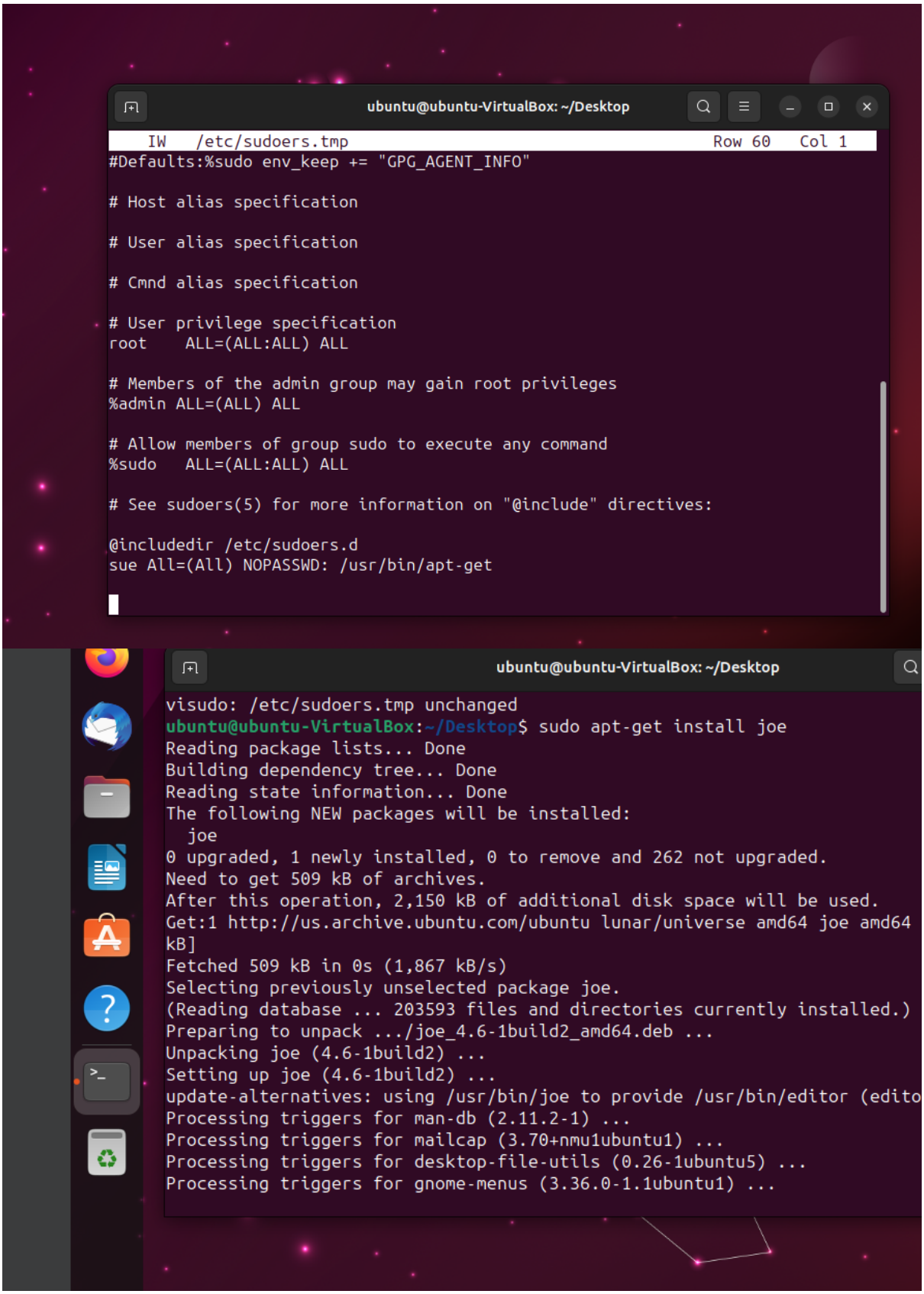
Lab 7.3

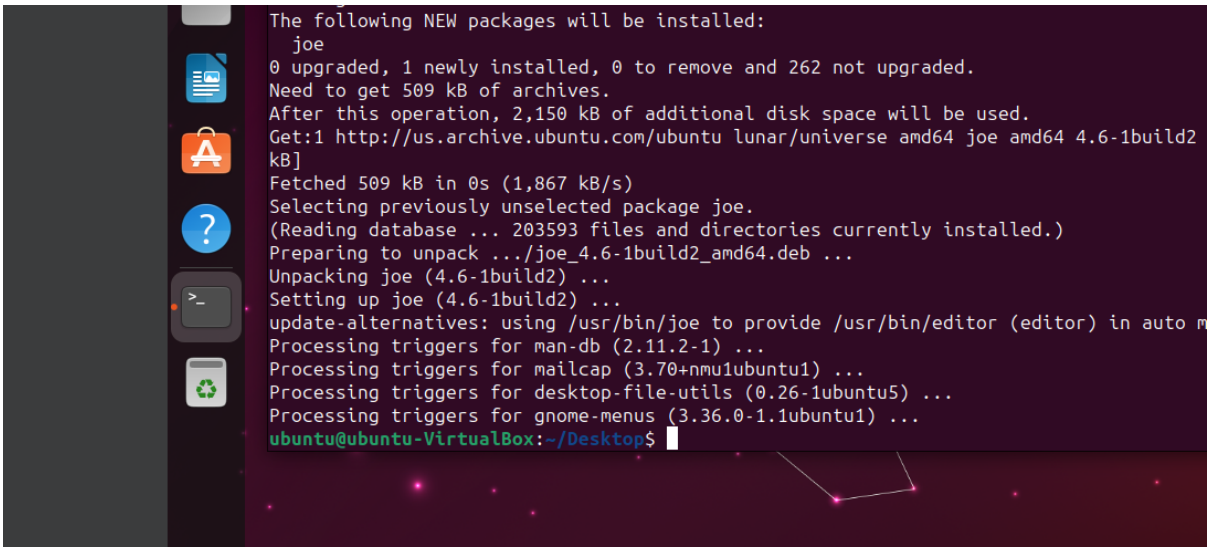
List the steps you did and the commands you executed.

Then paste a single screenshot showing a successful execution of command the `apt-get install joe` executed






ubuntu@ubuntu-VirtualBox: ~/Desktop
IW /etc/sudoers.tmp Row 60 Col 1
#Defaults:%sudo env_keep += "GPG_AGENT_INFO"
Host alias specification
User alias specification
Cmnd alias specification
User privilege specification
root ALL=(ALL:ALL) ALL
Members of the admin group may gain root privileges
%admin ALL=(ALL) ALL
Allow members of group sudo to execute any command
%sudo ALL=(ALL:ALL) ALL
See sudoers(5) for more information on "@include" directives:
@includedir /etc/sudoers.d
sue All=(All) NOPASSWD: /usr/bin/apt-get
ubuntu@ubuntu-VirtualBox: ~/Desktop
visudo: /etc/sudoers.tmp unchanged
ubuntu@ubuntu-VirtualBox:~/Desktop$ sudo apt-get install joe
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
joe
0 upgraded, 1 newly installed, 0 to remove and 262 not upgraded.
Need to get 509 kB of archives.
After this operation, 2,150 kB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu lunar/universe amd64 joe amd64
kB]
Fetched 509 kB in 0s (1,867 kB/s)
Selecting previously unselected package joe.
(Reading database ... 203593 files and directories currently installed.)
Preparing to unpack .../joe_4.6-1build2_amd64.deb ...
Unpacking joe (4.6-1build2) ...
Setting up joe (4.6-1build2) ...
update-alternatives: using /usr/bin/joe to provide /usr/bin/editor (edito
Processing triggers for man-db (2.11.2-1) ...
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...
Processing triggers for desktop-file-utils (0.26-1ubuntu5) ...
Processing triggers for gnome-menus (3.36.0-1.1ubuntu1) ...


The following NEW packages will be installed:
joe
0 upgraded, 1 newly installed, 0 to remove and 262 not upgraded.
Need to get 509 kB of archives.
After this operation, 2,150 kB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu lunar/universe amd64 joe amd64 4.6-1build2
kB]
Fetched 509 kB in 0s (1,867 kB/s)
Selecting previously unselected package joe.
(Reading database ... 203593 files and directories currently installed.)
Preparing to unpack .../joe_4.6-1build2_amd64.deb ...
Unpacking joe (4.6-1build2) ...
Setting up joe (4.6-1build2) ...
update-alternatives: using /usr/bin/joe to provide /usr/bin/editor (editor) in auto m
Processing triggers for man-db (2.11.2-1) ...
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...
Processing triggers for desktop-file-utils (0.26-1ubuntu5) ...
Processing triggers for gnome-menus (3.36.0-1.1ubuntu1) ...
ubuntu@ubuntu-VirtualBox:~/Desktop$