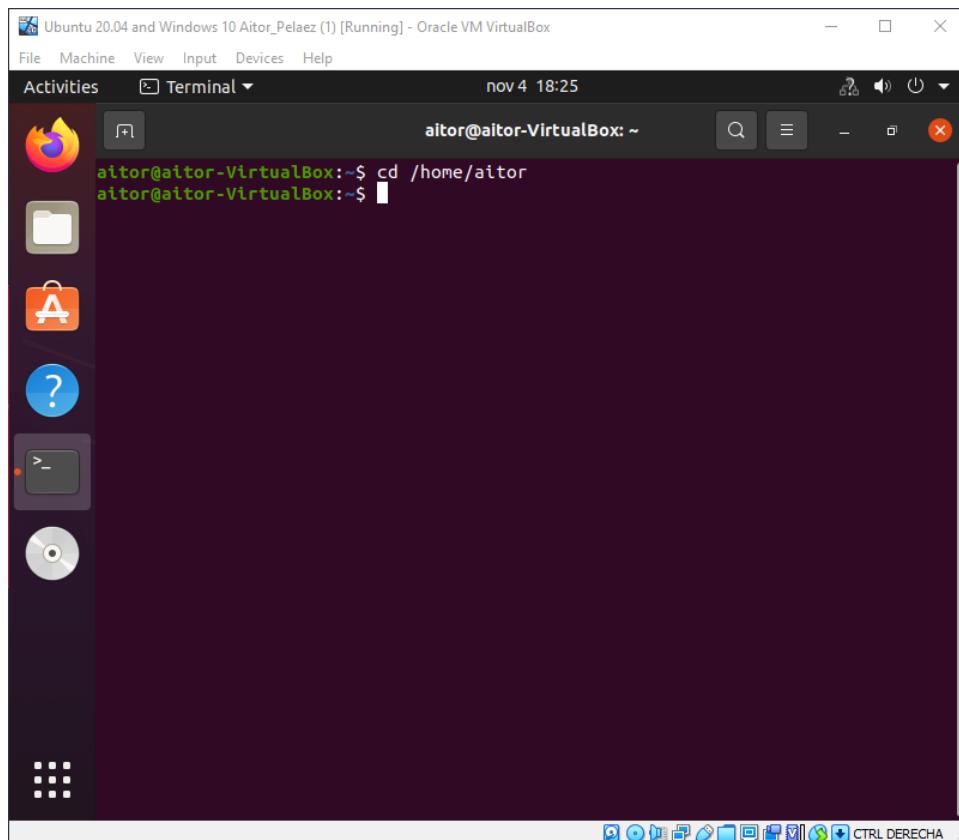


Exercises Unit 3

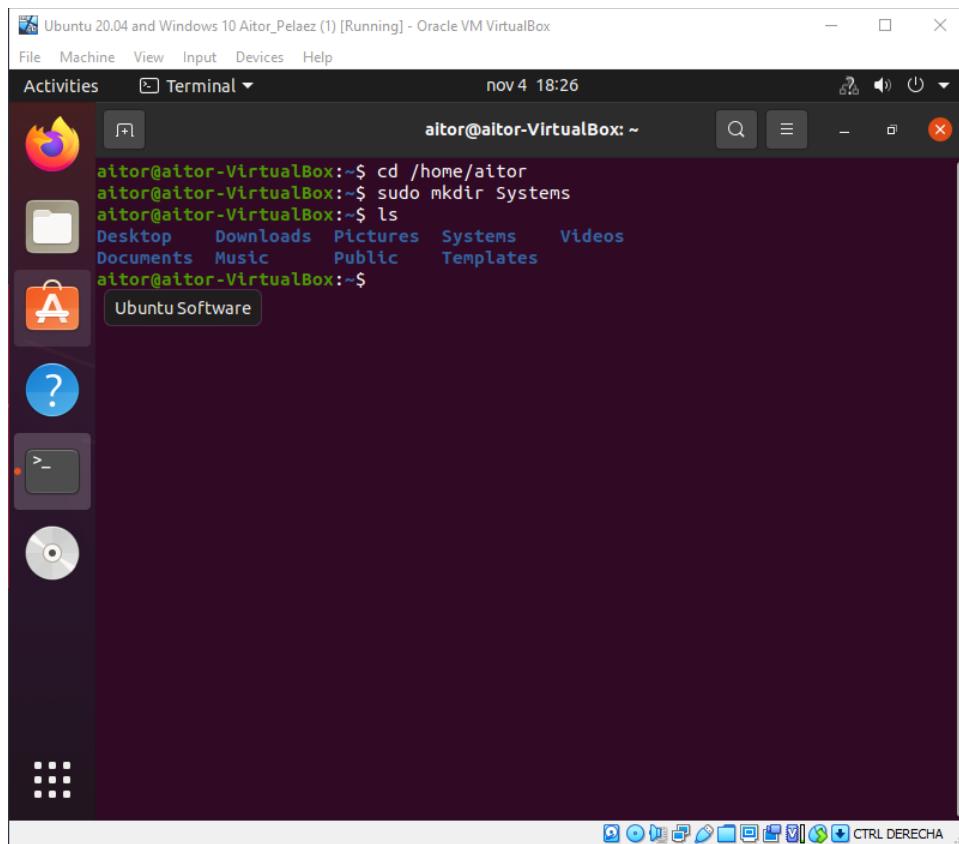
A. MANAGING DIRECTORIES

1. Change the current directory to /home/<user>

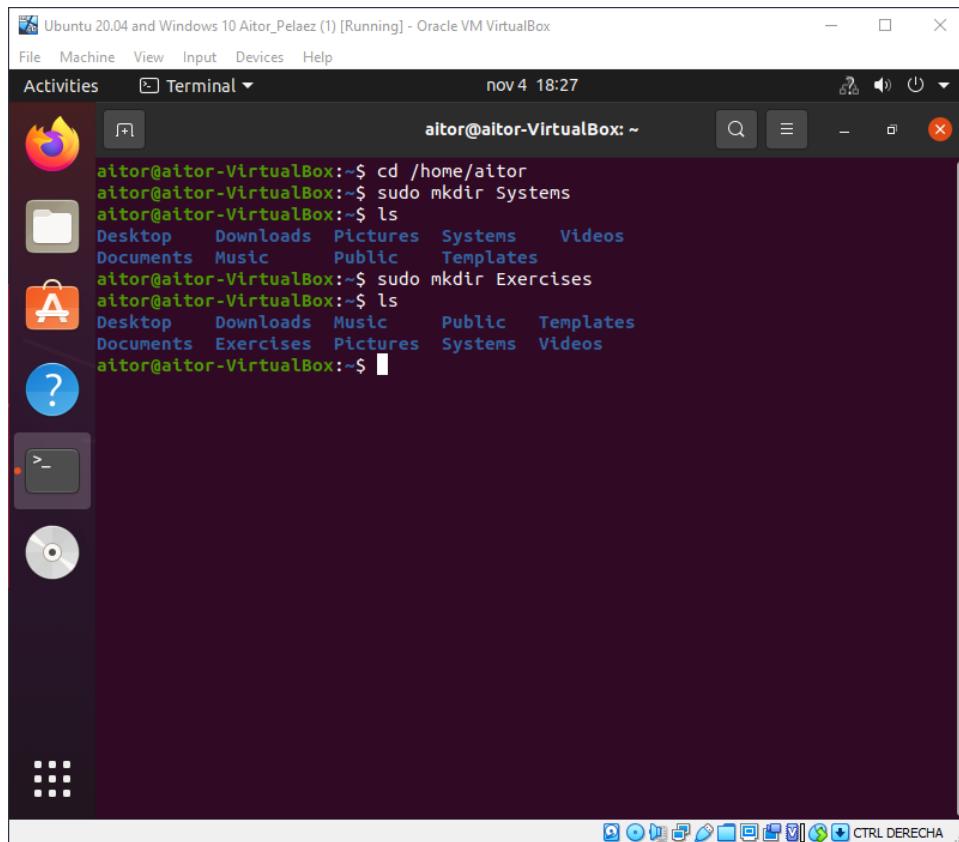


2. Create a directory called systems

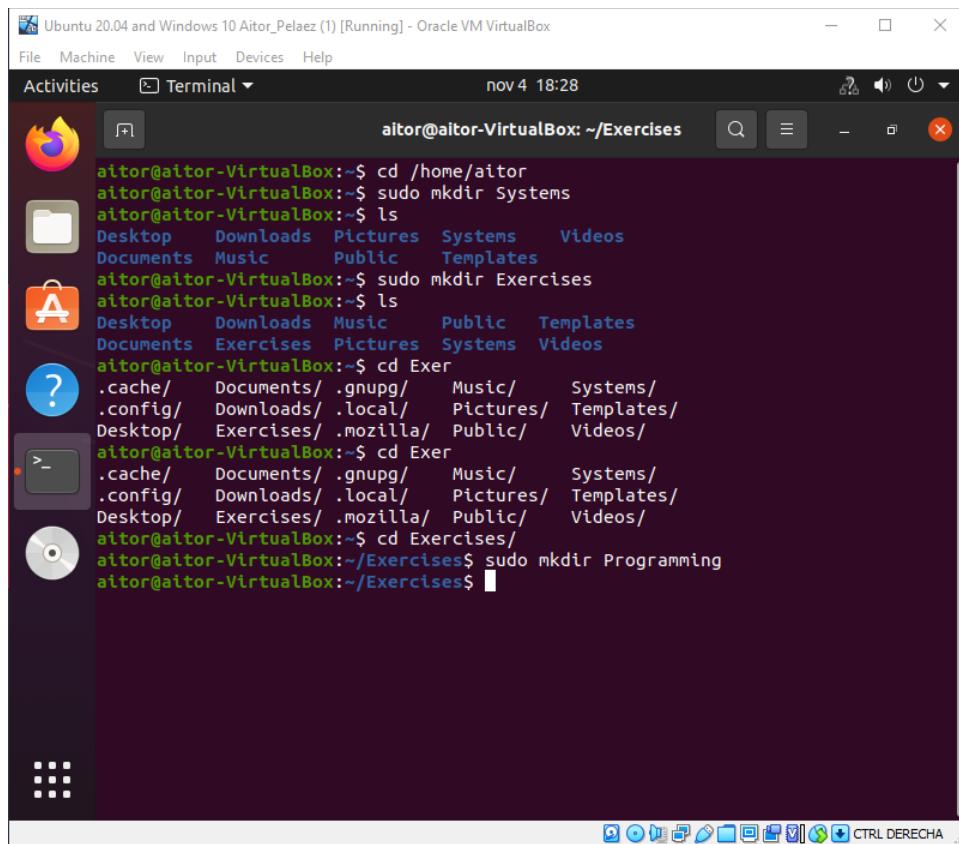
Aitor Peláez Tomás



3. Create a directory called exercises. Go to this directory and create another new directory called programming



Aitor Peláez Tomás



The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "Terminal" and the command line shows the user's actions:

```
aitor@aitor-VirtualBox:~$ cd /home/aitor
aitor@aitor-VirtualBox:~$ sudo mkdir Systems
aitor@aitor-VirtualBox:~$ ls
Desktop Downloads Pictures Systems Videos
Documents Music Public Templates
aitor@aitor-VirtualBox:~$ sudo mkdir Exercises
aitor@aitor-VirtualBox:~$ ls
Desktop Downloads Music Public Templates
Documents Exercises Pictures Systems Videos
aitor@aitor-VirtualBox:~$ cd Exer
.cache/ Documents/.gnupg/ Music/ Systems/
.config/ Downloads/.local/ Pictures/ Templates/
Desktop/ Exercises/.mozilla/ Public/ Videos/
aitor@aitor-VirtualBox:~$ cd Exercises/
aitor@aitor-VirtualBox:~/Exercises$ sudo mkdir Programming
aitor@aitor-VirtualBox:~/Exercises$
```

4. Go back to the user's home directory. Delete the directories "exercises" and "programming" using just one command. Create the directories again with one command.

Aitor Peláez Tomás

Ubuntu 20.04 and Windows 10 Aitor_Pelaez (1) [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal nov 4 18:28

```
aitor@aitor-VirtualBox:~$ cd /home/aitor
aitor@aitor-VirtualBox:~$ sudo mkdir Systems
aitor@aitor-VirtualBox:~$ ls
Desktop Downloads Pictures Systems Videos
Documents Music Public Templates
aitor@aitor-VirtualBox:~$ sudo mkdir Exercises
aitor@aitor-VirtualBox:~$ ls
Desktop Downloads Music Public Templates
Documents Exercises Pictures Systems Videos
aitor@aitor-VirtualBox:~$ cd Exer
.cache/ Documents/.gnupg/ Music/ Systems/
.config/ Downloads/.local/ Pictures/ Templates/
Desktop/ Exercises/.mozilla/ Public/ Videos/
aitor@aitor-VirtualBox:~$ cd Exercises/
aitor@aitor-VirtualBox:~/Exercises$ sudo mkdir Programming
aitor@aitor-VirtualBox:~/Exercises$ ../..
bash: ../..: Is a directory
aitor@aitor-VirtualBox:~/Exercises$ cd ../..
aitor@aitor-VirtualBox:/home$ cd aitor/
aitor@aitor-VirtualBox:~$
```

CTRL DERECHA

Ubuntu 20.04 and Windows 10 Aitor_Pelaez (1) [Running] - Oracle VM VirtualBox

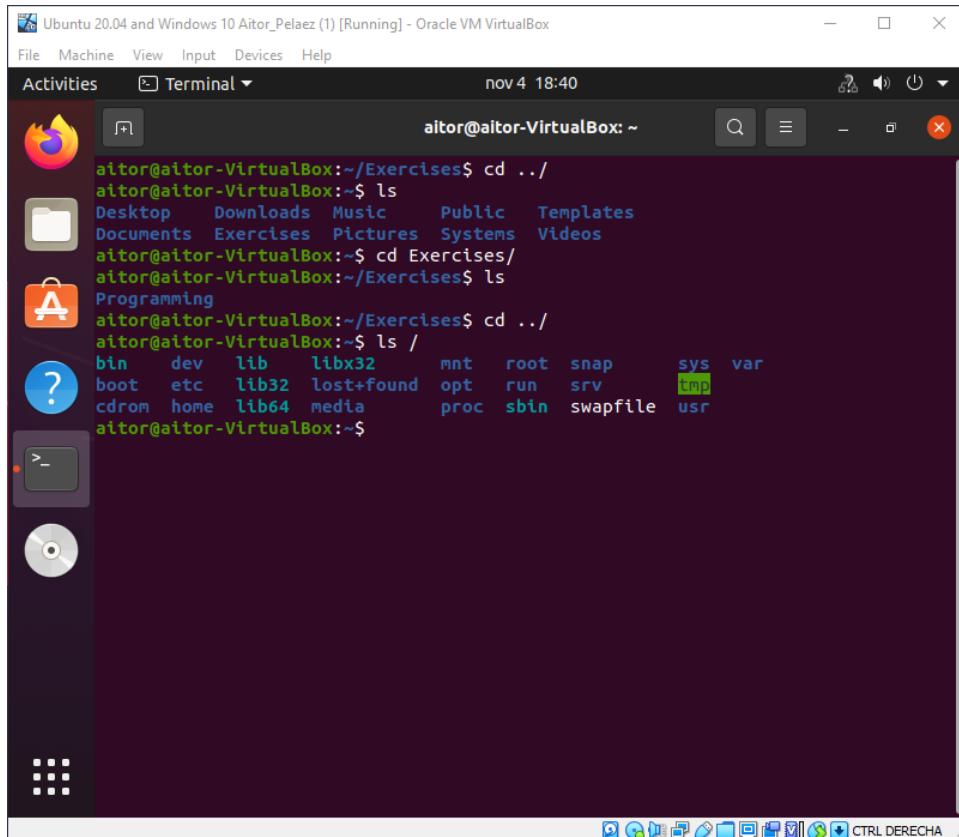
File Machine View Input Devices Help

Activities Terminal nov 4 18:31

```
aitor@aitor-VirtualBox:~/Exercises$ cd ../.
aitor@aitor-VirtualBox:~$ rm -r Exercises/
rm: descend into write-protected directory 'Exercises/'? yes
rm: remove write-protected directory 'Exercises/Programming'? yes
rm: cannot remove 'Exercises/Programming': Permission denied
aitor@aitor-VirtualBox:~$ sudo rm -r Exercises/
aitor@aitor-VirtualBox:~$ ls
Desktop Downloads Pictures Systems Videos
Documents Music Public Templates
aitor@aitor-VirtualBox:~$
```

CTRL DERECHA

5. Print the contents of the root directory

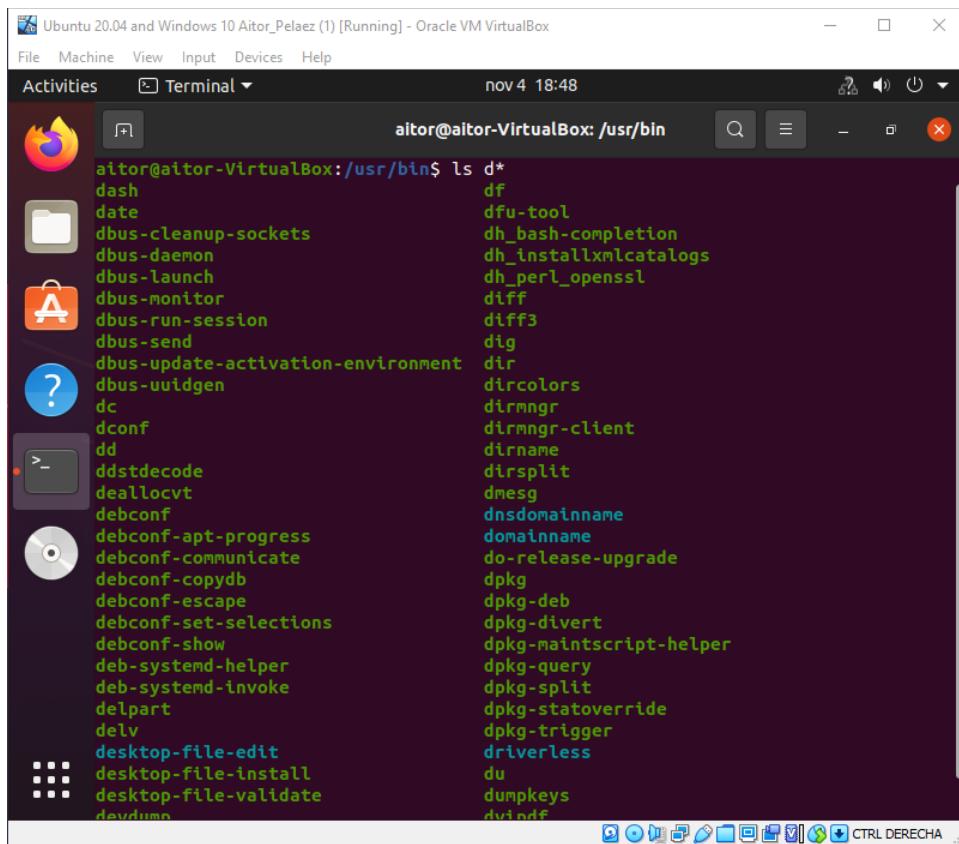


The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "Terminal" and the prompt is "aitor@aitor-VirtualBox: ~". The user has run several commands in the terminal:

```
aitor@aitor-VirtualBox:~/Exercises$ cd ..
aitor@aitor-VirtualBox:~$ ls
Desktop Downloads Music Public Templates
Documents Exercises Pictures Systems Videos
aitor@aitor-VirtualBox:~$ cd Exercises/
aitor@aitor-VirtualBox:~/Exercises$ ls
Programming
aitor@aitor-VirtualBox:~/Exercises$ cd ../
aitor@aitor-VirtualBox:~$ ls /
bin dev lib libx32 mnt root snap sys var
boot etc lib32 lost+found opt run srv tmp
cdrom home lib64 media proc sbin swapfile usr
```

6. Print all the files and directories that begin with d in the /usr/bin directory

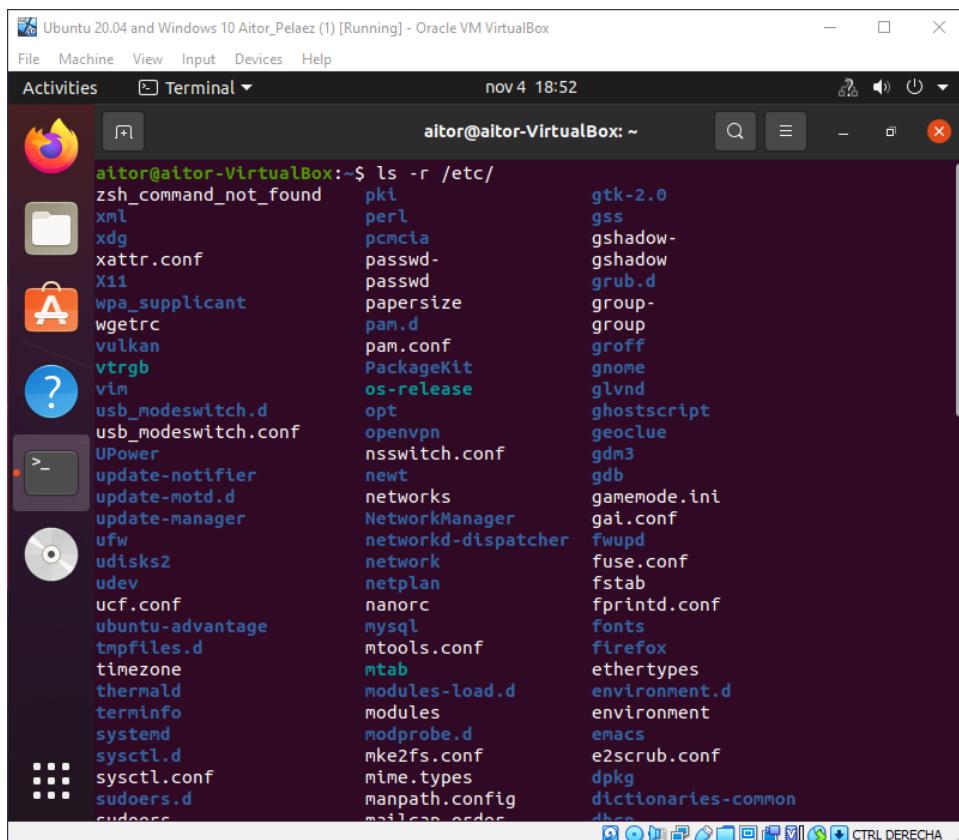
Aitor Peláez Tomás



A screenshot of a Linux desktop environment (Ubuntu 20.04) running in Oracle VM VirtualBox. The terminal window shows the command `ls *` being run in the directory `/usr/bin`, listing various executable files. The desktop interface includes a dock with icons for file manager, terminal, browser, and others.

```
aitor@aitor-VirtualBox:/usr/bin$ ls *
dash                      df
date                       dfu-tool
dbus-cleanup-sockets      dh_bash-completion
dbus-daemon                dh_installxmlcatalogs
dbus-launch                 dh_perl_openssl
dbus-monitor                diff
dbus-run-session            diff3
dbus-send                  dig
dbus-update-activation-environment  dir
dbus-uuidgen               dircolors
dc                          dirmngr
dconf                      dirmngr-client
dd                          dirname
ddstdecode                 dirsplits
deallocvt                 dmesg
debconf                     dnsdomainname
debconf-apt-progress       domainname
debconf-communicate        do-release-upgrade
debconf-copydb              dpkg
debconf-escape              dpkg-deb
debconf-set-selections     dpkg-divert
debconf-show                dpkg-maintscript-helper
deb-systemd-helper         dpkg-query
deb-systemd-invoke          dpkg-split
delpart                    dpkg-statoverride
delv                       dpkg-trigger
desktop-file-edit           driverless
desktop-file-install        du
desktop-file-validate      dumpkeys
devdumon                   duinfo
```

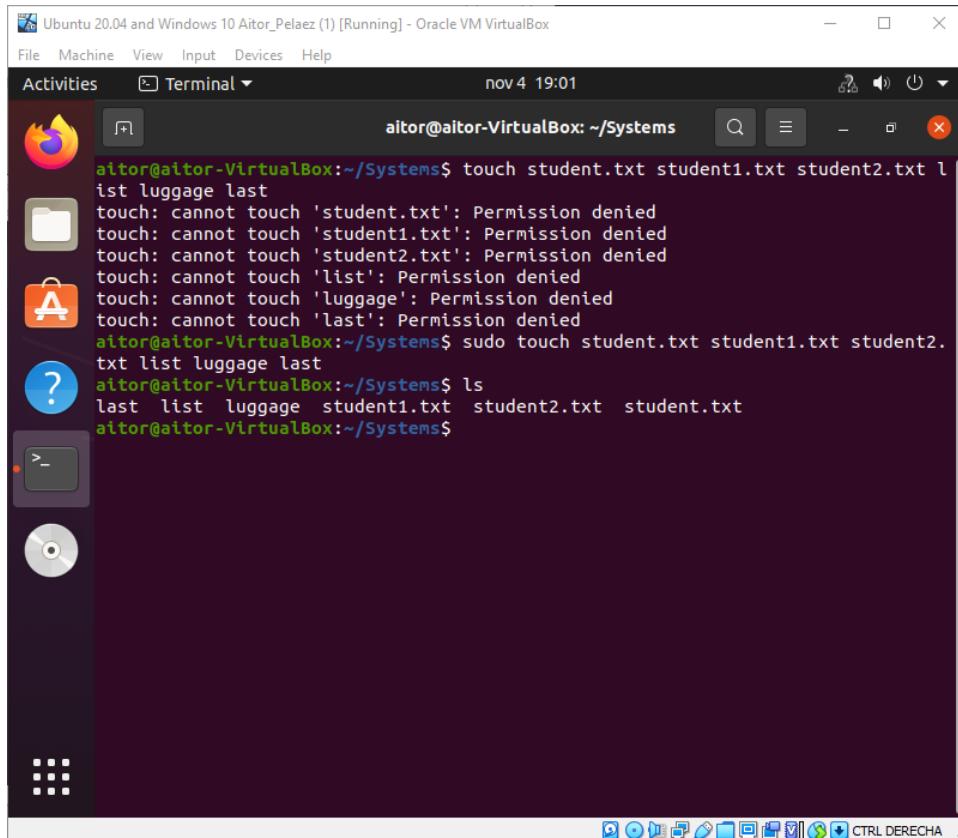
7. List all the files and directories in /etc, including subdirectories



A screenshot of a Linux desktop environment (Ubuntu 20.04) running in Oracle VM VirtualBox. The terminal window shows the command `ls -r /etc/` being run in the root directory, listing all files and subdirectories within /etc. The desktop interface includes a dock with icons for file manager, terminal, browser, and others.

```
aitor@aitor-VirtualBox:~$ ls -r /etc/
zsh_command_not_found      pki
xml                           perl
xdg                           pcmcia
xattr.conf                   passwd-
X11                           passwd
wpa_supplicant              papersize
wgetrc                      pam.d
vulkan                      pam.conf
vtrgb                        PackageKit
vim                           os-release
usb_modeswitch.d             opt
usb_modeswitch.conf          openvpn
UPower                      nsswitch.conf
update-notifier              newt
update-motd.d                networks
update-manager               NetworkManager
ufw                           network
udisks2                     netplan
udev                        nanorc
ucf.conf                     mysql
ubuntu-advantage             mtools.conf
tmpfiles.d                   mtab
timezone                     modules-load.d
thermald                     modules
terminfo                     modprobe.d
systemd                     mke2fs.conf
sysctl.d                    mime.types
sysctl.conf                  manpath.config
sudoers.d                   mailcap_order
sudoers                      " "
```

8. Create the empty files called student.txt, student1.txt, student2.txt, list, luggage and last in the directory named “systems”

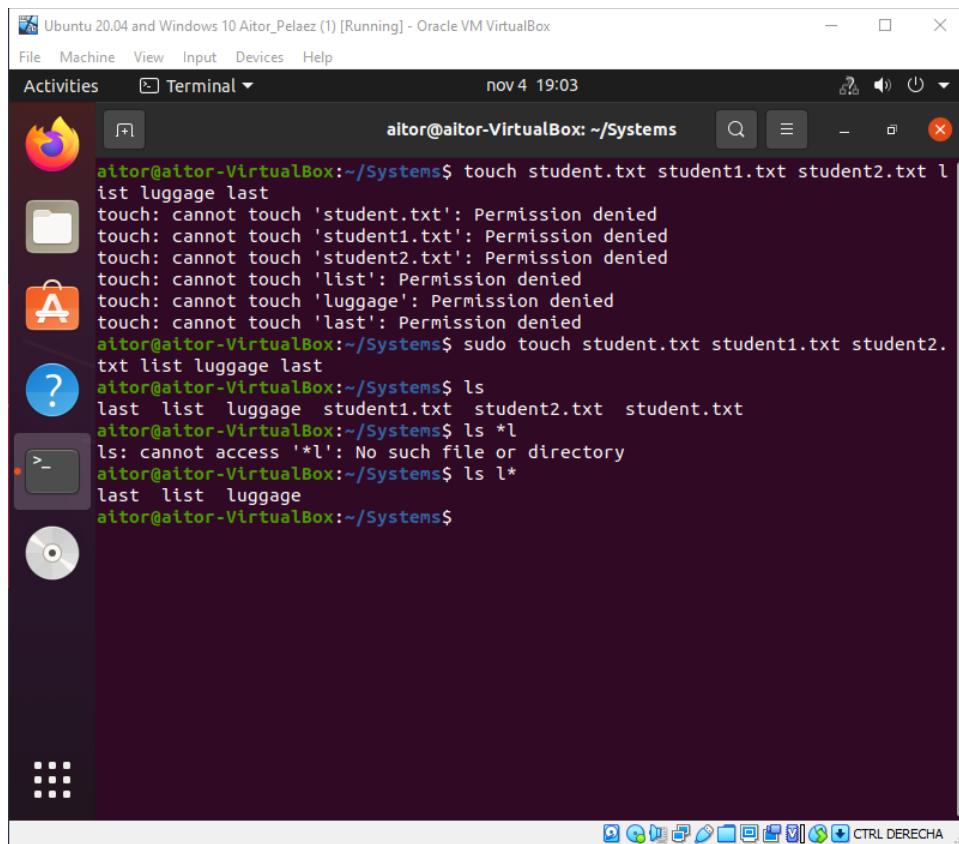


The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "Ubuntu 20.04 and Windows 10 Aitor_Pelaez (1) [Running] - Oracle VM VirtualBox". The terminal content shows the user attempting to create files in a directory named "systems". The user runs the command "touch student.txt student1.txt student2.txt list luggage last". The terminal output shows that the first five commands fail with "touch: cannot touch ...: Permission denied" because the user does not have permission to write to the root directory. The last command, "touch last", also fails with the same permission denial message. Finally, the user runs "sudo touch student.txt student1.txt student2.txt list luggage last", which succeeds without any errors. The user then runs "ls" to list the contents of the directory, which shows the files "last", "list", "luggage", "student1.txt", "student2.txt", and "student.txt".

```
aitor@aitor-VirtualBox:~/Systems$ touch student.txt student1.txt student2.txt list luggage last
touch: cannot touch 'student.txt': Permission denied
touch: cannot touch 'student1.txt': Permission denied
touch: cannot touch 'student2.txt': Permission denied
touch: cannot touch 'list': Permission denied
touch: cannot touch 'luggage': Permission denied
touch: cannot touch 'last': Permission denied
aitor@aitor-VirtualBox:~/Systems$ sudo touch student.txt student1.txt student2.
txt list luggage last
aitor@aitor-VirtualBox:~/Systems$ ls
last list luggage student1.txt student2.txt student.txt
aitor@aitor-VirtualBox:~/Systems$
```

9. Print all the files that begin with “l” in the directory “systems”

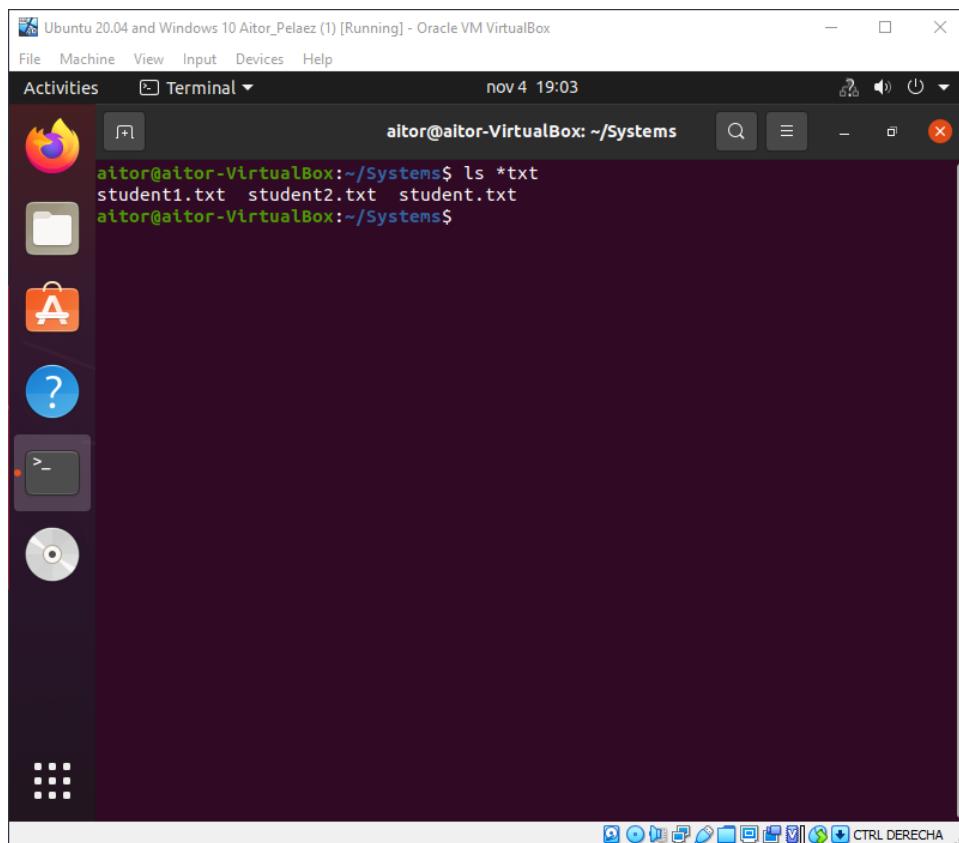
Aitor Peláez Tomás



The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "Ubuntu 20.04 and Windows 10 Aitor_Pelaez (1) [Running] - Oracle VM VirtualBox". The terminal session shows the following command-line interaction:

```
aitor@aitor-VirtualBox:~/Systems$ touch student.txt student1.txt student2.txt list luggage last
touch: cannot touch 'student.txt': Permission denied
touch: cannot touch 'student1.txt': Permission denied
touch: cannot touch 'student2.txt': Permission denied
touch: cannot touch 'list': Permission denied
touch: cannot touch 'luggage': Permission denied
touch: cannot touch 'last': Permission denied
aitor@aitor-VirtualBox:~/Systems$ sudo touch student.txt student1.txt student2.
txt list luggage last
aitor@aitor-VirtualBox:~/Systems$ ls
last list luggage student1.txt student2.txt student.txt
aitor@aitor-VirtualBox:~/Systems$ ls *l
ls: cannot access '*l': No such file or directory
aitor@aitor-VirtualBox:~/Systems$ ls l*
last list luggage
aitor@aitor-VirtualBox:~/Systems$
```

10. Print all the files that end with “txt” in the directory “systems”

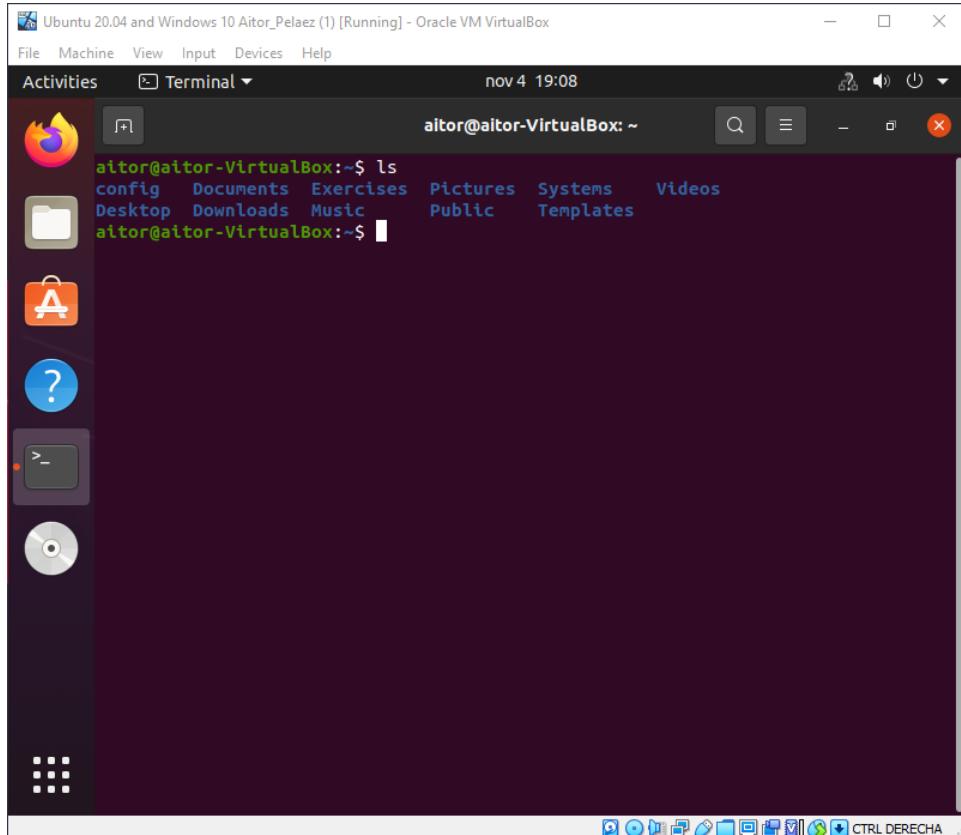


The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "Ubuntu 20.04 and Windows 10 Aitor_Pelaez (1) [Running] - Oracle VM VirtualBox". The terminal session shows the following command-line interaction:

```
aitor@aitor-VirtualBox:~/Systems$ ls *txt
student1.txt student2.txt student.txt
aitor@aitor-VirtualBox:~/Systems$
```

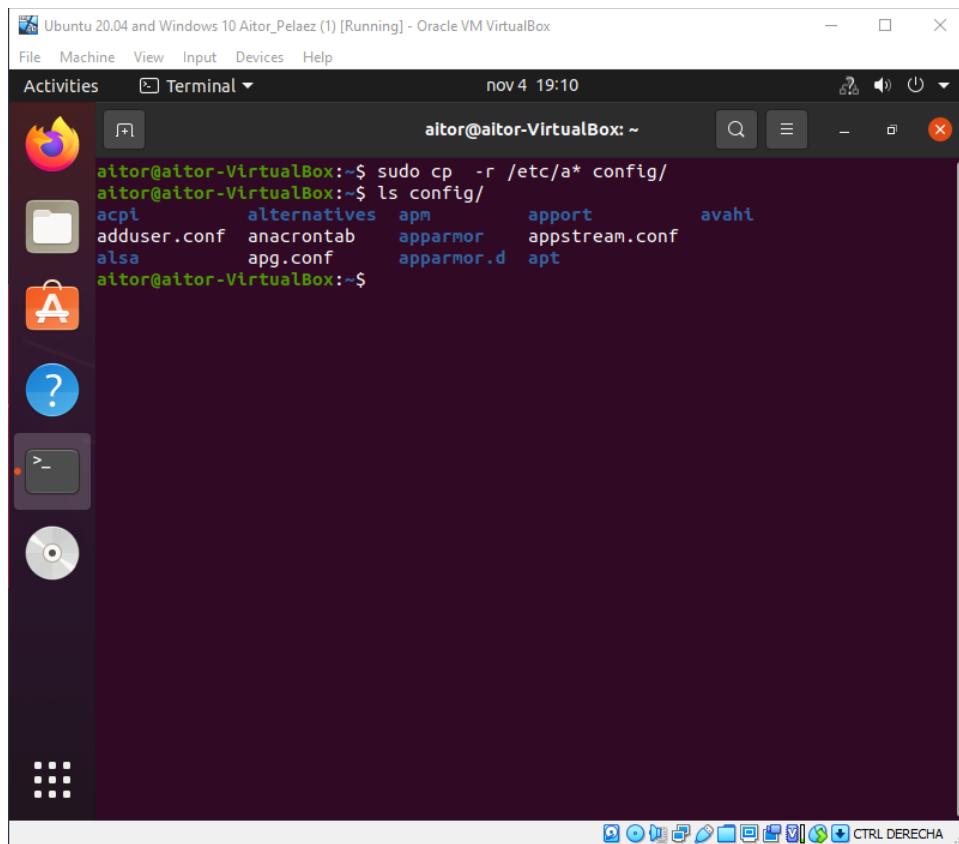
Aitor Peláez Tomás

11. Create a new directory into \$HOME called “config”



12. Copy all the files in /etc which begin with “a” into “config”

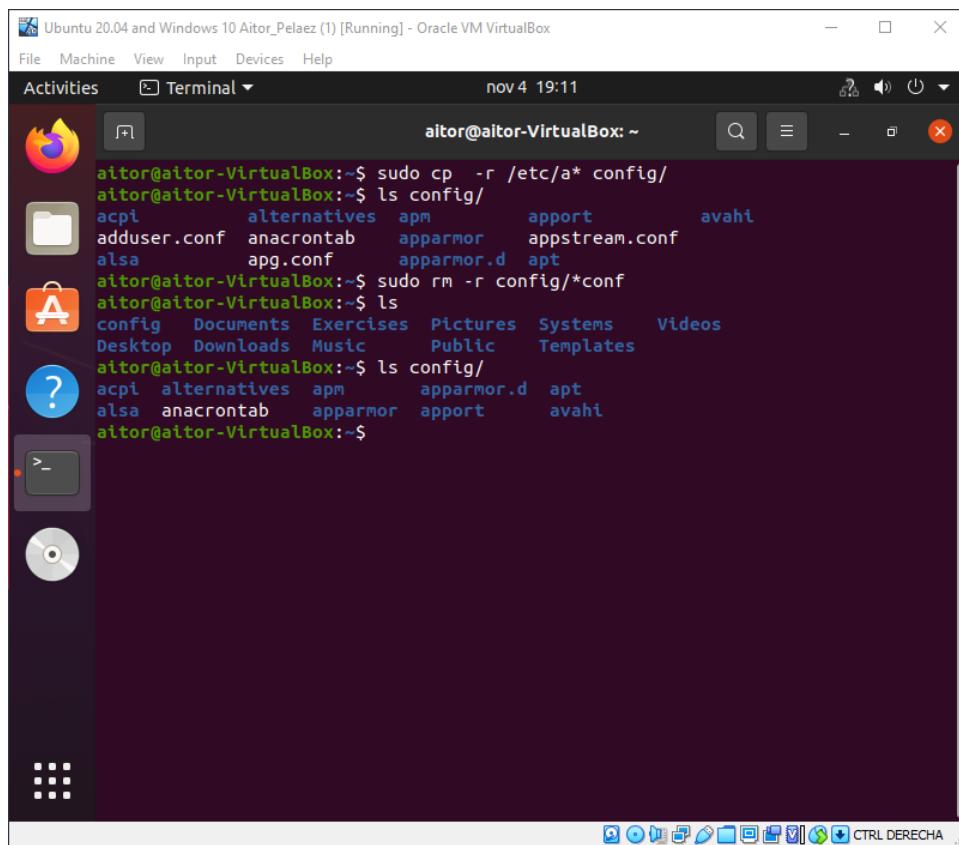
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The screenshot shows a standard Ubuntu desktop environment. On the left is a dock with icons for the Dash, Home, Applications, Help, and Dash search. The main area is a terminal window titled "Activities Terminal". The terminal shows the following command-line session:

```
aitor@aitor-VirtualBox:~$ sudo cp -r /etc/a* config/
aitor@aitor-VirtualBox:~$ ls config/
acpi alternatives apm apport avahi
adduser.conf anacrontab apparmor appstream.conf
alsa apg.conf apparmor.d apt
```

13. Delete all the files in “config” which end with “conf”



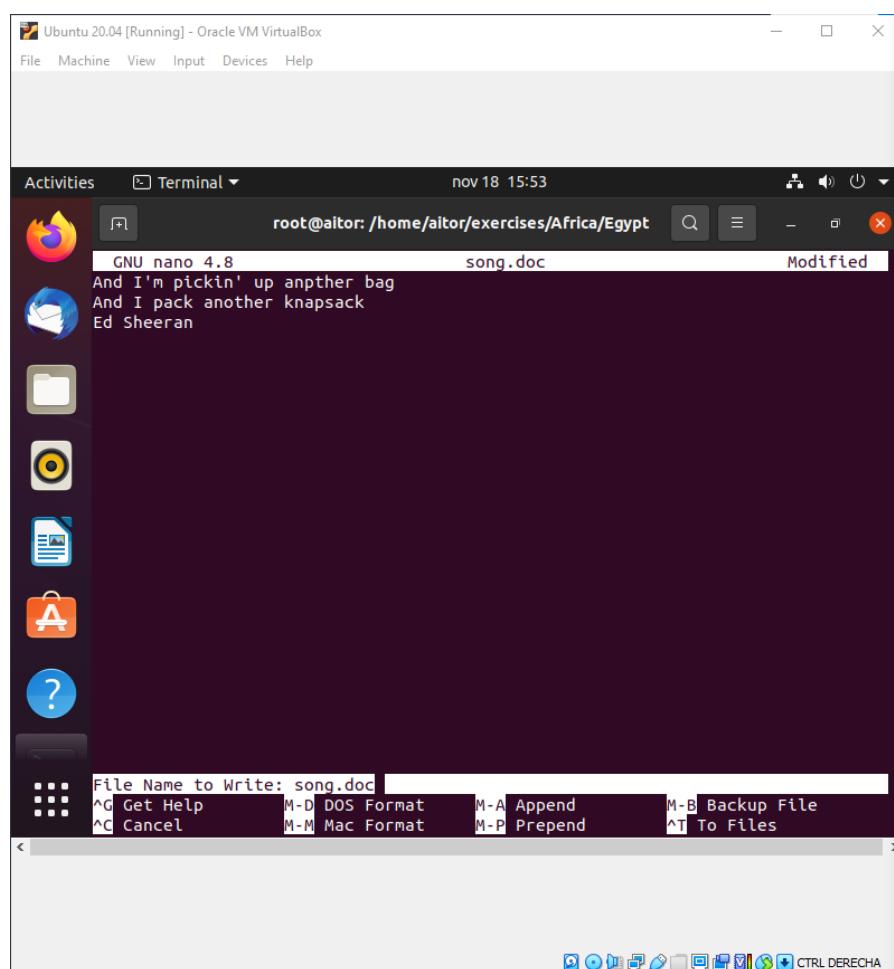
The screenshot shows the same Ubuntu desktop environment as the previous one. The terminal window now shows the result of the command entered in the previous step:

```
aitor@aitor-VirtualBox:~$ sudo cp -r /etc/a* config/
aitor@aitor-VirtualBox:~$ ls config/
acpi alternatives apm apport avahi
adduser.conf anacrontab apparmor appstream.conf
alsa apg.conf apparmor.d apt
aitor@aitor-VirtualBox:~$ sudo rm -r config/*conf
aitor@aitor-VirtualBox:~$ ls
config Documents Exercises Pictures Systems Videos
Desktop Downloads Music Public Templates
aitor@aitor-VirtualBox:~$ ls config/
acpi alternatives apm apparmor.d apt
alsa anacrontab apparmor apport avahi
aitor@aitor-VirtualBox:~$
```

B. COPY, RENAME AND EDIT FILES

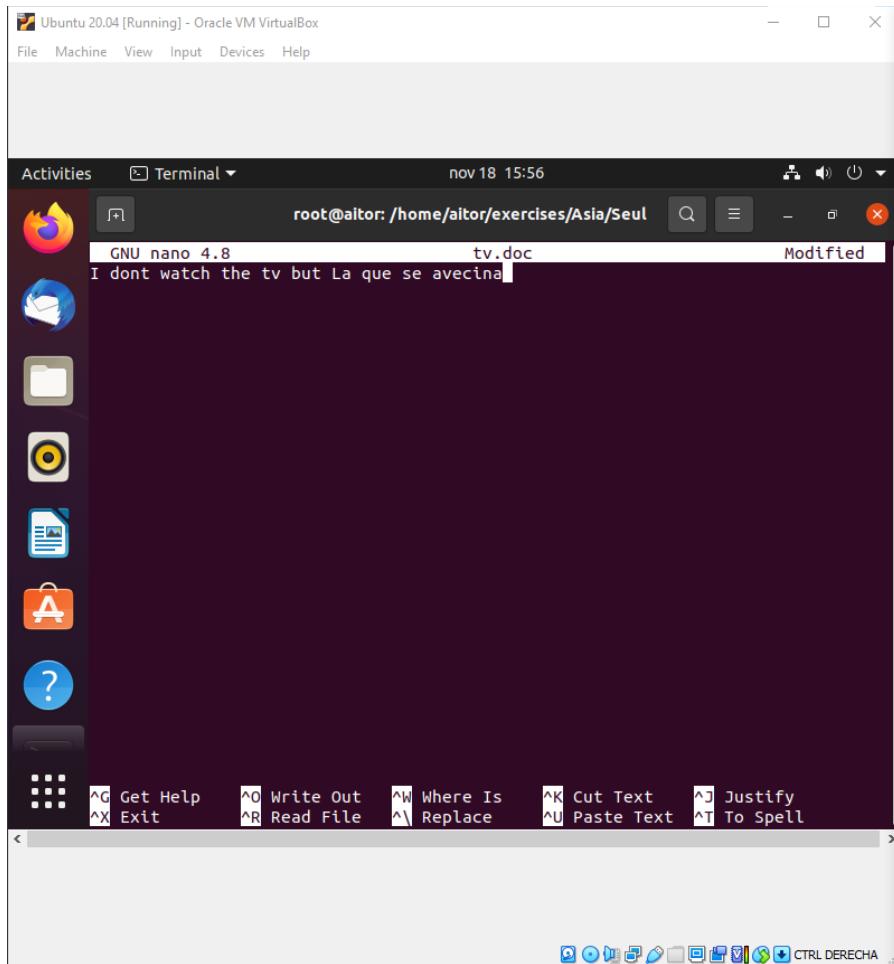
14. Create the following files using nano (or another editor): song.doc (write a few lines of a song) in the directory Egypt; tv.doc (write the name of your favourite TV programs) in the directory Seul and marks (write the marks you expect to get this year) in the directory Tunisia.

1. Here I'm using nano for creating the file song.doc into Egypt



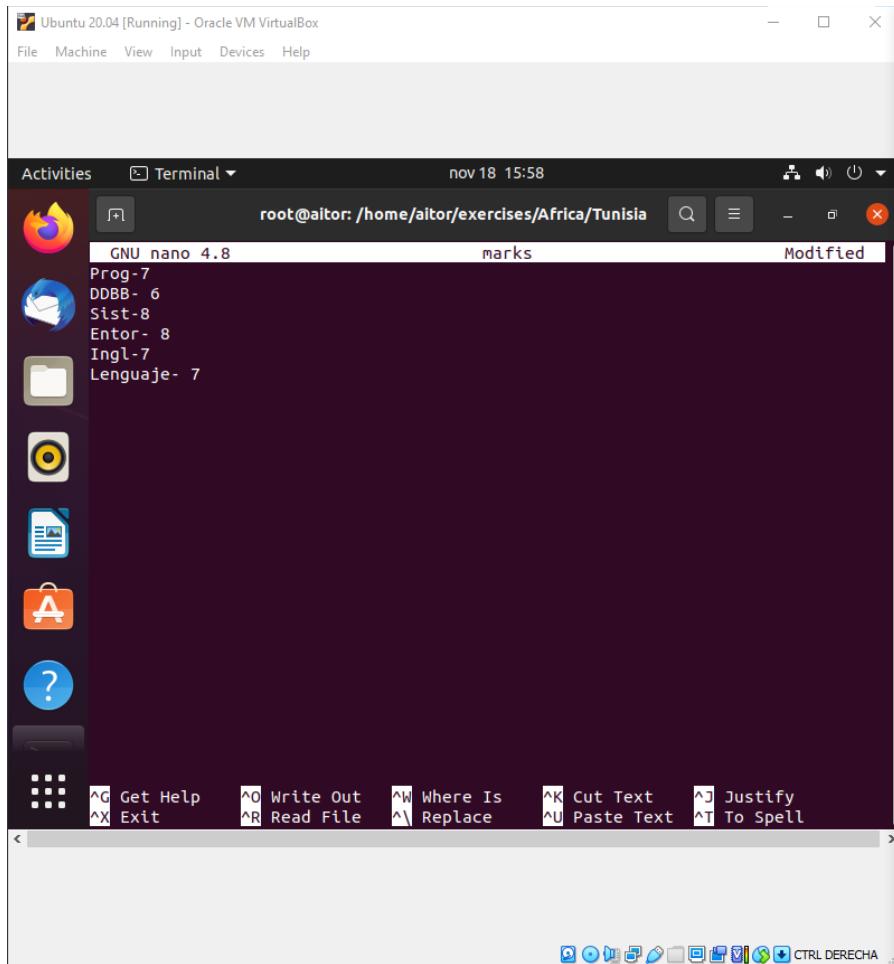
2. Here I'm writing into Seul the file tv.doc with the editor nano

Aitor Peláez Tomás



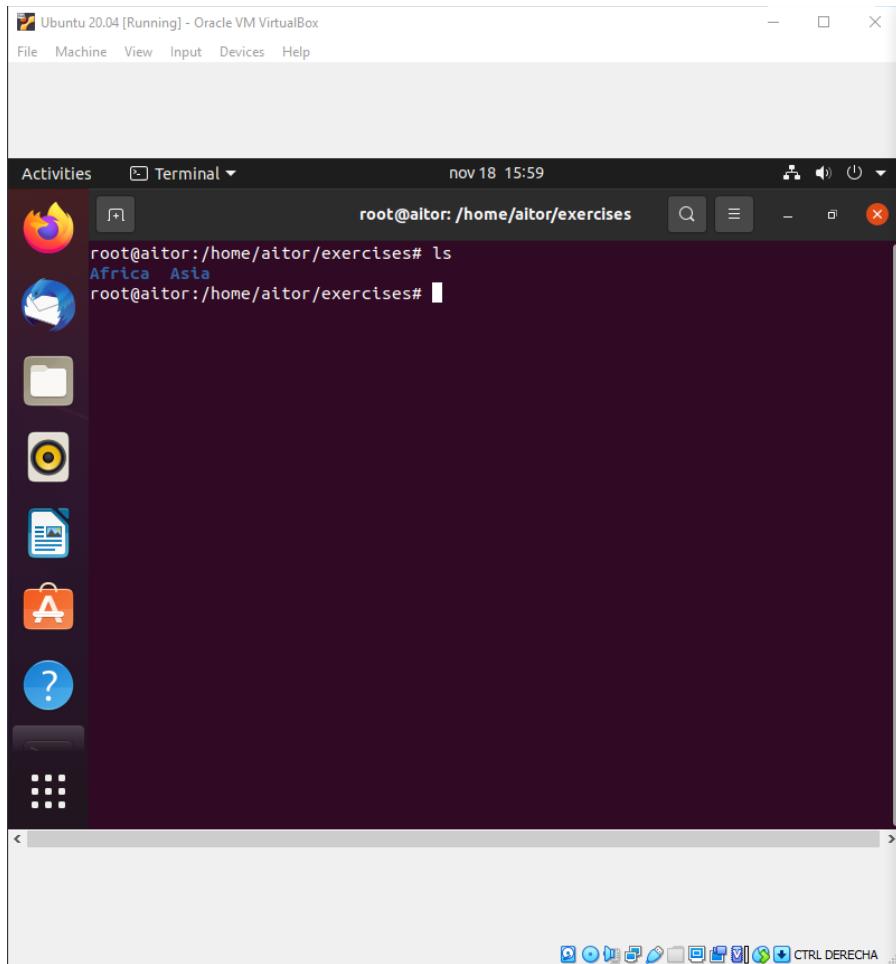
3. Here I create marks and I'm writing into Tunisia

Aitor Peláez Tomás



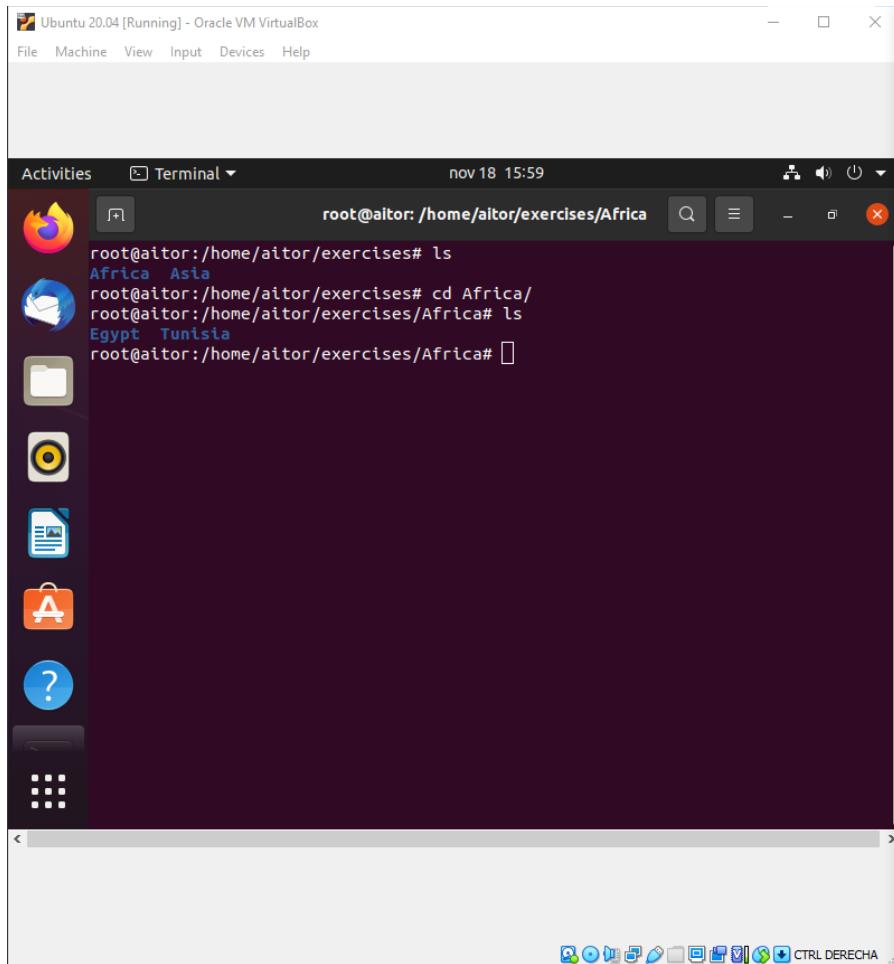
4. And here we can see how is the tree od directories. Africa and Asia in exercises

Aitor Peláez Tomás



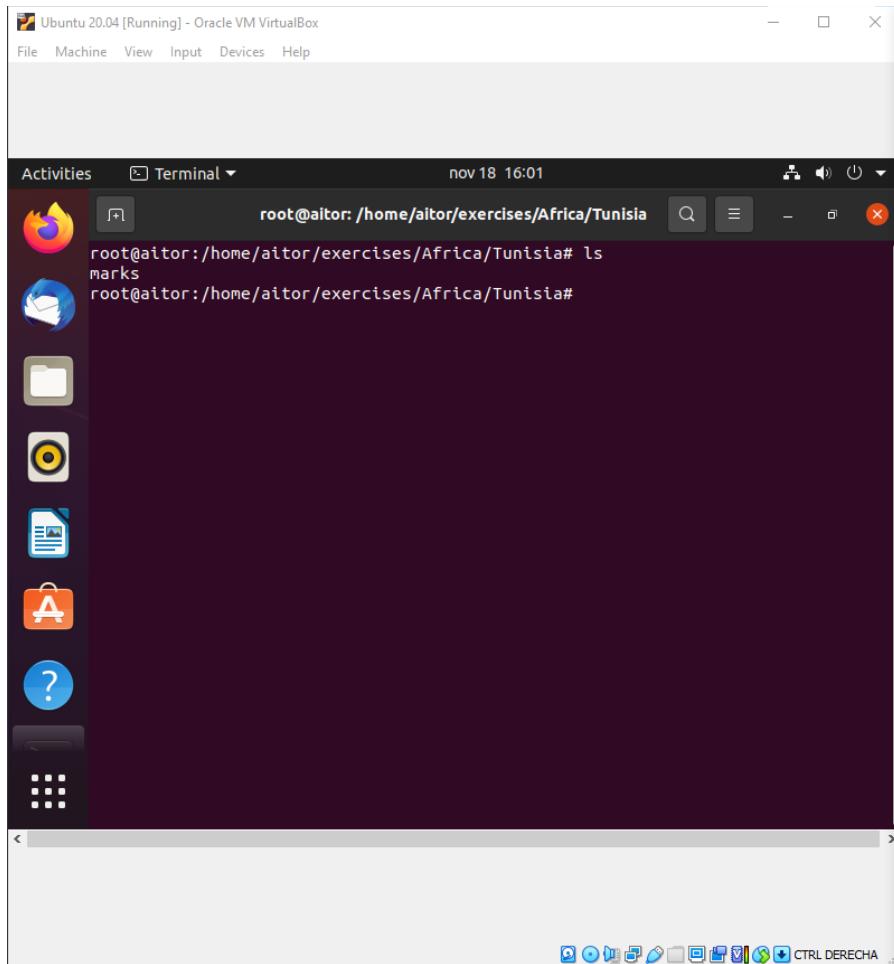
5.Egypt and Tunisia into Africa

Aitor Peláez Tomás



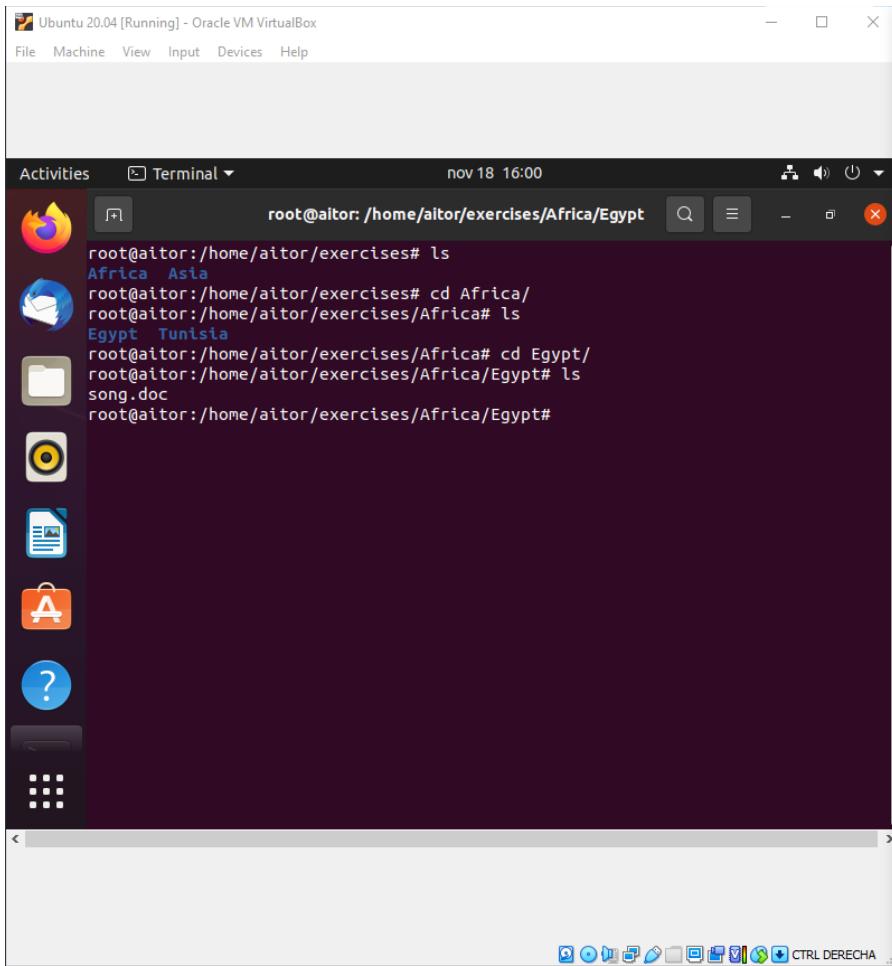
6. Here how marks into Tunisia

Aitor Peláez Tomás



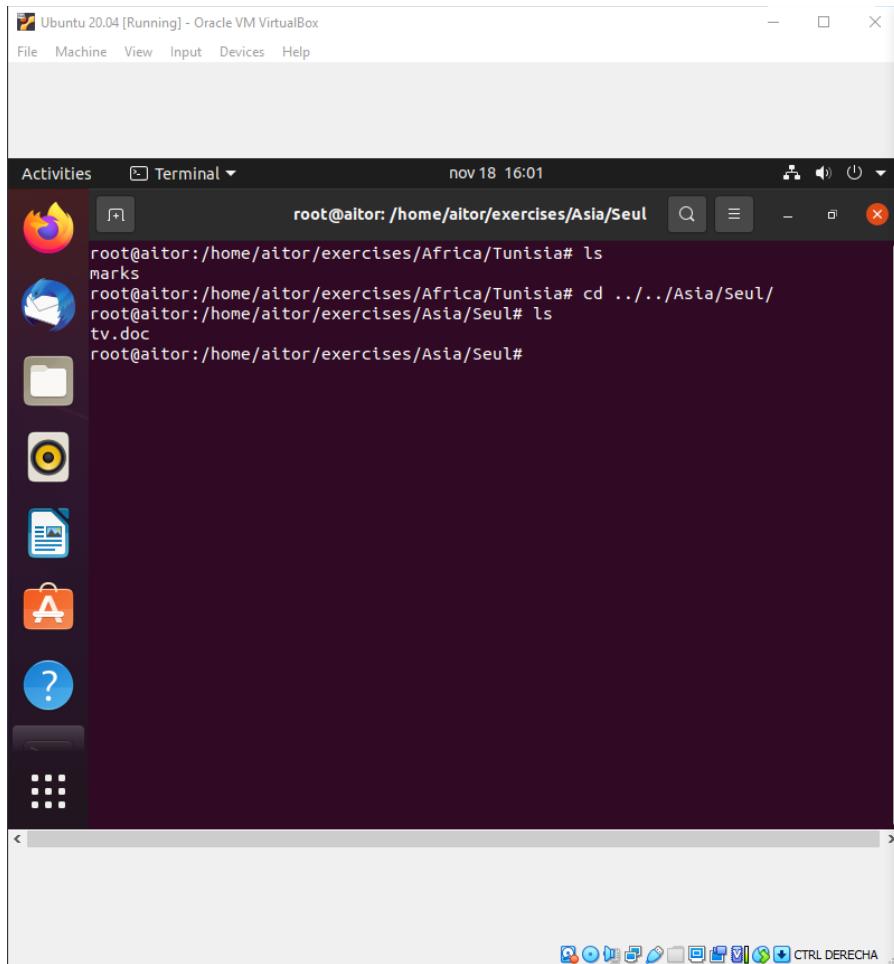
7. Here how I create song.doc into Egypt

Aitor Peláez Tomás



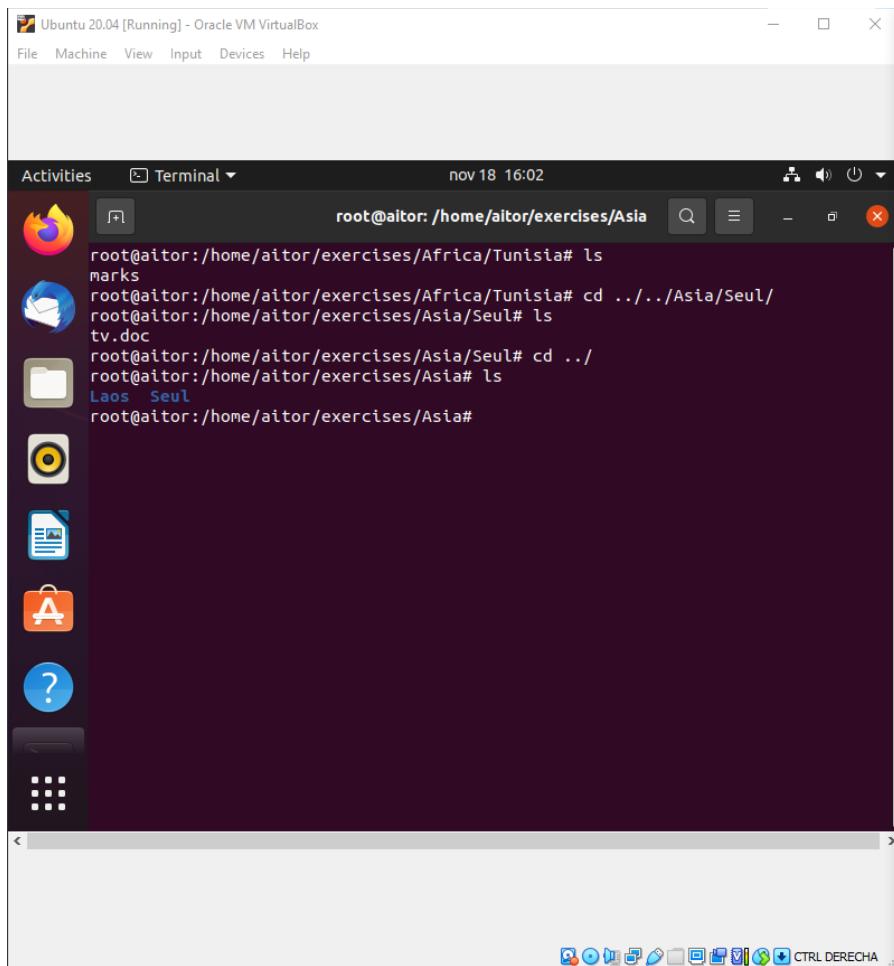
8. Here how I create tv.doc into Seul

Aitor Peláez Tomás



9. And here how is Asia distributed

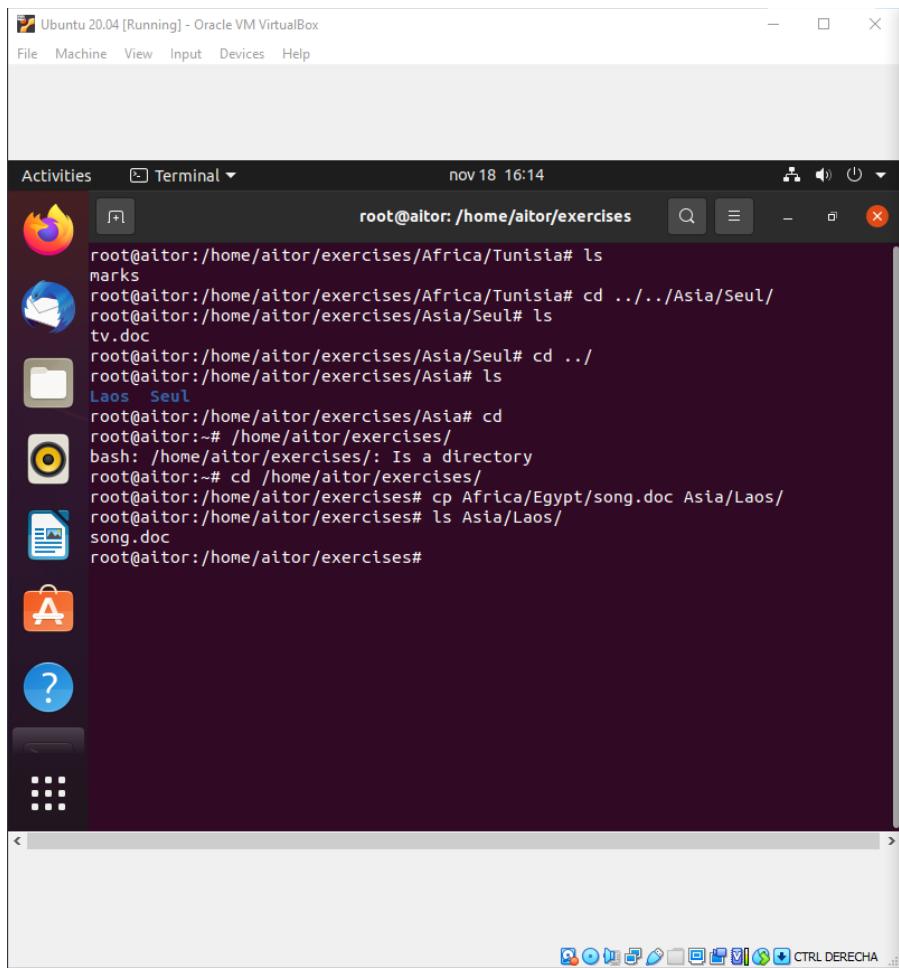
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CHANGE THE CURRENT DIRECTORY TO AFRICA AND DO THE FOLLOWING EXERCISES USING RELATIVE PATHS

15. Copy the file “song.doc” into “Laos”

Aitor Peláez Tomás

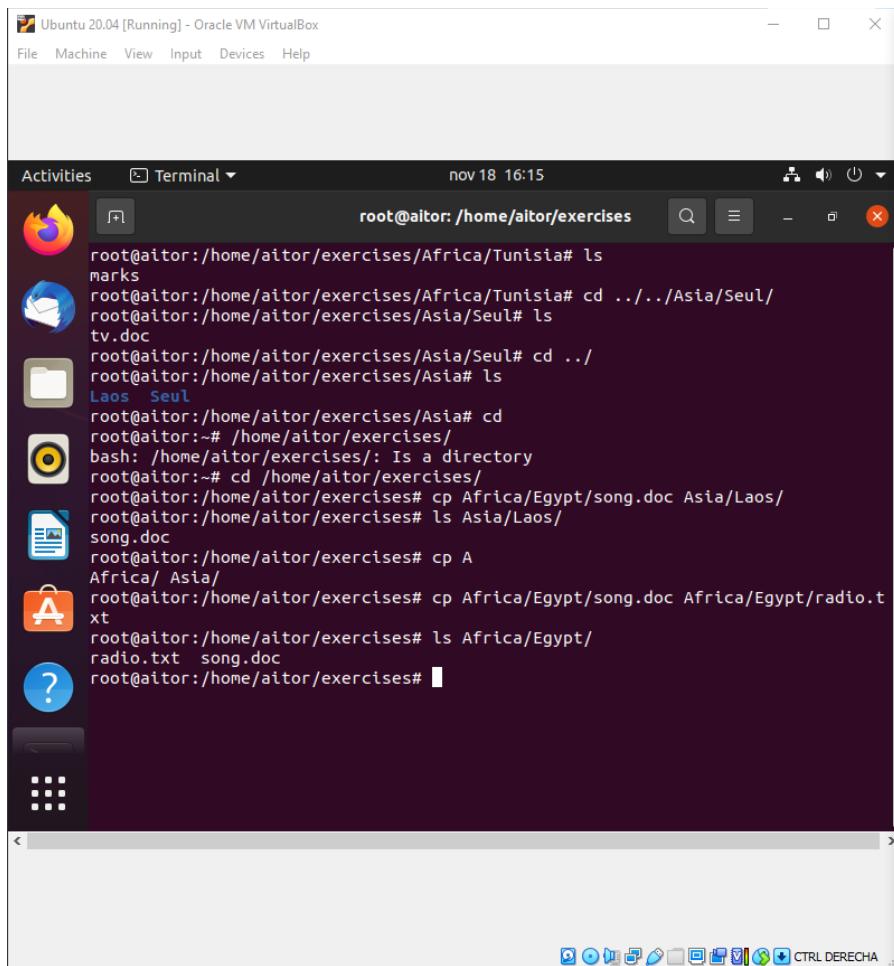


The screenshot shows a terminal window titled "Terminal" running on an Ubuntu 20.04 system. The terminal window is open to the directory "/home/aitor/exercises". The user is root and has run the following commands:

```
root@aitor:/home/aitor/exercises# ls
marks
root@aitor:/home/aitor/exercises/Africa/Tunisia# cd ../../Asia/Seul/
root@aitor:/home/aitor/exercises/Asia/Seul# ls
tv.doc
root@aitor:/home/aitor/exercises/Asia/Seul# cd ..
root@aitor:/home/aitor/exercises/Asia# ls
Laos  Seul
root@aitor:/home/aitor/exercises/Asia# cd
root@aitor:~# /home/aitor/exercises/
bash: /home/aitor/exercises/: Is a directory
root@aitor:~# cd /home/aitor/exercises/
root@aitor:/home/aitor/exercises# cp Africa/Egypt/song.doc Asia/Laos/
root@aitor:/home/aitor/exercises# ls Asia/Laos/
song.doc
root@aitor:/home/aitor/exercises#
```

16. Copy the file “tv.doc” into “Egypt” with the name “radio.txt”

Aitor Peláez Tomás

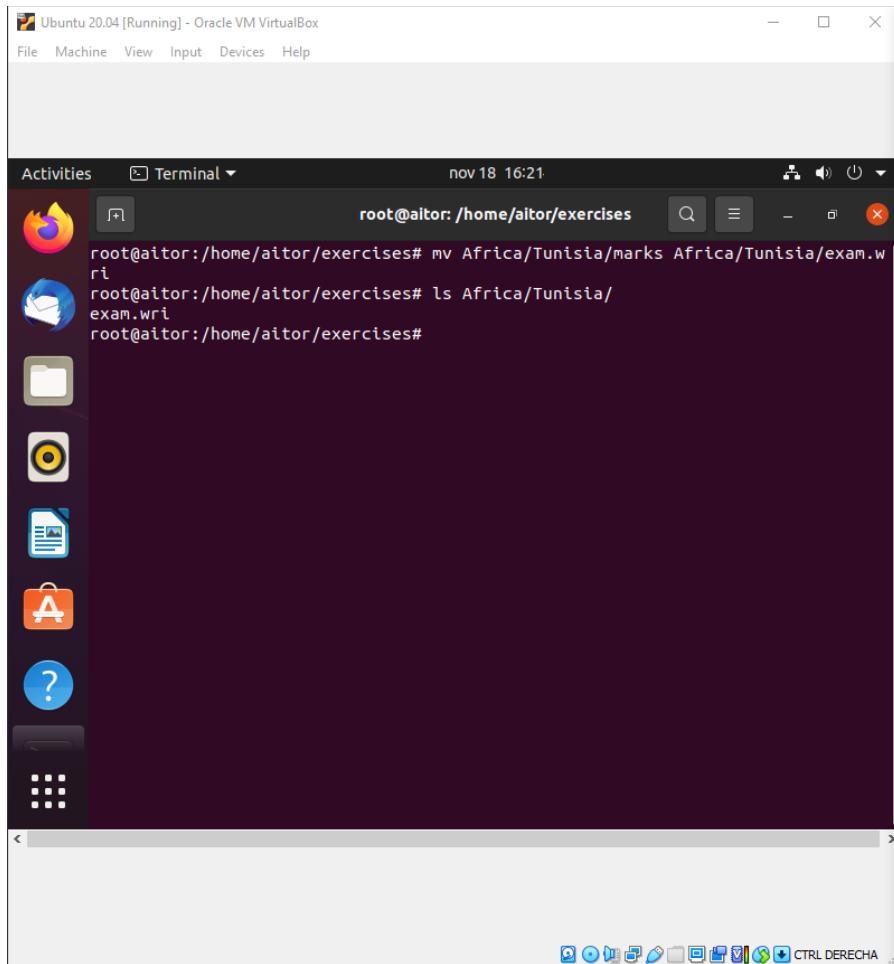


The screenshot shows a terminal window titled "root@aitor:/home/aitor/exercises". The terminal is running on an Ubuntu 20.04 system. The user is navigating through directories and copying files. The terminal output is as follows:

```
root@aitor:/home/aitor/exercises/Africa/Tunisia# ls
marks
root@aitor:/home/aitor/exercises/Africa/Tunisia# cd ../../Asia/Seul/
root@aitor:/home/aitor/exercises/Asia/Seul# ls
tv.doc
root@aitor:/home/aitor/exercises/Asia/Seul# cd ..
root@aitor:/home/aitor/exercises/Asia# ls
Laos Seul
root@aitor:/home/aitor/exercises/Asia# cd ..
root@aitor:~# /home/aitor/exercises/
bash: /home/aitor/exercises/: Is a directory
root@aitor:~# cd /home/aitor/exercises/
root@aitor:/home/aitor/exercises# cp Africa/Egypt/song.doc Asia/Laos/
root@aitor:/home/aitor/exercises# ls Asia/Laos/
song.doc
root@aitor:/home/aitor/exercises# cp A
Africa/ Asia/
root@aitor:/home/aitor/exercises# cp Africa/Egypt/song.doc Africa/Egypt/radio.t
xt
root@aitor:/home/aitor/exercises# ls Africa/Egypt/
radio.txt song.doc
root@aitor:/home/aitor/exercises#
```

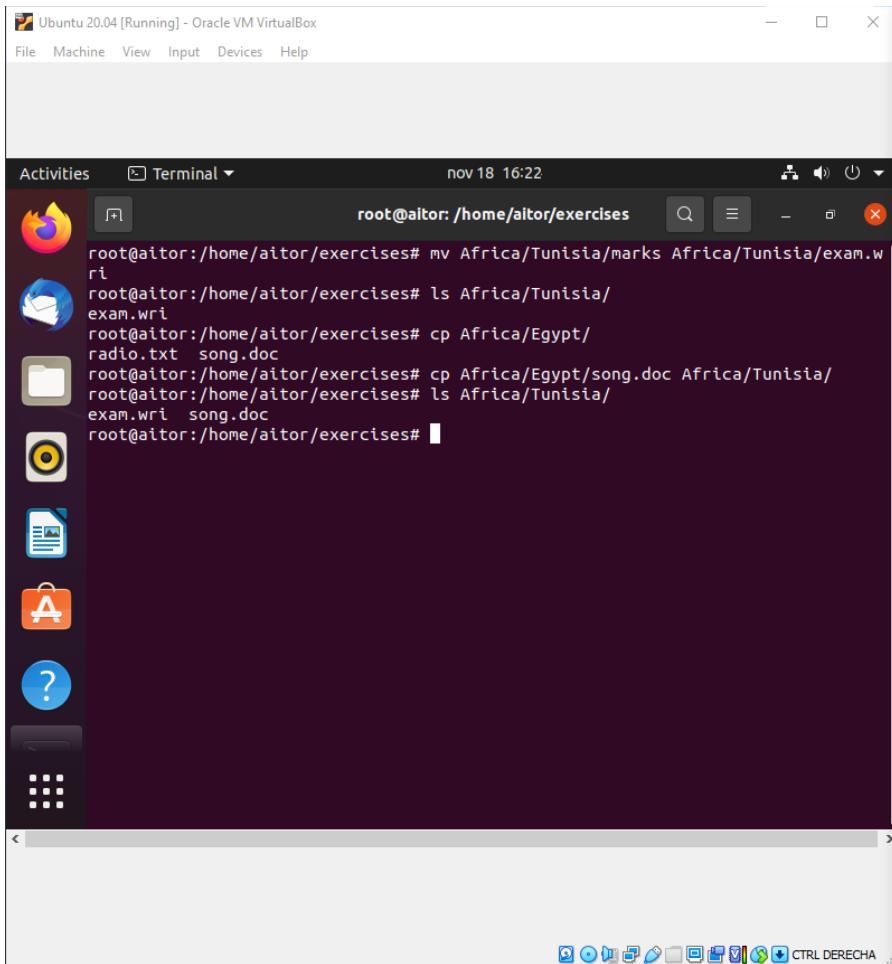
17. Rename the file “marks” to “exam.wri” (it is located in the directory named Tunisia)

Aitor Peláez Tomás



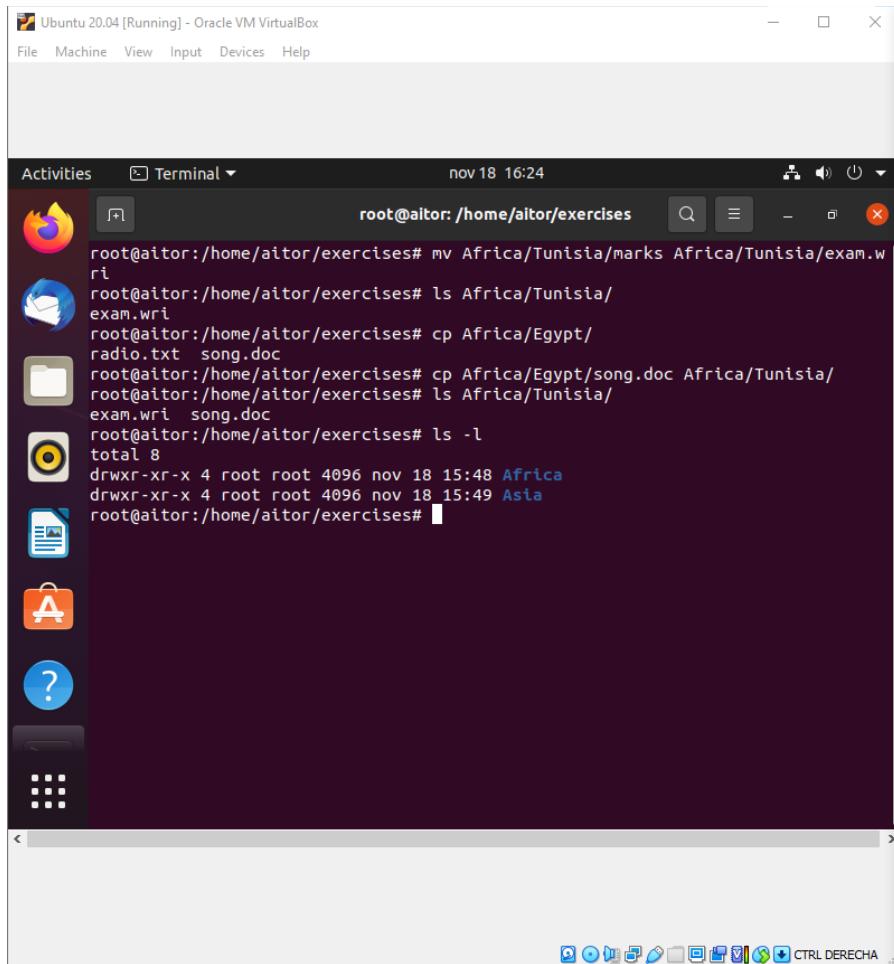
18. Copy the file “song.doc” (located in “Egypt”) inside “Tunisia”

Aitor Peláez Tomás



19. Print the content of the current directory using long listing format

Aitor Peláez Tomás

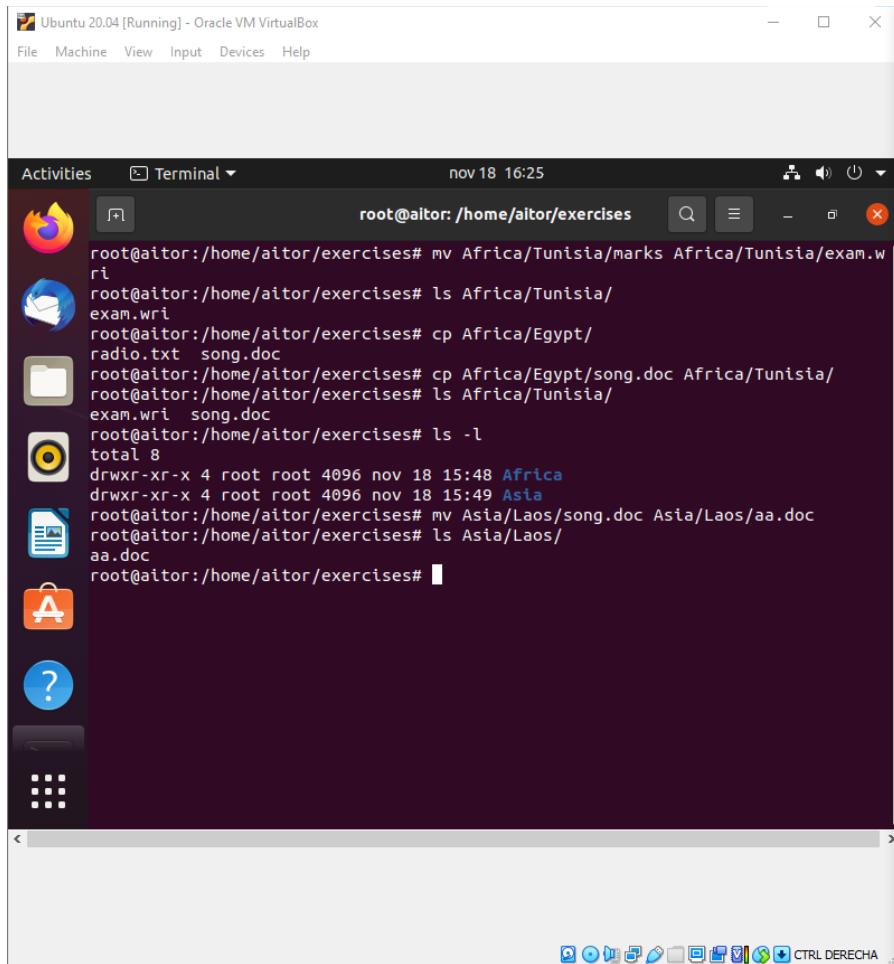


The screenshot shows a terminal window in a Linux environment (Ubuntu 20.04) running in Oracle VM VirtualBox. The terminal window title is "root@aitor:/home/aitor/exercises". The terminal content shows the following command-line session:

```
root@aitor:/home/aitor/exercises# mv Africa/Tunisia/marks Africa/Tunisia/exam.wri
root@aitor:/home/aitor/exercises# ls Africa/Tunisia/
exam.wri
root@aitor:/home/aitor/exercises# cp Africa/Egypt/
radio.txt song.doc
root@aitor:/home/aitor/exercises# cp Africa/Egypt/song.doc Africa/Tunisia/
root@aitor:/home/aitor/exercises# ls Africa/Tunisia/
exam.wri song.doc
root@aitor:/home/aitor/exercises# ls -l
total 8
drwxr-xr-x 4 root root 4096 nov 18 15:48 Africa
drwxr-xr-x 4 root root 4096 nov 18 15:49 Asia
root@aitor:/home/aitor/exercises#
```

20. Rename the file “song.doc” (located in “Laos”) to “aa.doc”

Aitor Peláez Tomás

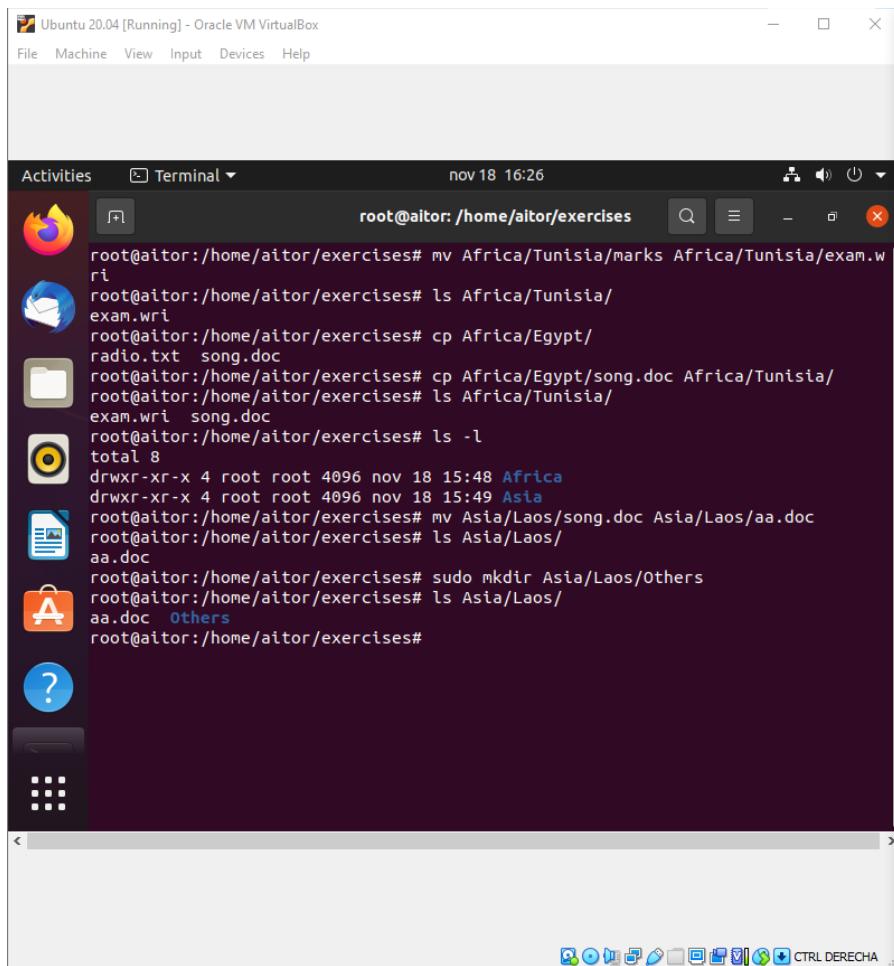


The screenshot shows a terminal window titled "Ubuntu 20.04 [Running] - Oracle VM VirtualBox". The terminal window has a dark background and contains the following command-line session:

```
root@aitor:/home/aitor/exercises# mv Africa/Tunisia/marks Africa/Tunisia/exam.wri
root@aitor:/home/aitor/exercises# ls Africa/Tunisia/
exam.wri
root@aitor:/home/aitor/exercises# cp Africa/Egypt/
radio.txt song.doc
root@aitor:/home/aitor/exercises# cp Africa/Egypt/song.doc Africa/Tunisia/
root@aitor:/home/aitor/exercises# ls Africa/Tunisia/
exam.wri song.doc
root@aitor:/home/aitor/exercises# ls -l
total 8
drwxr-xr-x 4 root root 4096 nov 18 15:48 Africa
drwxr-xr-x 4 root root 4096 nov 18 15:49 Asia
root@aitor:/home/aitor/exercises# mv Asia/Laos/song.doc Asia/Laos/aa.doc
root@aitor:/home/aitor/exercises# ls Asia/Laos/
aa.doc
root@aitor:/home/aitor/exercises#
```

21. Create the directory “Others” in “Laos”

Aitor Peláez Tomás

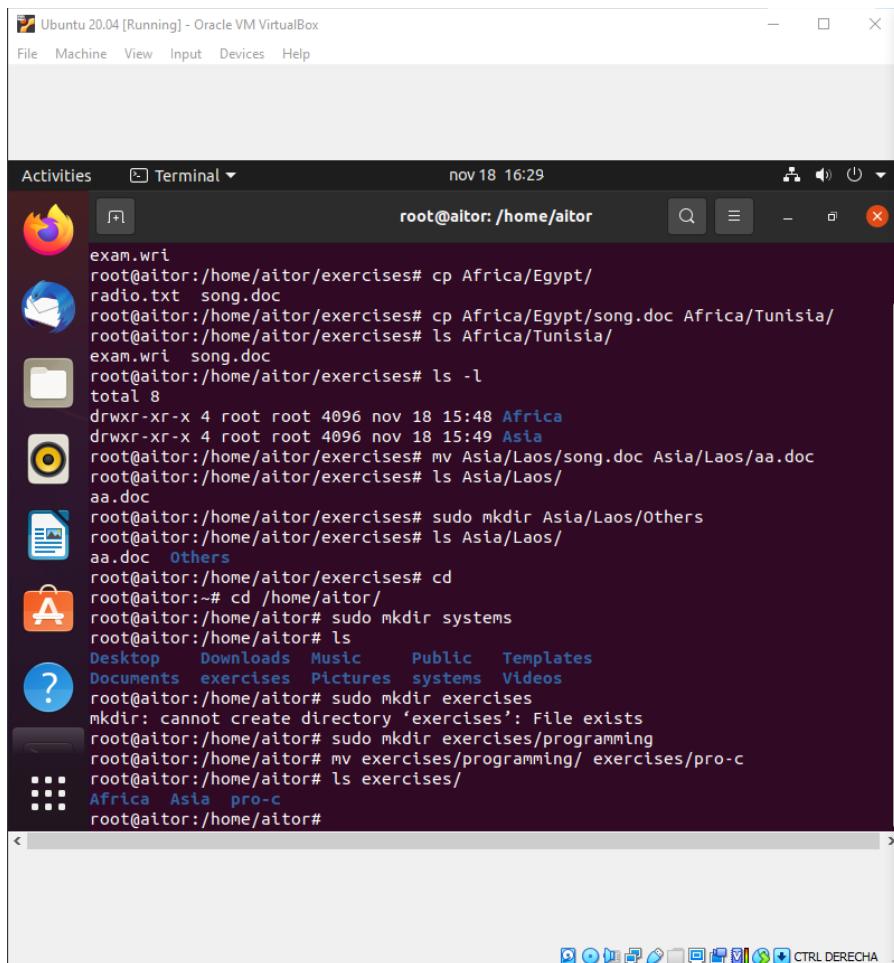


The screenshot shows a terminal window titled "Ubuntu 20.04 [Running] - Oracle VM VirtualBox". The terminal window has a dark background and contains the following command-line session:

```
root@aitor:/home/aitor/exercises# mv Africa/Tunisia/marks Africa/Tunisia/exam.wri
root@aitor:/home/aitor/exercises# ls Africa/Tunisia/
exam.wri
root@aitor:/home/aitor/exercises# cp Africa/Egypt/
radio.txt song.doc
root@aitor:/home/aitor/exercises# cp Africa/Egypt/song.doc Africa/Tunisia/
exam.wri song.doc
root@aitor:/home/aitor/exercises# ls -l
total 8
drwxr-xr-x 4 root root 4096 nov 18 15:48 Africa
drwxr-xr-x 4 root root 4096 nov 18 15:49 Asia
root@aitor:/home/aitor/exercises# mv Asia/Laos/song.doc Asia/Laos/aa.doc
root@aitor:/home/aitor/exercises# ls Asia/Laos/
aa.doc
root@aitor:/home/aitor/exercises# sudo mkdir Asia/Laos/Others
root@aitor:/home/aitor/exercises# ls Asia/Laos/
aa.doc  Others
root@aitor:/home/aitor/exercises#
```

22. Rename the directory named “programming” (which you created in the first exercises) to pro-c. 23. Create the following directory tree in “exercises” (using as few commands as possible)

Aitor Peláez Tomás

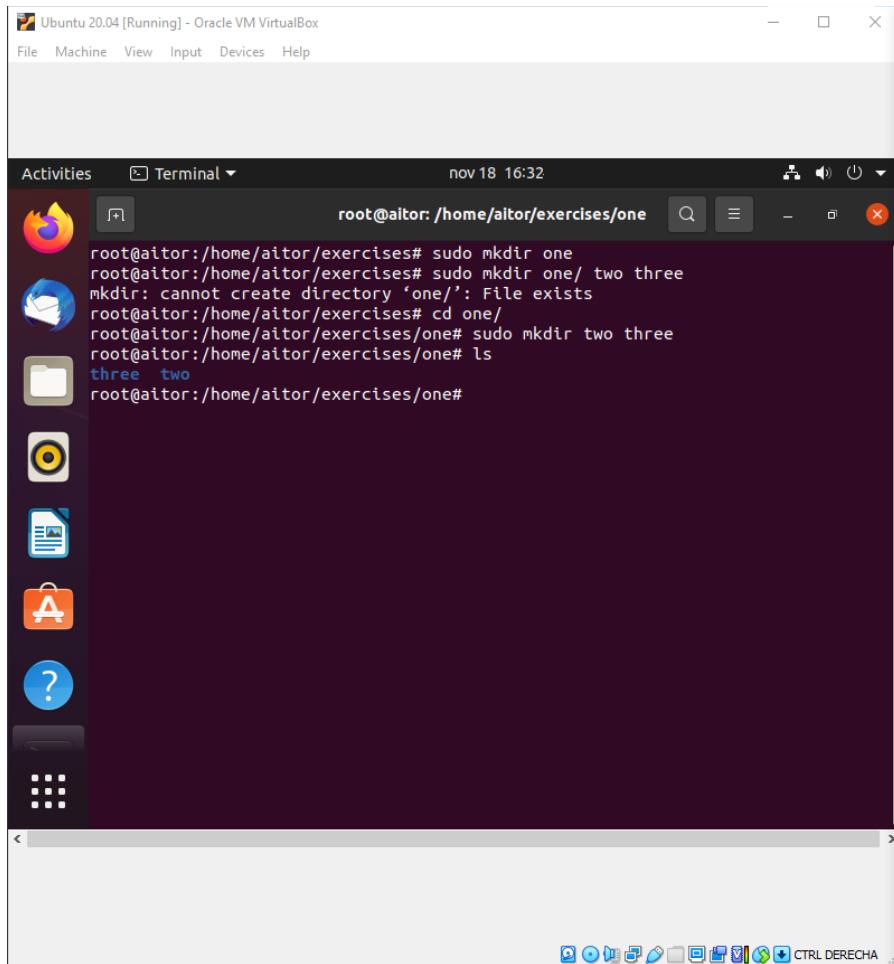


The screenshot shows a terminal window in a Linux desktop environment. The terminal title bar reads "root@aitor: /home/aitor". The terminal window displays the following command-line session:

```
exam.wri
root@aitor:/home/aitor/exercises# cp Africa/Egypt/
radio.txt song.doc
root@aitor:/home/aitor/exercises# cp Africa/Egypt/song.doc Africa/Tunisia/
root@aitor:/home/aitor/exercises# ls Africa/Tunisia/
exam.wri song.doc
root@aitor:/home/aitor/exercises# ls -l
total 8
drwxr-xr-x 4 root root 4096 nov 18 15:48 Africa
drwxr-xr-x 4 root root 4096 nov 18 15:49 Asia
root@aitor:/home/aitor/exercises# mv Asia/Laos/song.doc Asia/Laos/aa.doc
root@aitor:/home/aitor/exercises# ls Asia/Laos/
aa.doc
root@aitor:/home/aitor/exercises# sudo mkdir Asia/Laos/Others
root@aitor:/home/aitor/exercises# ls Asia/Laos/
aa.doc Others
root@aitor:/home/aitor/exercises# cd
root@aitor:# cd /home/aitor/
root@aitor:/home/aitor# sudo mkdir systems
root@aitor:/home/aitor# ls
Desktop Downloads Music Public Templates
Documents exercises Pictures systems Videos
root@aitor:/home/aitor# sudo mkdir exercises
mkdir: cannot create directory 'exercises': File exists
root@aitor:/home/aitor# sudo mkdir exercises/programming
root@aitor:/home/aitor# mv exercises/programming/ exercises/pro-c
root@aitor:/home/aitor# ls exercises/
Africa Asia pro-c
root@aitor:/home/aitor#
```

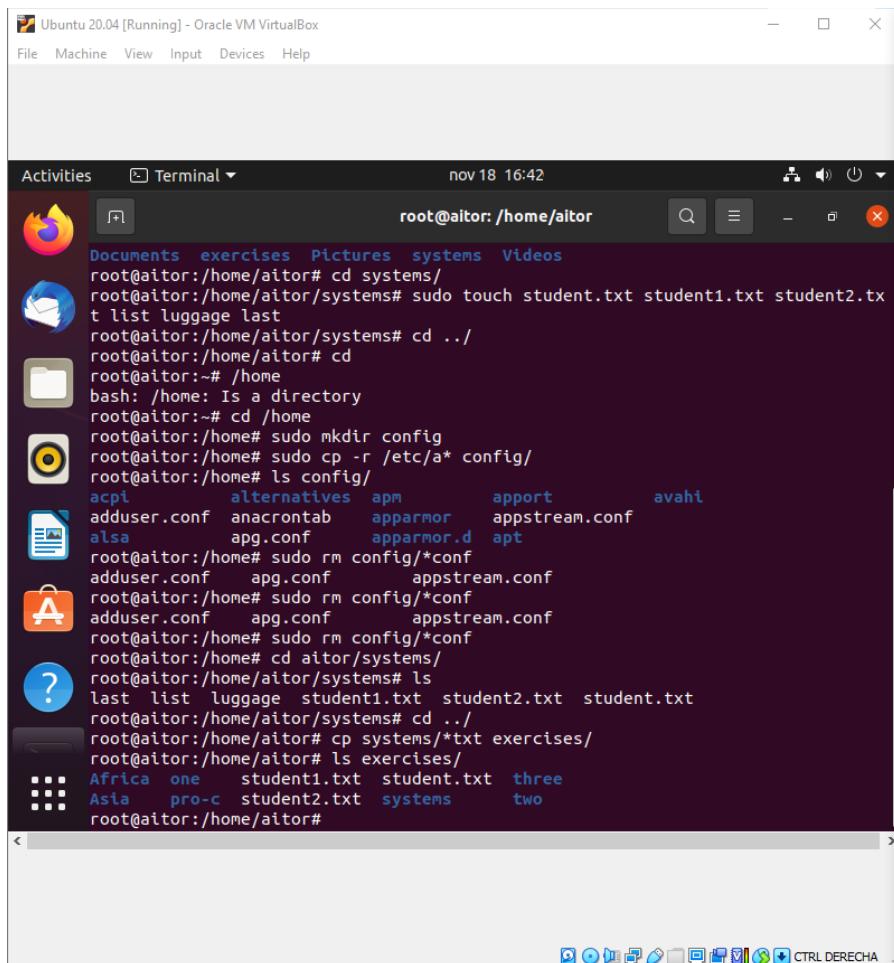
23.Create the following directory tree in “exercises” (using as few commands as possible)

Aitor Peláez Tomás



24. Copy the files with txt extension from the directory named “systems” to “exercises”.

Aitor Peláez Tomás

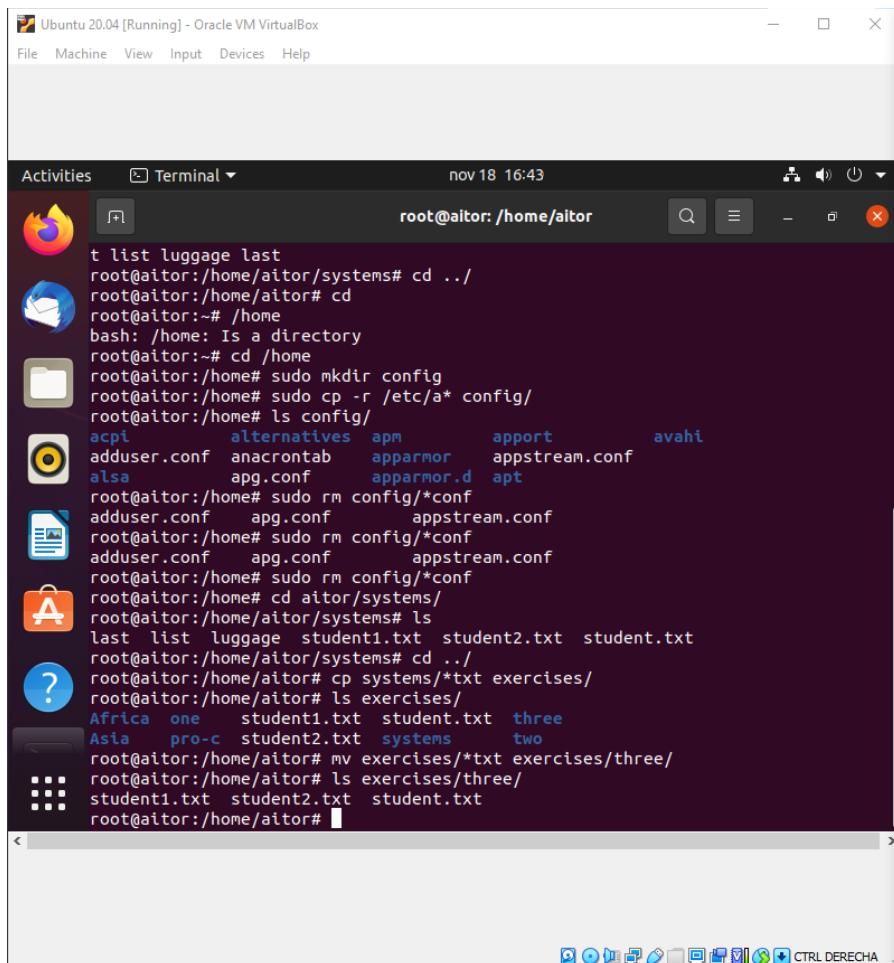


The screenshot shows a terminal window titled "root@aitor: /home/aitor" running on an Ubuntu 20.04 system. The terminal displays the following command history:

```
root@aitor:~# cd systems/
root@aitor:/home/aitor/systems# sudo touch student.txt student1.txt student2.txt
root@aitor:/home/aitor/systems# cd ..
root@aitor:/home/aitor# cd
root@aitor:~# /home
bash: /home: Is a directory
root@aitor:~# cd /home
root@aitor:/home# sudo mkdir config
root@aitor:/home# sudo cp -r /etc/* config/
root@aitor:/home# ls config/
acpi      alternatives  apm      apport      avahi
adduser.conf  anacrontab  apparmor  appstream.conf
alsa      apg.conf    apparmor.d apt
root@aitor:/home# sudo rm config/*conf
adduser.conf  apg.conf    appstream.conf
root@aitor:/home# sudo rm config/*conf
root@aitor:/home# cd aitor/systems/
root@aitor:/home/aitor/systems# ls
last  list  luggage  student1.txt  student2.txt  student.txt
root@aitor:/home/aitor/systems# cd ..
root@aitor:/home/aitor# cp systems/*txt exercises/
root@aitor:/home/aitor# ls exercises/
Africa  one  student1.txt  student.txt  three
Asia   pro-c  student2.txt  systems    two
root@aitor:/home/aitor#
```

25. Move the files you copied in the exercise above to the directory THREE.

Aitor Peláez Tomás

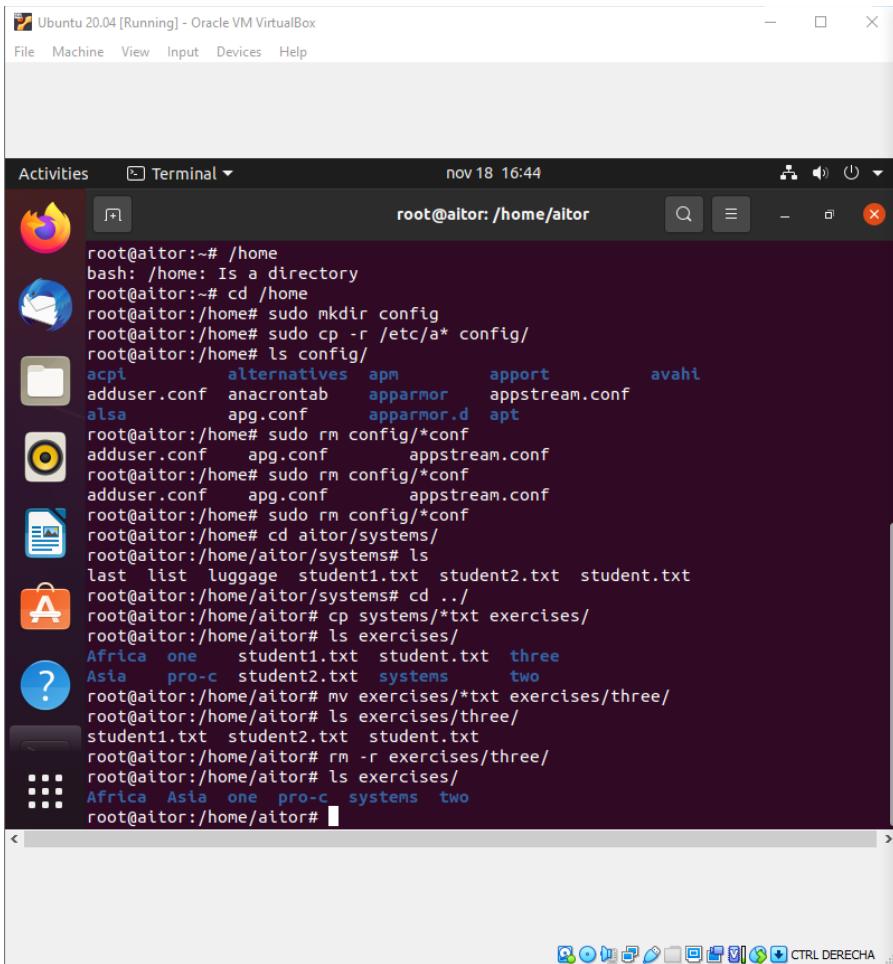


The screenshot shows a terminal window in an Ubuntu 20.04 desktop environment. The terminal is running as root, indicated by the prompt "root@aitor: /home/aitor". The user has navigated to the "/home/aitor" directory and then to the "/home/aitor/systems" directory. They have created a new directory named "config" and copied files from "/etc/" into it. They then listed the contents of "config" and moved files from "/systems/" into a directory named "exercises". Finally, they listed the contents of "exercises/three" and moved files from "three" into "exercises/three". The terminal window also shows various icons for system monitoring and configuration.

```
t list luggage last
root@aitor:/home/aitor/systems# cd ../
root@aitor:/home/aitor# cd
root@aitor:# /home
bash: /home: Is a directory
root@aitor:# cd /home
root@aitor:/home# sudo mkdir config
root@aitor:/home# sudo cp -r /etc/* config/
root@aitor:/home# ls config/
acpi      alternatives    apport      avahi
adduser.conf  anacrontab   apparmor   appstream.conf
alsa       apg.conf      apparmor.d apt
root@aitor:/home# sudo rm config/*conf
adduser.conf  apg.conf      appstream.conf
root@aitor:/home# sudo rm config/*conf
adduser.conf  apg.conf      appstream.conf
root@aitor:/home# sudo rm config/*conf
root@aitor:/home# cd aitor/systems/
root@aitor:/home/aitor/systems# ls
last  list  luggage  student1.txt  student2.txt  student.txt
root@aitor:/home/aitor/systems# cd ..
root@aitor:/home/aitor# cp systems/*txt exercises/
root@aitor:/home/aitor# ls exercises/
Africa  one  student1.txt  student.txt  three
Asia   pro-c  student2.txt  systems   two
root@aitor:/home/aitor# mv exercises/*txt exercises/three/
root@aitor:/home/aitor# ls exercises/three/
student1.txt  student2.txt  student.txt
root@aitor:/home/aitor#
```

26. Delete the directory named THREE, including all the files and, if so, subdirectories

Aitor Peláez Tomás



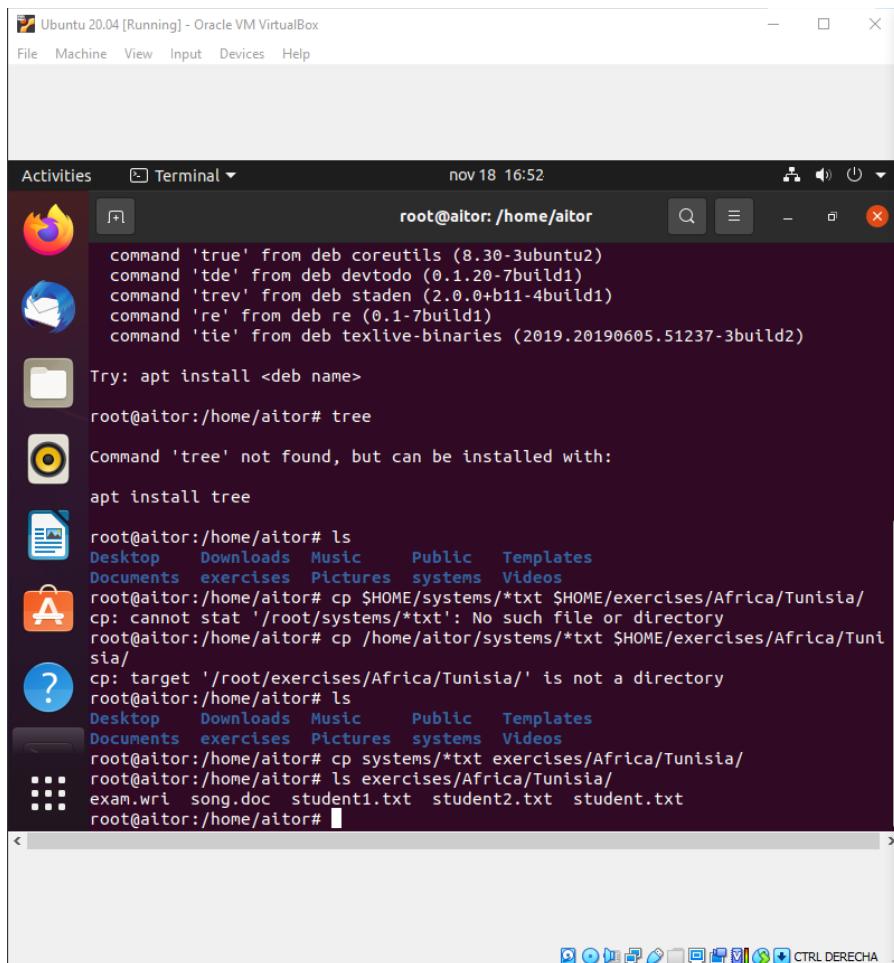
The screenshot shows a terminal window titled "root@aitor: /home/aitor" running on an Ubuntu 20.04 desktop environment. The terminal displays the following command history:

```
root@aitor:~# /home
bash: /home: Is a directory
root@aitor:~# cd /home
root@aitor:/home# sudo mkdir config
root@aitor:/home# sudo cp -r /etc/a* config/
root@aitor:/home# ls config/
acpt alternatives apm apport avahi
adduser.conf anacrontab apparmor appstream.conf
alsa apg.conf apparmor.d apt
root@aitor:/home# sudo rm config/*conf
adduser.conf apg.conf appstream.conf
root@aitor:/home# sudo rm config/*conf
adduser.conf apg.conf appstream.conf
root@aitor:/home# sudo rm config/*conf
root@aitor:/home# cd aitor/systems/
root@aitor:/home/aitor/systems# ls
last list luggage student1.txt student2.txt student.txt
root@aitor:/home/aitor/systems# cd ../
root@aitor:/home/aitor# cp systems/*txt exercises/
root@aitor:/home/aitor# ls exercises/
Africa one student1.txt student.txt three
Asia pro-c student2.txt systems two
root@aitor:/home/aitor# mv exercises/*txt exercises/three/
root@aitor:/home/aitor# ls exercises/three/
student1.txt student2.txt student.txt
root@aitor:/home/aitor# rm -r exercises/three/
root@aitor:/home/aitor# ls exercises/
Africa Asia one pro-c systems two
root@aitor:/home/aitor#
```

CHANGE INTO SYSTEMS AND DO THE FOLLOWING EXERCISES USING ABSOLUTE PATHS

27. Copy the files that end with “txt” of the directory named “systems” to “Tunisia”

Aitor Peláez Tomás

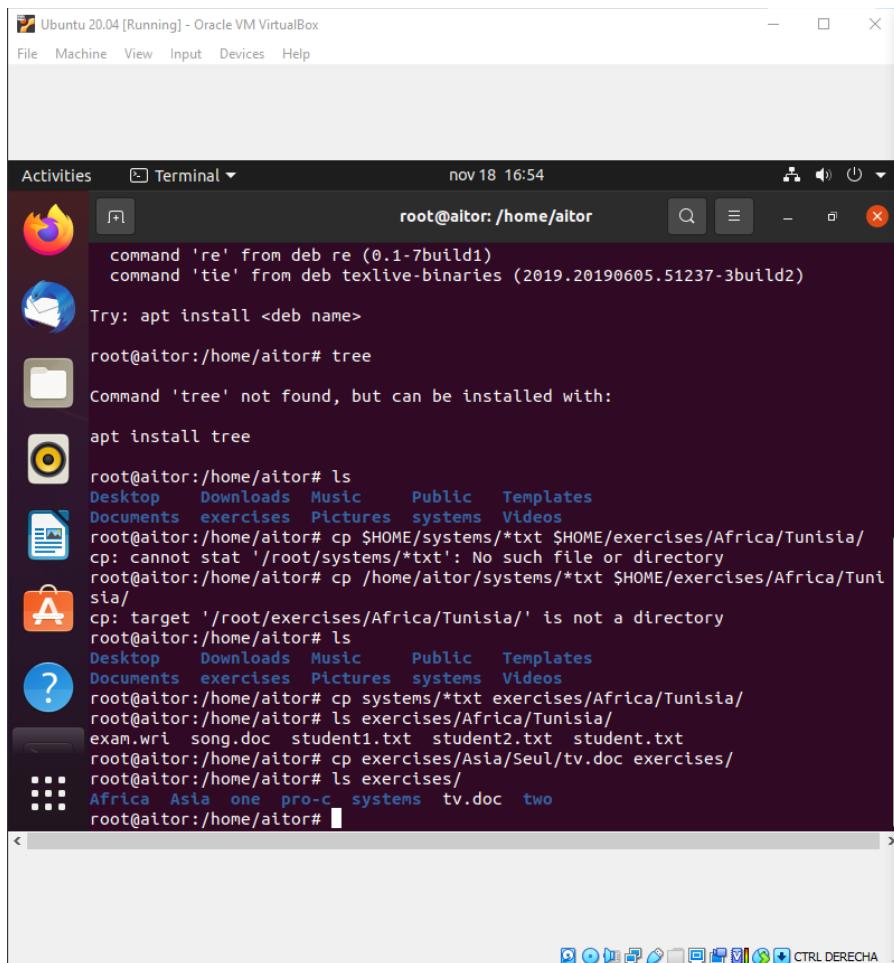


```
Ubuntu 20.04 [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Activities Terminal nov 18 16:52
root@aitor: /home/aitor
command 'true' from deb coreutils (8.30-3ubuntu2)
command 'tde' from deb devtodo (0.1.20-7build1)
command 'trev' from deb staden (2.0.0+b11-4build1)
command 're' from deb re (0.1-7build1)
command 'tie' from deb texlive-binaries (2019.20190605.51237-3build2)

Try: apt install <deb name>
root@aitor:/home/aitor# tree
Command 'tree' not found, but can be installed with:
apt install tree
root@aitor:/home/aitor# ls
Desktop Downloads Music Public Templates
Documents exercises Pictures systems Videos
root@aitor:/home/aitor# cp $HOME/systems/*txt $HOME/exercises/Africa/Tunisia/
cp: cannot stat '/root/systems/*txt': No such file or directory
root@aitor:/home/aitor# cp /home/aitor/systems/*txt $HOME/exercises/Africa/Tunisia/
cp: target '/root/exercises/Africa/Tunisia/' is not a directory
root@aitor:/home/aitor# ls
Desktop Downloads Music Public Templates
Documents exercises Pictures systems Videos
root@aitor:/home/aitor# cp systems/*txt exercises/Africa/Tunisia/
root@aitor:/home/aitor# ls exercises/Africa/Tunisia/
exam.wri song.doc student1.txt student2.txt student.txt
root@aitor:/home/aitor#
```

28. Copy the file “tv.doc” (located in “Seul”) to the directory named “exercises”

Aitor Peláez Tomás



The screenshot shows a terminal window titled "Ubuntu 20.04 [Running] - Oracle VM VirtualBox". The terminal is running as root, indicated by the "#". The session starts with a warning about deprecated commands:

```
root@aitor: /home/aitor# command 're' from deb re (0.1-7build1)
command 'tie' from deb texlive-binaries (2019.20190605.51237-3build2)
```

Then, the user tries to install a package:

```
Try: apt install <deb name>
```

Next, they attempt to run the "tree" command:

```
root@aitor:/home/aitor# tree
Command 'tree' not found, but can be installed with:
```

They then proceed to install the "tree" package:

```
apt install tree
```

After installation, they check the contents of their home directory:

```
root@aitor:/home/aitor# ls
Desktop Downloads Music Public Templates
Documents exercises Pictures systems Videos
```

They then copy files from the "systems" directory to the "exercises" directory:

```
root@aitor:/home/aitor# cp $HOME/systems/*txt $HOME/exercises/Africa/Tunisia/
cp: cannot stat '/root/systems/*txt': No such file or directory
```

They try again, specifying the full path:

```
root@aitor:/home/aitor# cp /home/aitor/systems/*txt $HOME/exercises/Africa/Tunisia/
cp: target '/root/exercises/Africa/Tunisia/' is not a directory
```

They then list the contents of the "exercises" directory:

```
root@aitor:/home/aitor# ls
Desktop Downloads Music Public Templates
Documents exercises Pictures systems Videos
```

They copy files from the "systems" directory to the "exercises" directory again:

```
root@aitor:/home/aitor# cp systems/*txt exercises/Africa/Tunisia/
root@aitor:/home/aitor# ls exercises/Africa/Tunisia/
exam.wri song.doc student1.txt student2.txt student.txt
```

Finally, they copy files from the "Asia" directory to the "exercises" directory:

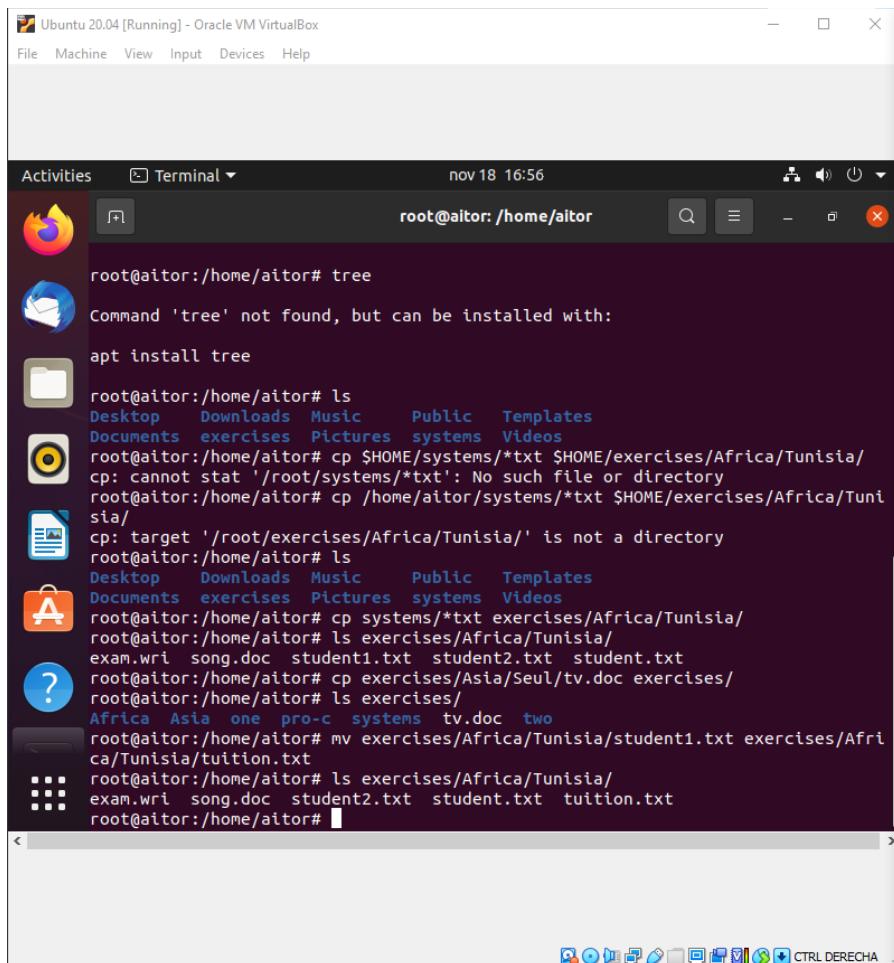
```
root@aitor:/home/aitor# cp exercises/Asia/Seul/tv.doc exercises/
root@aitor:/home/aitor# ls exercises/
Africa Asia one pro-c systems tv.doc two
```

The terminal ends with:

```
root@aitor:/home/aitor#
```

29. Rename the file student1.txt (located in “Tunisia”) to tuition.txt

Aitor Peláez Tomás



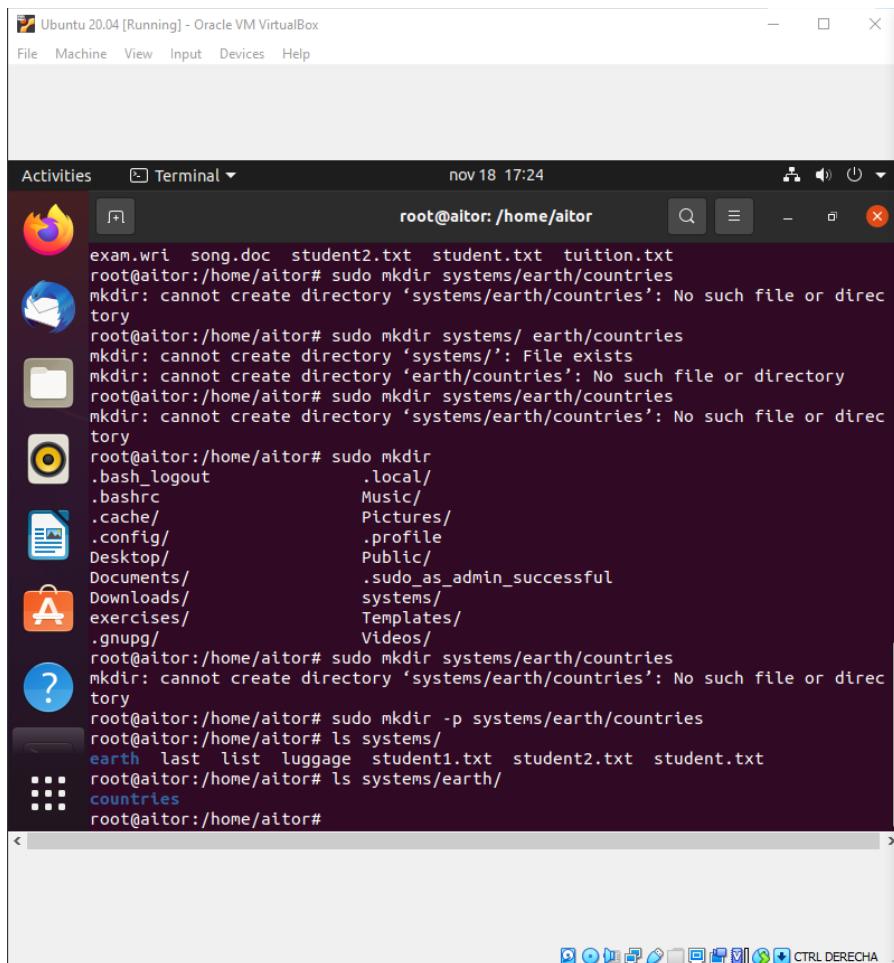
The screenshot shows a terminal window titled "Ubuntu 20.04 [Running] - Oracle VM VirtualBox". The terminal is running as root user ("root@aitor: /home/aitor#") and displays the following command-line session:

```
root@aitor:/home/aitor# tree
Command 'tree' not found, but can be installed with:
apt install tree

root@aitor:/home/aitor# ls
Desktop Downloads Music Public Templates
Documents exercises Pictures systems Videos
root@aitor:/home/aitor# cp $HOME/systems/*txt $HOME/exercises/Africa/Tunisia/
cp: cannot stat '/root/systems/*txt': No such file or directory
root@aitor:/home/aitor# cp /home/aitor/systems/*txt $HOME/exercises/Africa/Tuni
sia/
cp: target '/root/exercises/Africa/Tunisia/' is not a directory
root@aitor:/home/aitor# ls
Desktop Downloads Music Public Templates
Documents exercises Pictures systems Videos
root@aitor:/home/aitor# cp systems/*txt exercises/Africa/Tunisia/
root@aitor:/home/aitor# ls exercises/Africa/Tunisia/
exam.wri song.doc student1.txt student2.txt student.txt
root@aitor:/home/aitor# cp exercises/Asia/Seul/tv.doc exercises/
root@aitor:/home/aitor# ls exercises/
Africa Asia one pro-c systems tv.doc two
root@aitor:/home/aitor# mv exercises/Africa/Tunisia/student1.txt exercises/Afri
ca/Tunisia/tuition.txt
root@aitor:/home/aitor# ls exercises/Africa/Tunisia/
exam.wri song.doc student2.txt student.txt tuition.txt
root@aitor:/home/aitor#
```

30. Create a new directory called “earth” into “systems”. Create another directory called “countries” inside “earth”

Aitor Peláez Tomás

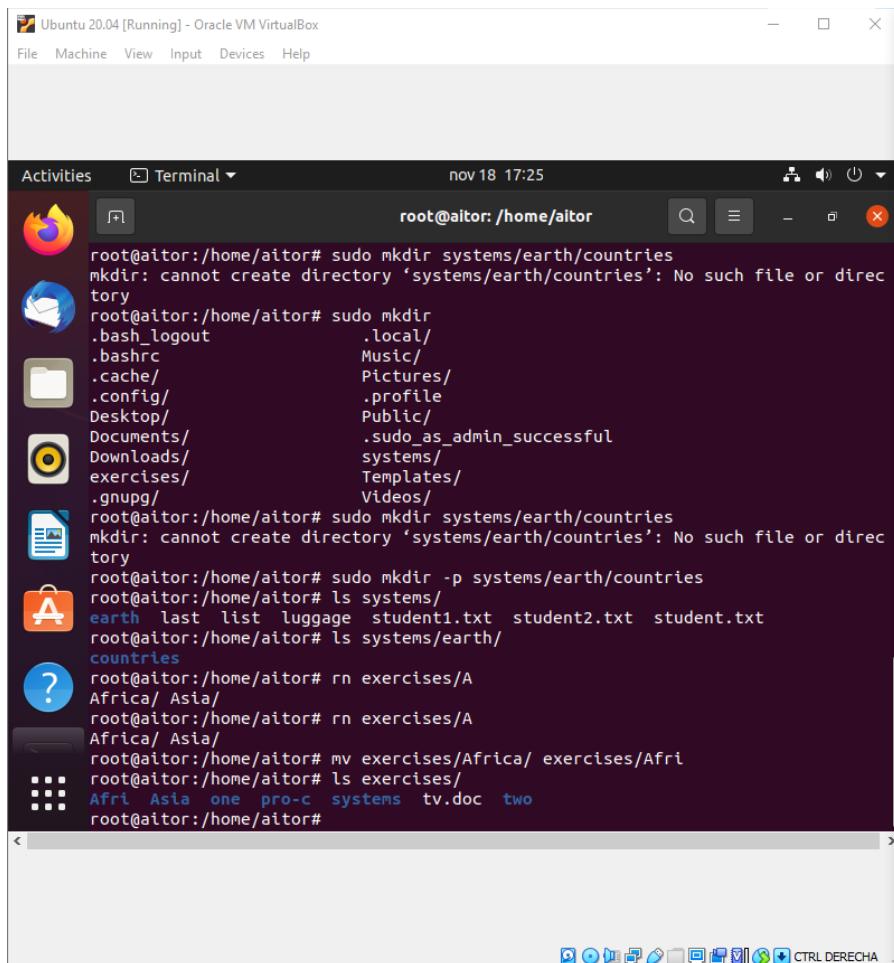


The screenshot shows a terminal window in a Linux environment (Ubuntu 20.04) running as root. The terminal window has a dark background with light-colored text. It displays the following command-line session:

```
root@aitor: /home/aitor# sudo mkdir systems/earth/countries
mkdir: cannot create directory 'systems/earth/countries': No such file or directory
root@aitor: /home/aitor# sudo mkdir systems/ earth/countries
mkdir: cannot create directory 'systems/': File exists
mkdir: cannot create directory 'earth/countries': No such file or directory
root@aitor: /home/aitor# sudo mkdir systems/earth/countries
mkdir: cannot create directory 'systems/earth/countries': No such file or directory
root@aitor: /home/aitor# sudo mkdir
.bash_logout      .local/
.bashrc          Music/
.cache/          Pictures/
.config/         .profile
Desktop/         Public/
Documents/        .sudo_as_admin_successful
Downloads/        systems/
.exercises/       Templates/
.gnupg/          Videos/
root@aitor: /home/aitor# sudo mkdir systems/earth/countries
mkdir: cannot create directory 'systems/earth/countries': No such file or directory
root@aitor: /home/aitor# sudo mkdir -p systems/earth/countries
root@aitor: /home/aitor# ls systems/
earth  last  list  luggage  student1.txt  student2.txt  student.txt
root@aitor: /home/aitor# ls systems/earth/
countries
root@aitor: /home/aitor#
```

31. Rename “Africa” (located in “exercises”) to “Afri”

Aitor Peláez Tomás



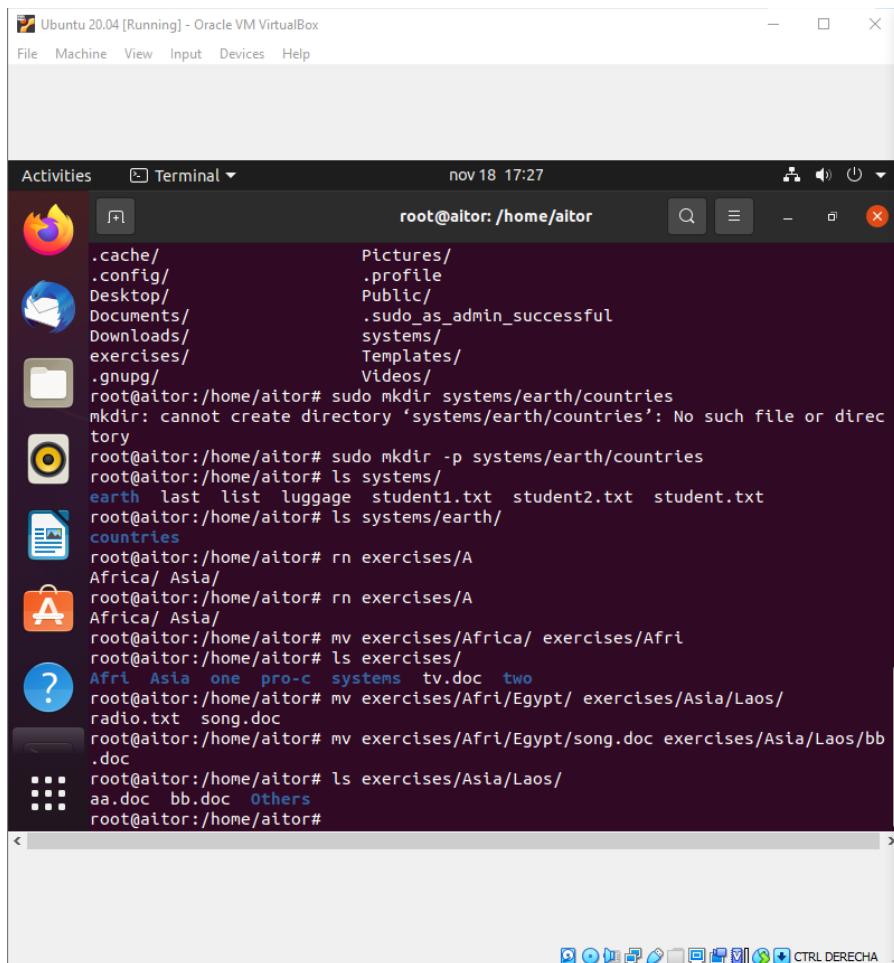
The screenshot shows a terminal window in a Linux environment (Ubuntu 20.04) running in Oracle VM VirtualBox. The terminal window has a dark background and contains the following command history:

```
root@aitor:/home/aitor# sudo mkdir systems/earth/countries
mkdir: cannot create directory 'systems/earth/countries': No such file or directory
root@aitor:/home/aitor# sudo mkdir
.bash_logout          .local/
.bashrc               Music/
.cache/               Pictures/
.config/              .profile
Desktop/              Public/
Documents/            .sudo_as_admin_successful
Downloads/            systems/
.exercises/           Templates/
.gnupg/               Videos/
root@aitor:/home/aitor# sudo mkdir systems/earth/countries
mkdir: cannot create directory 'systems/earth/countries': No such file or directory
root@aitor:/home/aitor# sudo mkdir -p systems/earth/countries
root@aitor:/home/aitor# ls systems/
earth  last  list  luggage  student1.txt  student2.txt  student.txt
root@aitor:/home/aitor# ls systems/earth/
countries
root@aitor:/home/aitor# rm exercises/A
Africa/  Asia/
root@aitor:/home/aitor# rm exercises/A
Africa/  Asia/
root@aitor:/home/aitor# mv exercises/Africa/ exercises/Afri
root@aitor:/home/aitor# ls exercises/
Afri  Asia  one  pro-c  systems  tv.doc  two
root@aitor:/home/aitor#
```

NOW YOU CAN BE PLACED IN THE DIRECTORY YOU WANT

32. Move the file “song.doc”, which is located in Egypt, to “Laos” with the name “bb.doc”

Aitor Peláez Tomás

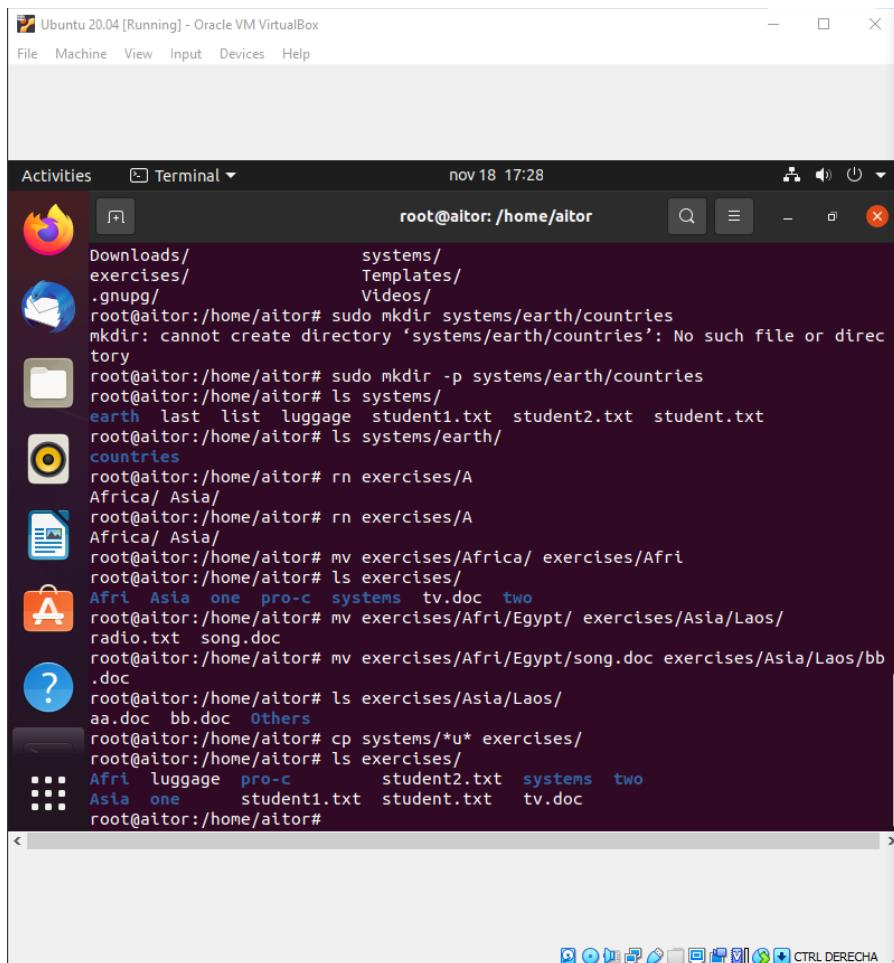


The screenshot shows a terminal window in a Linux environment (Ubuntu 20.04) running as root. The terminal is titled "root@aitor: /home/aitor". The user has performed the following commands:

```
root@aitor: /home/aitor# sudo mkdir systems/earth/countries
mkdir: cannot create directory 'systems/earth/countries': No such file or directory
root@aitor: /home/aitor# sudo mkdir -p systems/earth/countries
root@aitor: /home/aitor# ls systems/
earth last list luggage student1.txt student2.txt student.txt
root@aitor: /home/aitor# ls systems/earth/
countries
root@aitor: /home/aitor# rn exercises/A
Africa/ Asia/
root@aitor: /home/aitor# rn exercises/A
Africa/ Asia/
root@aitor: /home/aitor# mv exercises/Africa/ exercises/Afri
root@aitor: /home/aitor# ls exercises/
Afri Asia one pro-c systems tv.doc two
root@aitor: /home/aitor# mv exercises/Afri/Egypt/ exercises/Asia/Laos/
radio.txt song.doc
root@aitor: /home/aitor# mv exercises/Afri/Egypt/song.doc exercises/Asia/Laos/bb
.doc
root@aitor: /home/aitor# ls exercises/Asia/Laos/
aa.doc bb.doc others
root@aitor: /home/aitor#
```

33. Copy the files whose name contains the letter “u” from “systems” to “exercises”

Aitor Peláez Tomás

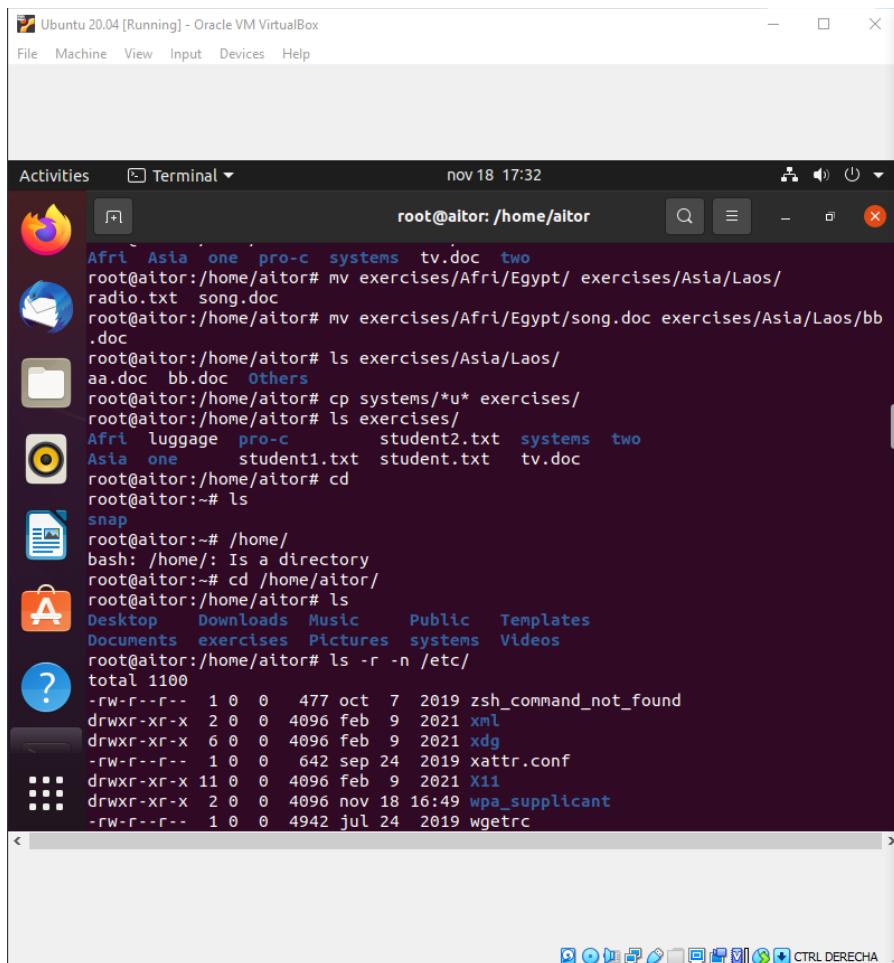


The screenshot shows a terminal window titled "root@aitor: /home/aitor" running on an Ubuntu 20.04 system. The terminal displays the following command-line session:

```
root@aitor: /home/aitor# sudo mkdir systems/earth/countries
mkdir: cannot create directory 'systems/earth/countries': No such file or directory
root@aitor:/home/aitor# sudo mkdir -p systems/earth/countries
root@aitor:/home/aitor# ls systems/
earth last list luggage student1.txt student2.txt student.txt
root@aitor:/home/aitor# ls systems/earth/
countries
root@aitor:/home/aitor# rn exercises/A
Africa/ Asia/
root@aitor:/home/aitor# rn exercises/A
Africa/ Asia/
root@aitor:/home/aitor# mv exercises/Africa/ exercises/Afri
root@aitor:/home/aitor# ls exercises/
Afri Asia one pro-c systems tv.doc two
root@aitor:/home/aitor# mv exercises/Afri/Egypt/ exercises/Asia/Laos/
radio.txt song.doc
root@aitor:/home/aitor# mv exercises/Afri/Egypt/song.doc exercises/Asia/Laos/bb
.doc
root@aitor:/home/aitor# ls exercises/Asia/Laos/
aa.doc bb.doc Others
root@aitor:/home/aitor# cp systems/*u* exercises/
root@aitor:/home/aitor# ls exercises/
Afri luggage pro-c student2.txt systems two
Asia one student1.txt student.txt tv.doc
root@aitor:/home/aitor#
```

34. Print the content of the /etc directory, including subdirectories, in reverse alphabetical order

Aitor Peláez Tomás



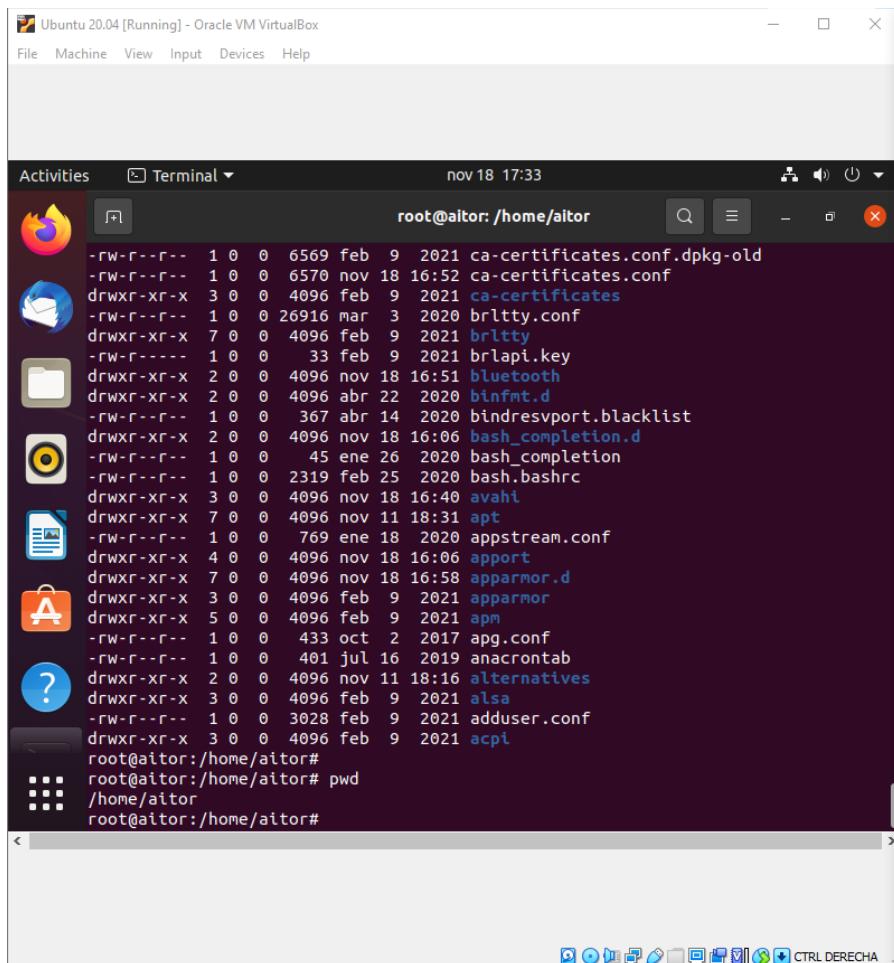
The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "root@aitor: /home/aitor". The terminal content shows a series of commands being run by the root user:

```
Afri Asia one pro-c systems tv.doc two
root@aitor:/home/aitor# mv exercises/Afri/Egypt/ exercises/Asia/Laos/
radio.txt song.doc
root@aitor:/home/aitor# mv exercises/Afri/Egypt/song.doc exercises/Asia/Laos/bb
.doc
root@aitor:/home/aitor# ls exercises/Asia/Laos/
aa.doc bb.doc Others
root@aitor:/home/aitor# cp systems/*u* exercises/
root@aitor:/home/aitor# ls exercises/
Afri luggage pro-c student2.txt systems two
Asia one student1.txt student.txt tv.doc
root@aitor:/home/aitor# cd
root@aitor:~# ls
snap
root@aitor:~# /home/
bash: /home/: Is a directory
root@aitor:~# cd /home/aitor/
root@aitor:/home/aitor# ls
Desktop Downloads Music Public Templates
Documents exercises Pictures systems Videos
root@aitor:/home/aitor# ls -r -n /etc/
total 1100
-rw-r--r-- 1 0 0 477 oct 7 2019 zsh_command_not_found
drwxr-xr-x 2 0 0 4096 feb 9 2021 xml
drwxr-xr-x 6 0 0 4096 feb 9 2021 xdg
-rw-r--r-- 1 0 0 642 sep 24 2019 xattr.conf
drwxr-xr-x 11 0 0 4096 feb 9 2021 X11
drwxr-xr-x 2 0 0 4096 nov 18 16:49 wpa_supplicant
-rw-r--r-- 1 0 0 4942 jul 24 2019 wgetrc
```

35. How can you print the name of the current directory?

PWD

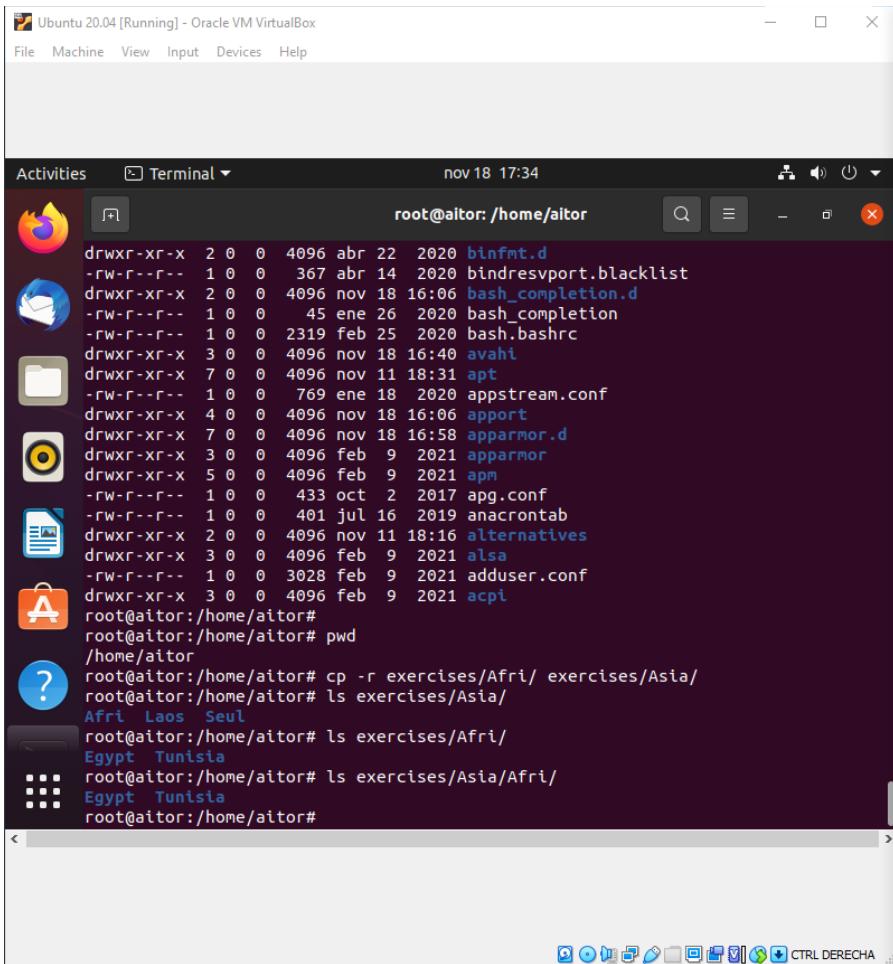
Aitor Peláez Tomás



```
root@aitor: /home/aitor
-rw-r--r-- 1 0 0 6569 feb 9 2021 ca-certificates.conf.dpkg-old
-rw-r--r-- 1 0 0 6570 nov 18 16:52 ca-certificates.conf
drwxr-xr-x 3 0 0 4096 feb 9 2021 ca-certificates
-rw-r--r-- 1 0 0 26916 mar 3 2020 brltty.conf
drwxr-xr-x 7 0 0 4096 feb 9 2021 brltty
-rw-r----- 1 0 0 33 feb 9 2021 brlapi.key
drwxr-xr-x 2 0 0 4096 nov 18 16:51 bluetooth
drwxr-xr-x 2 0 0 4096 abr 22 2020 blnfmt.d
-rw-r--r-- 1 0 0 367 abr 14 2020 bindresvport.blacklist
drwxr-xr-x 2 0 0 4096 nov 18 16:06 bash_completion.d
-rw-r--r-- 1 0 0 45 ene 26 2020 bash_completion
-rw-r--r-- 1 0 0 2319 feb 25 2020 bash.bashrc
drwxr-xr-x 3 0 0 4096 nov 18 16:40 avahi
drwxr-xr-x 7 0 0 4096 nov 11 18:31 apt
-rw-r--r-- 1 0 0 769 ene 18 2020 appstream.conf
drwxr-xr-x 4 0 0 4096 nov 18 16:06 apport
drwxr-xr-x 7 0 0 4096 nov 18 16:58 apparmor.d
drwxr-xr-x 3 0 0 4096 feb 9 2021 apparmor
drwxr-xr-x 5 0 0 4096 feb 9 2021 apm
-rw-r--r-- 1 0 0 433 oct 2 2017 apg.conf
-rw-r--r-- 1 0 0 401 jul 16 2019 anacrontab
drwxr-xr-x 2 0 0 4096 nov 11 18:16 alternatives
drwxr-xr-x 3 0 0 4096 feb 9 2021 alsa
-rw-r--r-- 1 0 0 3028 feb 9 2021 adduser.conf
drwxr-xr-x 3 0 0 4096 feb 9 2021 acpi
root@aitor:/home/aitor#
root@aitor:/home/aitor# pwd
/home/aitor
root@aitor:/home/aitor#
```

36. Copy the folder “Afri” including files and subdirectories to “Asia”

Aitor Peláez Tomás

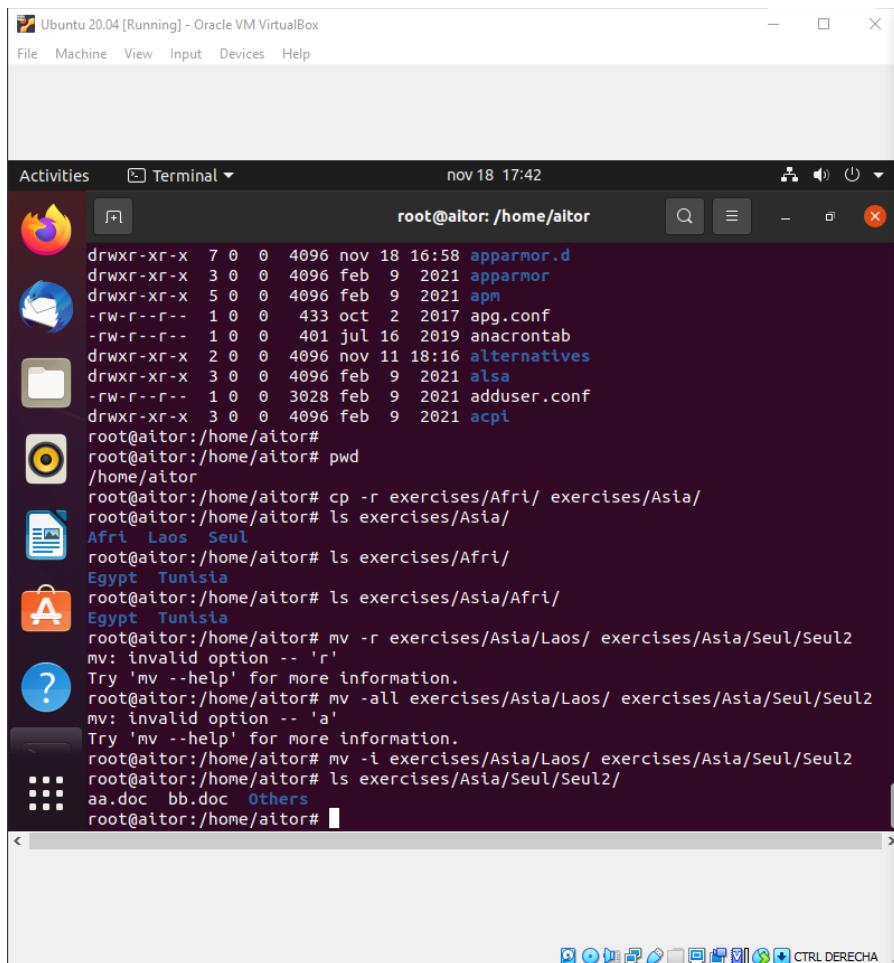


The screenshot shows a terminal window titled "Terminal" running on an Ubuntu 20.04 system. The terminal is displaying a list of files in the directory "/home/aitor". The output includes file names like binfmt.d, bash_completion.d, bash_completion, bash.bashrc, avahi, apt, appstream.conf, apport, apparmor.d, apparmor, apm, apg.conf, anacrontab, alternatives, alsa, adduser.conf, acpi, and a few files starting with Afri, Laos, Seul, Egypt, and Tunisia. Below the file list, the user runs several commands: cp -r exercises/Afri/ exercises/Asia/, ls exercises/Asia/, ls exercises/Afri/, and ls exercises/Asia/Afri/. The terminal window has a dark theme and includes a dock at the bottom with various icons.

```
root@aitor:/home/aitor# drwxr-xr-x 2 0 0 4096 abr 22 2020 binfmt.d
root@aitor:/home/aitor# -rw-r--r-- 1 0 0 367 abr 14 2020 bindresvport.blacklist
root@aitor:/home/aitor# drwxr-xr-x 2 0 0 4096 nov 18 16:06 bash_completion.d
root@aitor:/home/aitor# -rw-r--r-- 1 0 0 45 ene 26 2020 bash_completion
root@aitor:/home/aitor# -rw-r--r-- 1 0 0 2319 feb 25 2020 bash.bashrc
root@aitor:/home/aitor# drwxr-xr-x 3 0 0 4096 nov 18 16:40 avahi
root@aitor:/home/aitor# drwxr-xr-x 7 0 0 4096 nov 11 18:31 apt
root@aitor:/home/aitor# -rw-r--r-- 1 0 0 769 ene 18 2020 appstream.conf
root@aitor:/home/aitor# drwxr-xr-x 4 0 0 4096 nov 18 16:06 apport
root@aitor:/home/aitor# drwxr-xr-x 7 0 0 4096 nov 18 16:58 apparmor.d
root@aitor:/home/aitor# drwxr-xr-x 3 0 0 4096 feb 9 2021 apparmor
root@aitor:/home/aitor# drwxr-xr-x 5 0 0 4096 feb 9 2021 apm
root@aitor:/home/aitor# -rw-r--r-- 1 0 0 433 oct 2 2017 apg.conf
root@aitor:/home/aitor# -rw-r--r-- 1 0 0 401 jul 16 2019 anacrontab
root@aitor:/home/aitor# drwxr-xr-x 2 0 0 4096 nov 11 18:16 alternatives
root@aitor:/home/aitor# drwxr-xr-x 3 0 0 4096 feb 9 2021 alsa
root@aitor:/home/aitor# -rw-r--r-- 1 0 0 3028 feb 9 2021 adduser.conf
root@aitor:/home/aitor# drwxr-xr-x 3 0 0 4096 feb 9 2021 acpi
root@aitor:/home/aitor#
root@aitor:/home/aitor# pwd
/home/aitor
root@aitor:/home/aitor# root@aitor:/home/aitor# cp -r exercises/Afri/ exercises/Asia/
root@aitor:/home/aitor# ls exercises/Asia/
Afri Laos Seul
root@aitor:/home/aitor# root@aitor:/home/aitor# ls exercises/Afri/
Egypt Tunisia
root@aitor:/home/aitor# ls exercises/Asia/Afri/
Egypt Tunisia
root@aitor:/home/aitor#
```

37. Move all the files and subdirectories of “Laos” to “Seul” and rename it to “Seul2”

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The screenshot shows a Linux desktop environment running inside Oracle VM VirtualBox. The terminal window is open and displays the following command-line session:

```
root@aitor:~# cp -r exercises/Afri/ exercises/Asia/
root@aitor:~# ls exercises/Asia/
Afri Laos Seul
root@aitor:~# ls exercises/Afri/
Egypt Tunisia
root@aitor:~# ls exercises/Asia/Afri/
Egypt Tunisia
root@aitor:~# mv -r exercises/Asia/Laos/ exercises/Asia/Seul/Seul2
mv: invalid option -- 'r'
Try 'mv --help' for more information.
root@aitor:~# mv -all exercises/Asia/Laos/ exercises/Asia/Seul/Seul2
mv: invalid option -- 'a'
Try 'mv --help' for more information.
root@aitor:~# mv -i exercises/Asia/Laos/ exercises/Asia/Seul/Seul2
root@aitor:~# ls exercises/Asia/Seul/
aa.doc bb.doc Others
root@aitor:~#
```