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Semana 01.b: Utilização do Linux

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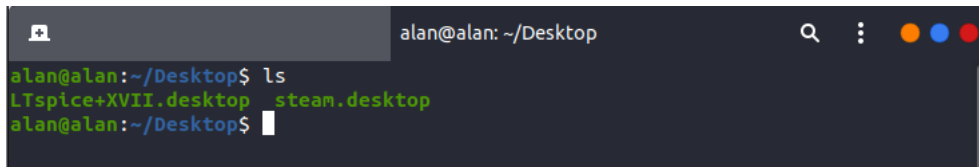
20 de Maio de 2022

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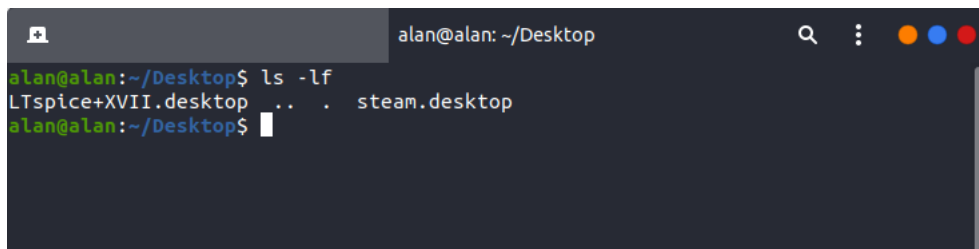
1 Conceitos Básicos

Figura 1: Comando: ls



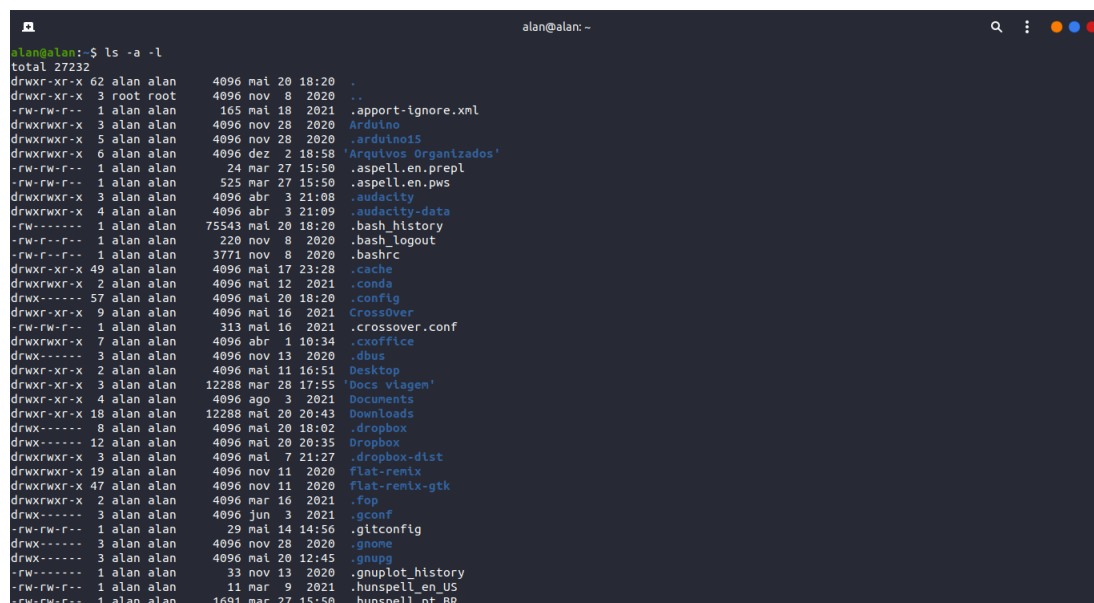
```
alan@alan: ~/Desktop
alan@alan:~/Desktop$ ls
LTspice+XVII.desktop  steam.desktop
alan@alan:~/Desktop$
```

Figura 2: Comando: ls -lf



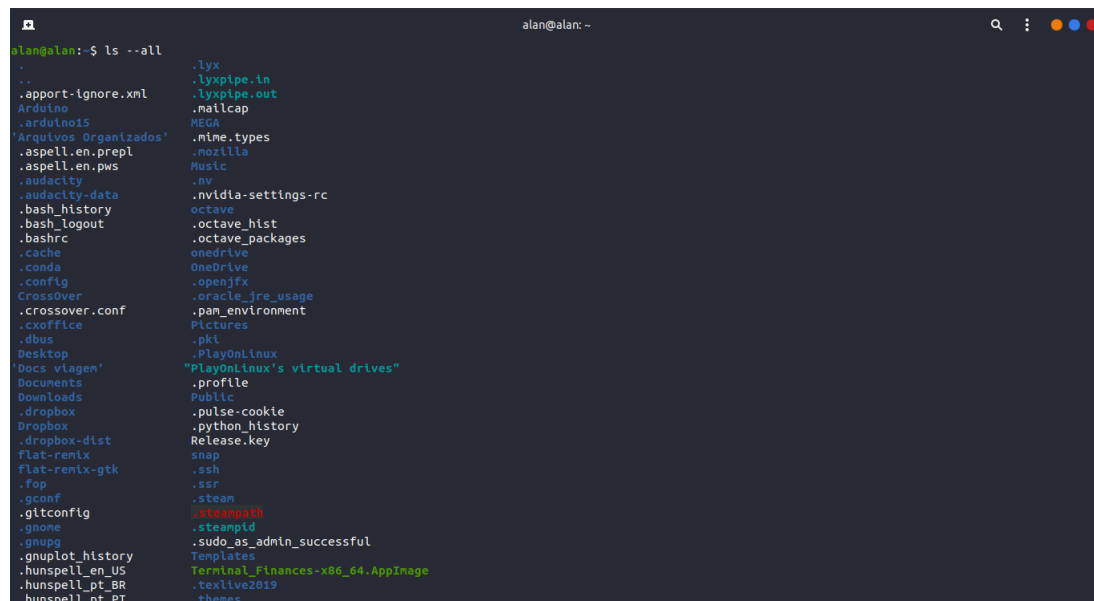
```
alan@alan: ~/Desktop
alan@alan:~/Desktop$ ls -lf
LTspice+XVII.desktop  ..  .  steam.desktop
alan@alan:~/Desktop$
```

Figura 3: Comando: ls -a -l



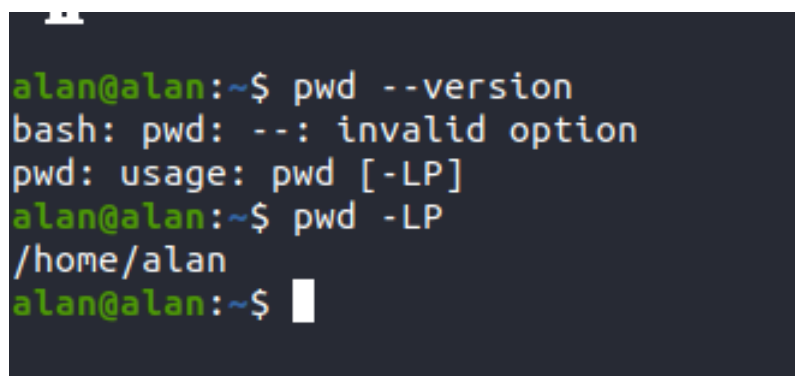
```
alan@alan: ~$ ls -a -l
total 27232
drwxr-xr-x 62 alan alan 4096 mai 20 18:20 .
drwxr-xr-x 3 root root 4096 nov 8 2020 ..
-rw-rw-r-- 1 alan alan 165 mai 18 2021 .apport-ignore.xml
drwxrwxr-x 3 alan alan 4096 nov 28 2020 Arduino
drwxrwxr-x 5 alan alan 4096 nov 28 2020 arduino15
drwxrwxr-x 6 alan alan 4096 dez 2 18:58 'Arquivos Organizados'
-rw-rw-r-- 1 alan alan 24 mar 27 15:50 .aspell.en.prepl
-rw-rw-r-- 1 alan alan 525 mar 27 15:50 .aspell.en.pws
drwxrwxr-x 3 alan alan 4096 abr 3 21:08 .audacity
drwxrwxr-x 4 alan alan 4096 abr 3 21:09 .audacity-data
-rw-r--r-- 1 alan alan 75543 mai 20 18:20 .bash_history
-rw-rw-r-- 1 alan alan 220 nov 8 2020 .bash_logout
-rw-rw-r-- 1 alan alan 3771 nov 8 2020 .bashrc
drwxr-xr-x 49 alan alan 4096 mai 17 23:28 .cache
drwxrwxr-x 2 alan alan 4096 mai 12 2021 .conda
drwxr-xr-x 57 alan alan 4096 mai 20 18:20 .config
drwxr-xr-x 9 alan alan 4096 mai 16 2021 CrossOver
-rw-rw-r-- 1 alan alan 313 mai 16 2021 .crossover.conf
drwxrwxr-x 7 alan alan 4096 abr 1 10:34 .crossover
drwxr-xr-x 3 alan alan 4096 nov 13 2020 .dbus
drwxr-xr-x 2 alan alan 4096 mai 11 16:51 Desktop
drwxr-xr-x 3 alan alan 12288 mar 28 17:55 'Docs viagem'
drwxr-xr-x 4 alan alan 4096 ago 3 2021 Documents
drwxr-xr-x 18 alan alan 12288 mai 20 20:43 Downloads
drwxr-xr-x 8 alan alan 4096 mai 20 18:02 .dropbox
drwxr-xr-x 12 alan alan 4096 mai 20 20:35 Dropbox
drwxrwxr-x 3 alan alan 4096 mai 7 21:27 .dropbox-dist
drwxrwxr-x 19 alan alan 4096 nov 11 2020 flat-remix
drwxrwxr-x 47 alan alan 4096 nov 11 2020 flat-remix-gtk
drwxrwxr-x 2 alan alan 4096 mar 16 2021 .fop
drwxr-xr-x 3 alan alan 4096 jun 3 2021 .gconf
-rw-rw-r-- 1 alan alan 29 mai 14 14:56 .gitconfig
drwxr-xr-x 3 alan alan 4096 nov 28 2020 .gnome
drwxr-xr-x 3 alan alan 4096 mai 20 12:45 .gnupg
-rw-rw-r-- 1 alan alan 33 nov 13 2020 .gnuplot_history
-rw-rw-r-- 1 alan alan 11 mar 9 2021 .hunspell_en_US
-rw-rw-r-- 1 alan alan 1691 mar 27 15:50 .hunspell_pt_BR
```

Figura 4: Comando: ls --all



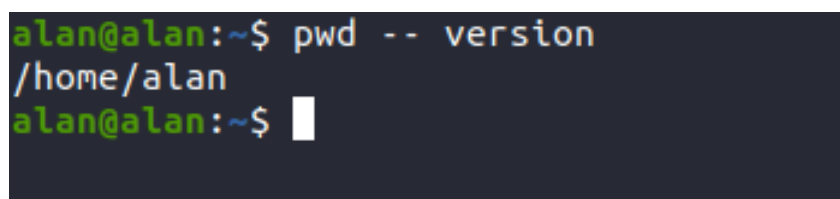
```
alan@alan:~$ ls --all
.
.
.apport-ignore.xml
.arduino15
.Arquivos Organizados
.aspell.en.prepl
.aspell.en.pws
.audacity
.audacity-data
.bash_history
.bash_logout
.bashrc
.cache
.conda
.config
.Crossover
.crossover.conf
.cxoffice
.dbus
Desktop
'Docs viagen'
Documents
Downloads
.dropbox
.dropbox-dist
flat-remix
flat-remix-gtk
.fop
.gconf
.gltconfig
.gnome
.gnupg
.gnuplot_history
.hunspell_en_US
.hunspell_pt_BR
.hunspell_pt_PT
.lyx
.lyxpipe.in
.lyxpipe.out
.mailcap
MEGA
.mine.types
.mozilla
Music
.nv
.nvidia-settings-rc
octave
.octave_hist
.octave_packages
onedrive
OneDrive
.openjfx
.oracle_jre_usage
.pam_environment
Pictures
.pkg
.PlayOnLinux
'PlayOnLinux's virtual drives'
.profile
Public
.pulse-cookie
.python_history
Release.key
snap
.ssh
.ssr
.steam
.steampath
.steampid
.sudo_ac_admin_successful
Templates
Terminal_Finances-x86_64.AppImage
.texlive2019
.themes
```

Figura 5: Comando: pwd -LP



```
alan@alan:~$ pwd --version
bash: pwd: --: invalid option
pwd: usage: pwd [-LP]
alan@alan:~$ pwd -LP
/home/alan
alan@alan:~$
```

Figura 6: Comando: pwd -- version



```
alan@alan:~$ pwd -- version
/home/alan
alan@alan:~$
```

Figura 7: Comando: cd --help



```
alan@alan:~$ cd --help
cd: cd [-L][-P [-e]] [-@] [dir]
  Change the shell working directory.

  Change the current directory to DIR.  The default DIR is the value of the
  HOME shell variable.

  The variable CDPATH defines the search path for the directory containing
  DIR.  Alternative directory names in CDPATH are separated by a colon (:).
  A null directory name is the same as the current directory.  If DIR begins
  with a slash (/), then CDPATH is not used.

  If the directory is not found, and the shell option 'cdable_vars' is set,
  the word is assumed to be a variable name.  If that variable has a value,
  its value is used for DIR.

Options:
-L      force symbolic links to be followed: resolve symbolic
        links in DIR after processing instances of '..'
-P      use the physical directory structure without following
        symbolic links: resolve symbolic links in DIR before
        processing instances of '..'
-e      if the -P option is supplied, and the current working
        directory cannot be determined successfully, exit with
        a non-zero status
-@      on systems that support it, present a file with extended
        attributes as a directory containing the file attributes

The default is to follow symbolic links, as if '-L' were specified.
'..' is processed by removing the immediately previous pathname component
back to a slash or the beginning of DIR.

Exit Status:
Returns 0 if the directory is changed, and if $PWD is set successfully when
-P is used; non-zero otherwise.
alan@alan:~$
```

Figura 8: Comando: grep -- -a /etc/hosts dentro do diretório /usr/local



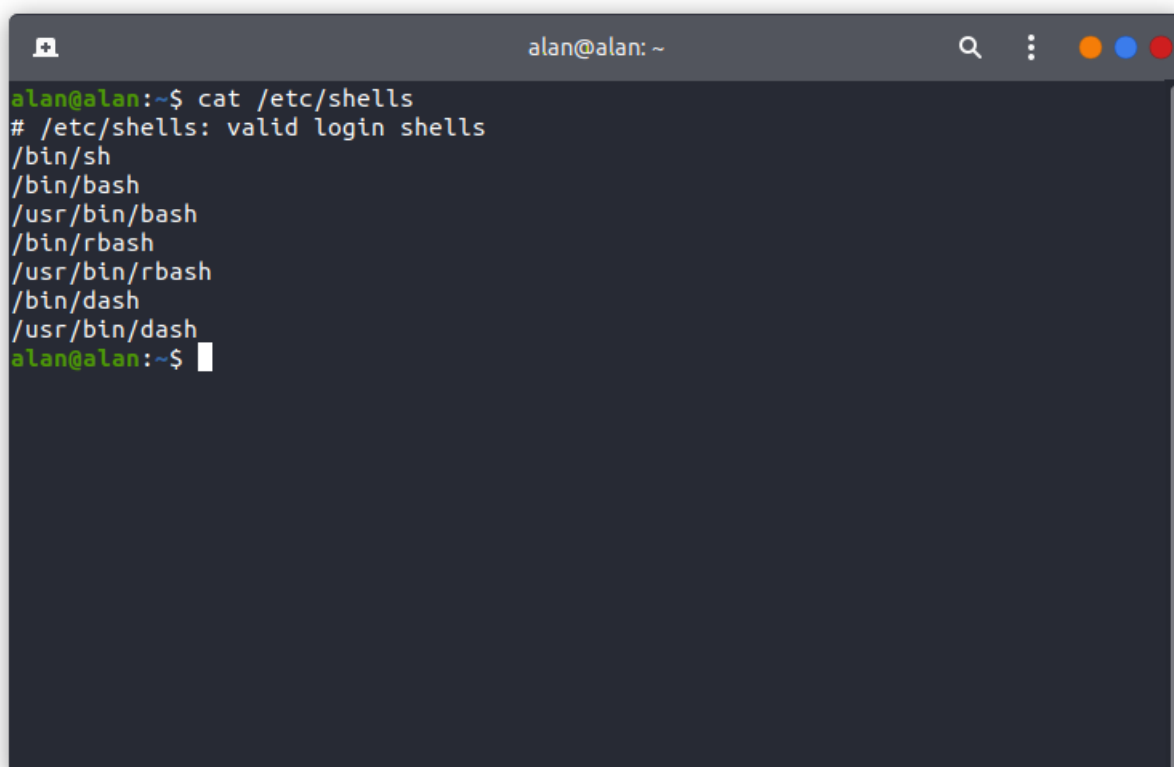
```
alan@alan: /usr/local$ grep -- -a /etc/hosts
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
alan@alan: /usr/local$
```

Figura 9: Comando: echo \$SHELL

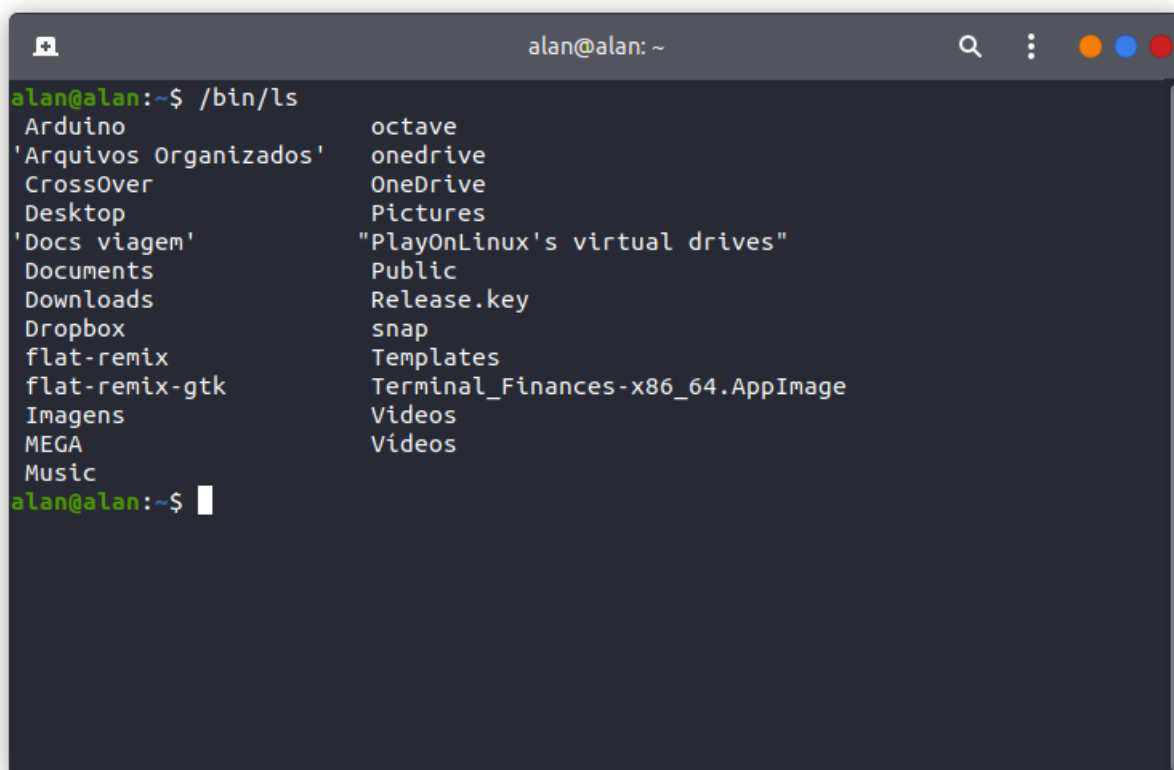


```
alan@alan: ~  
alan@alan:~$ echo $SHELL  
/bin/bash  
alan@alan:~$
```

Figura 10: Comando: cat /etc/shells

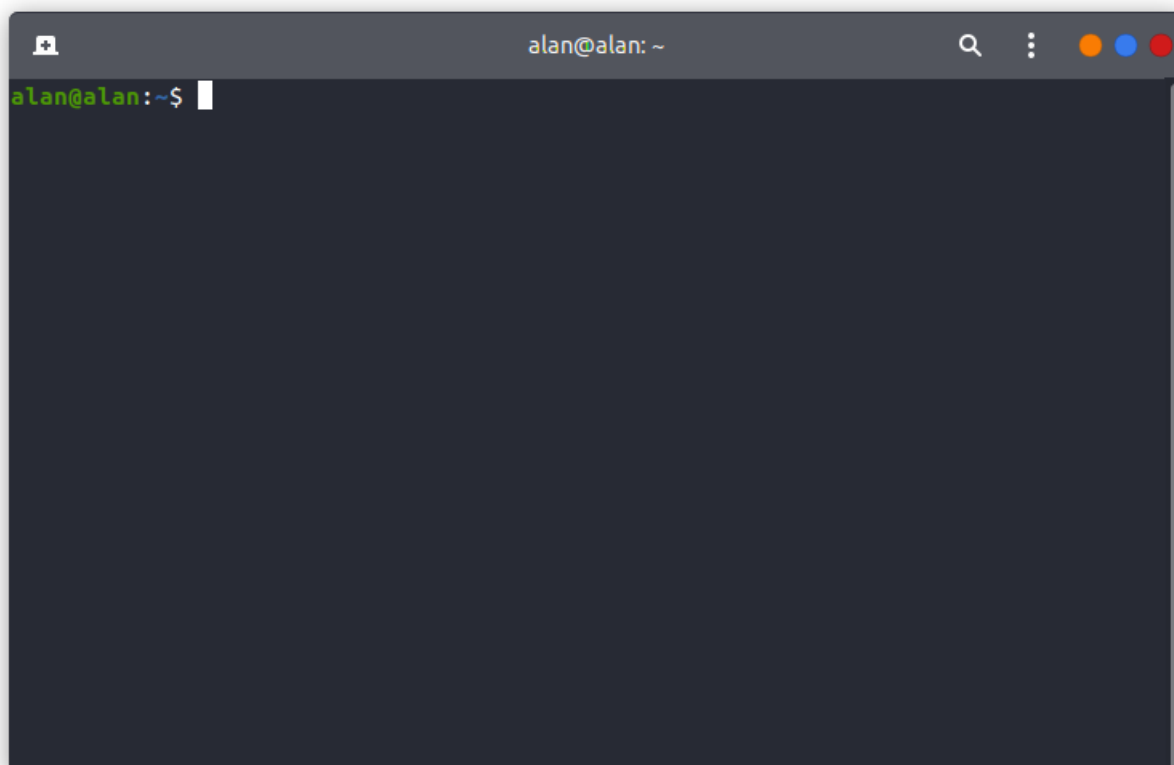


```
alan@alan: ~  
alan@alan:~$ cat /etc/shells  
# /etc/shells: valid login shells  
/bin/sh  
/bin/bash  
/usr/bin/bash  
/bin/rbash  
/usr/bin/rbash  
/bin/dash  
/usr/bin/dash  
alan@alan:~$
```

Figura 11: Comando: `/bin/ls`

A terminal window titled 'alan@alan: ~' showing the output of the command `/bin/ls`. The output lists various files and directories in two columns. The first column contains: Arduino, 'Arquivos Organizados', CrossOver, Desktop, 'Docs viagem', Documents, Downloads, Dropbox, flat-remix, flat-remix-gtk, Imagens, MEGA, and Music. The second column contains: octave, onedrive, OneDrive, Pictures, "PlayOnLinux's virtual drives", Public, Release.key, snap, Templates, Terminal_Finances-x86_64.AppImage, Videos, and Vídeos. The prompt `alan@alan:~$` is visible at the bottom left.

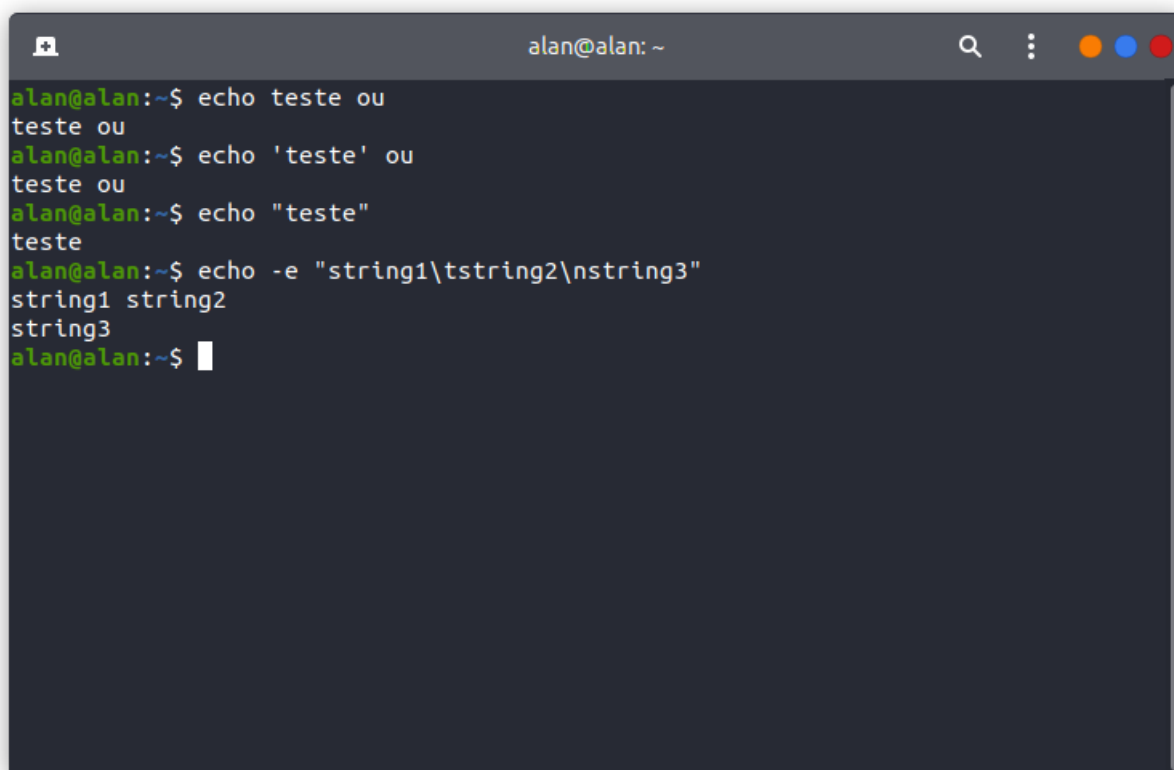
```
alan@alan:~$ /bin/ls
Arduino          octave
'Arquivos Organizados' onedrive
CrossOver        OneDrive
Desktop          Pictures
'Docs viagem'    "PlayOnLinux's virtual drives"
Documents         Public
Downloads        Release.key
Dropbox          snap
flat-remix       Templates
flat-remix-gtk  Terminal_Finances-x86_64.AppImage
Imagens          Videos
MEGA             Vídeos
Music
alan@alan:~$
```

Figura 12: Comando: `clear`

A terminal window titled 'alan@alan: ~' showing the result of the `clear` command. The terminal is now empty, with only the prompt `alan@alan:~$` visible at the top left.

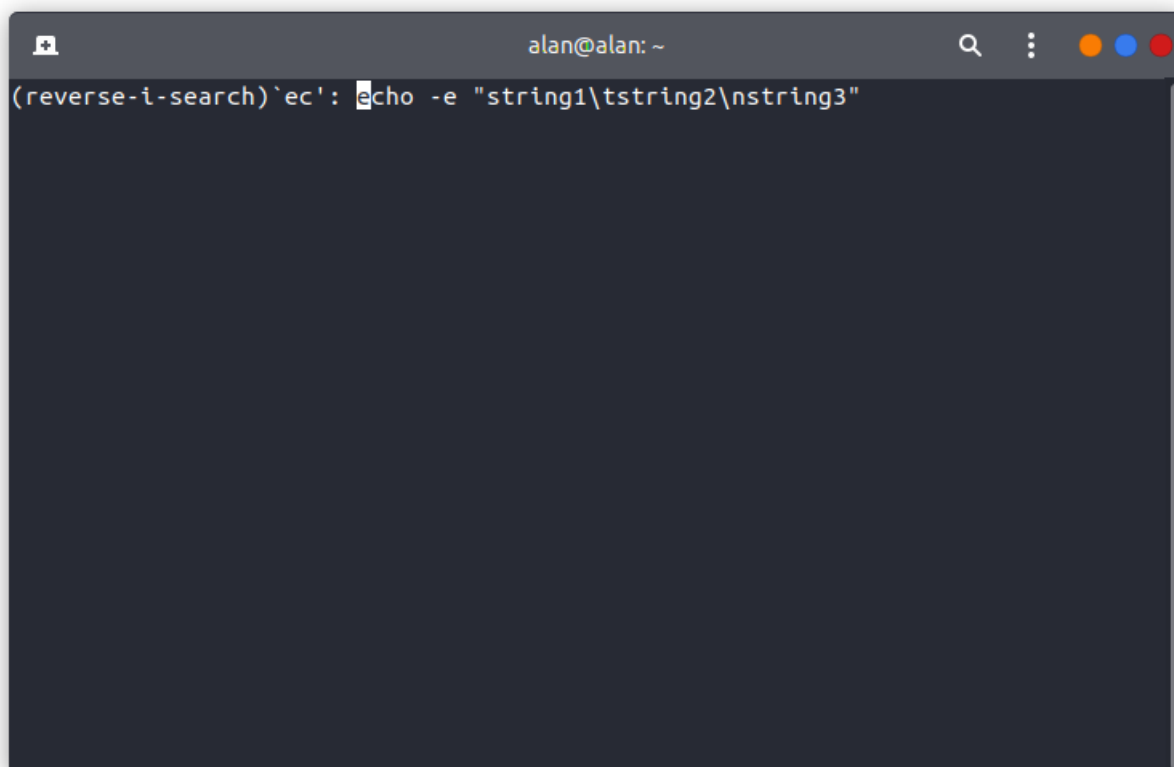
```
alan@alan:~$
```

Figura 13: Comando: echo <texto>

A terminal window titled 'alan@alan: ~' with standard macOS window controls. It shows a series of commands and their outputs. The first command 'echo teste ou' outputs 'teste ou'. The second 'echo 'teste' ou' outputs 'teste ou'. The third 'echo "teste"' outputs 'teste'. The fourth 'echo -e "string1\tstring2\nstring3"' outputs 'string1 string2' followed by 'string3' on a new line. The prompt 'alan@alan:~\$' is followed by a cursor.

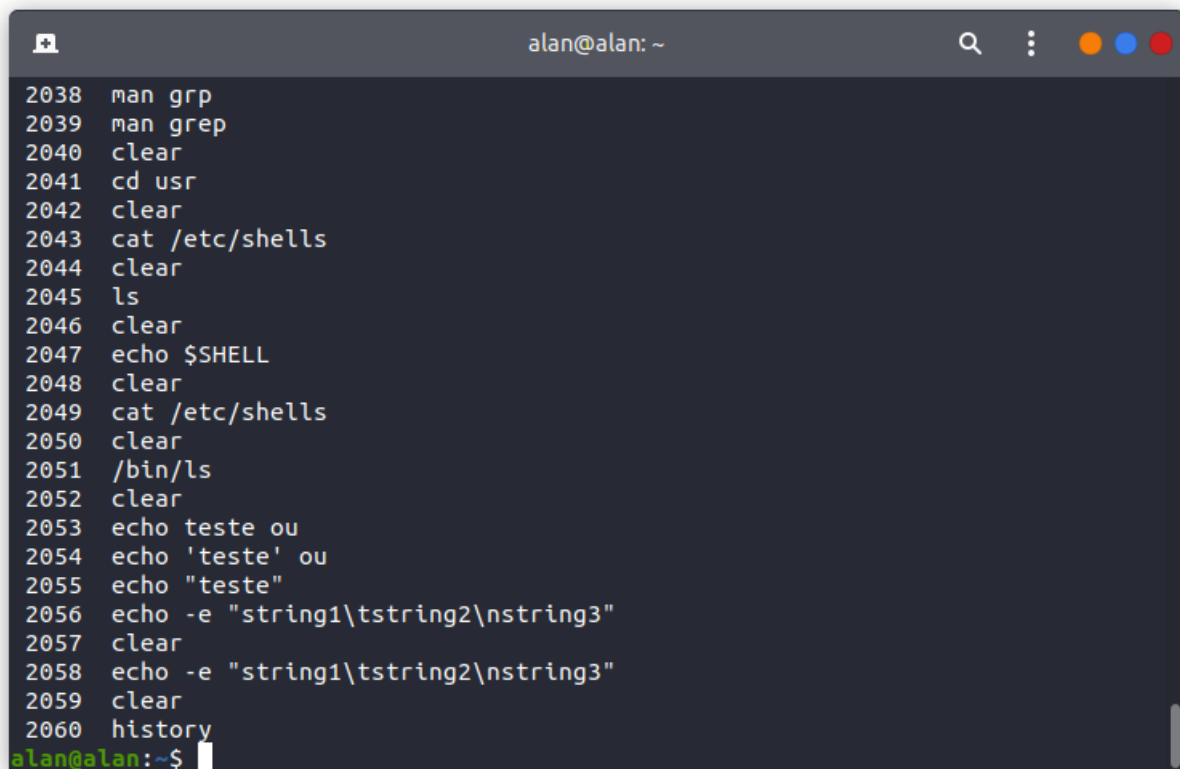
```
alan@alan:~$ echo teste ou
teste ou
alan@alan:~$ echo 'teste' ou
teste ou
alan@alan:~$ echo "teste"
teste
alan@alan:~$ echo -e "string1\tstring2\nstring3"
string1 string2
string3
alan@alan:~$
```

Figura 14: Comando: <CTRL+R> -> Histórico de comandos

The same terminal window as in Figure 13, but now in reverse-i-search mode. The prompt is '(reverse-i-search)`ec':'. The user has entered 'echo -e "string1\tstring2\nstring3"' and the terminal shows this command as the first result in the history search.

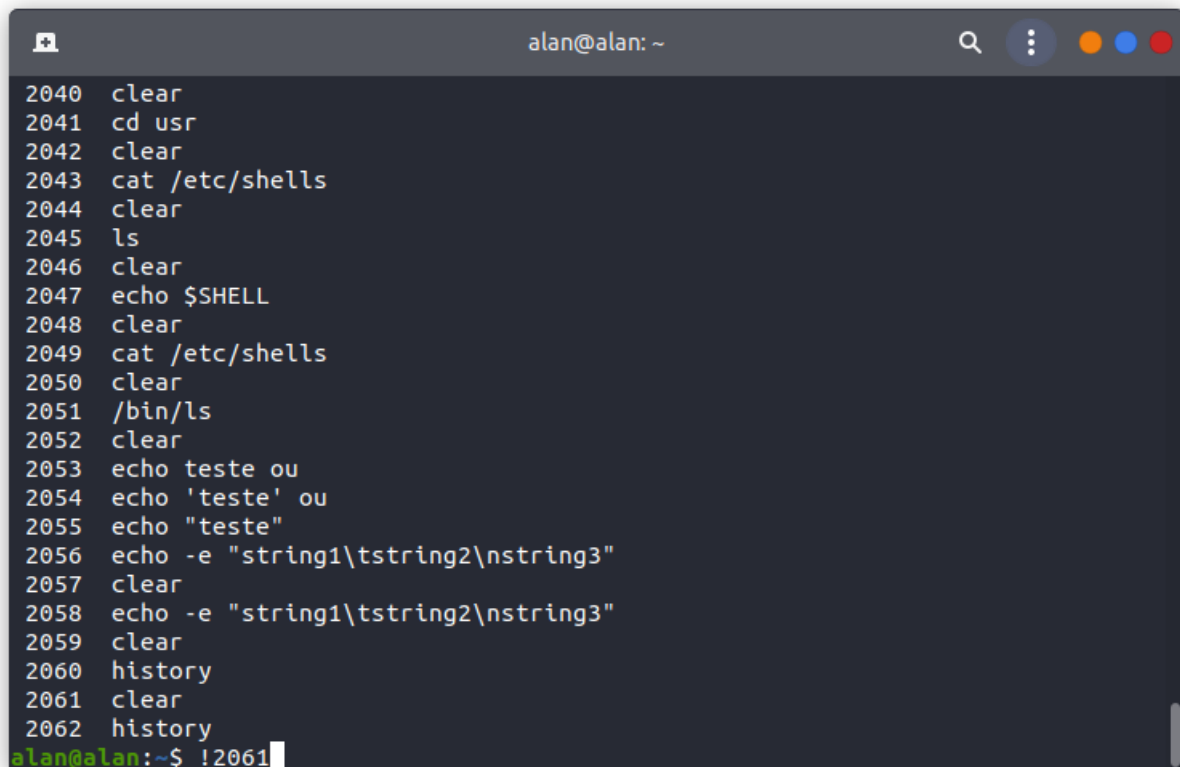
```
(reverse-i-search)`ec': echo -e "string1\tstring2\nstring3"
```


Figura 15: Comando: history



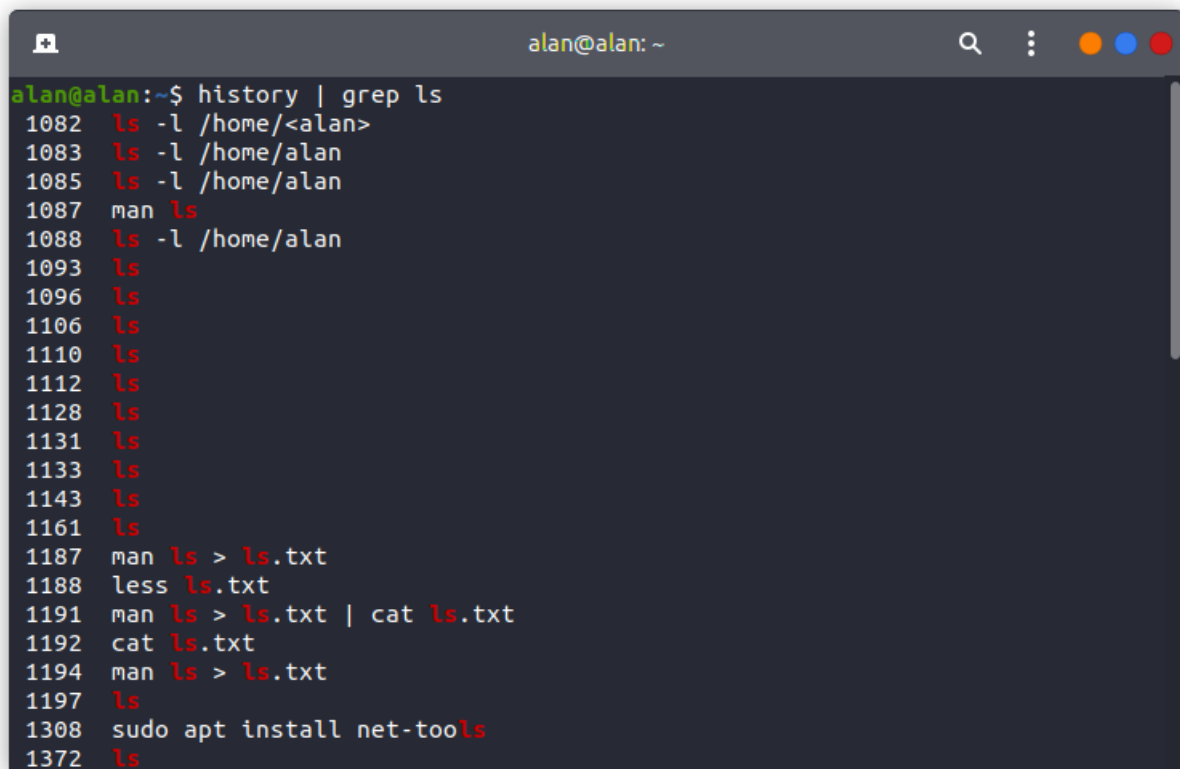
```
alan@alan: ~  
2038 man grp  
2039 man grep  
2040 clear  
2041 cd usr  
2042 clear  
2043 cat /etc/shells  
2044 clear  
2045 ls  
2046 clear  
2047 echo $SHELL  
2048 clear  
2049 cat /etc/shells  
2050 clear  
2051 /bin/ls  
2052 clear  
2053 echo teste ou  
2054 echo 'teste' ou  
2055 echo "teste"  
2056 echo -e "string1\tstring2\nstring3"  
2057 clear  
2058 echo -e "string1\tstring2\nstring3"  
2059 clear  
2060 history  
alan@alan:~$
```

Figura 16: Executar um determinado comando do history <!Número_do_comando>



```
alan@alan: ~  
2040 clear  
2041 cd usr  
2042 clear  
2043 cat /etc/shells  
2044 clear  
2045 ls  
2046 clear  
2047 echo $SHELL  
2048 clear  
2049 cat /etc/shells  
2050 clear  
2051 /bin/ls  
2052 clear  
2053 echo teste ou  
2054 echo 'teste' ou  
2055 echo "teste"  
2056 echo -e "string1\tstring2\nstring3"  
2057 clear  
2058 echo -e "string1\tstring2\nstring3"  
2059 clear  
2060 history  
2061 clear  
2062 history  
alan@alan:~$ !2061
```

Figura 17: Comando: history | grep ls



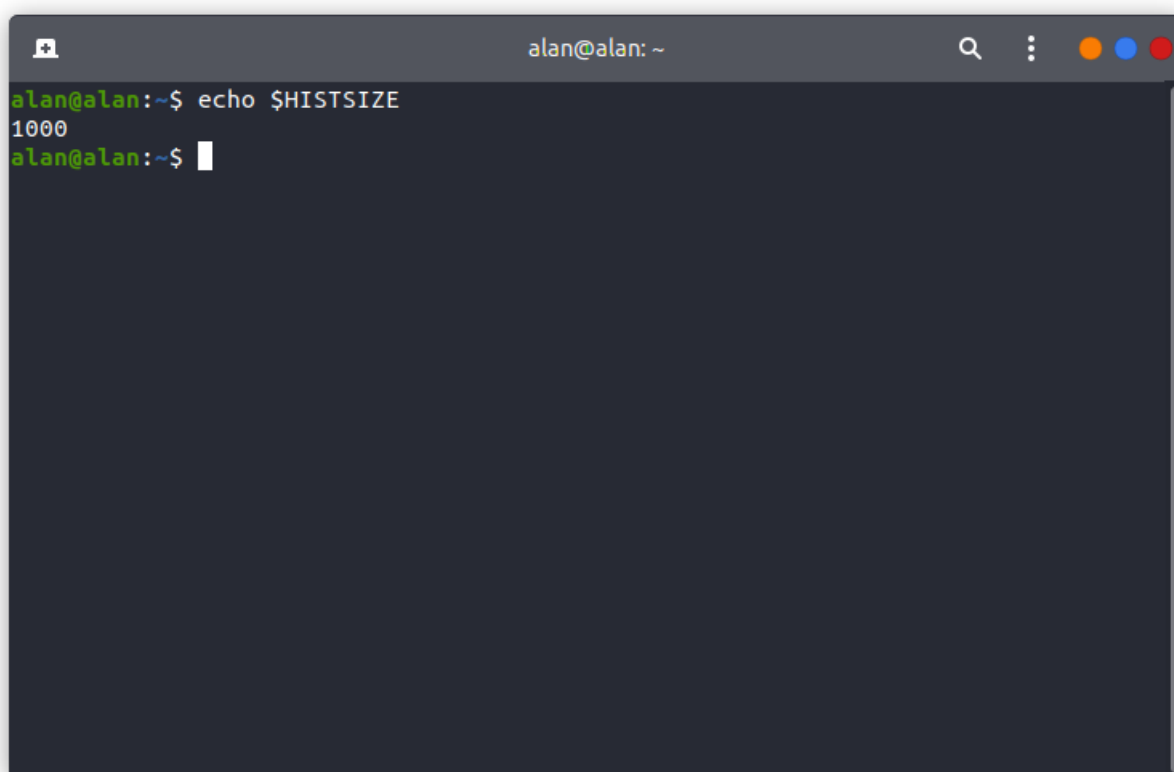
```
alan@alan: ~  
alan@alan:~$ history | grep ls  
1082  ls -l /home/<alan>  
1083  ls -l /home/alan  
1085  ls -l /home/alan  
1087  man ls  
1088  ls -l /home/alan  
1093  ls  
1096  ls  
1106  ls  
1110  ls  
1112  ls  
1128  ls  
1131  ls  
1133  ls  
1143  ls  
1161  ls  
1187  man ls > ls.txt  
1188  less ls.txt  
1191  man ls > ls.txt | cat ls.txt  
1192  cat ls.txt  
1194  man ls > ls.txt  
1197  ls  
1308  sudo apt install net-tools  
1372  ls
```

Figura 18: Comando: history -c



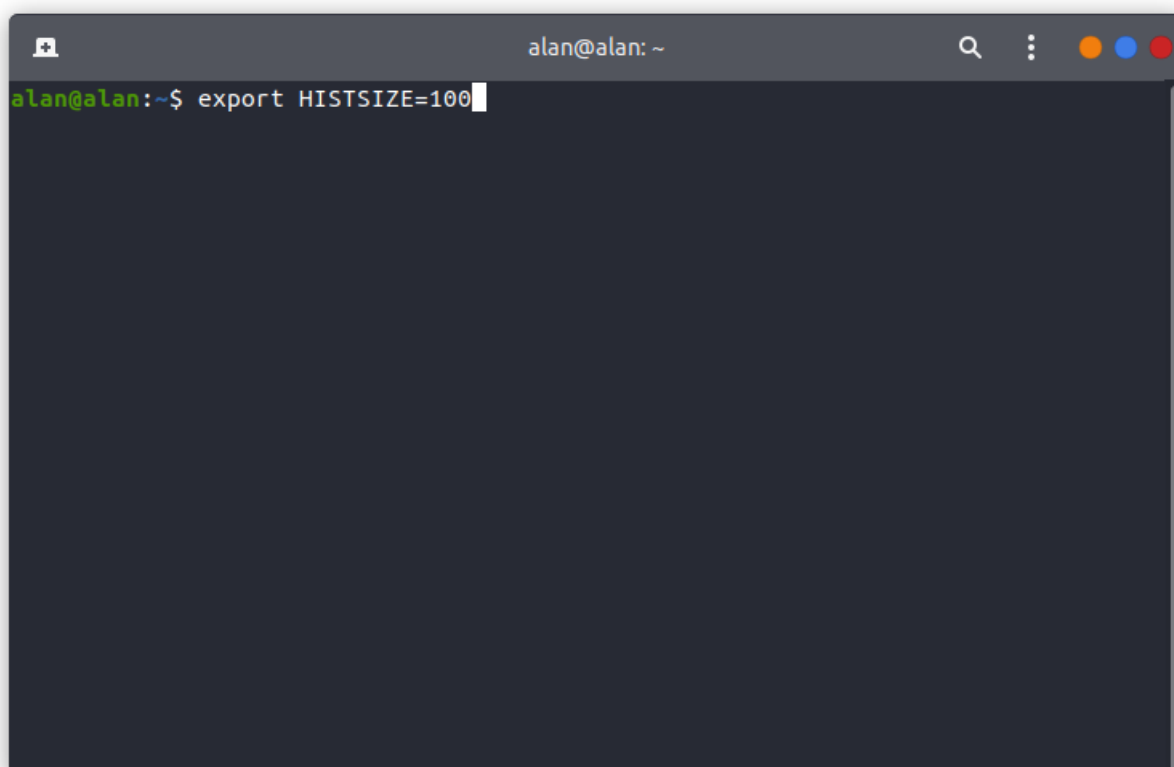
```
alan@alan: ~  
alan@alan:~$ history -c  
alan@alan:~$
```

Figura 19: Comando: echo \$HISTSIZE



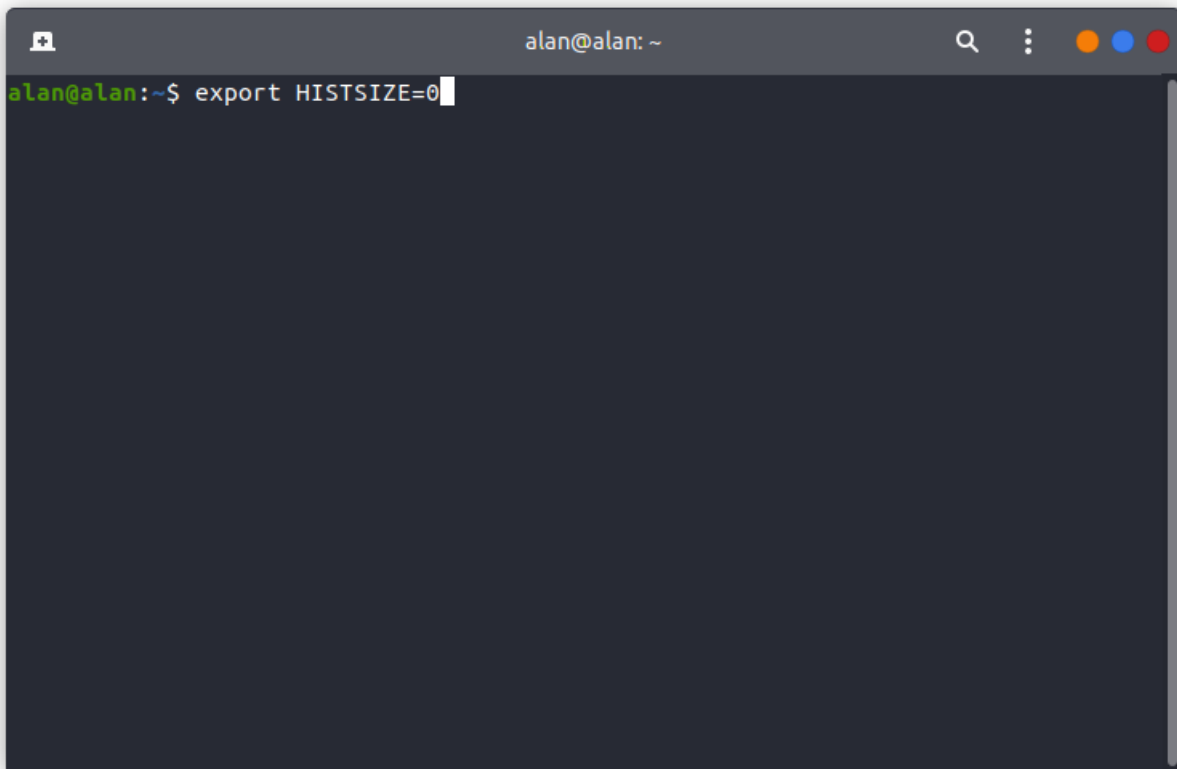
```
alan@alan: ~  
alan@alan:~$ echo $HISTSIZE  
1000  
alan@alan:~$
```

Figura 20: Comando: export HISTSIZE=100



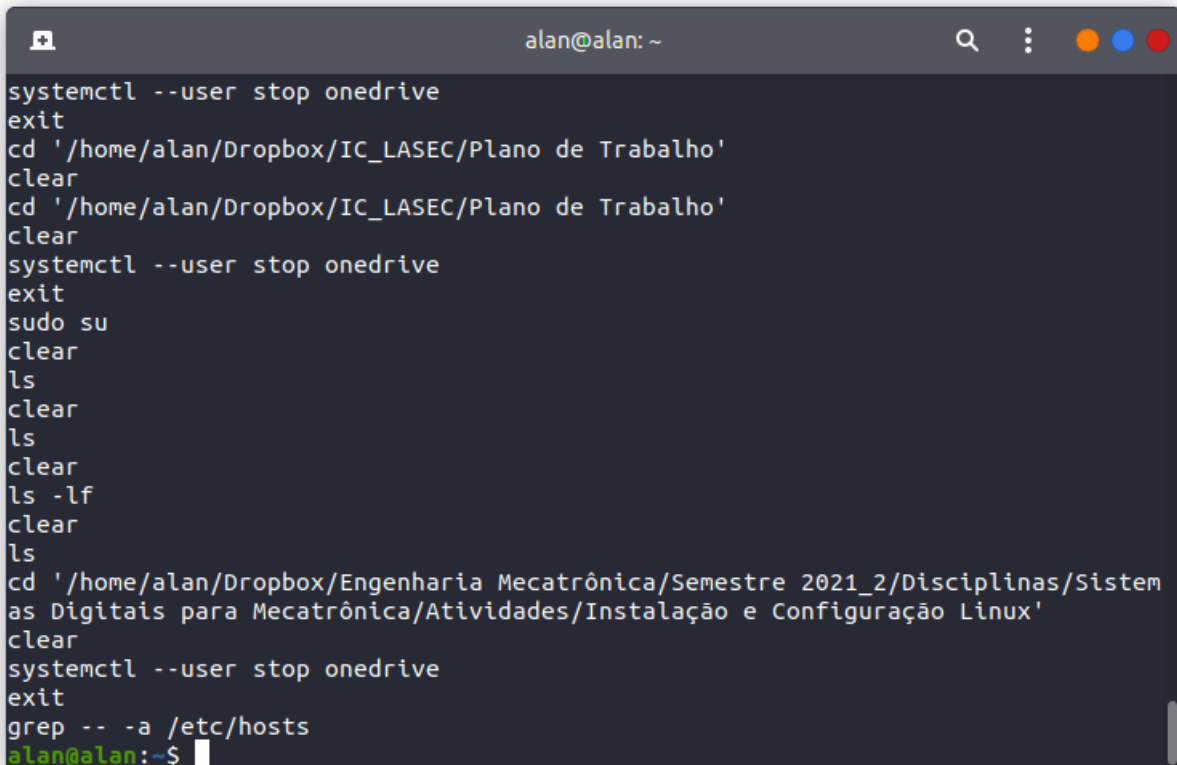
```
alan@alan: ~  
alan@alan:~$ export HISTSIZE=100
```

Figura 21: Comando: export HISTSIZE=0

A terminal window titled 'alan@alan: ~' with search and window control icons. The command 'export HISTSIZE=0' has been entered and is highlighted with a green cursor.

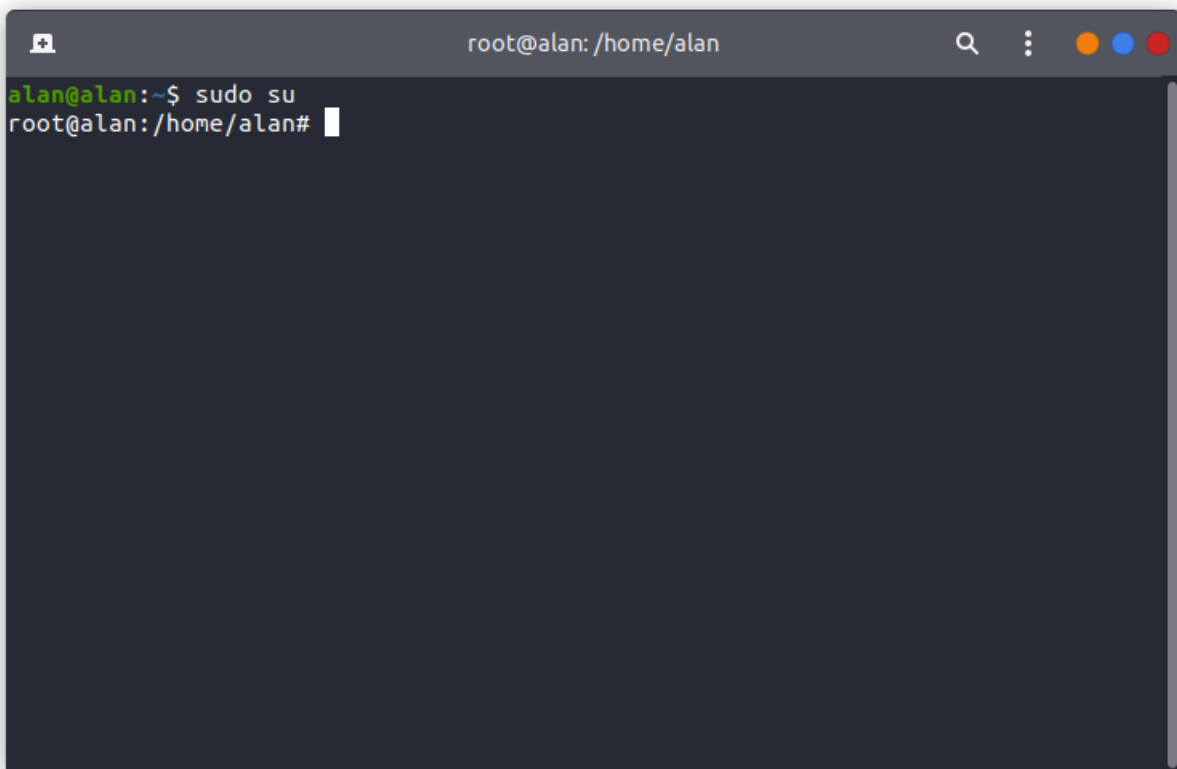
```
alan@alan:~$ export HISTSIZE=0
```

Figura 22: Comando: cat ~/.bash_history

A terminal window titled 'alan@alan: ~' with search and window control icons. The command 'cat ~/.bash_history' has been executed, displaying a list of previously entered commands.

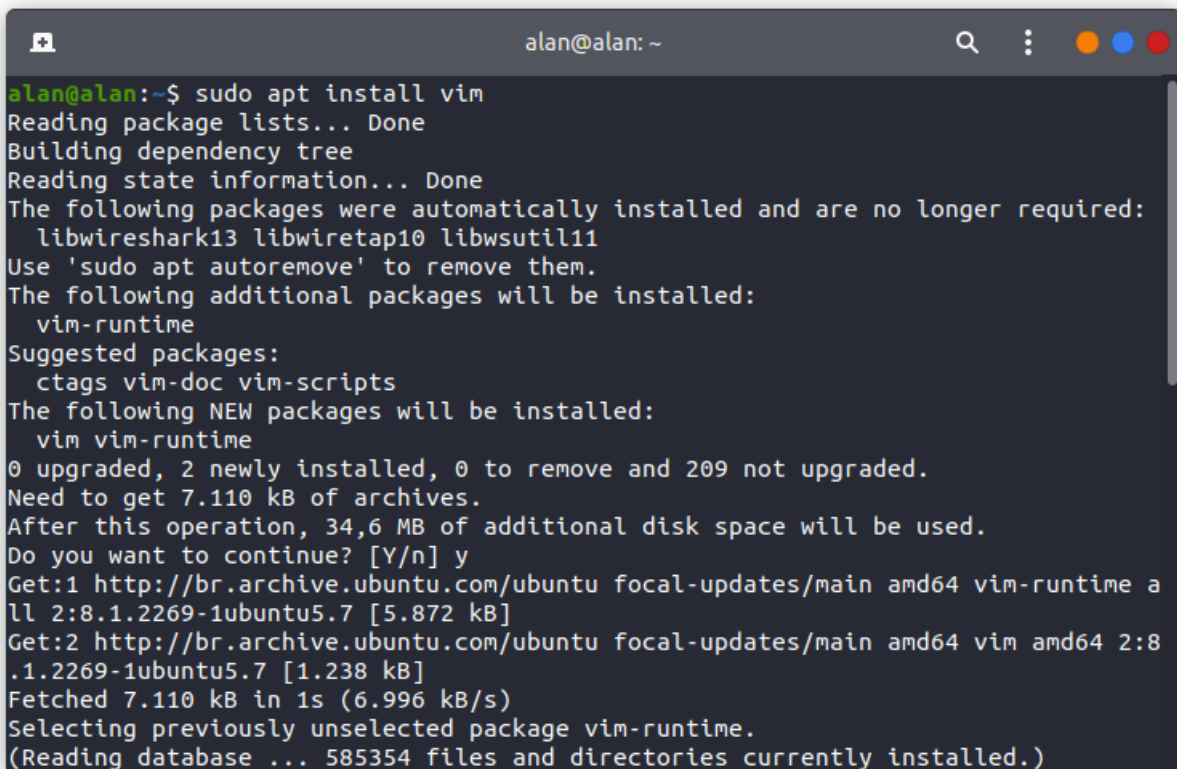
```
systemctl --user stop onedrive
exit
cd '/home/alan/Dropbox/IC_LASEC/Plano de Trabalho'
clear
cd '/home/alan/Dropbox/IC_LASEC/Plano de Trabalho'
clear
systemctl --user stop onedrive
exit
sudo su
clear
ls
clear
ls
clear
ls -lf
clear
ls
cd '/home/alan/Dropbox/Engenharia Mecatrônica/Semestre 2021_2/ Disciplinas/Sistemas Digitais para Mecatrônica/Atividades/Instalação e Configuração Linux'
clear
systemctl --user stop onedrive
exit
grep -- -a /etc/hosts
alan@alan:~$
```

Figura 23: Comando no Ubuntu: sudo su



```
root@alan: /home/alan  
alan@alan:~$ sudo su  
root@alan:/home/alan#
```

Figura 24: Comando no Ubuntu: sudo apt install vim



```
alan@alan: ~  
alan@alan:~$ sudo apt install vim  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following packages were automatically installed and are no longer required:  
  libwireshark13 libwiretap10 libwsutil11  
Use 'sudo apt autoremove' to remove them.  
The following additional packages will be installed:  
  vim-runtime  
Suggested packages:  
  ctags vim-doc vim-scripts  
The following NEW packages will be installed:  
  vim vim-runtime  
0 upgraded, 2 newly installed, 0 to remove and 209 not upgraded.  
Need to get 7.110 kB of archives.  
After this operation, 34,6 MB of additional disk space will be used.  
Do you want to continue? [Y/n] y  
Get:1 http://br.archive.ubuntu.com/ubuntu focal-updates/main amd64 vim-runtime a  
ll 2:8.1.2269-1ubuntu5.7 [5.872 kB]  
Get:2 http://br.archive.ubuntu.com/ubuntu focal-updates/main amd64 vim amd64 2:8  
.1.2269-1ubuntu5.7 [1.238 kB]  
Fetched 7.110 kB in 1s (6.996 kB/s)  
Selecting previously unselected package vim-runtime.  
(Reading database ... 585354 files and directories currently installed.)
```

2 Ligando e Desligando o Linux

Figura 25: Comando: logout

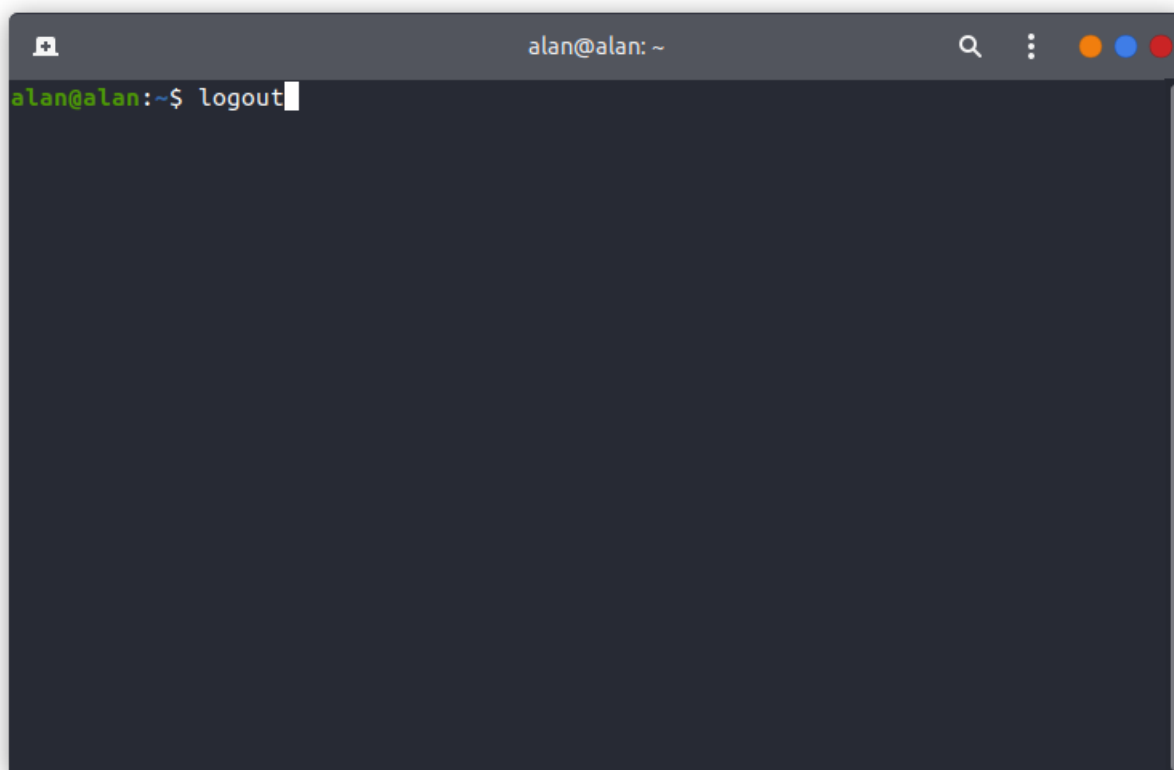


Figura 26: Comando: exit



Figura 27: Comando: shutdown -h now

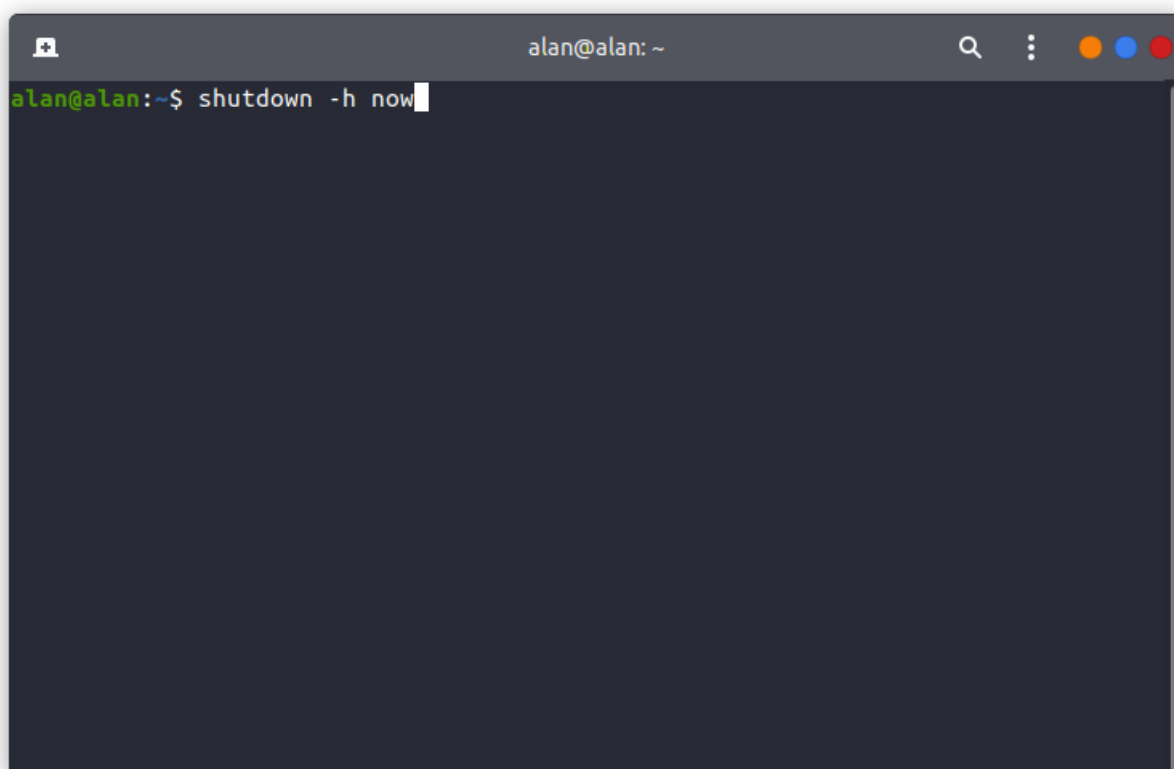


Figura 28: Comando: sudo poweroff

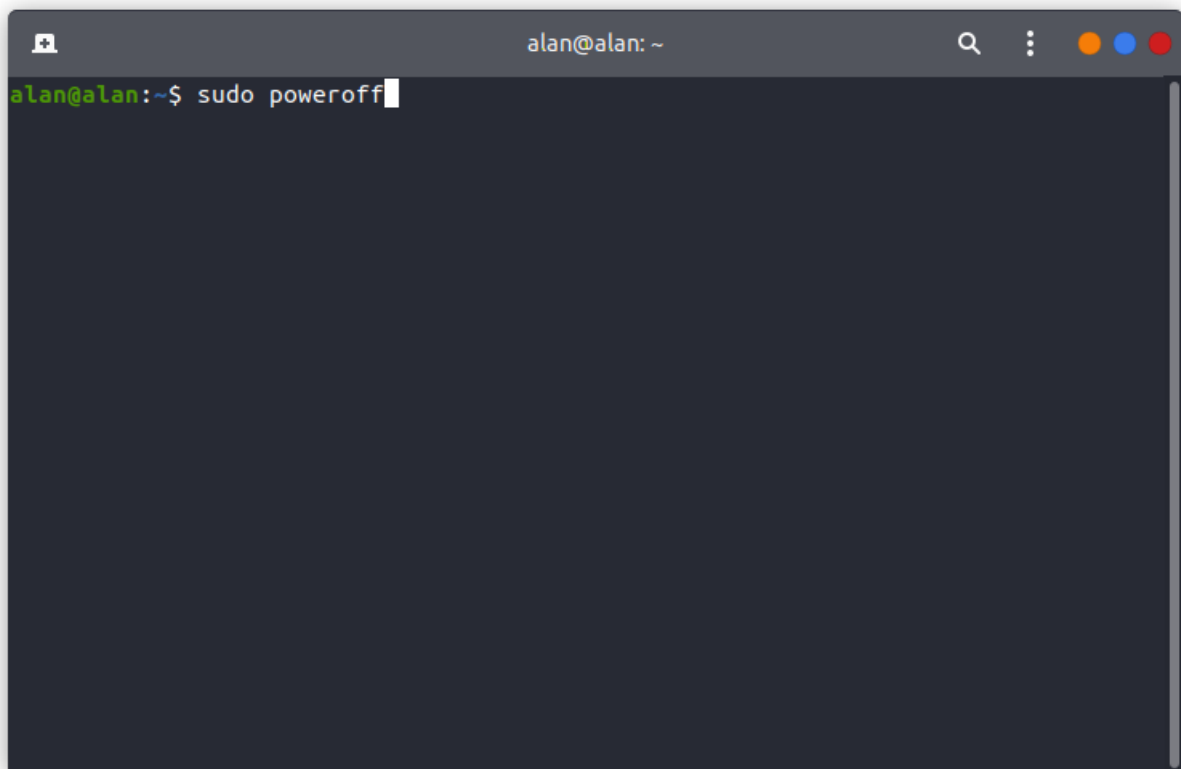


Figura 29: Comando: sudo shutdown -h +3

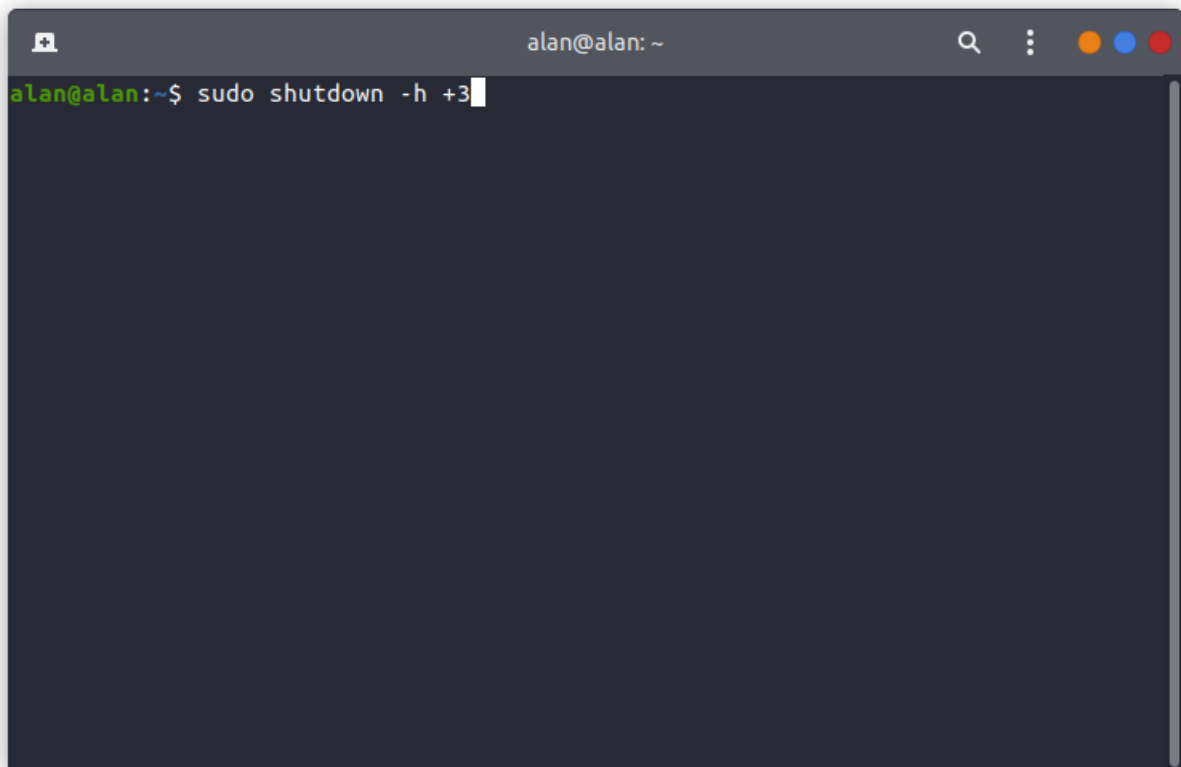


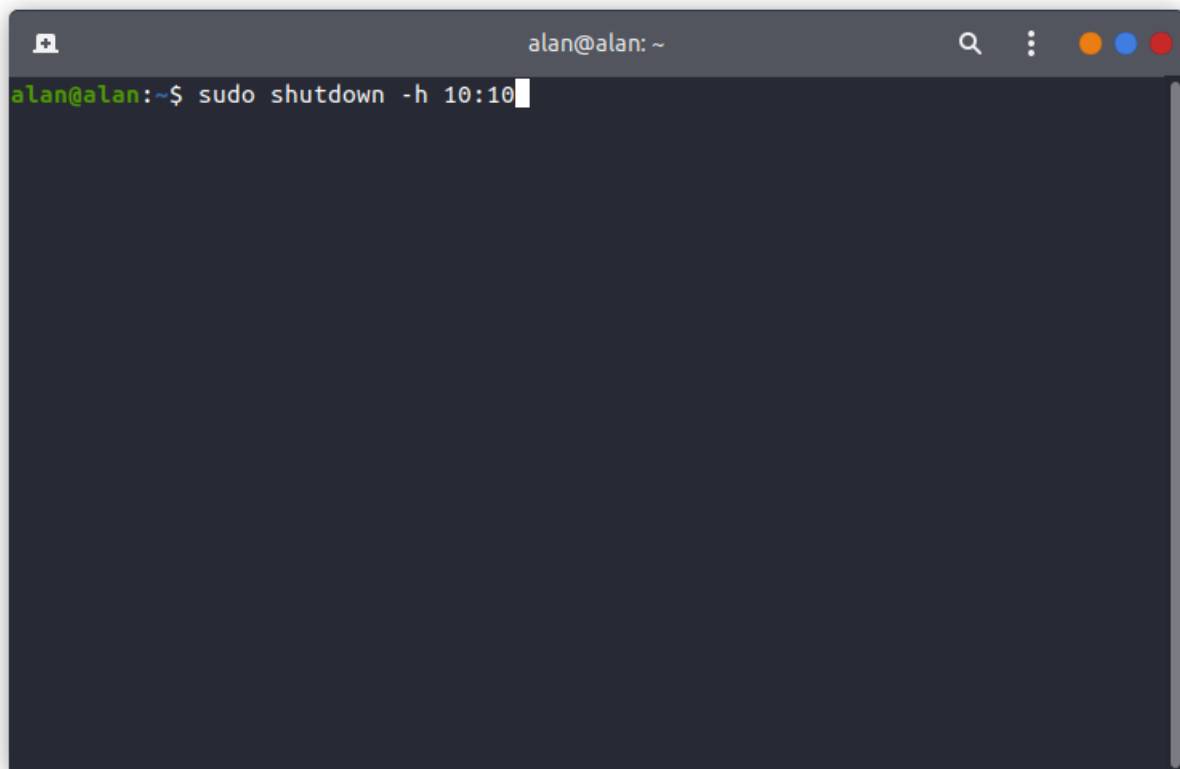
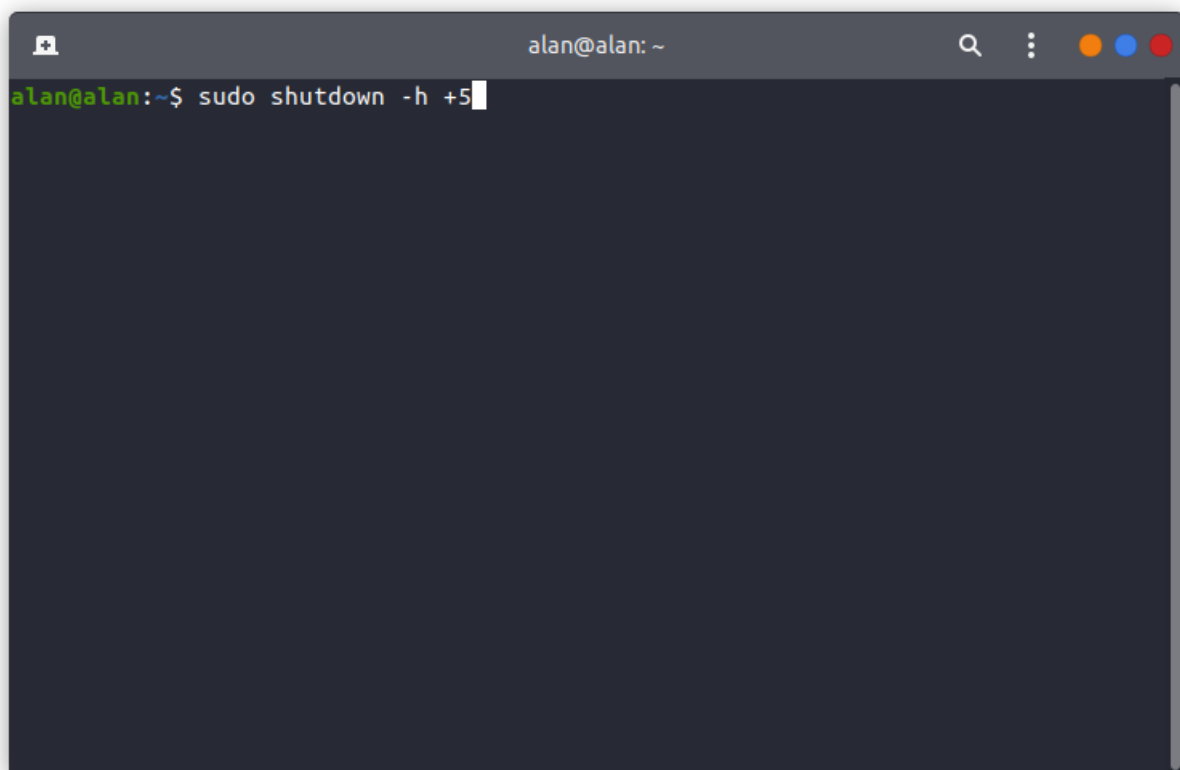
Figura 30: Comando: `sudo shutdown -h 10:10`Figura 31: Comando: `sudo shutdown -h +5`

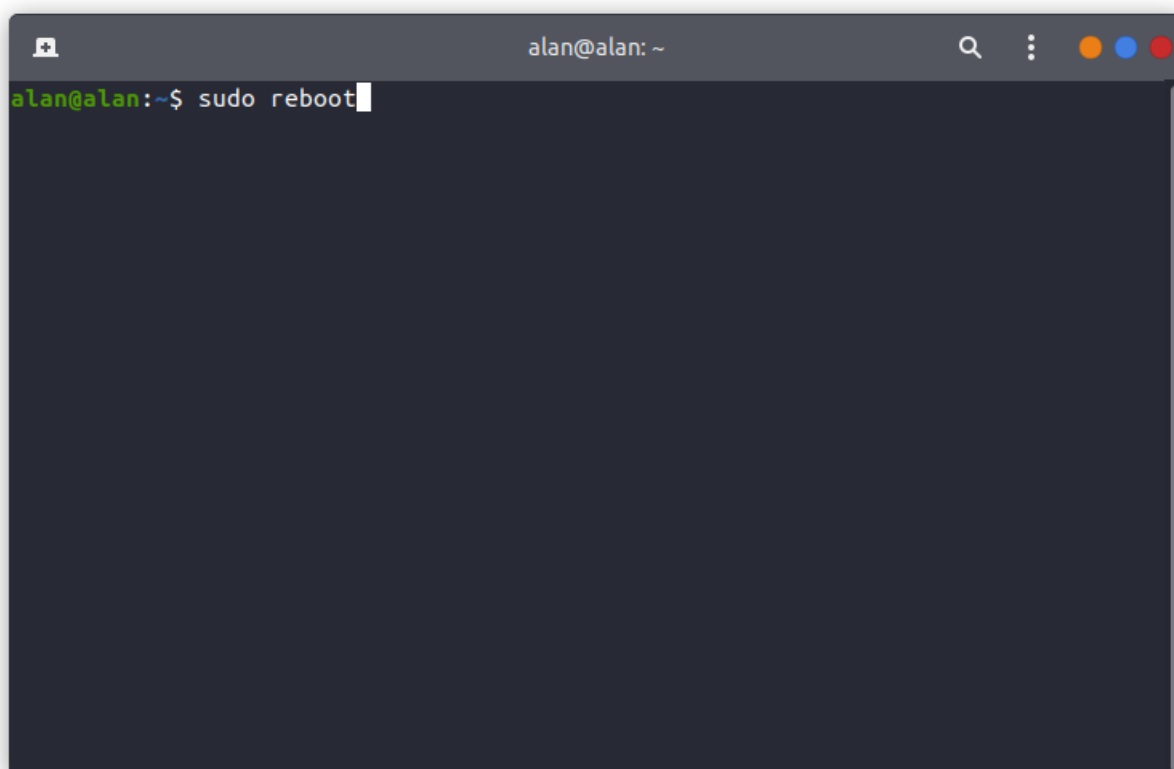
Figura 32: Comando: `sudo shutdown -c`Figura 33: Comando: `sudo reboot`

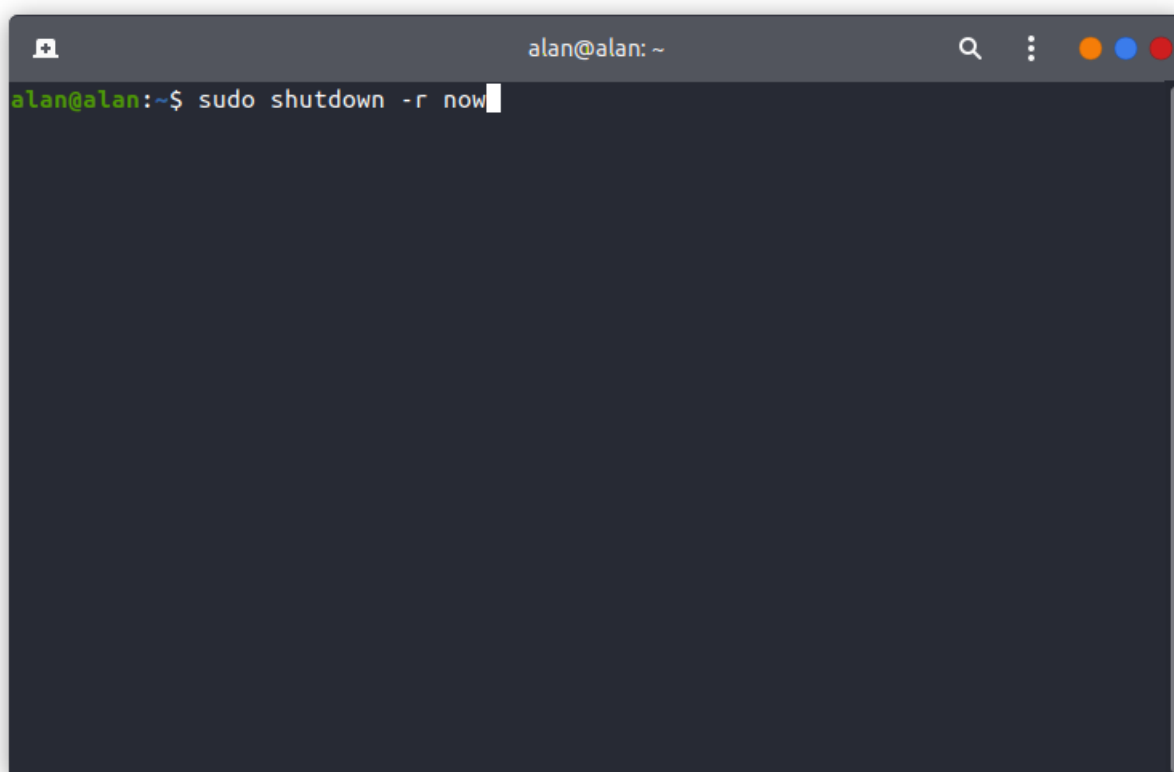
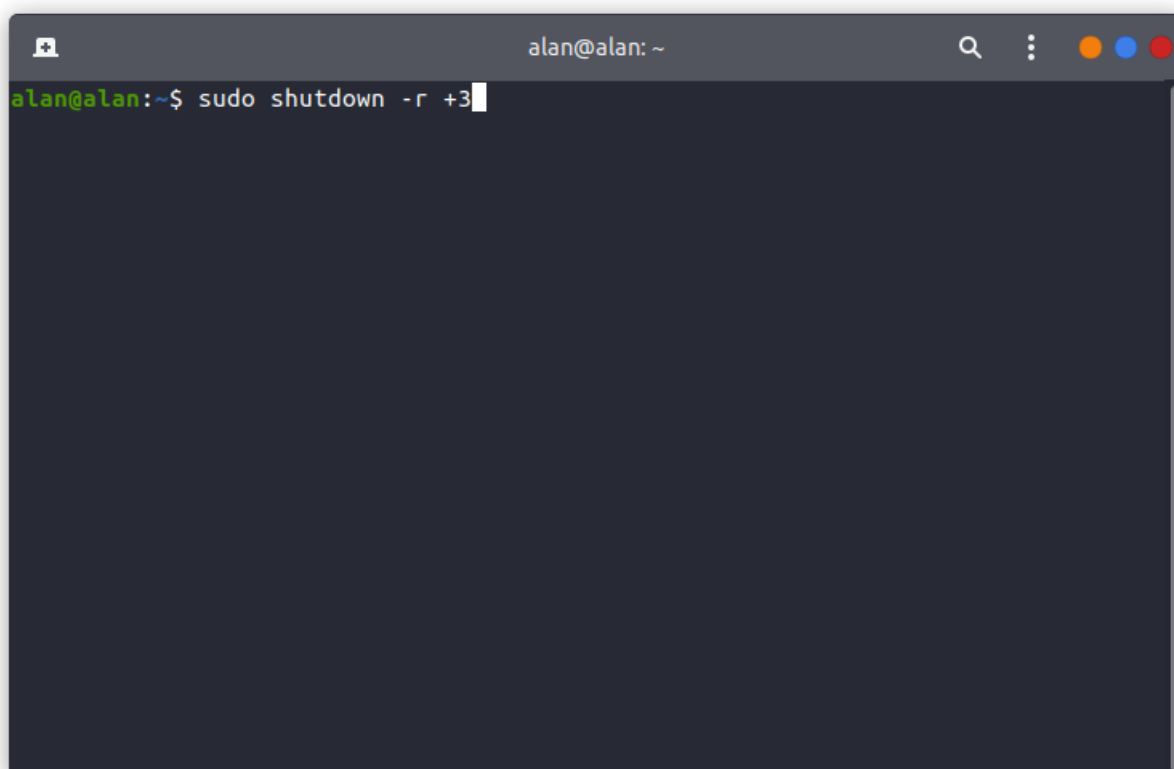
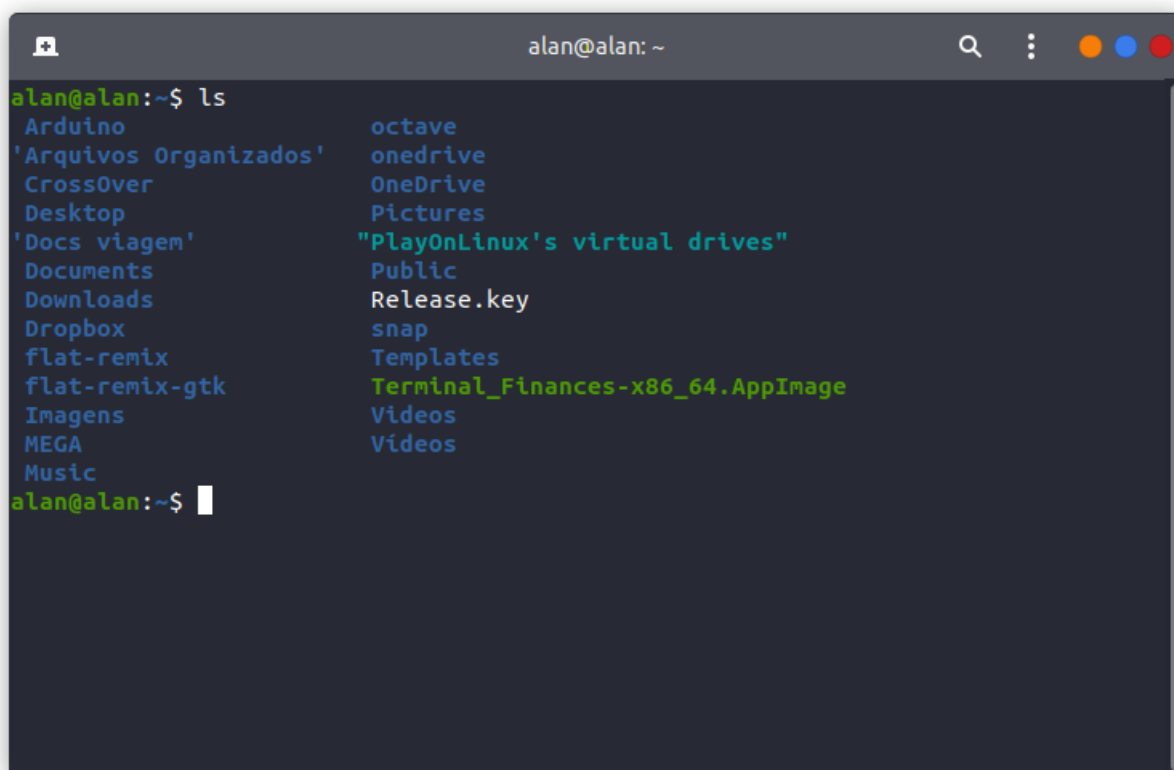
Figura 34: Comando: `sudo shutdown -r now`A terminal window with a dark background. The title bar at the top shows a window icon, the text 'alan@alan: ~', and standard macOS window controls (magnifying glass, three dots, and red, yellow, green buttons). The terminal text shows the prompt 'alan@alan:~\$' followed by the command 'sudo shutdown -r now' with a white cursor at the end of the line.Figura 35: Comando: `sudo shutdown -r +3`A terminal window with a dark background. The title bar at the top shows a window icon, the text 'alan@alan: ~', and standard macOS window controls (magnifying glass, three dots, and red, yellow, green buttons). The terminal text shows the prompt 'alan@alan:~\$' followed by the command 'sudo shutdown -r +3' with a white cursor at the end of the line.

Figura 36: Comando: `sudo shutdown -r +8:25`A screenshot of a terminal window with a dark background. The window title bar shows 'alan@alan: ~' and standard macOS window controls. The terminal prompt is 'alan@alan:~\$' and the command 'sudo shutdown -r +8:25' is entered, with a cursor at the end of the line.

```
alan@alan:~$ sudo shutdown -r +8:25
```

3 Operações em Diretórios e Arquivos

Figura 37: Comando: ls



A terminal window titled 'alan@alan: ~' with standard window controls. The command 'ls' has been executed, displaying a two-column list of files and directories. The output is as follows:

```
alan@alan:~$ ls
Arduino          octave
'Arquivos Organizados' onedrive
CrossOver        OneDrive
Desktop          Pictures
'Docs viagem'    "PlayOnLinux's virtual drives"
Documents        Public
Downloads        Release.key
Dropbox          snap
flat-remix       Templates
flat-remix-gtk   Terminal_Finances-x86_64.AppImage
Imagens          Videos
MEGA             Vídeos
Music
```

The prompt 'alan@alan:~\$' is followed by a cursor.

Figura 38: Comando: ls -l

```

alan@alan: ~
CrossOver
Desktop
'Docs viagem'
Documents
Downloads
Dropbox
flat-remix
flat-remix-gtk
Imagens
MEGA
Music
octave
onedrive
OneDrive
Pictures
"PlayOnLinux's virtual drives"
Public
Release.key
snap
Templates
Terminal_Finances-x86_64.AppImage
Videos
Videos
alan@alan:~$

```

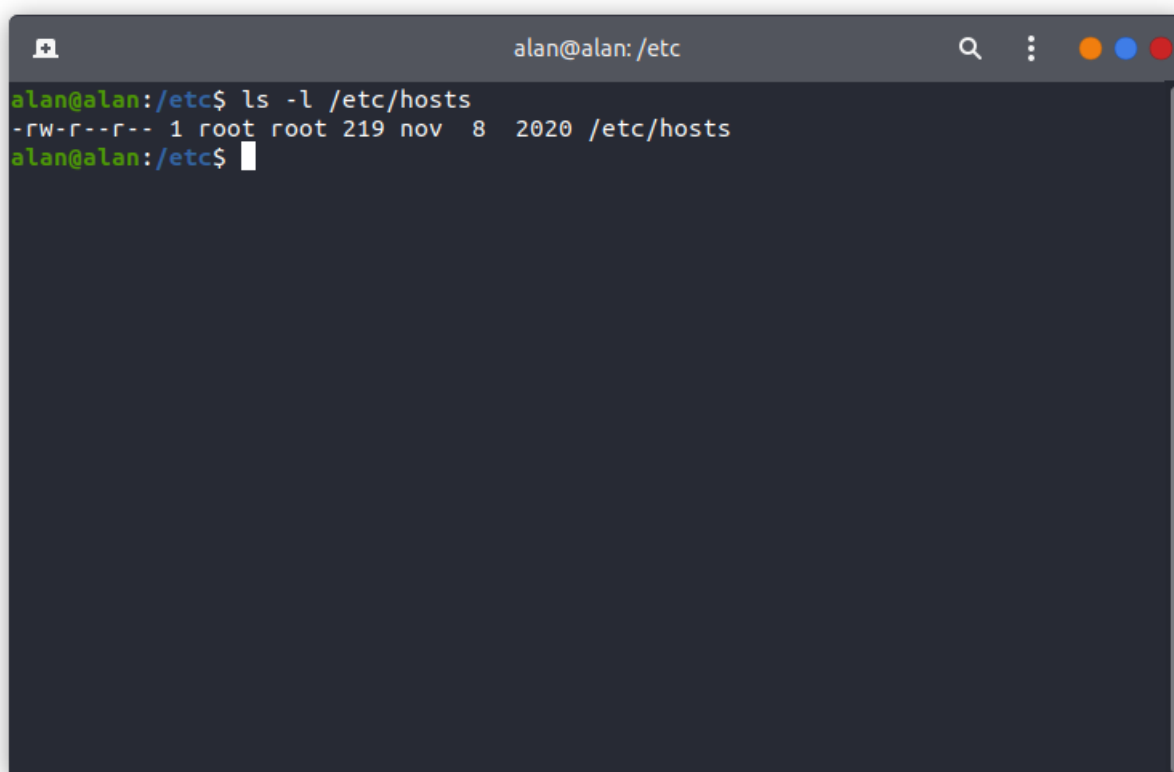
Figura 39: Comando: ls -l

```

alan@alan: ~
drwxr-xr-x  2 alan alan    4096 mai 11 16:51 Desktop
drwxr-xr-x  3 alan alan   12288 mar 28 17:55 'Docs viagem'
drwxr-xr-x  4 alan alan    4096 ago  3 2021 Documents
drwxr-xr-x 18 alan alan   12288 mai 20 22:07 Downloads
drwx----- 12 alan alan    4096 mai 20 20:35 Dropbox
drwxrwxr-x 19 alan alan    4096 nov 11 2020 flat-remix
drwxrwxr-x 47 alan alan    4096 nov 11 2020 flat-remix-gtk
drwxr-xr-x  4 alan alan    4096 nov 30 2020 Imagens
drwxrwxr-x  4 alan alan    4096 nov 10 2020 MEGA
drwxr-xr-x  2 alan alan    4096 jan 16 2021 Music
drwxr-xr-x  3 alan alan    4096 jan  9 20:49 octave
drwxrwxr-x  5 alan alan    4096 abr  3 14:11 onedrive
drwx-----  9 alan alan    4096 abr  5 10:27 OneDrive
drwxr-xr-x  4 alan alan    4096 nov 28 22:45 Pictures
lrwxrwxrwx  1 alan alan      36 mai 11 2021 "PlayOnLinux's virtual drives" ->
/home/alan/.PlayOnLinux//wineprefix/
drwxr-xr-x  2 alan alan    4096 jan 16 2021 Public
-rw-rw-r--  1 alan alan    1101 nov  9 2020 Release.key
drwx----- 15 alan alan    4096 abr  4 18:16 snap
drwxr-xr-x  2 alan alan    4096 jan 16 2021 Templates
-rwxrwxr-x  1 alan alan  27430280 fev  6 2021 Terminal_Finances-x86_64.AppImage
drwxr-xr-x  4 alan alan    4096 fev  5 17:23 Videos
drwxr-xr-x  3 alan alan    4096 nov 30 2020 Videos
alan@alan:~$

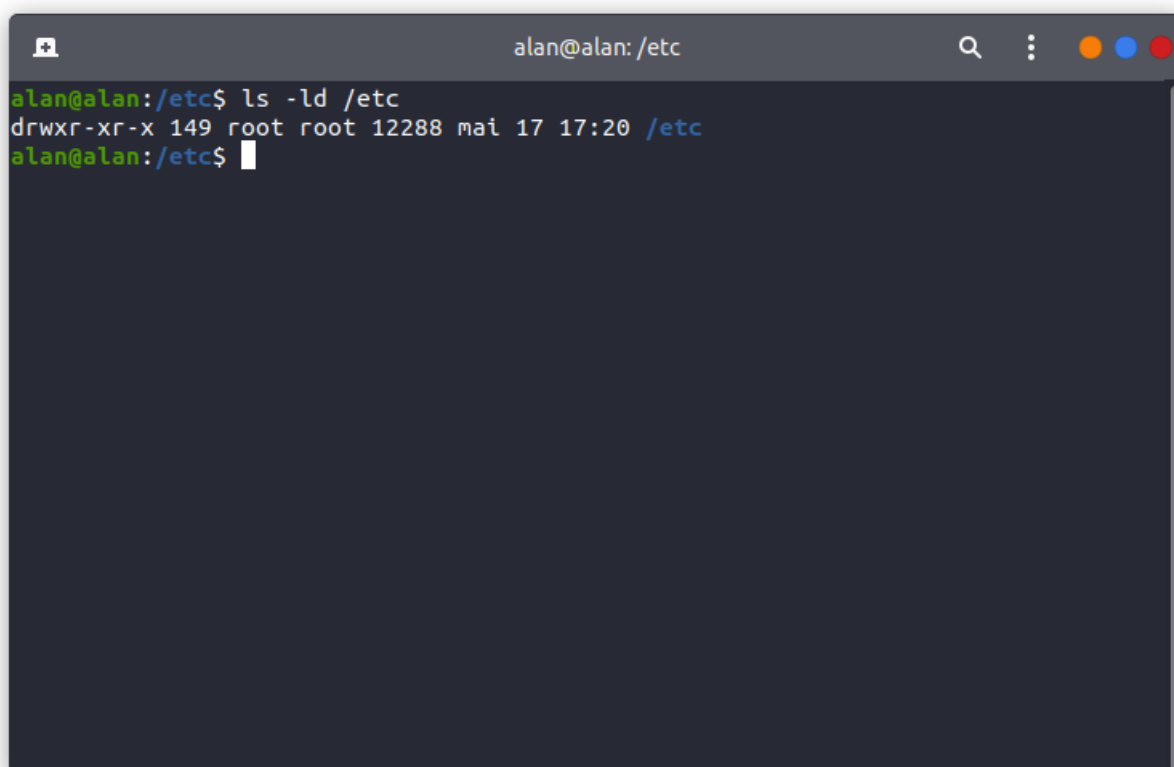
```

Figura 40: Comando: ls -l



```
alan@alan:/etc$ ls -l /etc/hosts
-rw-r--r-- 1 root root 219 nov  8 2020 /etc/hosts
alan@alan:/etc$
```

Figura 41: Comando: ls -ld



```
alan@alan:/etc$ ls -ld /etc
drwxr-xr-x 149 root root 12288 mai 17 17:20 /etc
alan@alan:/etc$
```

Figura 42: Comando: `ls -ld .*?`

```

alan@alan:~$ ls -ld .*?
drwxr-xr-x 3 root root 4096 nov  8  2020 .
-rw-rw-r-- 1 alan alan  165 mai 18  2021 .appport-ignore.xml
drwxrwxr-x 5 alan alan 4096 nov 28  2020 .arduino15
-rw-rw-r-- 1 alan alan   24 mar 27 15:50 .aspell.en.prepl
-rw-rw-r-- 1 alan alan  525 mar 27 15:50 .aspell.en.pws
drwxrwxr-x 3 alan alan 4096 abr  3 21:08 .audacity
drwxrwxr-x 4 alan alan 4096 abr  3 21:09 .audacity-data
-rw----- 1 alan alan 75432 mai 20 21:08 .bash_history
-rw-r--r-- 1 alan alan  220 nov  8  2020 .bash_logout
-rw-r--r-- 1 alan alan 3771 nov  8  2020 .bashrc
drwxr-xr-x 49 alan alan 4096 mai 17 23:28 .cache
drwxrwxr-x 2 alan alan 4096 mai 12  2021 .conda
drwx----- 57 alan alan 4096 mai 20 22:09 .config
-rw-rw-r-- 1 alan alan  313 mai 16  2021 .crossover.conf
drwxrwxr-x 7 alan alan 4096 abr  1 10:34 .cxoffice
drwx----- 3 alan alan 4096 nov 13  2020 .dbus
drwx----- 8 alan alan 4096 mai 20 18:02 .dropbox
drwxrwxr-x 3 alan alan 4096 mai  7 21:27 .dropbox-dist
drwxrwxr-x 2 alan alan 4096 mar 16  2021 .fop
drwx----- 3 alan alan 4096 jun  3  2021 .gconf
-rw-rw-r-- 1 alan alan   29 mai 14 14:56 .gitconfig
drwx----- 3 alan alan 4096 nov 28  2020 .gnome
drwx----- 3 alan alan 4096 mai 20 12:45 .gnupg

```

Figura 43: Comando: `ls -F`

```

alan@alan: /etc$ ls -F
fwupd/      networkd-dispatcher/  udisks2/
gai.conf    NetworkManager/      ufw/
gamemode.ini networks             update-manager/
gconf/      newt/                 update-motd.d/
gdb/        nsswitch.conf         update-notifier/
gdm3/       octave.conf           UPower/
geoclue/    openal/               usb_modeswitch.conf
ghostscript/ OpenCL/               usb_modeswitch.d/
glvnd/      openvpn/              vbox/
gnome/      opt/                  vdpau_wrapper.cfg
gnome-chess/ os-release@           vin/
groff/      PackageKit/           vtrgb@
group       pam.conf              vulkan/
group-      pam.d/                wgetrc
grub.d/     papersize             whoopsie
gshadow     passwd               wireshark/
gshadow-    passwd-              wpa_supplicant/
gss/        pcmcia/              X11/
gtk-2.0/    perl/                xattr.conf
gtk-3.0/    pki/                 xdg/
hdparm.conf pm/                  xml/
host.conf   pnm2ppa.conf         zsh_command_not_found
hostid     polkit-1/

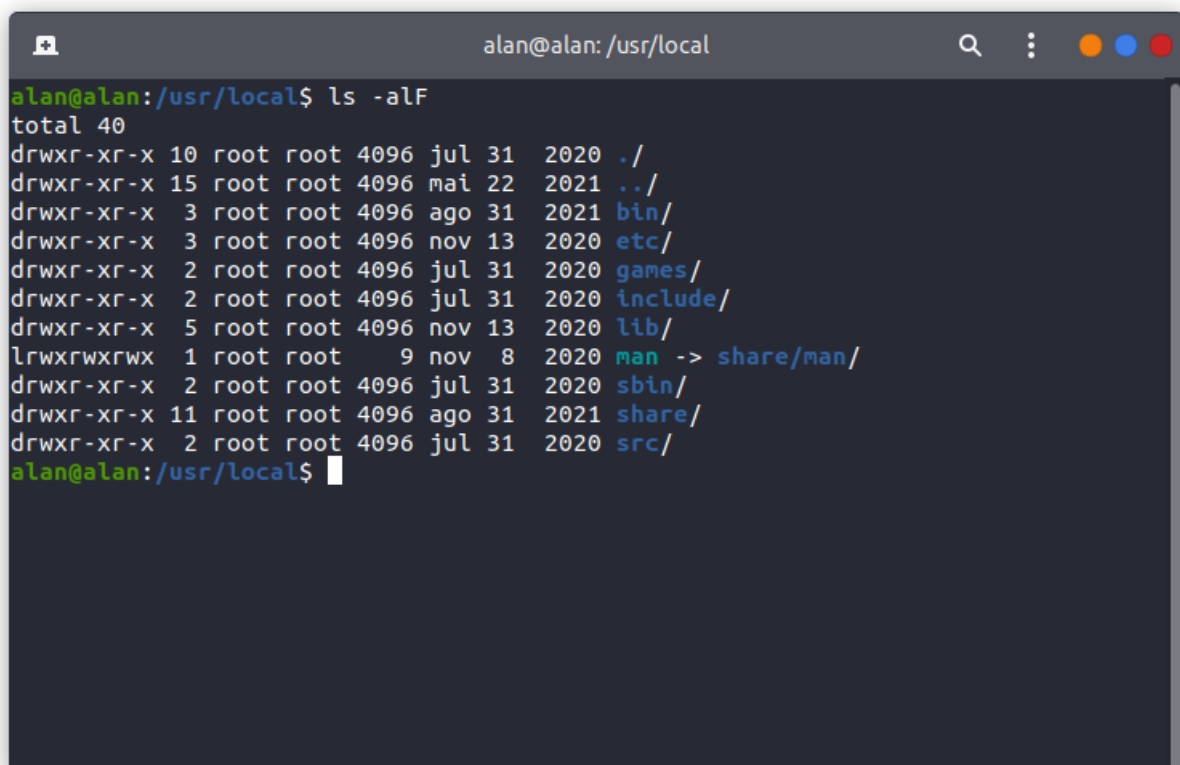
```


Figura 44: Comando: ls -s



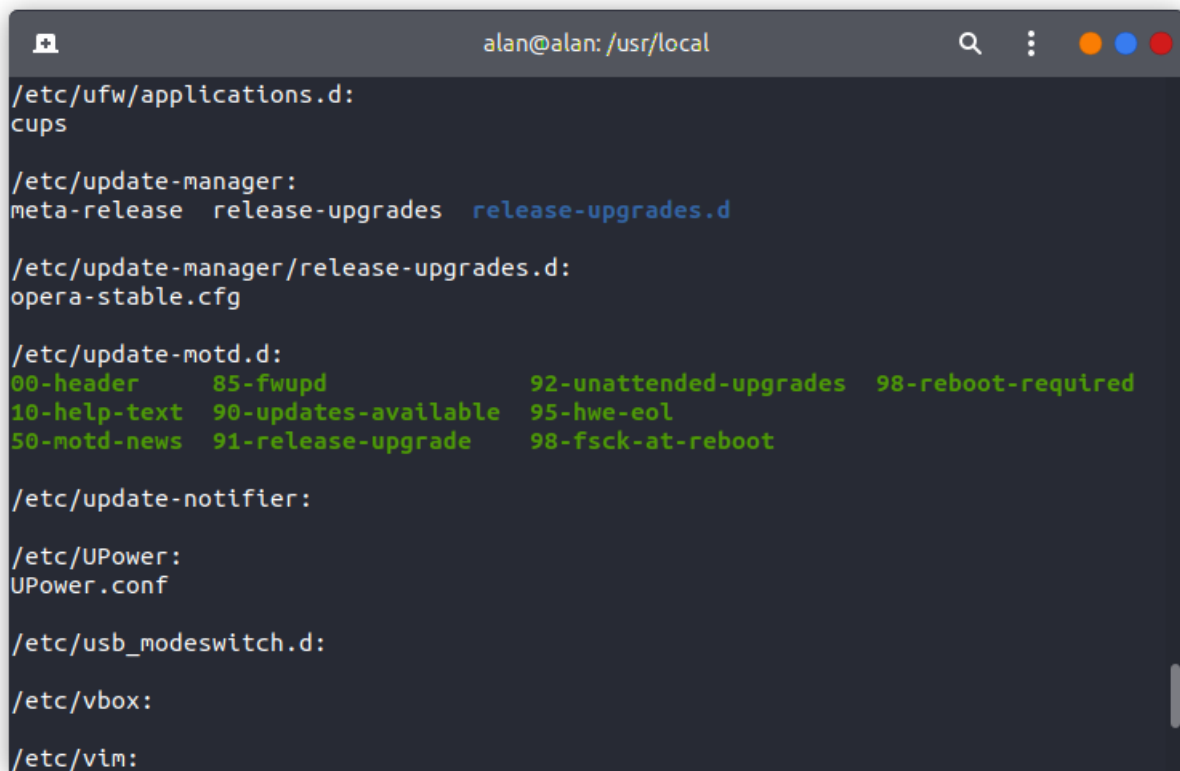
```
alan@alan: /usr/local$ ls -s
total 32
4 bin  4 etc  4 games  4 include  4 lib  0 man  4 sbin  4 share  4 src
alan@alan: /usr/local$
```

Figura 45: Comando: ls -alF



```
alan@alan: /usr/local$ ls -alF
total 40
drwxr-xr-x 10 root root 4096 jul 31  2020 ./
drwxr-xr-x 15 root root 4096 mai 22  2021 ../
drwxr-xr-x  3 root root 4096 ago 31  2021 bin/
drwxr-xr-x  3 root root 4096 nov 13  2020 etc/
drwxr-xr-x  2 root root 4096 jul 31  2020 games/
drwxr-xr-x  2 root root 4096 jul 31  2020 include/
drwxr-xr-x  5 root root 4096 nov 13  2020 lib/
lrwxrwxrwx  1 root root    9 nov  8  2020 man -> share/man/
drwxr-xr-x  2 root root 4096 jul 31  2020 sbin/
drwxr-xr-x 11 root root 4096 ago 31  2021 share/
drwxr-xr-x  2 root root 4096 jul 31  2020 src/
alan@alan: /usr/local$
```

Figura 46: Comando: ls -R /etc/



```
alan@alan: /usr/local
/etc/ufw/applications.d:
cups

/etc/update-manager:
meta-release  release-upgrades  release-upgrades.d

/etc/update-manager/release-upgrades.d:
opera-stable.cfg

/etc/update-motd.d:
00-header      85-fwupd          92-unattended-upgrades  98-reboot-required
10-help-text   90-updates-available  95-hwe-eol
50-motd-news   91-release-upgrade   98-fsck-at-reboot

/etc/update-notifier:

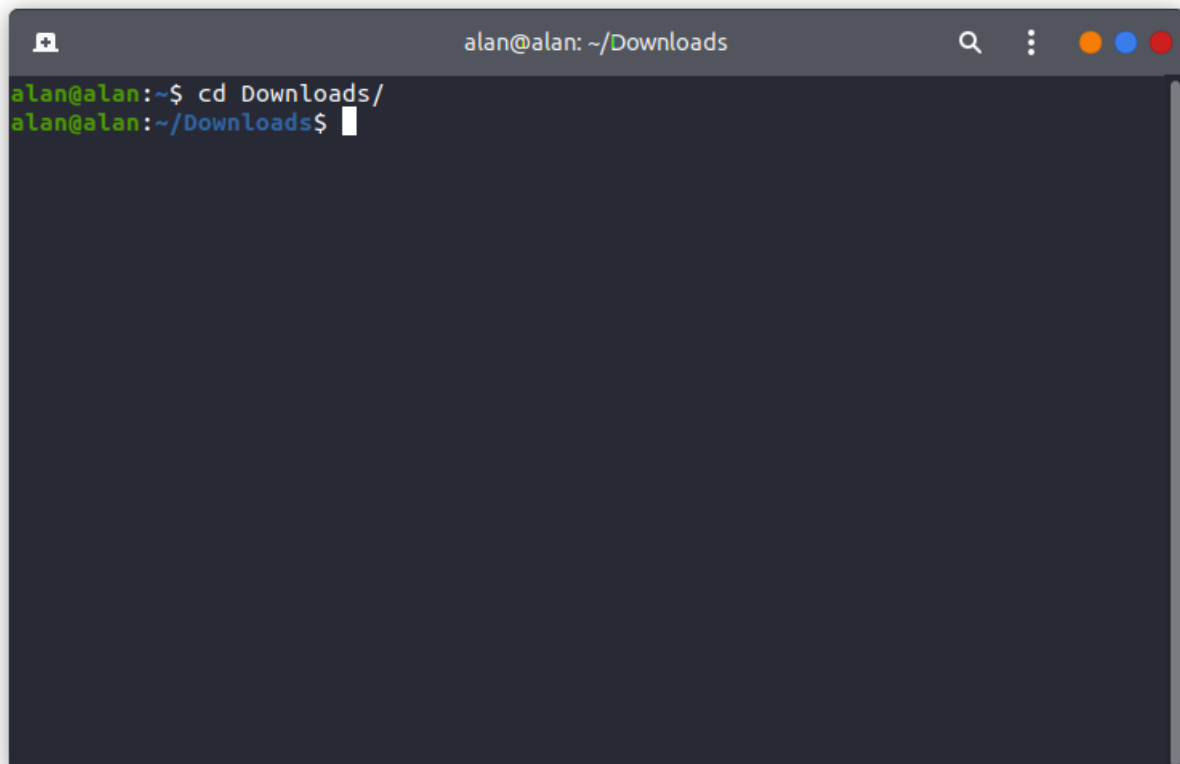
/etc/UPower:
UPower.conf

/etc/usb_modeswitch.d:

/etc/vbox:

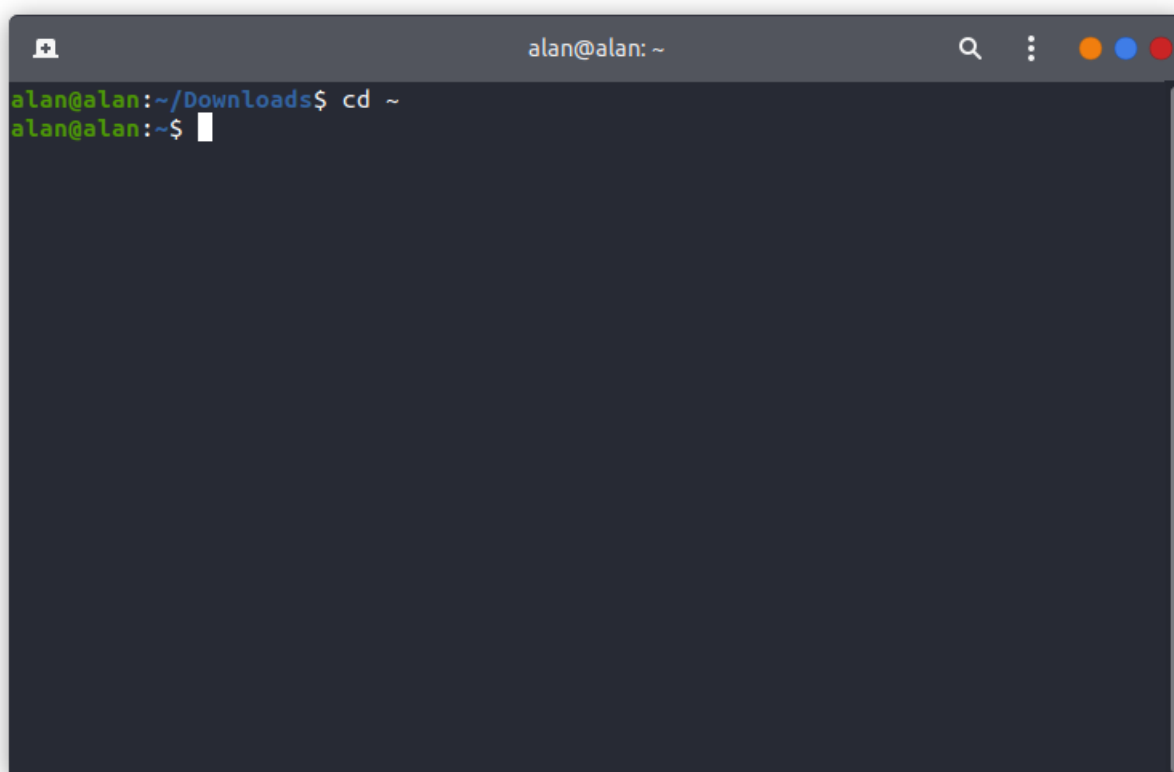
/etc/vim:
```

Figura 47: Comando: cd /Downloads



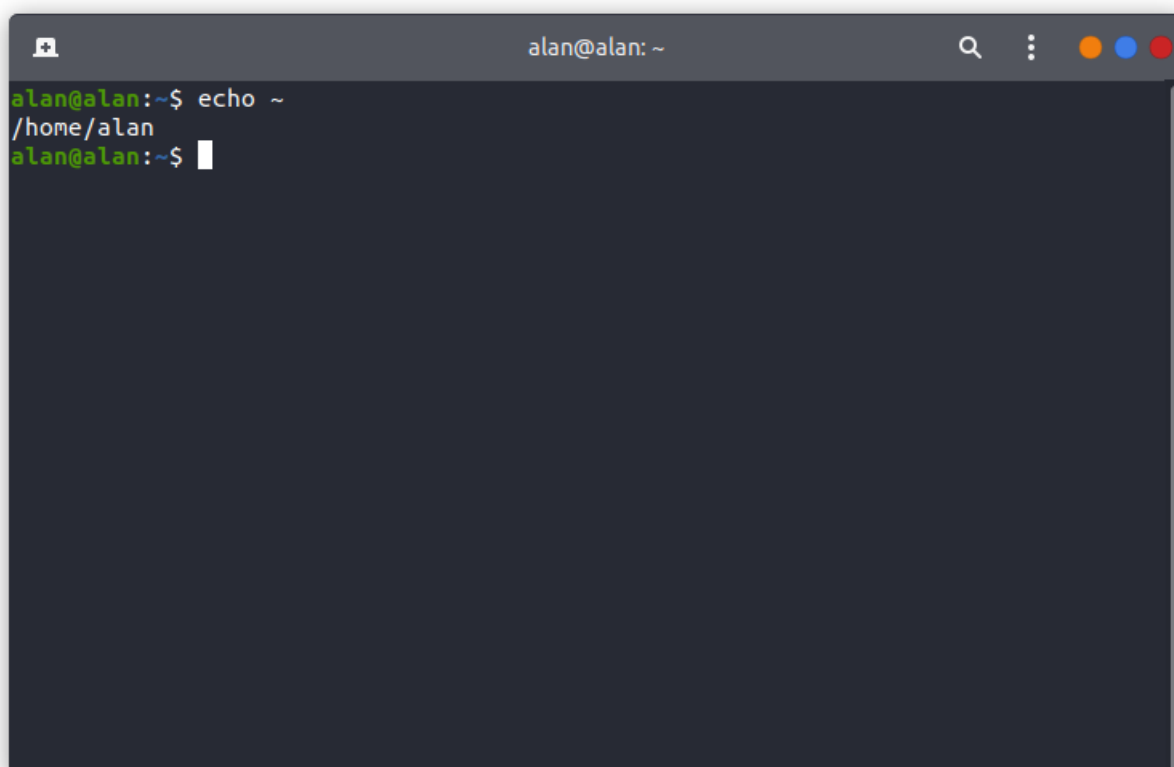
```
alan@alan: ~/Downloads
alan@alan:~$ cd Downloads/
alan@alan:~/Downloads$
```

Figura 48: Comando: cd

A terminal window titled 'alan@alan: ~' with standard macOS window controls. The prompt is 'alan@alan:~/Downloads\$'. The command 'cd ~' has been entered and executed. The output shows the prompt has changed to 'alan@alan:~\$', indicating the current directory is now the home directory.

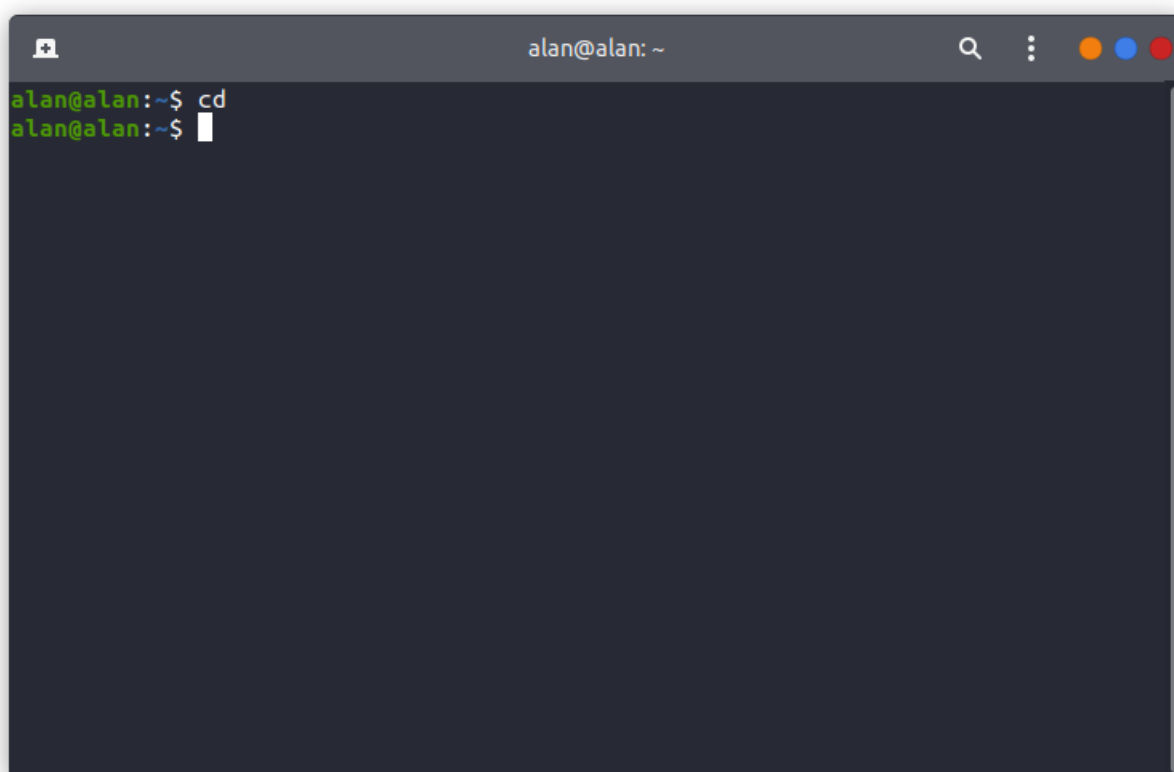
```
alan@alan:~/Downloads$ cd ~
alan@alan:~$
```

Figura 49: Comando: echo

A terminal window titled 'alan@alan: ~' with standard macOS window controls. The prompt is 'alan@alan:~\$'. The command 'echo ~' has been entered and executed. The output is '/home/alan', which is the full path to the user's home directory. The prompt remains 'alan@alan:~\$'.

```
alan@alan:~$ echo ~
/home/alan
alan@alan:~$
```

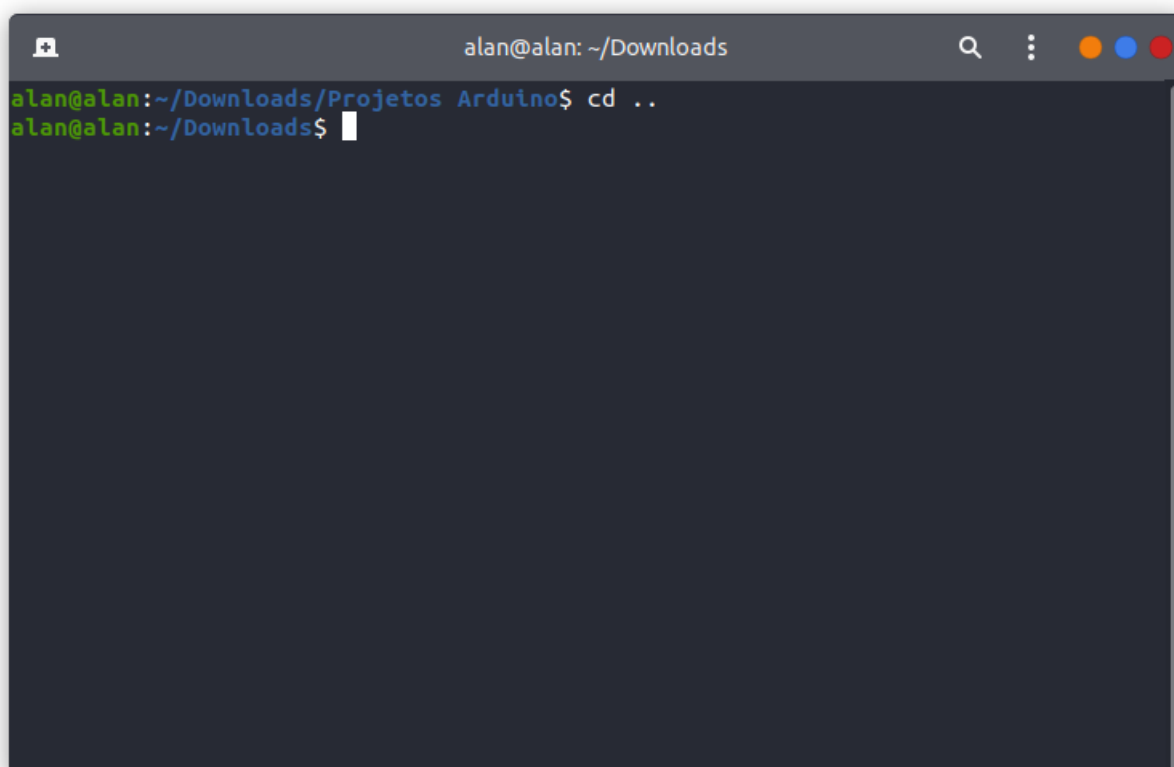
Figura 50: Comando: cd



A terminal window titled 'alan@alan: ~' with standard macOS window controls. The prompt is 'alan@alan:~\$'. The command 'cd' has been entered and executed, resulting in a new prompt 'alan@alan:~\$'.

```
alan@alan:~$ cd
alan@alan:~$
```

Figura 51: Comando: cd ..



A terminal window titled 'alan@alan: ~/Downloads' with standard macOS window controls. The prompt is 'alan@alan:~/Downloads/Projetos Arduino\$'. The command 'cd ..' has been entered and executed, resulting in a new prompt 'alan@alan:~/Downloads\$'.

```
alan@alan:~/Downloads/Projetos Arduino$ cd ..
alan@alan:~/Downloads$
```

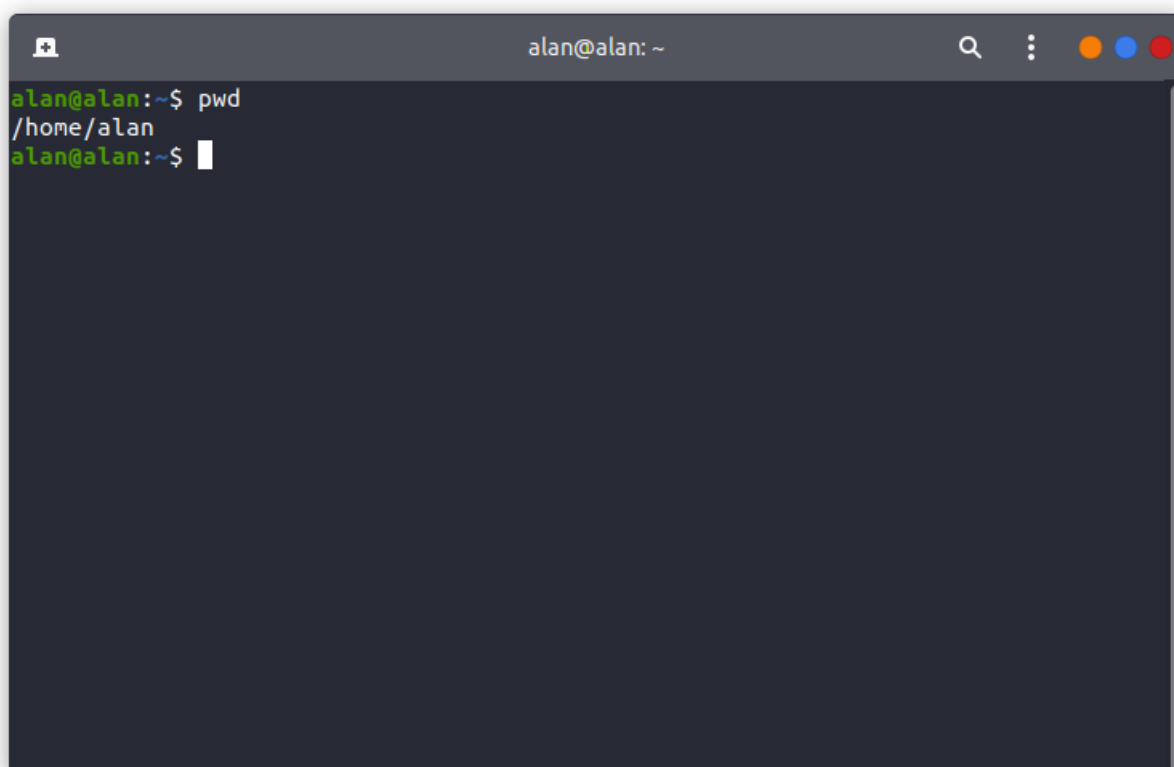
Figura 52: Comando: pwd



```
alan@alan: /usr/local$ pwd
/usr/local
alan@alan: /usr/local$
```

A terminal window titled 'alan@alan: /usr/local' with search and window control icons. The prompt is 'alan@alan: /usr/local\$'. The command 'pwd' is entered, and the output is '/usr/local'. The prompt then changes to 'alan@alan: /usr/local\$' with a cursor.

Figura 53: Comando: pwd



```
alan@alan: ~$ pwd
/home/alan
alan@alan: ~$
```

A terminal window titled 'alan@alan: ~' with search and window control icons. The prompt is 'alan@alan: ~\$'. The command 'pwd' is entered, and the output is '/home/alan'. The prompt then changes to 'alan@alan: ~\$' with a cursor.

- 4 Comandos para Manipulação de Arquivos Texto
- 5 Comandos de Sistema
- 6 Gerenciamento de Processos
- 7 Permissão e Propriedade
- 8 Gerenciando Usuários
- 9 Comandos para Redes de Computadores
- 10 Gerenciamento de Pacotes
- 11 Verificando Configuração de Hardware e Software