



UNIVERSIDADE FEDERAL DE UBERLÂNDIA
FACULDADE DE ENGENHARIA MECÂNICA
Curso de Graduação em Engenharia Mecatrônica



RELATÓRIO DA PRIMEIRA SEMANA DA DISCIPLINA SISTEMAS DIGITAIS PARA MECATRÔNICA (FEELT 49081)

TAREFA SEMANA 01B - INSTALAÇÃO E CONFIGURAÇÃO DO LINUX

Prof. Éder Alves de Moura

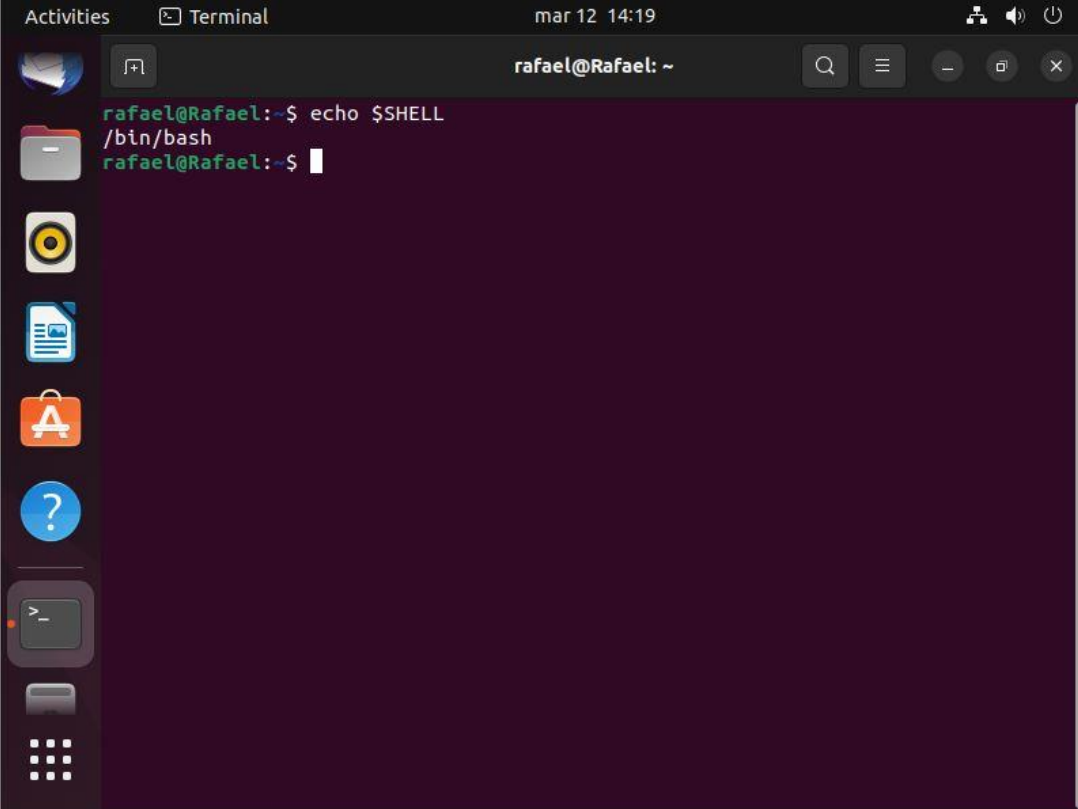
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11621EMT014

Uberlândia, Março de 2023

Capítulo 1

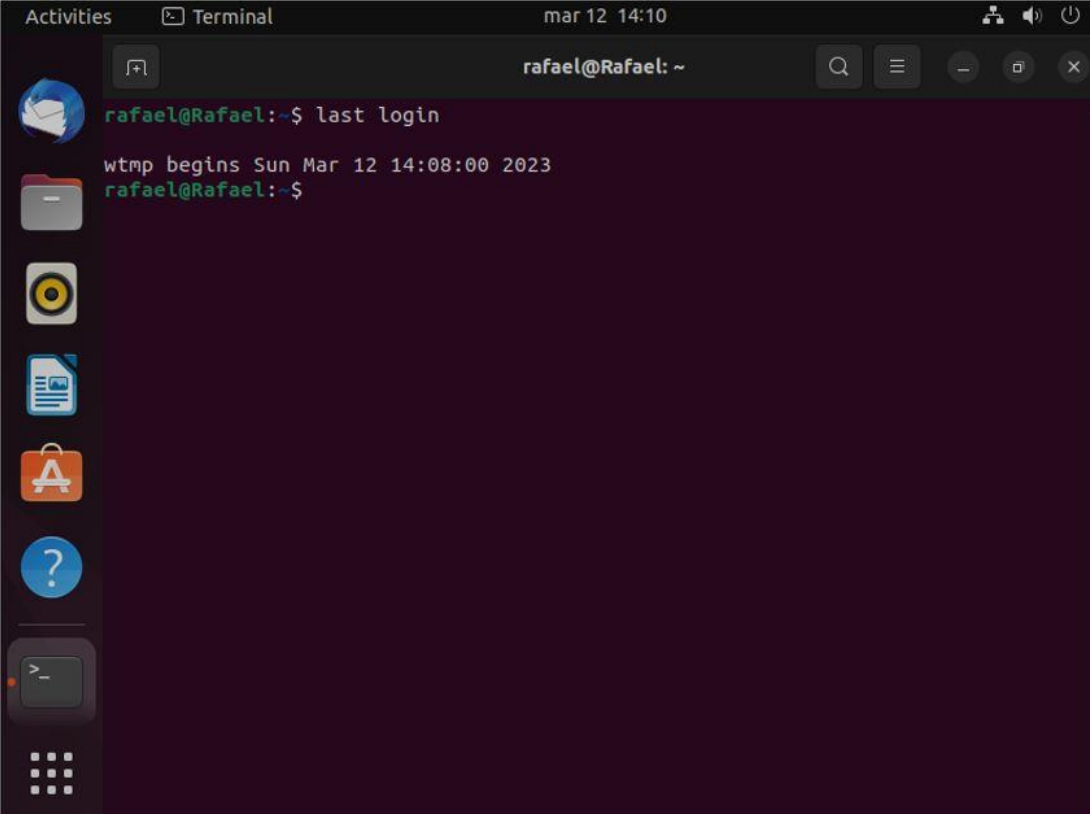
Listagem 1.2: Prompt de Login



A terminal window titled 'Terminal' with the date and time 'mar 12 14:19' in the top right corner. The window shows the user 'rafael@Rafael' at the home directory '~'. The command 'echo \$SHELL' has been entered, and the output is '/bin/bash'. The terminal has a dark purple background and a light blue prompt. The window title bar includes 'Activities', 'Terminal', and system icons for network, volume, and power.

```
rafael@Rafael:~$ echo $SHELL
/bin/bash
rafael@Rafael:~$
```

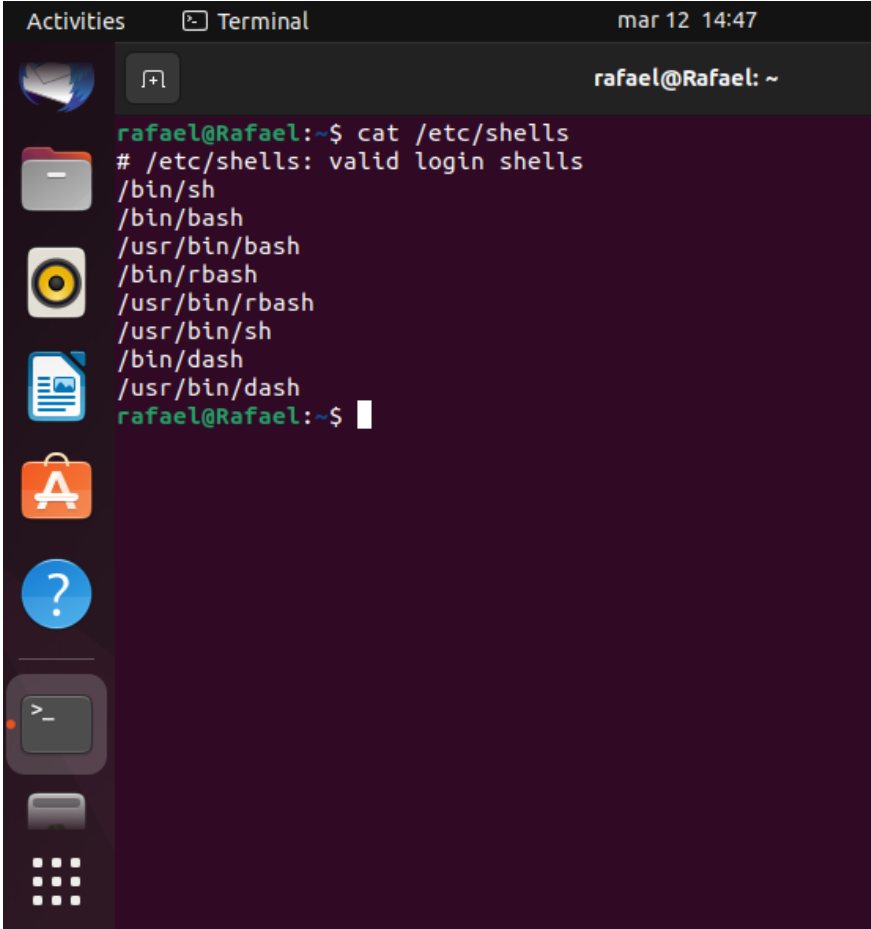
Listagem 1.8: Shell Utilizado



A terminal window titled 'Terminal' with the date and time 'mar 12 14:10' in the top right corner. The window shows the user 'rafael@Rafael' at the home directory '~'. The command 'last login' has been entered, and the output is 'wtmp begins Sun Mar 12 14:08:00 2023'. The terminal has a dark purple background and a light blue prompt. The window title bar includes 'Activities', 'Terminal', and system icons for network, volume, and power.

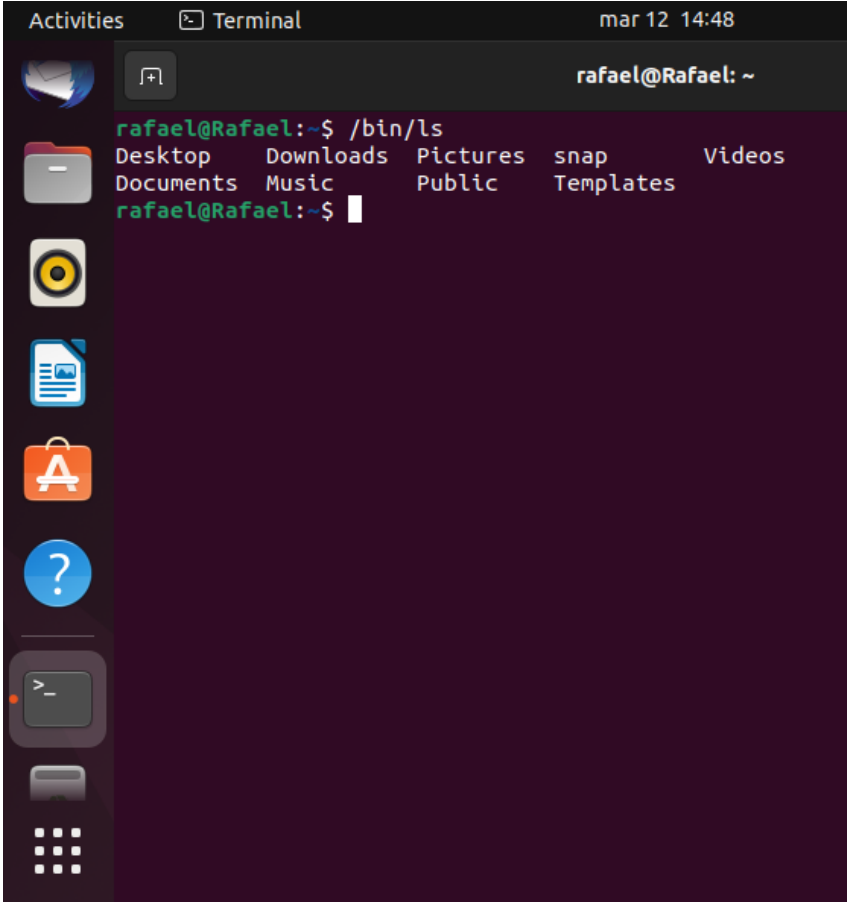
```
rafael@Rafael:~$ last login
wtmp begins Sun Mar 12 14:08:00 2023
rafael@Rafael:~$
```

Listagem 1.9: Shells Instalados

A screenshot of a Linux terminal window. The title bar shows 'Activities', 'Terminal', and the date 'mar 12 14:47'. The terminal prompt is 'rafael@Rafael: ~'. The user has entered the command 'cat /etc/shells'. The output lists the valid login shells: '/bin/sh', '/bin/bash', '/usr/bin/bash', '/bin/rbash', '/usr/bin/rbash', '/usr/bin/sh', '/bin/dash', and '/usr/bin/dash'. The terminal has a dark purple background and a sidebar on the left with various application icons.

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

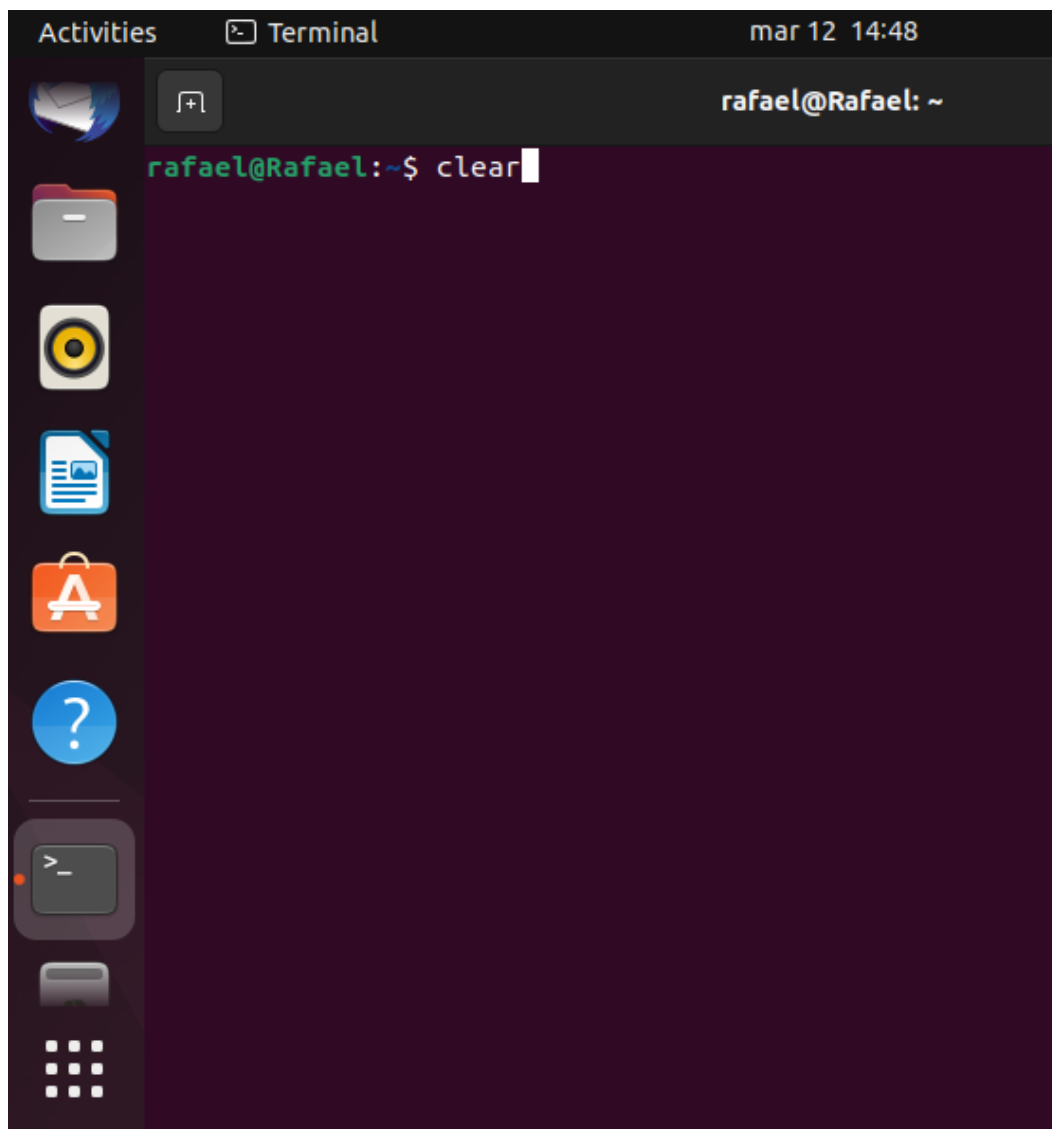
Listagem 1.10: Caminho Completo



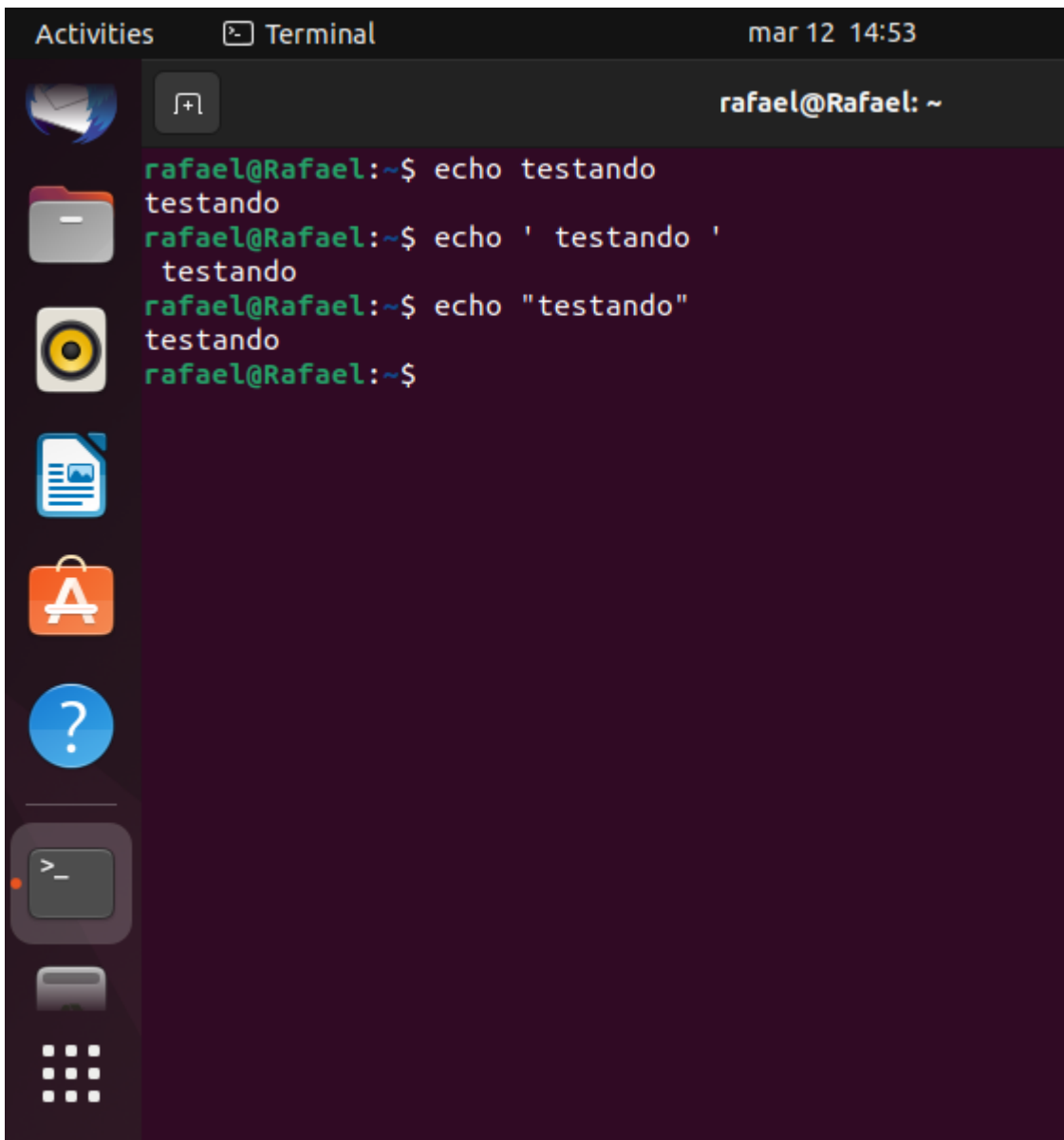
A screenshot of a Linux terminal window. The window has a title bar with 'Activities', 'Terminal', and 'mar 12 14:48'. The terminal shows the user 'rafael@Rafael' at the home directory '~'. The command '/bin/ls' has been executed, displaying a list of directories: Desktop, Downloads, Pictures, snap, Videos, Documents, Music, Public, and Templates. The prompt 'rafael@Rafael:~\$' is visible at the bottom of the terminal output.

```
rafael@Rafael:~$ /bin/ls
Desktop    Downloads  Pictures   snap       Videos
Documents  Music      Public     Templates
rafael@Rafael:~$
```

Listagem 1.11: Limpando a Tela



Listagem 1.12: Exibindo Mensagens no Terminal

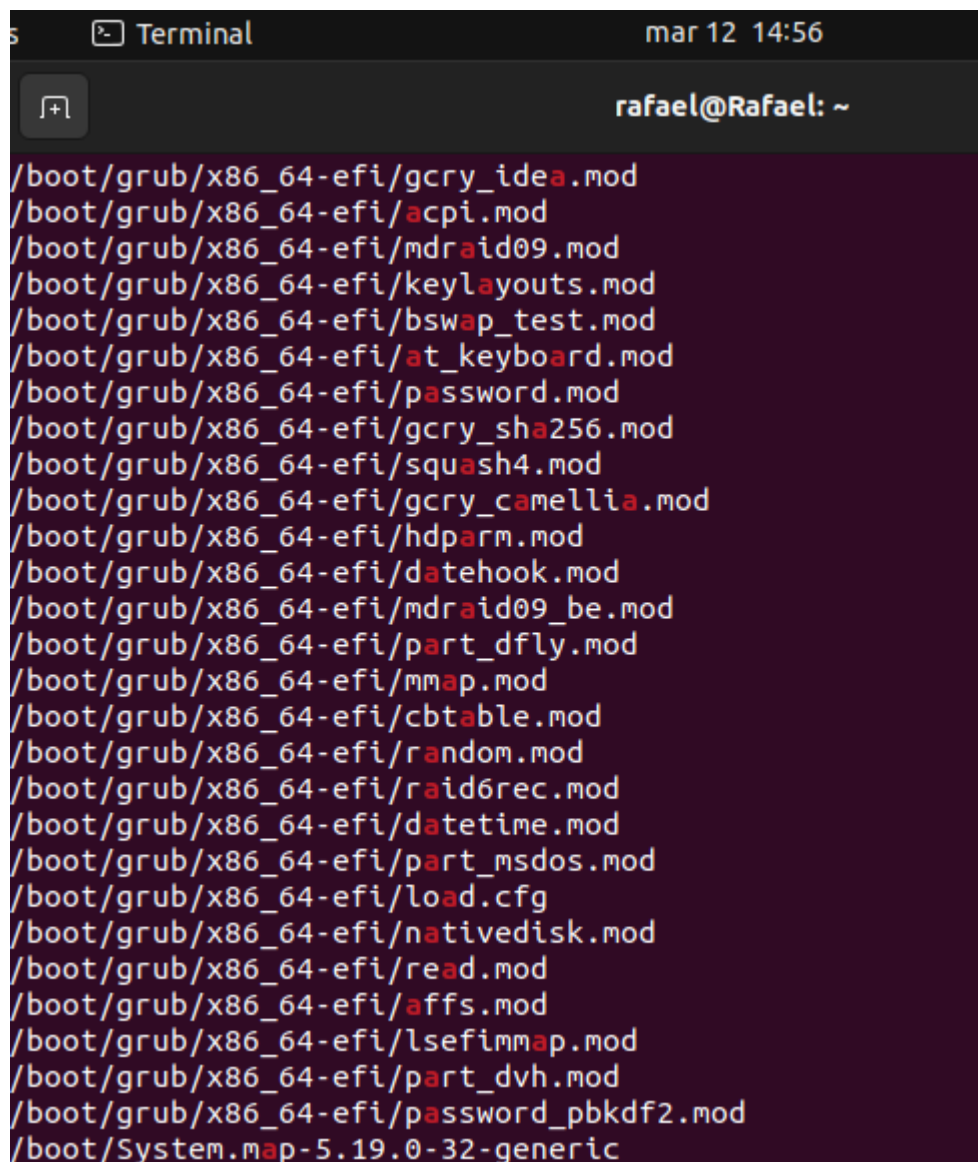


The image shows a terminal window titled "Terminal" with a timestamp of "mar 12 14:53". The user is "rafael@Rafael" and the current directory is "~". The terminal displays the following commands and output:

```
rafael@Rafael:~$ echo testando
testando
rafael@Rafael:~$ echo ' testando '
 testando
rafael@Rafael:~$ echo "testando"
testando
rafael@Rafael:~$
```

The terminal window has a dark background and a sidebar on the left with various application icons. The output of the commands is displayed on the lines immediately following each command.

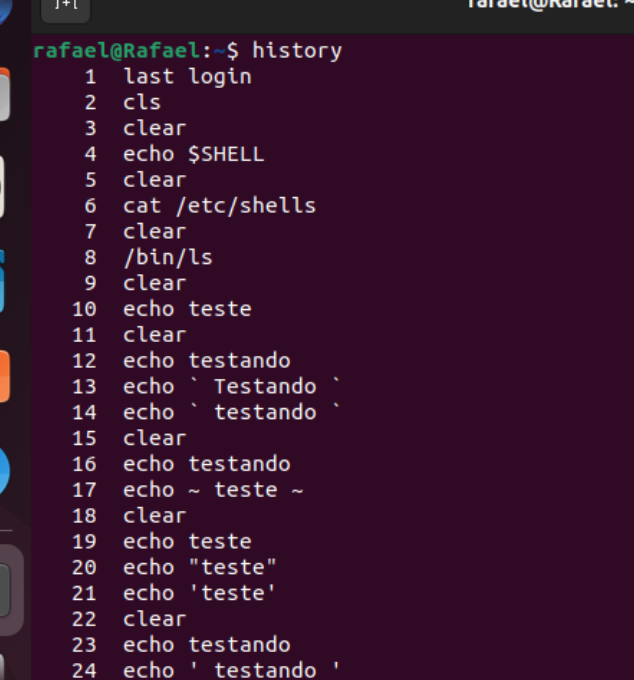
Listagem 1.13: Histórico



A terminal window titled "Terminal" with a timestamp of "mar 12 14:56". The prompt is "rafael@Rafael: ~". The terminal displays a list of GRUB modules, each on a new line, starting from the top of the boot path and ending with the generic fallback. The modules listed are: /boot/grub/x86_64-efi/gcry_idea.mod, /boot/grub/x86_64-efi/acpi.mod, /boot/grub/x86_64-efi/mdraid09.mod, /boot/grub/x86_64-efi/keylayouts.mod, /boot/grub/x86_64-efi/bswap_test.mod, /boot/grub/x86_64-efi/at_keyboard.mod, /boot/grub/x86_64-efi/password.mod, /boot/grub/x86_64-efi/gcry_sha256.mod, /boot/grub/x86_64-efi/squash4.mod, /boot/grub/x86_64-efi/gcry_camellia.mod, /boot/grub/x86_64-efi/hdparm.mod, /boot/grub/x86_64-efi/datehook.mod, /boot/grub/x86_64-efi/mdraid09_be.mod, /boot/grub/x86_64-efi/part_dfly.mod, /boot/grub/x86_64-efi/mmap.mod, /boot/grub/x86_64-efi/cbtable.mod, /boot/grub/x86_64-efi/random.mod, /boot/grub/x86_64-efi/raid6rec.mod, /boot/grub/x86_64-efi/datetime.mod, /boot/grub/x86_64-efi/part_msdos.mod, /boot/grub/x86_64-efi/load.cfg, /boot/grub/x86_64-efi/nativedisk.mod, /boot/grub/x86_64-efi/read.mod, /boot/grub/x86_64-efi/affs.mod, /boot/grub/x86_64-efi/lsefimap.mod, /boot/grub/x86_64-efi/part_dvh.mod, /boot/grub/x86_64-efi/password_pbkdf2.mod, and /boot/System.map-5.19.0-32-generic.

```
s Terminal mar 12 14:56
rafael@Rafael: ~
/boot/grub/x86_64-efi/gcry_idea.mod
/boot/grub/x86_64-efi/acpi.mod
/boot/grub/x86_64-efi/mdraid09.mod
/boot/grub/x86_64-efi/keylayouts.mod
/boot/grub/x86_64-efi/bswap_test.mod
/boot/grub/x86_64-efi/at_keyboard.mod
/boot/grub/x86_64-efi/password.mod
/boot/grub/x86_64-efi/gcry_sha256.mod
/boot/grub/x86_64-efi/squash4.mod
/boot/grub/x86_64-efi/gcry_camellia.mod
/boot/grub/x86_64-efi/hdparm.mod
/boot/grub/x86_64-efi/datehook.mod
/boot/grub/x86_64-efi/mdraid09_be.mod
/boot/grub/x86_64-efi/part_dfly.mod
/boot/grub/x86_64-efi/mmap.mod
/boot/grub/x86_64-efi/cbtable.mod
/boot/grub/x86_64-efi/random.mod
/boot/grub/x86_64-efi/raid6rec.mod
/boot/grub/x86_64-efi/datetime.mod
/boot/grub/x86_64-efi/part_msdos.mod
/boot/grub/x86_64-efi/load.cfg
/boot/grub/x86_64-efi/nativedisk.mod
/boot/grub/x86_64-efi/read.mod
/boot/grub/x86_64-efi/affs.mod
/boot/grub/x86_64-efi/lsefimap.mod
/boot/grub/x86_64-efi/part_dvh.mod
/boot/grub/x86_64-efi/password_pbkdf2.mod
/boot/System.map-5.19.0-32-generic
```

Listagem 1.14: Comando history



The screenshot shows a Linux terminal window with a dark purple background. On the left is a vertical sidebar with various application icons. The terminal title bar at the top reads "Activities" on the left, "Terminal" in the center, and "mar 12 15:03" on the right. The prompt "rafael@Rafael: ~" is visible at the top of the terminal area. The command history is displayed as a numbered list from 1 to 28, showing a sequence of basic shell commands.

```
rafael@Rafael:~$ history
1  last login
2  cls
3  clear
4  echo $SHELL
5  clear
6  cat /etc/shells
7  clear
8  /bin/ls
9  clear
10 echo teste
11 clear
12 echo testando
13 echo ` Testando `
14 echo ` testando `
15 clear
16 echo testando
17 echo ~ teste ~
18 clear
19 echo teste
20 echo "teste"
21 echo 'teste'
22 clear
23 echo testando
24 echo ' testando '
25 echo "testando"
26 CLEAR
27 clear
28 echo testando
```

Listagem 1.16: Exemplo de busca no history

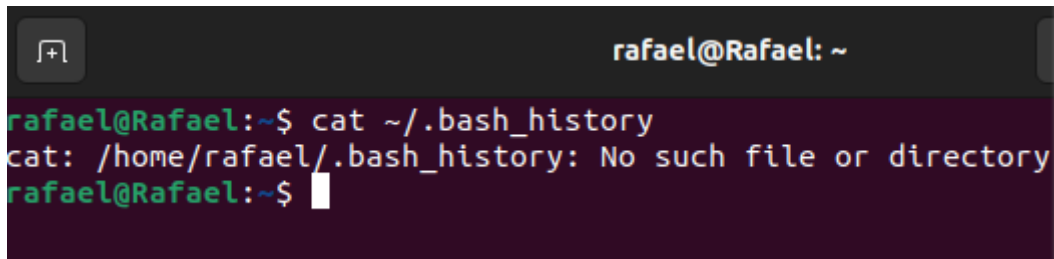
```
rafael@Rafael: ~  
rafael@Rafael:~$ history | grep login  
1 last login  
241 /proc/3725/task/3725/loginuid  
355 history | grep login  
rafael@Rafael:~$
```

Listagem 1.17: Limpar o histórico

```
rafael@Rafael: ~  
rafael@Rafael:~$ history -c  
rafael@Rafael:~$ history  
1  history
```


Capítulo 2

Listagem 1.21: Arquivo contendo o histórico de comandos



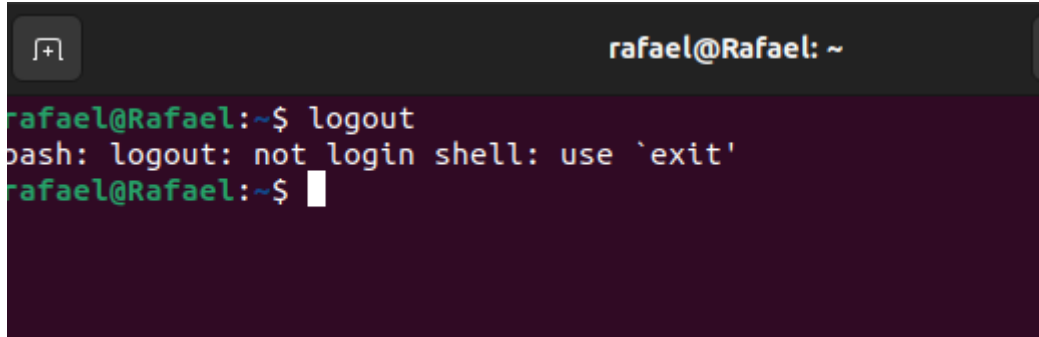
```
rafael@Rafael: ~  
rafael@Rafael:~$ cat ~/.bash_history  
cat: /home/rafael/.bash_history: No such file or directory  
rafael@Rafael:~$
```

Listagem 1.23: Usuário Root no Ubuntu



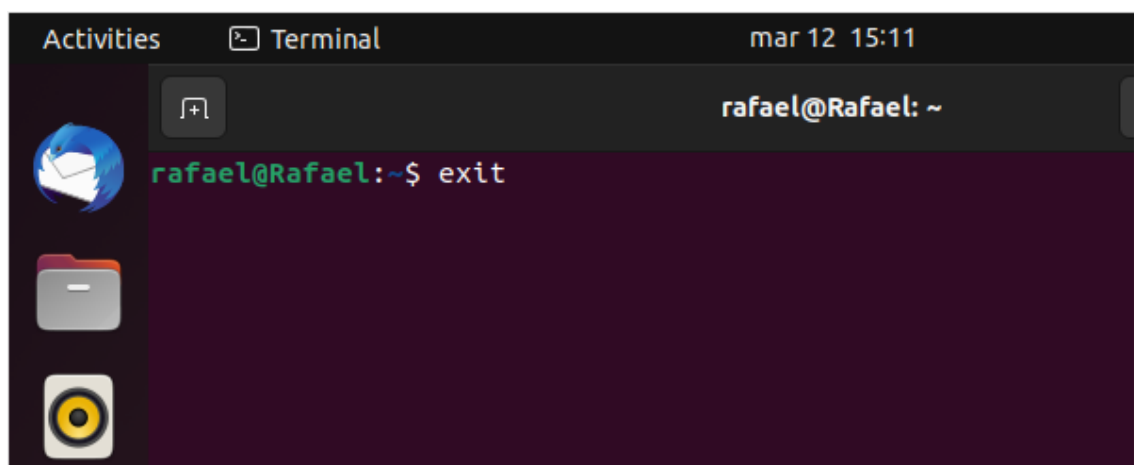
```
rafael@Rafael: ~  
rafael@Rafael:~$ sudo apt install vim  
[sudo] password for rafael:
```

Listagem 2.1: Comando logout



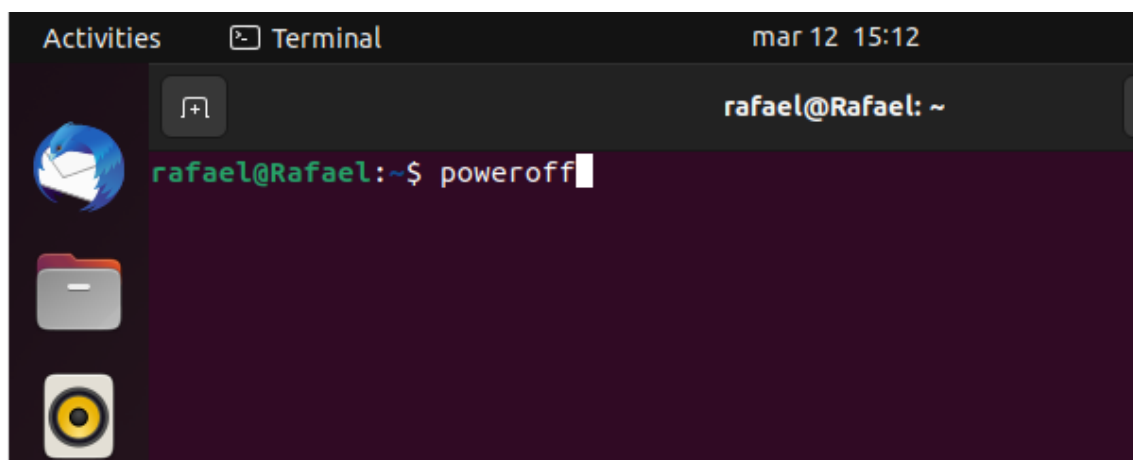
```
rafael@Rafael:~$ logout  
bash: logout: not login shell: use `exit'  
rafael@Rafael:~$
```

Listagem 2.2: Comando exit

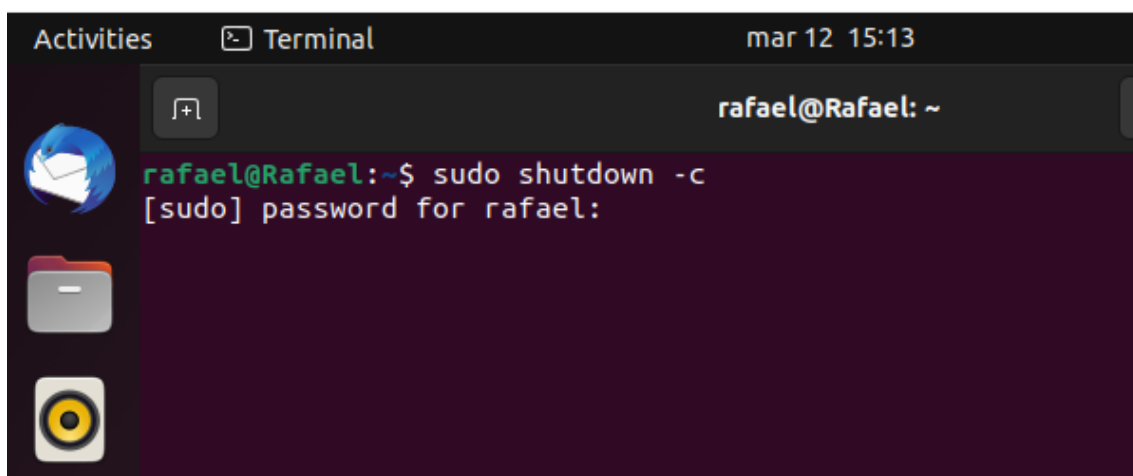


```
Activities Terminal mar 12 15:11  
rafael@Rafael: ~  
rafael@Rafael:~$ exit
```

Listagem 2.4: Desligando Imediatamente com poweroff



Listagem 2.9: Cancelando Shutdown

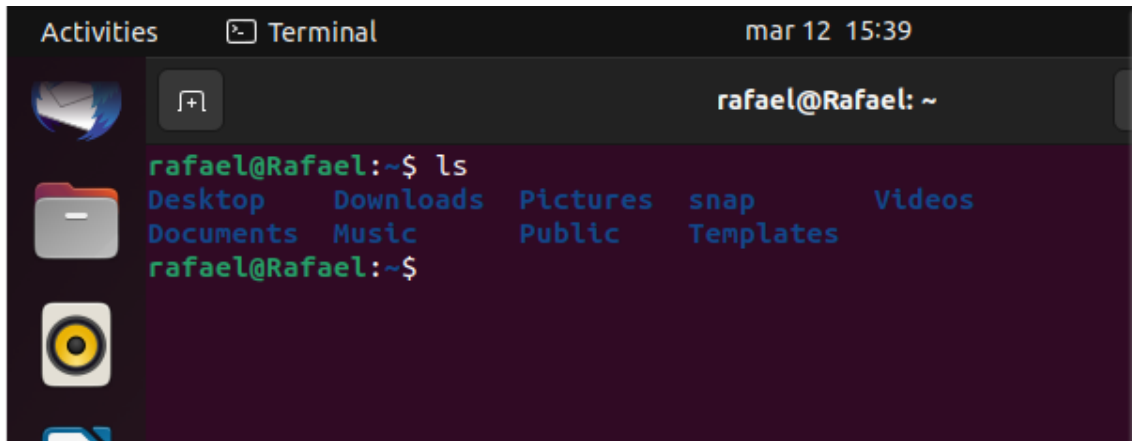


Listagem 2.11: Reiniciando com shutdown



Capítulo 3

Listagem 3.1: Listando o Conteúdo de um Diretório



A terminal window titled 'Terminal' with a timestamp of 'mar 12 15:39'. The prompt is 'rafael@Rafael: ~'. The command 'ls' has been executed, displaying a grid of directory names: Desktop, Downloads, Pictures, snap, Videos, Documents, Music, Public, and Templates. The prompt 'rafael@Rafael:~\$' is visible at the bottom.

```
rafael@Rafael:~$ ls
Desktop  Downloads  Pictures  snap      Videos
Documents Music      Public    Templates
```

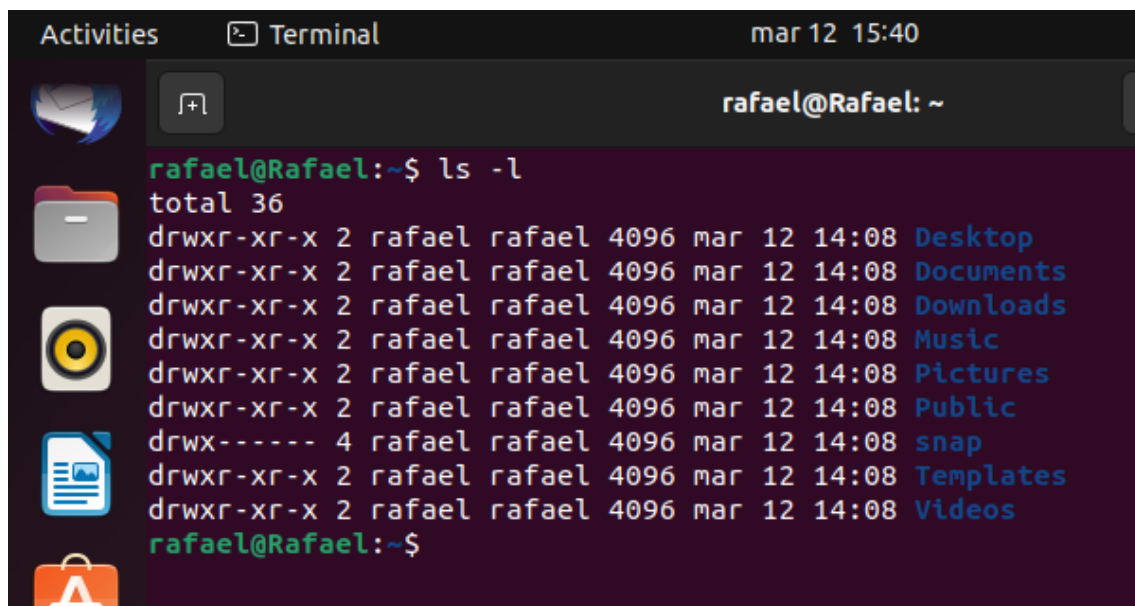
Listagem 3.2: Uma Entrada por Linha



A terminal window titled 'Terminal' with a timestamp of 'mar 12 15:40'. The prompt is 'rafael@Rafael: ~'. The command 'ls -1' has been executed, displaying a vertical list of directory names: Desktop, Documents, Downloads, Music, Pictures, Public, snap, Templates, Videos, and rafaelf@Rafael:~\$. The prompt 'rafael@Rafael:~\$' is visible at the bottom.

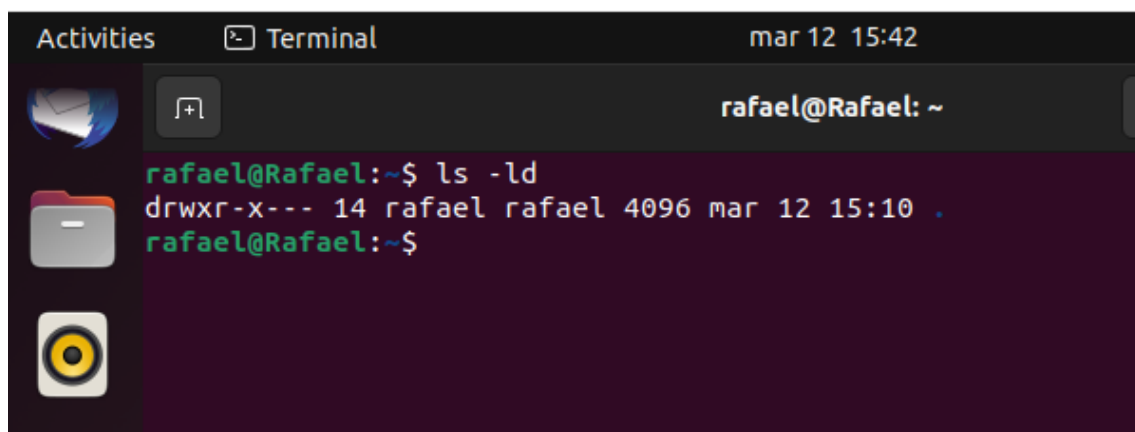
```
rafael@Rafael:~$ ls -1
Desktop
Documents
Downloads
Music
Pictures
Public
snap
Templates
Videos
rafaelf@Rafael:~$
```

Listagem 3.3: Comando ls no formato longo



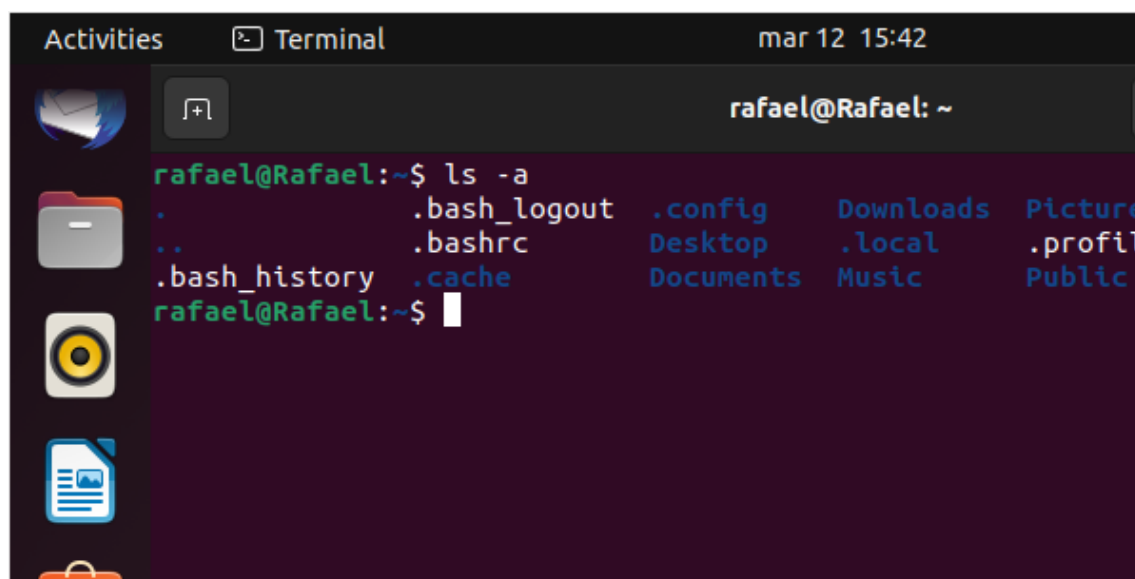
```
rafael@Rafael: ~$ ls -l
total 36
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Desktop
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Documents
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Downloads
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Music
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Pictures
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Public
drwx----- 4 raphael raphael 4096 mar 12 14:08 snap
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Templates
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Videos
rafael@Rafael:~$
```

Listagem 3.7: Obtendo informações sobre diretórios



```
rafael@Rafael:~$ ls -ld
drwxr-x--- 14 raphael raphael 4096 mar 12 15:10 .
rafael@Rafael:~$
```

Listagem 3.8: Listando Todos os Arquivos Inclusive os Ocultos



```
rafael@Rafael:~$ ls -a
.          .bash_logout  .config      Downloads    Picture
..         .bashrc      Desktop      .local       .profil
.bash_history .cache       Documents    Music        Public
rafael@Rafael:~$
```

Listagem 3.11: Tamanho em Blocos



A terminal window titled 'rafael@Rafael: ~' with a date and time of 'mar 12 15:43'. The user has entered the command 'ls -s'. The output shows the total size of the home directory as 36 blocks, followed by a list of directories and their sizes: Desktop (4), Downloads (4), Pictures (4), snap (4), Videos (4), Documents (4), Music (4), Public (4), and Templates (4). The prompt 'rafael@Rafael:~\$' is shown at the bottom.

```
rafael@Rafael:~$ ls -s
total 36
 4 Desktop      4 Downloads    4 Pictures     4 snap        4 Videos
 4 Documents    4 Music        4 Public       4 Templates
rafael@Rafael:~$
```

Listagem 3.13: Combinando Opções do Comando ls



A terminal window titled 'rafael@Rafael: ~' with a date and time of 'mar 12 15:43'. The user has entered the command 'ls -alF'. The output shows a detailed listing of the home directory with permissions, owner, group, size, date, and filename. The total size is 72 blocks. The prompt 'rafael@Rafael:~\$' is shown at the bottom.

```
rafael@Rafael:~$ ls -alF
total 72
drwxr-x--- 14 raphael raphael 4096 mar 12 15:10 ./
drwxr-xr-x  3 root    root    4096 mar 12 14:00 ../
-rw-----  1 raphael raphael  131 mar 12 15:10 .bash_history
-rw-r--r--  1 raphael raphael  220 mar 12 14:00 .bash_logout
-rw-r--r--  1 raphael raphael 3771 mar 12 14:00 .bashrc
drwx----- 11 raphael raphael 4096 mar 12 14:47 .cache/
drwx----- 10 raphael raphael 4096 mar 12 14:09 .config/
drwxr-xr-x  2 raphael raphael 4096 mar 12 14:08 Desktop/
drwxr-xr-x  2 raphael raphael 4096 mar 12 14:08 Documents/
drwxr-xr-x  2 raphael raphael 4096 mar 12 14:08 Downloads/
drwx-----  3 raphael raphael 4096 mar 12 14:08 .local/
drwxr-xr-x  2 raphael raphael 4096 mar 12 14:08 Music/
drwxr-xr-x  2 raphael raphael 4096 mar 12 14:08 Pictures/
-rw-r--r--  1 raphael raphael  807 mar 12 14:00 .profile
drwxr-xr-x  2 raphael raphael 4096 mar 12 14:08 Public/
drwx-----  4 raphael raphael 4096 mar 12 14:08 snap/
drwxr-xr-x  2 raphael raphael 4096 mar 12 14:08 Templates/
drwxr-xr-x  2 raphael raphael 4096 mar 12 14:08 Videos/
rafael@Rafael:~$
```

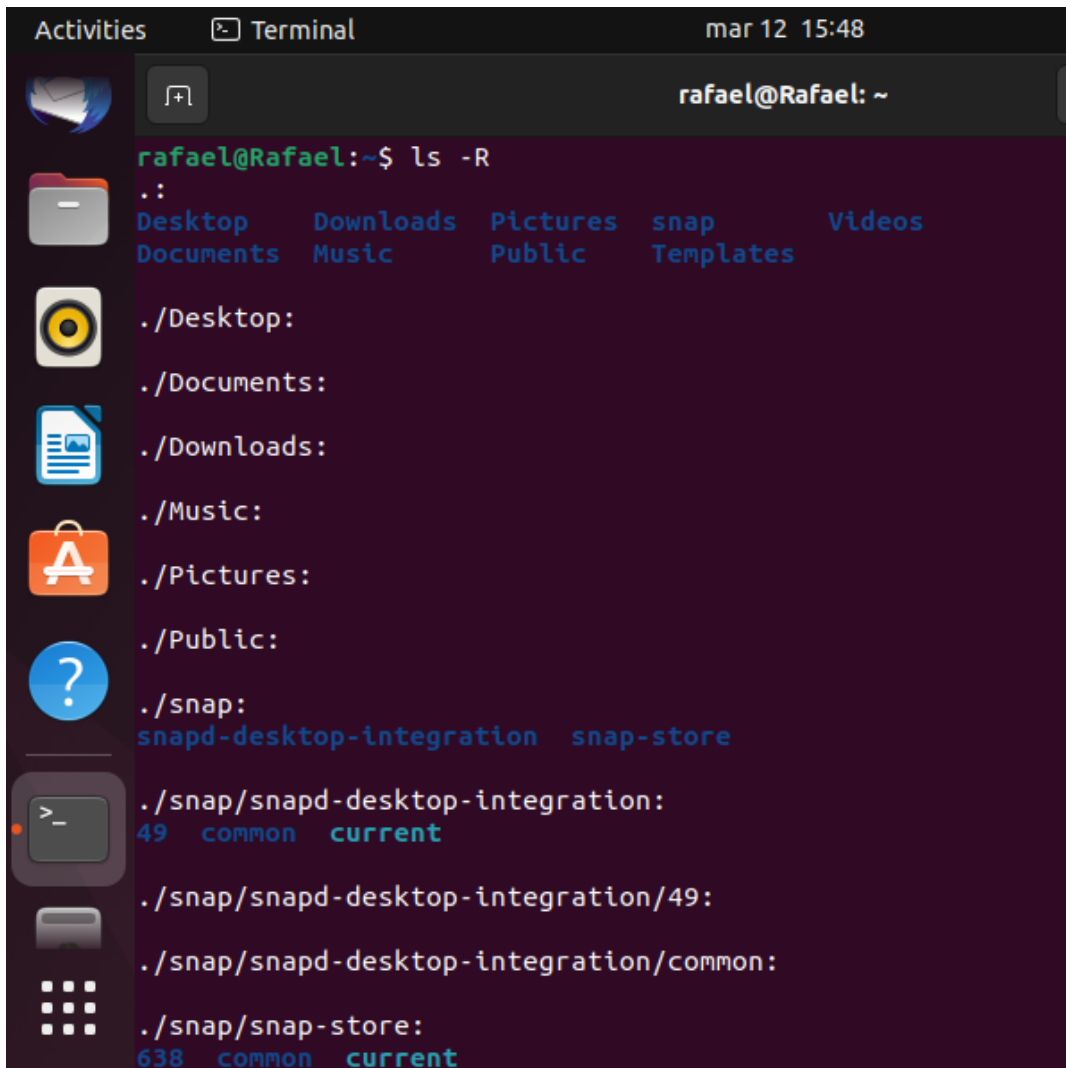
Listagem 3.14: Visualizando Informações sobre o Diretório



A terminal window titled 'Terminal' with a timestamp of 'mar 12 15:46'. The user 'rafael@Rafael' is at the prompt '~'. The command 'ls -ld /usr/' is entered, and the output is 'drwxr-xr-x 14 root root 4096 fev 23 00:57 /usr/'. The terminal has a dark purple background and a sidebar on the left with icons for Activities, Files, Music, Pictures, and Documents.

```
rafael@Rafael:~$ ls -ld /usr/
drwxr-xr-x 14 root root 4096 fev 23 00:57 /usr/
rafael@Rafael:~$
```

Listagem 3.15: Listando Recursivamente



A terminal window titled 'Terminal' with a timestamp of 'mar 12 15:48'. The user 'rafael@Rafael' is at the prompt '~'. The command 'ls -R' is entered, and the output shows a recursive listing of the current directory. It lists top-level directories like Desktop, Downloads, Pictures, snap, Videos, Documents, Music, Public, and Templates. It then recursively lists the contents of each directory, including subdirectories like snapd-desktop-integration and snap-store, and their files. The terminal has a dark purple background and a sidebar on the left with icons for Activities, Files, Music, Pictures, and Documents.

```
rafael@Rafael:~$ ls -R
.:
Desktop    Downloads  Pictures   snap       Videos
Documents  Music      Public     Templates

./Desktop:

./Documents:

./Downloads:

./Music:

./Pictures:

./Public:

./snap:
snapd-desktop-integration  snap-store

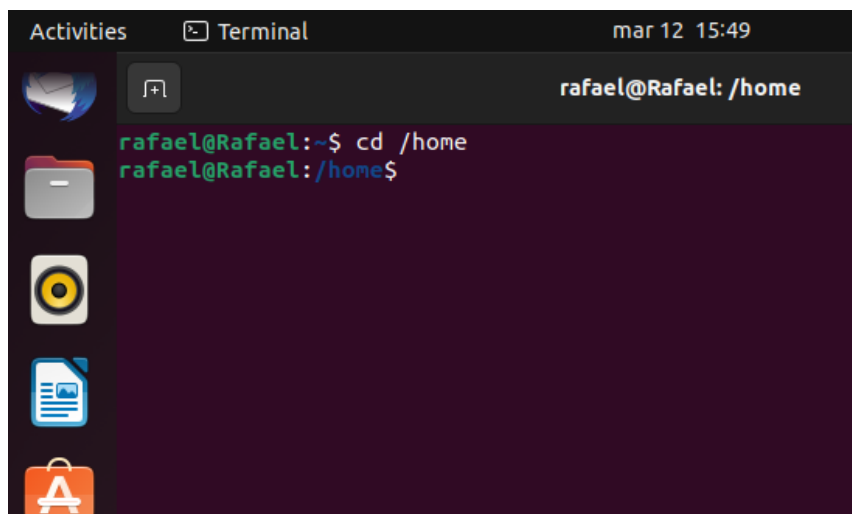
./snap/snapd-desktop-integration:
49  common  current

./snap/snapd-desktop-integration/49:

./snap/snapd-desktop-integration/common:

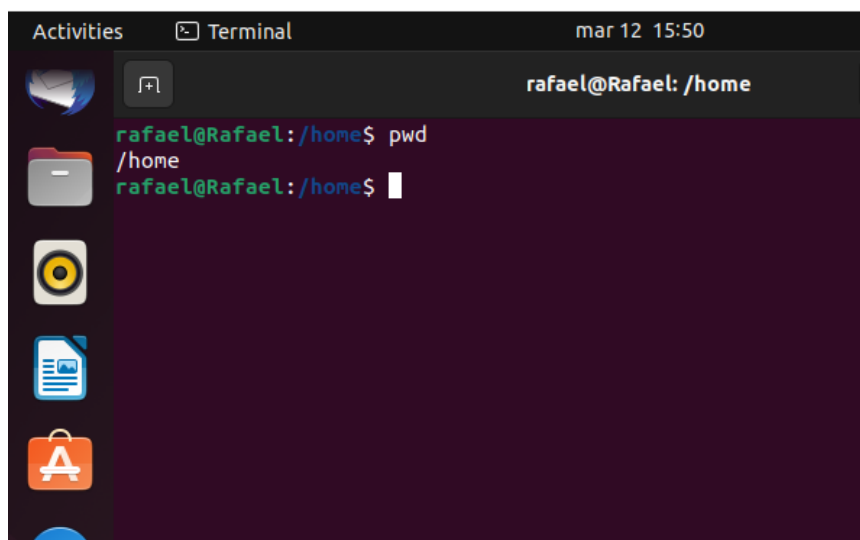
./snap/snap-store:
638  common  current
```

Listagem 3.16: Comando cd

A terminal window titled 'Terminal' with a timestamp of 'mar 12 15:49'. The prompt is 'rafael@Rafael: /home'. The user enters the command 'cd /home', and the prompt changes to 'rafael@Rafael: /home\$'. On the left, there is a sidebar with icons for Activities, Files, Music, Documents, and Applications.

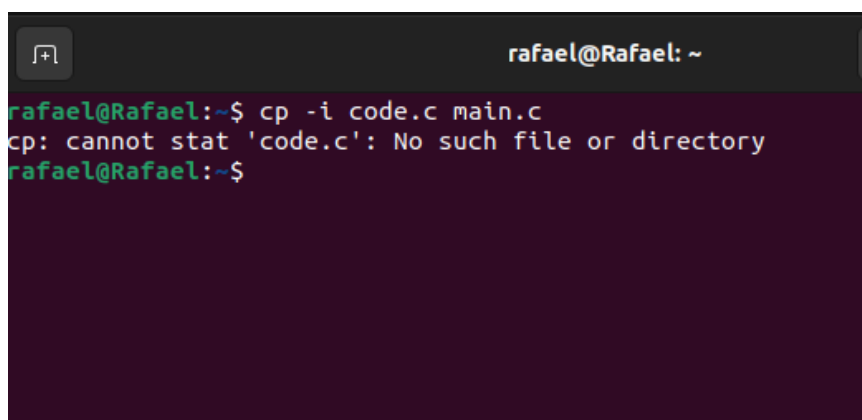
```
rafael@Rafael:~$ cd /home
rafael@Rafael: /home$
```

Listagem 3.21: Comando pwd

A terminal window titled 'Terminal' with a timestamp of 'mar 12 15:50'. The prompt is 'rafael@Rafael: /home'. The user enters the command 'pwd', and the output is '/home'. The prompt then changes to 'rafael@Rafael: /home\$'. The sidebar on the left is the same as in the previous screenshot.

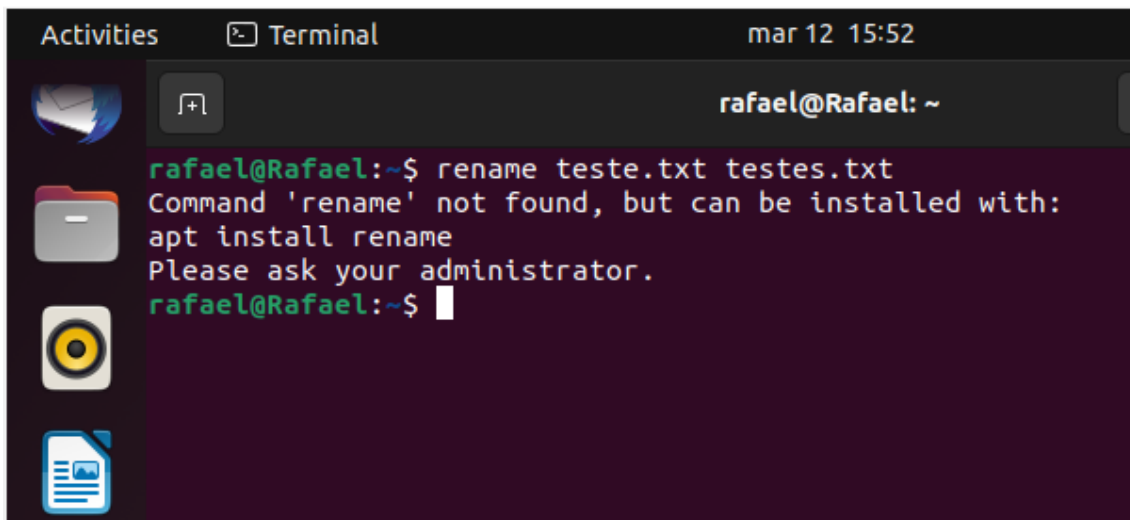
```
rafael@Rafael: /home$ pwd
/home
rafael@Rafael: /home$
```

Listagem 3.28: Copiando com a Opção -i

A terminal window titled 'Terminal' with a prompt of 'rafael@Rafael: ~'. The user enters the command 'cp -i code.c main.c'. The terminal displays an error message: 'cp: cannot stat 'code.c': No such file or directory'. The prompt then changes to 'rafael@Rafael:~\$'.

```
rafael@Rafael:~$ cp -i code.c main.c
cp: cannot stat 'code.c': No such file or directory
rafael@Rafael:~$
```

Listagem 3.30: Renomeando Arquivos com rename




```
Activities Terminal mar 12 15:52
rafael@Rafael: ~
rafael@Rafael:~$ rename teste.txt testes.txt
Command 'rename' not found, but can be installed with:
apt install rename
Please ask your administrator.
rafael@Rafael:~$
```

Listagem 3.31: Criando Arquivos com touch



```
Activities Terminal mar 12 15:53
rafael@Rafael: ~
rafael@Rafael:~$ touch teste.txt
rafael@Rafael:~$
```

Listagem 3.33: Apagando um Arquivo



```
rafael@Rafael: ~
rafael@Rafael:~$ rm teste.c
rm: cannot remove 'teste.c': No such file or directory
rafael@Rafael:~$
```


Listagem 3.42: Criando um Arquivo

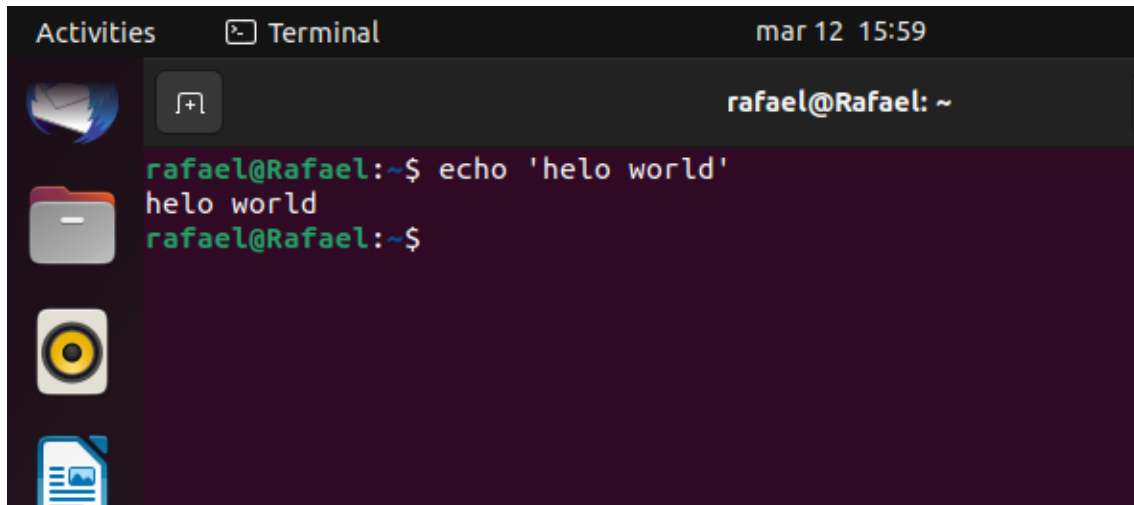


A screenshot of a Linux terminal window. The window has a title bar with 'Activities' on the left, 'Terminal' in the center, and 'mar 12 15:56' on the right. Below the title bar is a dark sidebar with icons for a file manager, a terminal, a music player, a document, and a shopping bag. The main area of the terminal is dark purple and shows the following commands and output:

```
rafael@Rafael:~$ touch arql
rafael@Rafael:~$ echo 'preto' >> arql
rafael@Rafael:~$
```

Capítulo 4

Listagem 4.1: Comando echo

A terminal window titled 'Terminal' with a timestamp of 'mar 12 15:59'. The prompt is 'rafael@Rafael: ~'. The user enters the command 'echo 'helo world'', and the terminal outputs 'helo world'.

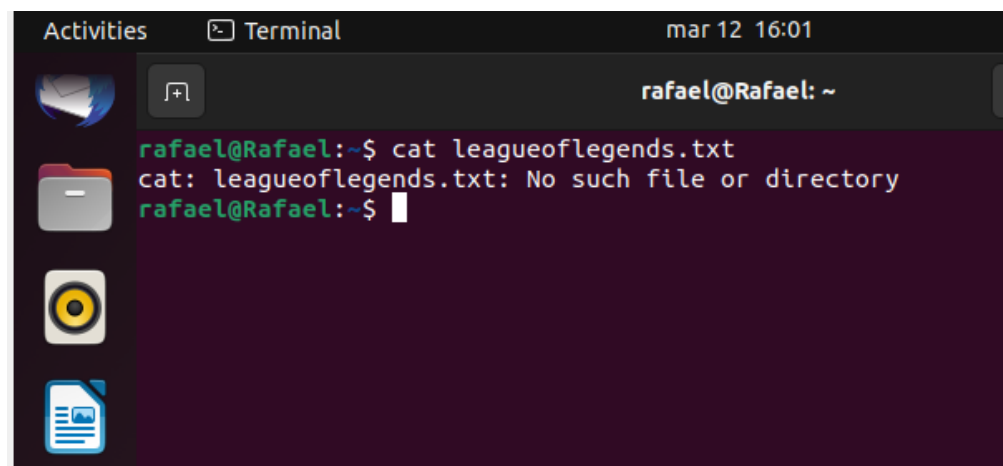
```
rafael@Rafael:~$ echo 'helo world'
helo world
rafael@Rafael:~$
```

Listagem 4.2: Comando echo

A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:00'. The prompt is 'rafael@Rafael: ~'. The user enters the command 'echo -en 'helloworld'', and the terminal outputs 'helloworld' without a newline.

```
rafael@Rafael:~$ echo -en 'helloworld'
helloworldrafael@Rafael:~$
```

Listagem 4.3: Comando cat

A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:01'. The prompt is 'rafael@Rafael: ~'. The user enters the command 'cat leagueoflegends.txt', and the terminal outputs an error message: 'cat: leagueoflegends.txt: No such file or directory'.

```
rafael@Rafael:~$ cat leagueoflegends.txt
cat: leagueoflegends.txt: No such file or directory
rafael@Rafael:~$
```

Listagem 4.4: Comando cat com dois arquivos

A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:02'. The user 'rafael@Rafael' is in the home directory '~'. The terminal shows three commands: 'seq 1 5 > arq1.txt', 'seq 6 10 > arq2.txt', and 'cat arq1.txt arq2.txt'. The output of the 'cat' command is a list of numbers from 1 to 10.

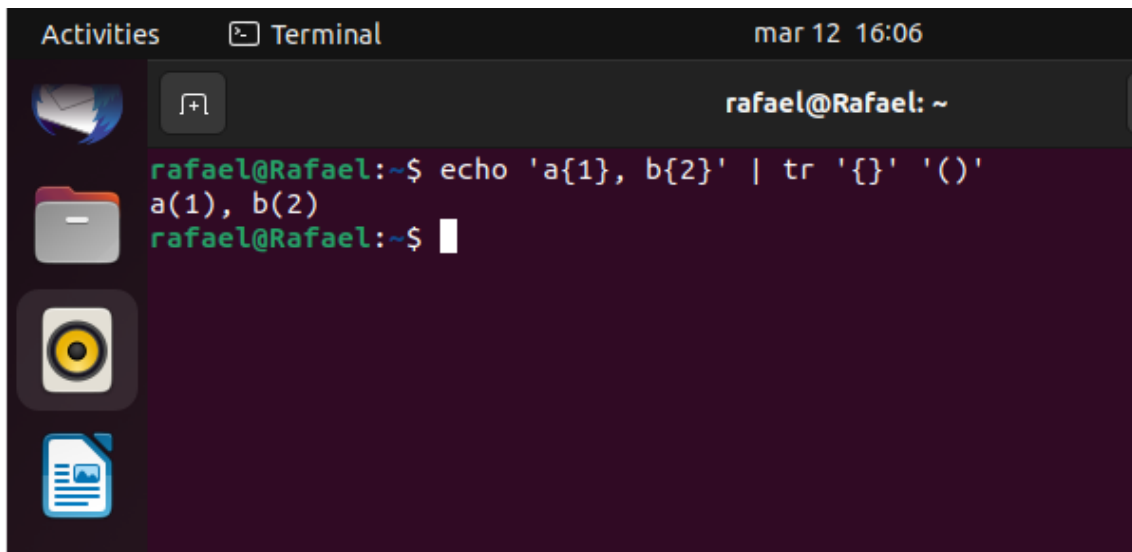
```
rafael@Rafael:~$ seq 1 5 > arq1.txt
rafael@Rafael:~$ seq 6 10 > arq2.txt
rafael@Rafael:~$ cat arq1.txt arq2.txt
1
2
3
4
5
6
7
8
9
10
rafael@Rafael:~$
```

Listagem 4.9: Gerando uma sequência de números

A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:03'. The user 'rafael@Rafael' is in the home directory '~'. The terminal shows the command 'seq 3' followed by the output '1', '2', and '3'. The prompt 'rafael@Rafael:~\$' is followed by a cursor.

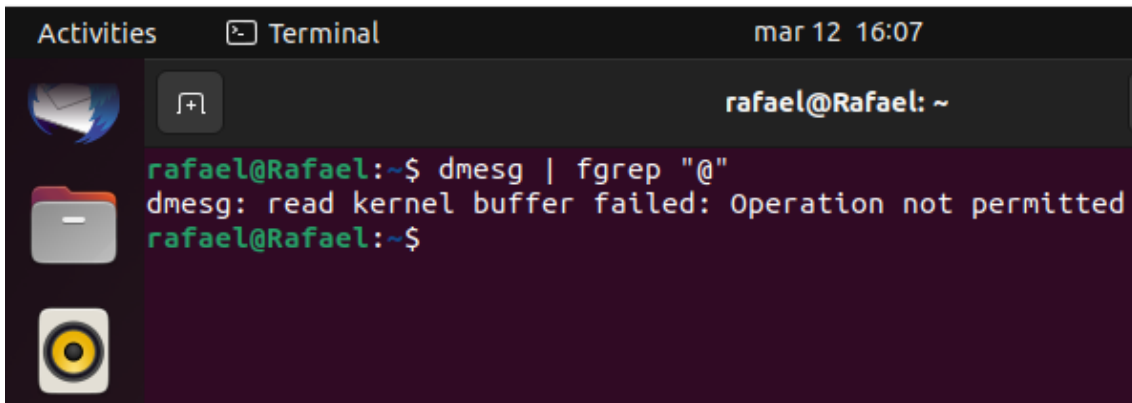
```
rafael@Rafael:~$ seq 3
1
2
3
rafael@Rafael:~$
```

Listagem 4.20: Substituir chaves por parênteses

A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:06'. The prompt is 'rafael@Rafael: ~'. The user enters the command 'echo 'a{1}, b{2}'' | tr '{}()''. The output is 'a(1), b(2)'.

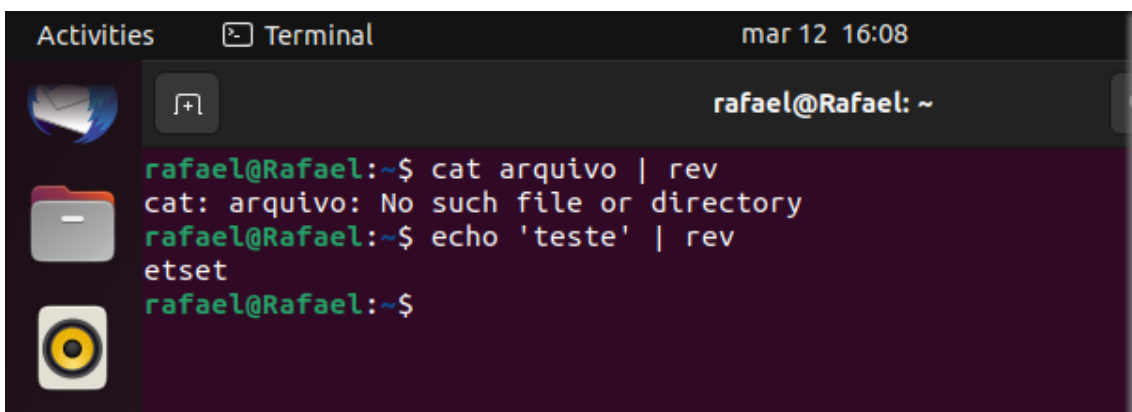
```
rafael@Rafael:~$ echo 'a{1}, b{2}' | tr '{}()'
a(1), b(2)
rafael@Rafael:~$
```

Listagem 4.32: Filtrando com egrep

A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:07'. The prompt is 'rafael@Rafael: ~'. The user enters the command 'dmesg | fgrep "@"'. The output is 'dmesg: read kernel buffer failed: Operation not permitted'.

```
rafael@Rafael:~$ dmesg | fgrep "@"
dmesg: read kernel buffer failed: Operation not permitted
rafael@Rafael:~$
```

Listagem 4.48: Comando para Inverter os Caracteres – ver

A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:08'. The prompt is 'rafael@Rafael: ~'. The user enters two commands: 'cat arquivo | rev' and 'echo 'teste' | rev'. The outputs are 'cat: arquivo: No such file or directory' and 'etset' respectively.

```
rafael@Rafael:~$ cat arquivo | rev
cat: arquivo: No such file or directory
rafael@Rafael:~$ echo 'teste' | rev
etset
rafael@Rafael:~$
```

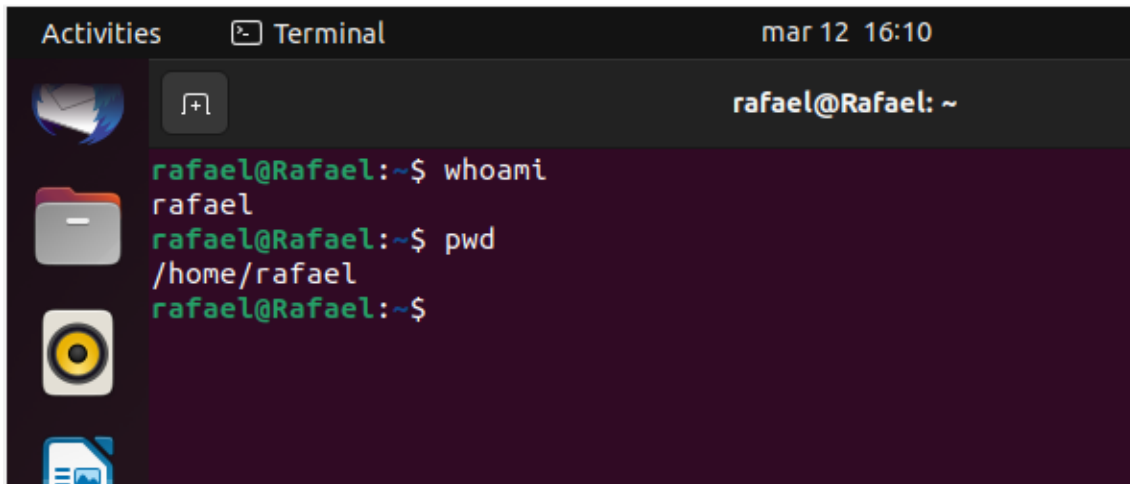
Listagem 4.49: Invertendo Caracteres com ver

A screenshot of a Linux terminal window. The title bar shows 'Activities', 'Terminal', and the date/time 'mar 12 16:09'. The terminal prompt is 'rafael@Rafael: ~'. The user enters the command 'cat arquivo | rev', which results in an error message 'cat: arquivo: No such file or directory'. The user then enters 'echo 'teste' | rev', which outputs 'etset'. The prompt returns to 'rafael@Rafael:~\$'. On the left side of the terminal, there is a vertical sidebar with icons for a file manager, a folder, a CD/DVD, and a document.

```
rafael@Rafael:~$ cat arquivo | rev
cat: arquivo: No such file or directory
rafael@Rafael:~$ echo 'teste' | rev
etset
rafael@Rafael:~$
```

Capítulo 5

Listagem 5.2: Comando whoami e pwd

A screenshot of a Linux terminal window titled 'Terminal' with a timestamp of 'mar 12 16:10'. The prompt is 'rafael@Rafael: ~'. The user enters 'whoami', and the output is 'rafael'. Then the user enters 'pwd', and the output is '/home/rafael'.

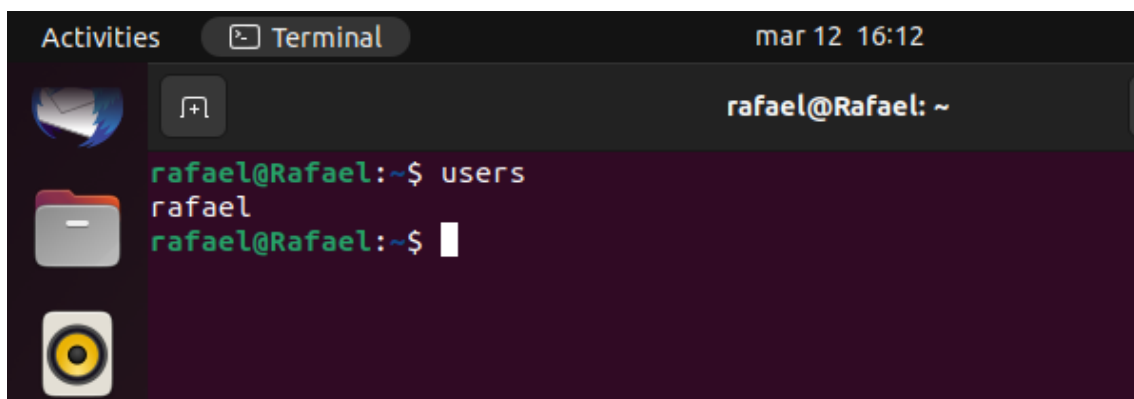
```
rafael@Rafael:~$ whoami
rafael
rafael@Rafael:~$ pwd
/home/rafael
rafael@Rafael:~$
```

Listagem 5.4: Identificadores no Mac

A screenshot of a Linux terminal window titled 'Terminal' with a timestamp of 'mar 12 16:11'. The prompt is 'rafael@Rafael: ~'. The user enters 'id', and the output shows the user's identity and group information: 'uid=1000(rafael) gid=1000(rafael) groups=1000(rafael)'.

```
rafael@Rafael:~$ id
uid=1000(rafael) gid=1000(rafael) groups=1000(rafael)
rafael@Rafael:~$
```

Listagem 5.7: Usuários Logados

A screenshot of a Linux terminal window titled 'Terminal' with a timestamp of 'mar 12 16:12'. The prompt is 'rafael@Rafael: ~'. The user enters 'users', and the output is 'rafael'.

```
rafael@Rafael:~$ users
rafael
rafael@Rafael:~$
```

Listagem 5.8: Instalação do finger

```
rafael@Rafael: ~  
rafael@Rafael:~$ sudo apt-get install finger  
[sudo] password for raphael:  
rafinha271Sorry, try again.  
[sudo] password for raphael:  
rafinha27Sorry, try again.  
[sudo] password for raphael:  
sudo: 3 incorrect password attempts  
rafael@Rafael:~$ sudo apt-get install finger  
[sudo] password for raphael:  
rafael is not in the sudoers file. This incident will be  
rafael@Rafael:~$ S
```

Listagem 5.11: Comando finger no Linux

```
Activities Terminal mar 12 16:14  
rafael@Rafael: ~  
rafael@Rafael:~$ finger  
Command 'finger' not found, but can be installed with:  
apt install finger  
Please ask your administrator.  
rafael@Rafael:~$
```

Listagem 5.13: Comando free

```
Activities Terminal mar 12 16:14  
rafael@Rafael: ~  
rafael@Rafael:~$ free  
              total        used        free      shared  
Mem:           3011848        922660        404516         35516  
Swap:          3297276            0        3297276  
rafael@Rafael:~$
```

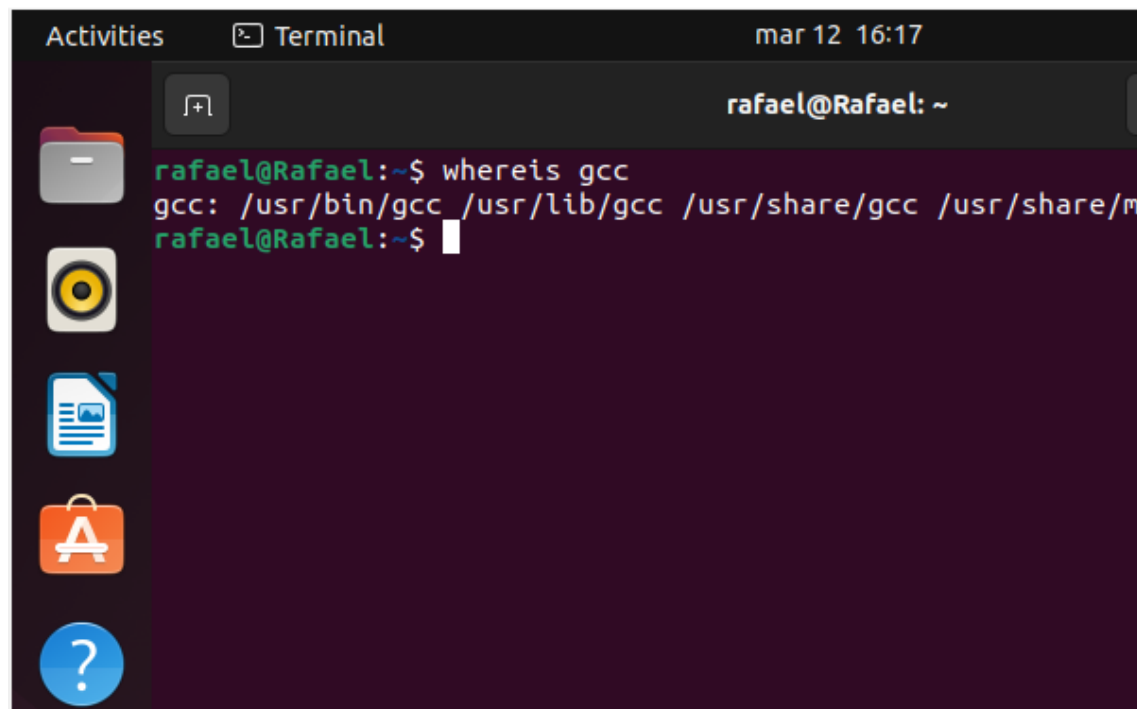
Listagem 5.25: Comando timeout



A terminal window titled 'rafael@Rafael: ~' with a timestamp of 'mar 12 16:15'. The terminal shows the execution of the command 'timeout 5 ping www.google.com'. The output displays five successful ping results, each showing 64 bytes of data and a response time between 15.7 ms and 15.9 ms. The terminal interface includes a sidebar with icons for file manager, music, documents, and applications.

```
rafael@Rafael:~$ timeout 5 ping www.google.com
PING www.google.com (142.251.129.228) 56(84) bytes of data:
64 bytes from gru14s34-in-f4.1e100.net (142.251.129.228):
me=15.9 ms
64 bytes from gru14s34-in-f4.1e100.net (142.251.129.228):
me=15.8 ms
64 bytes from gru14s34-in-f4.1e100.net (142.251.129.228):
me=15.7 ms
64 bytes from gru14s34-in-f4.1e100.net (142.251.129.228):
me=15.9 ms
64 bytes from gru14s34-in-f4.1e100.net (142.251.129.228):
me=15.7 ms
rafael@Rafael:~$
```

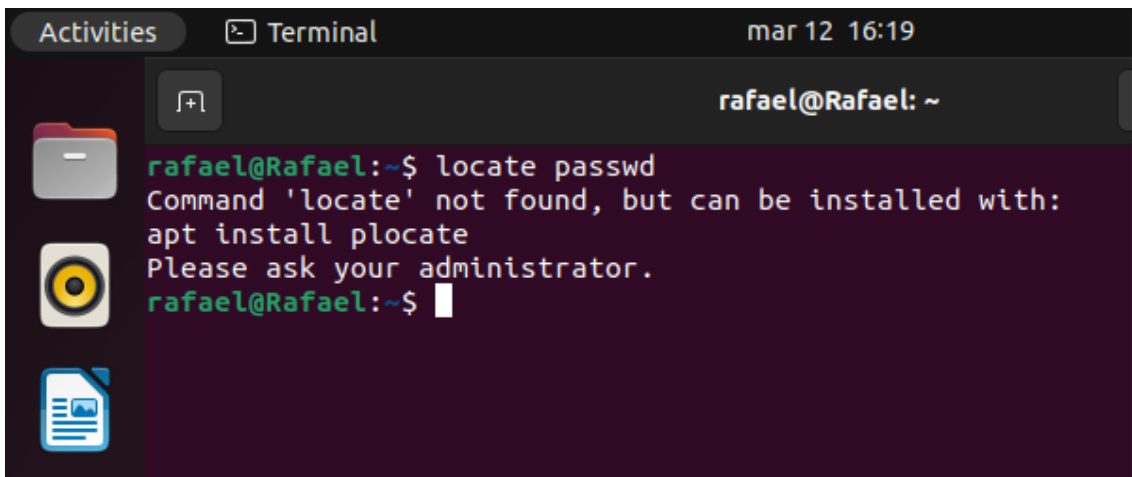
Listagem 5.27: Comando whereis



A terminal window titled 'rafael@Rafael: ~' with a timestamp of 'mar 12 16:17'. The terminal shows the execution of the command 'whereis gcc'. The output lists the locations of gcc binaries and libraries: '/usr/bin/gcc /usr/lib/gcc /usr/share/gcc /usr/share/m'. The terminal interface includes a sidebar with icons for file manager, music, documents, and applications.

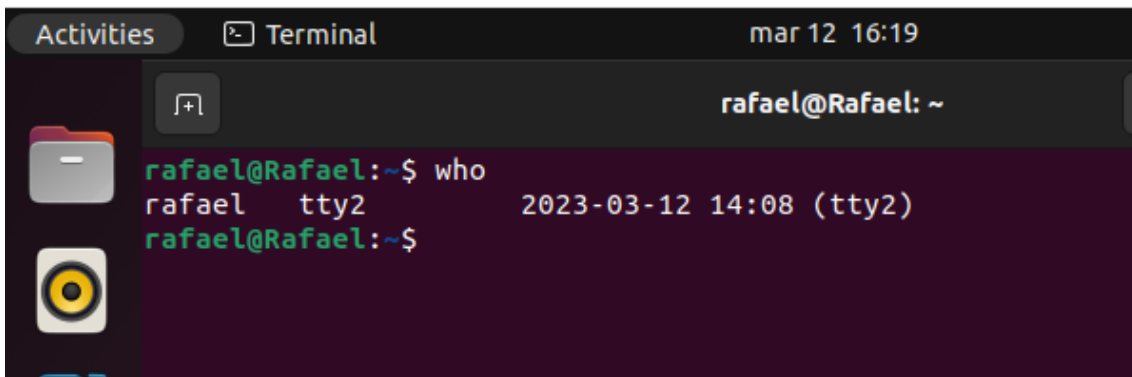
```
rafael@Rafael:~$ whereis gcc
gcc: /usr/bin/gcc /usr/lib/gcc /usr/share/gcc /usr/share/m
rafael@Rafael:~$
```


Listagem 5.28: Comando locate

A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:19'. The user 'rafael@Rafael' is at the prompt '~'. The command 'locate passwd' is entered. The output is: 'Command 'locate' not found, but can be installed with: apt install plocate Please ask your administrator.' The prompt 'rafael@Rafael:~\$' is shown again.

```
rafael@Rafael:~$ locate passwd
Command 'locate' not found, but can be installed with:
apt install plocate
Please ask your administrator.
rafael@Rafael:~$
```

Listagem 5.31: Comando who

A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:19'. The user 'rafael@Rafael' is at the prompt '~'. The command 'who' is entered. The output is: 'rafael tty2 2023-03-12 14:08 (tty2)'. The prompt 'rafael@Rafael:~\$' is shown again.

```
rafael@Rafael:~$ who
rafael tty2 2023-03-12 14:08 (tty2)
rafael@Rafael:~$
```

Capítulo 6

Listagem 6.1: Todos os Processos em Execução

Activities Terminal mar 12 16:20

rafael@Rafael: ~

```
rafael@Rafael:~$ ps -aef
UID          PID    PPID  C  STIME TTY          TIME CMD
root           1        0  0  14:07 ?           00:00:01 /sbin/t
root           2        0  0  14:07 ?           00:00:00 [kthrea
root           3         2  0  14:07 ?           00:00:00 [rcu_gp
root           4         2  0  14:07 ?           00:00:00 [rcu_pa
root           5         2  0  14:07 ?           00:00:00 [slub_t
root           6         2  0  14:07 ?           00:00:00 [netns
root           8         2  0  14:07 ?           00:00:00 [kworke
root          10         2  0  14:07 ?           00:00:00 [mm_per
root          11         2  0  14:07 ?           00:00:00 [rcu_ta
root          12         2  0  14:07 ?           00:00:00 [rcu_ta
root          13         2  0  14:07 ?           00:00:00 [rcu_ta
root          14         2  0  14:07 ?           00:00:00 [ksoftf
root          15         2  0  14:07 ?           00:00:01 [rcu_pr
root          16         2  0  14:07 ?           00:00:00 [migrat
root          17         2  0  14:07 ?           00:00:00 [idle_t
root          19         2  0  14:07 ?           00:00:00 [cpuhp/
root          20         2  0  14:07 ?           00:00:00 [cpuhp/
```

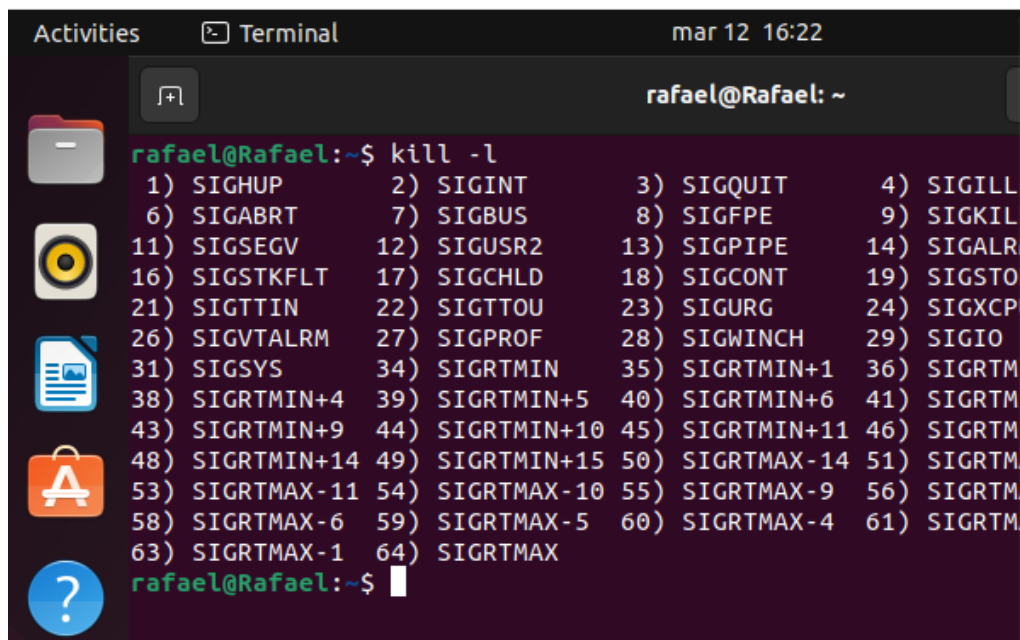
Listagem 6.4: Processos que Mais Consomem CPU

Activities Terminal mar 12 16:21

rafael@Rafael: ~

```
rafael@Rafael:~$ ps -aef -m | head -5
UID          PID    PPID  C  STIME TTY          TIME CMD
root           1        0  0  14:07 ?           00:00:01 /sbin/t
root           -         -  0  14:07 -           00:00:01 -
root           2        0  0  14:07 ?           00:00:00 [kthrea
root           -         -  0  14:07 -           00:00:00 -
rafael@Rafael:~$
```

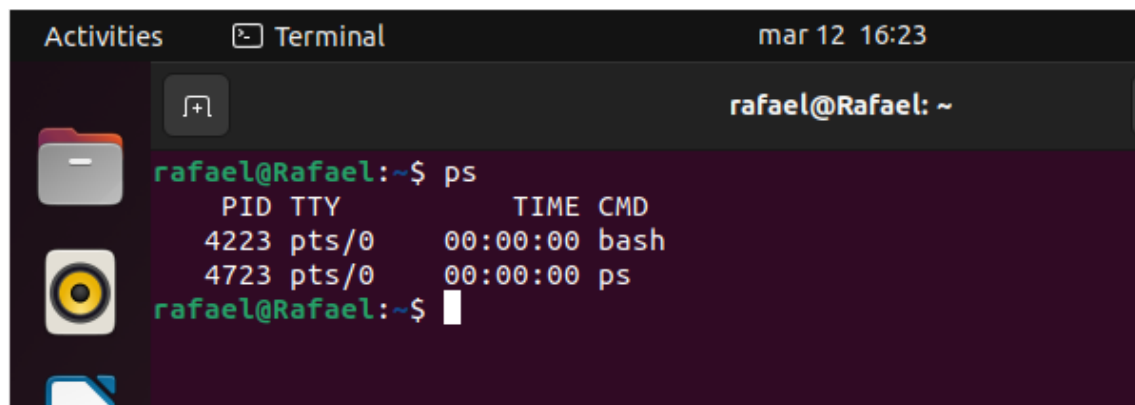
Listagem 6.9: Comando kill



A terminal window titled 'rafael@Rafael: ~' showing the output of the 'kill -l' command. The output lists 64 signals in a grid format. The signals are: 1) SIGHUP, 2) SIGINT, 3) SIGQUIT, 4) SIGILL, 6) SIGABRT, 7) SIGBUS, 8) SIGFPE, 9) SIGKILL, 11) SIGSEGV, 12) SIGUSR2, 13) SIGPIPE, 14) SIGALRM, 16) SIGSTKFLT, 17) SIGCHLD, 18) SIGCONT, 19) SIGSTOP, 21) SIGTTIN, 22) SIGTTOU, 23) SIGURG, 24) SIGXCPU, 26) SIGVTALRM, 27) SIGPROF, 28) SIGWINCH, 29) SIGIO, 31) SIGSYS, 34) SIGRTMIN, 35) SIGRTMIN+1, 36) SIGRTMIN+2, 38) SIGRTMIN+4, 39) SIGRTMIN+5, 40) SIGRTMIN+6, 41) SIGRTMIN+7, 43) SIGRTMIN+9, 44) SIGRTMIN+10, 45) SIGRTMIN+11, 46) SIGRTMIN+12, 48) SIGRTMIN+14, 49) SIGRTMIN+15, 50) SIGRTMAX-14, 51) SIGRTMAX-13, 53) SIGRTMAX-11, 54) SIGRTMAX-10, 55) SIGRTMAX-9, 56) SIGRTMAX-8, 58) SIGRTMAX-6, 59) SIGRTMAX-5, 60) SIGRTMAX-4, 61) SIGRTMAX-3, 63) SIGRTMAX-1, 64) SIGRTMAX.

```
rafael@Rafael:~$ kill -l
1) SIGHUP      2) SIGINT      3) SIGQUIT     4) SIGILL
6) SIGABRT     7) SIGBUS      8) SIGFPE       9) SIGKILL
11) SIGSEGV    12) SIGUSR2    13) SIGPIPE     14) SIGALRM
16) SIGSTKFLT  17) SIGCHLD    18) SIGCONT     19) SIGSTOP
21) SIGTTIN    22) SIGTTOU    23) SIGURG      24) SIGXCPU
26) SIGVTALRM  27) SIGPROF    28) SIGWINCH    29) SIGIO
31) SIGSYS     34) SIGRTMIN    35) SIGRTMIN+1  36) SIGRTMIN+2
38) SIGRTMIN+4 39) SIGRTMIN+5 40) SIGRTMIN+6 41) SIGRTMIN+7
43) SIGRTMIN+9 44) SIGRTMIN+10 45) SIGRTMIN+11 46) SIGRTMIN+12
48) SIGRTMIN+14 49) SIGRTMIN+15 50) SIGRTMAX-14 51) SIGRTMAX-13
53) SIGRTMAX-11 54) SIGRTMAX-10 55) SIGRTMAX-9  56) SIGRTMAX-8
58) SIGRTMAX-6 59) SIGRTMAX-5 60) SIGRTMAX-4 61) SIGRTMAX-3
63) SIGRTMAX-1 64) SIGRTMAX
```

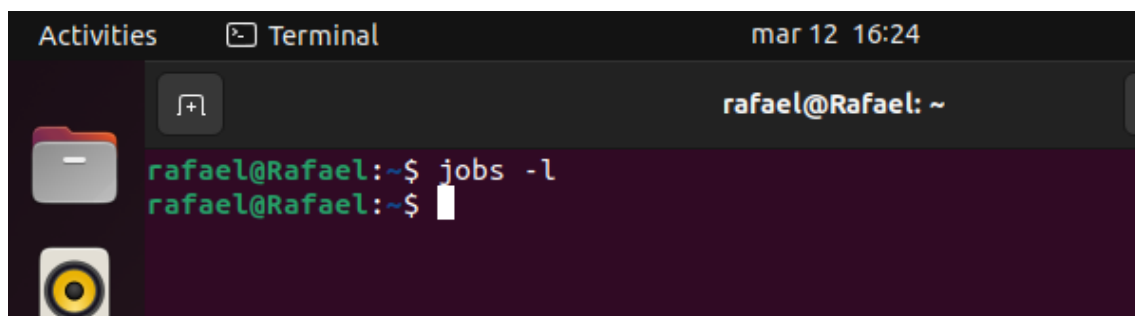
Listagem 6.13: Controlando Processos



A terminal window titled 'rafael@Rafael: ~' showing the output of the 'ps' command. The output displays two processes: 'bash' with PID 4223 and 'ps' with PID 4723.

```
rafael@Rafael:~$ ps
  PID TTY          TIME CMD
 4223 pts/0        00:00:00 bash
 4723 pts/0        00:00:00 ps
```

Listagem 6.16: Controlando Processos



A terminal window titled 'rafael@Rafael: ~' showing the output of the 'jobs -l' command. The output is empty, indicating no background jobs are currently running.

```
rafael@Rafael:~$ jobs -l
rafael@Rafael:~$
```

Listagem 6.22: Controlando Processos

Activities Terminal mar 12 16:24

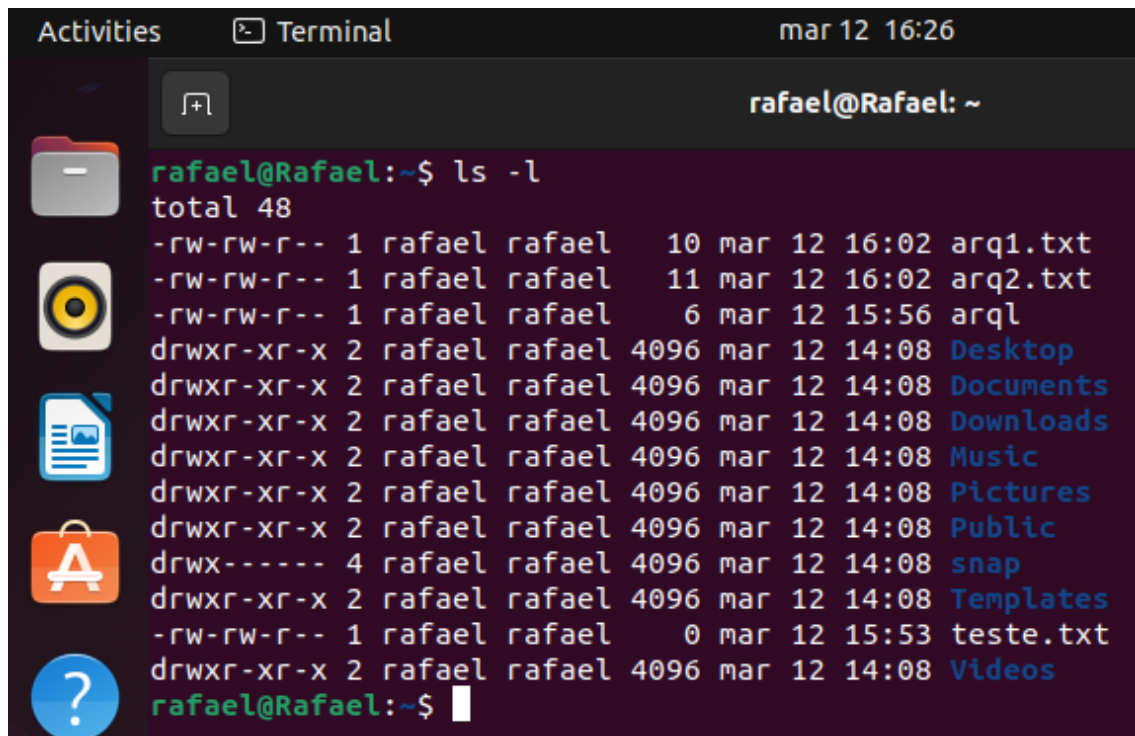
rafael@Rafael: ~

rafael@Rafael:~\$ ps aux

USER	PID	%CPU	%MEM	VSZ	RSS	TTY	STAT	START
root	1	0.0	0.4	167756	13056	?	Ss	14:07
root	2	0.0	0.0	0	0	?	S	14:07
root	3	0.0	0.0	0	0	?	I<	14:07
root	4	0.0	0.0	0	0	?	I<	14:07
root	5	0.0	0.0	0	0	?	I<	14:07
root	6	0.0	0.0	0	0	?	I<	14:07
root	8	0.0	0.0	0	0	?	I<	14:07
root	10	0.0	0.0	0	0	?	I<	14:07
root	11	0.0	0.0	0	0	?	I	14:07
root	12	0.0	0.0	0	0	?	I	14:07
root	13	0.0	0.0	0	0	?	I	14:07
root	14	0.0	0.0	0	0	?	S	14:07
root	15	0.0	0.0	0	0	?	I	14:07
root	16	0.0	0.0	0	0	?	S	14:07
root	17	0.0	0.0	0	0	?	S	14:07
root	19	0.0	0.0	0	0	?	S	14:07
root	20	0.0	0.0	0	0	?	S	14:07
root	21	0.0	0.0	0	0	?	S	14:07
root	22	0.0	0.0	0	0	?	S	14:07
root	23	0.0	0.0	0	0	?	S	14:07
root	25	0.0	0.0	0	0	?	I<	14:07
root	26	0.0	0.0	0	0	?	S	14:07
root	27	0.0	0.0	0	0	?	I<	14:07
root	28	0.0	0.0	0	0	?	S	14:07
root	29	0.0	0.0	0	0	?	S	14:07
root	31	0.0	0.0	0	0	?	S	14:07
root	33	0.0	0.0	0	0	?	I<	14:07

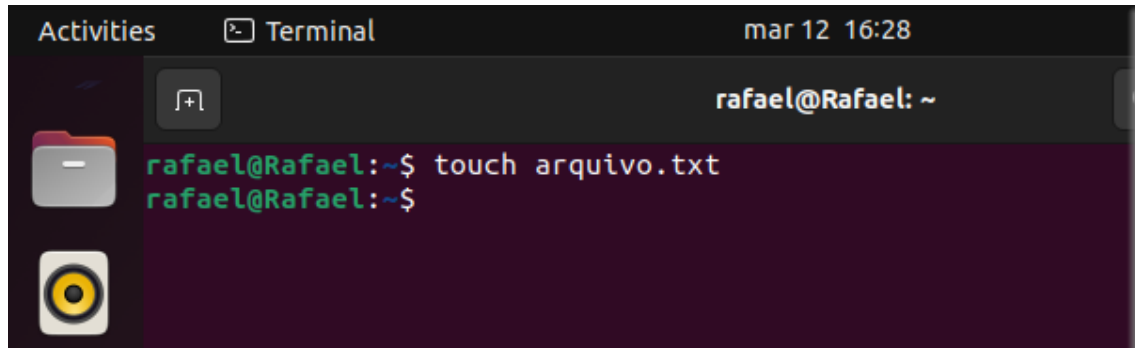
Capítulo 7

Listagem 7.1: Listando o Proprietário e as Permissões dos Arquivos



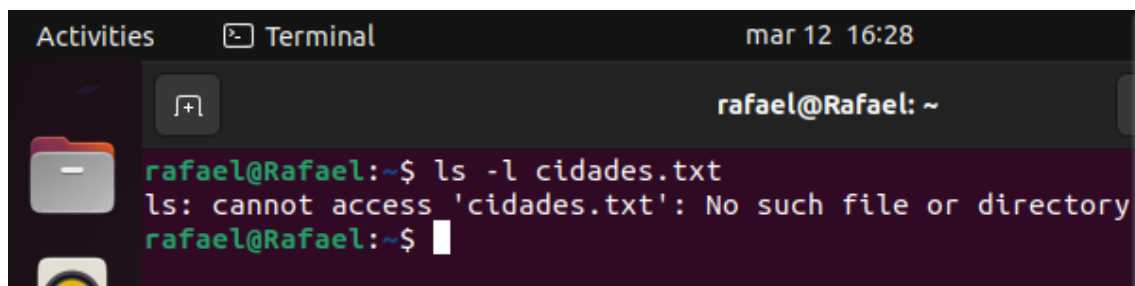
```
Activities Terminal mar 12 16:26
rafael@Rafael: ~
rafael@Rafael:~$ ls -l
total 48
-rw-rw-r-- 1 raphael raphael 10 mar 12 16:02 arq1.txt
-rw-rw-r-- 1 raphael raphael 11 mar 12 16:02 arq2.txt
-rw-rw-r-- 1 raphael raphael 6 mar 12 15:56 arql
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Desktop
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Documents
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Downloads
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Music
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Pictures
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Public
drwx----- 4 raphael raphael 4096 mar 12 14:08 snap
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Templates
-rw-rw-r-- 1 raphael raphael 0 mar 12 15:53 teste.txt
drwxr-xr-x 2 raphael raphael 4096 mar 12 14:08 Videos
rafael@Rafael:~$
```

Listagem 7.2: Criando arquivo cidadex.txt



```
Activities Terminal mar 12 16:28
rafael@Rafael: ~
rafael@Rafael:~$ touch arquivo.txt
rafael@Rafael:~$
```

Listagem 7.3: Criando arquivo cidadex.txt



```
Activities Terminal mar 12 16:28
rafael@Rafael: ~
rafael@Rafael:~$ ls -l cidades.txt
ls: cannot access 'cidades.txt': No such file or directory
rafael@Rafael:~$
```

Listagem 7.10: Trocando as Permissões de um Arquivo

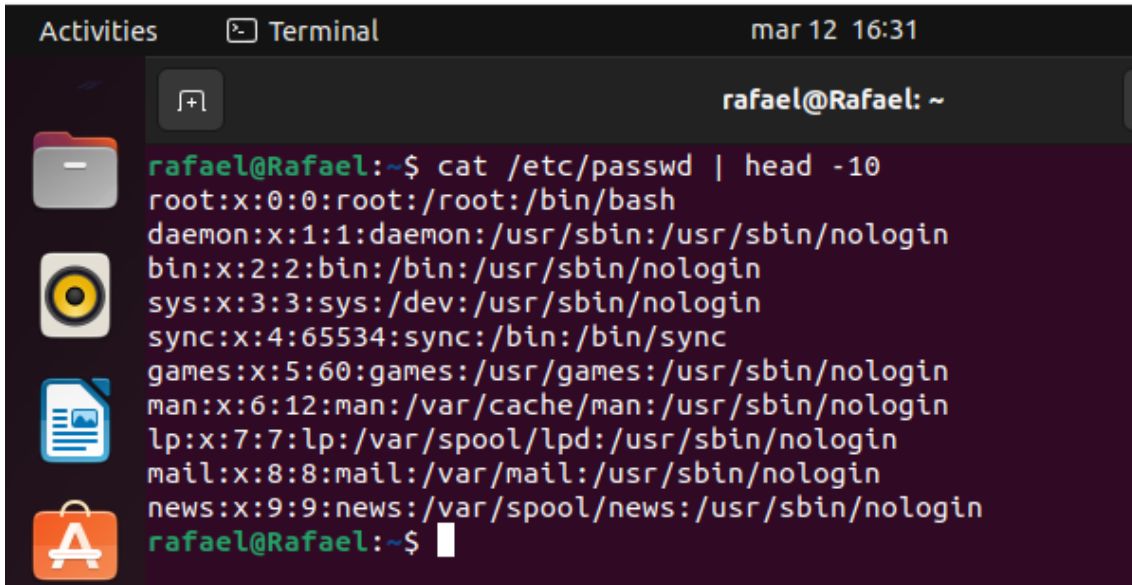


A screenshot of a Linux terminal window. The window title bar shows 'Activities', 'Terminal', and the date/time 'mar 12 16:29'. The terminal prompt is 'rafael@Rafael: ~'. The user has entered the command 'chmod 777 myfille'. The terminal output shows an error: 'chmod: cannot access 'myfille': No such file or directory'. The prompt is now 'rafael@Rafael:~\$' with a cursor.

```
rafael@Rafael:~$ chmod 777 myfille
chmod: cannot access 'myfille': No such file or directory
rafael@Rafael:~$
```

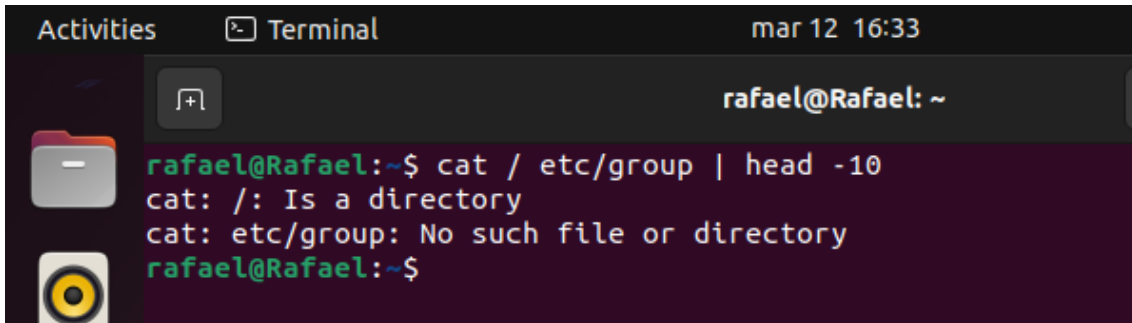
Capítulo 8

Listagem 8.1: Listando Todos os Usuários do Linux



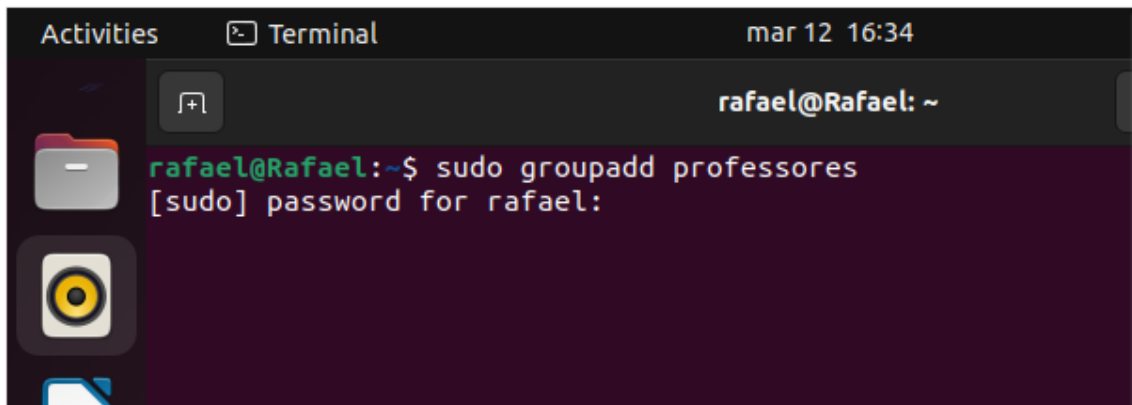
```
rafael@Rafael: ~  
rafael@Rafael:~$ cat /etc/passwd | head -10  
root:x:0:0:root:/root:/bin/bash  
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin  
bin:x:2:2:bin:/bin:/usr/sbin/nologin  
sys:x:3:3:sys:/dev:/usr/sbin/nologin  
sync:x:4:65534:sync:/bin:/bin/sync  
games:x:5:60:games:/usr/games:/usr/sbin/nologin  
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin  
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin  
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin  
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin  
rafael@Rafael:~$
```

Listagem 8.3: Listando Todos os Usuários do Linux



```
rafael@Rafael: ~  
rafael@Rafael:~$ cat /etc/group | head -10  
cat: /: Is a directory  
cat: etc/group: No such file or directory  
rafael@Rafael:~$
```

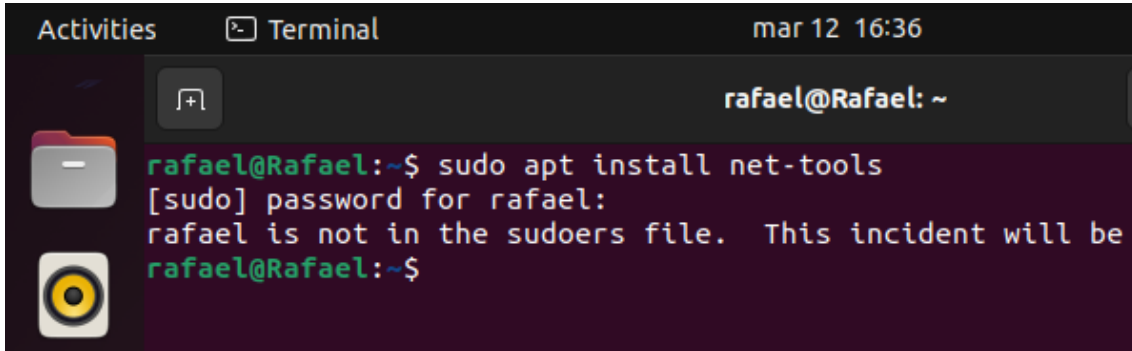
Listagem 8.9: Adicionando um Novo Grupo



```
rafael@Rafael: ~  
rafael@Rafael:~$ sudo groupadd professores  
[sudo] password for raphael:
```

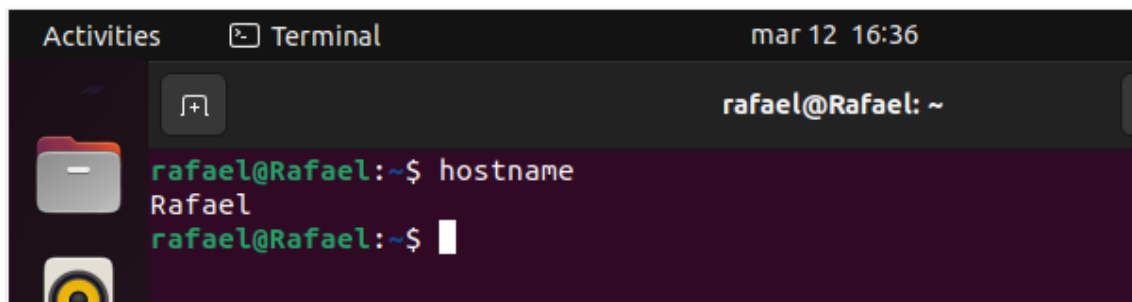
Capítulo 9

Listagem 9.1: Instalação do net-tools



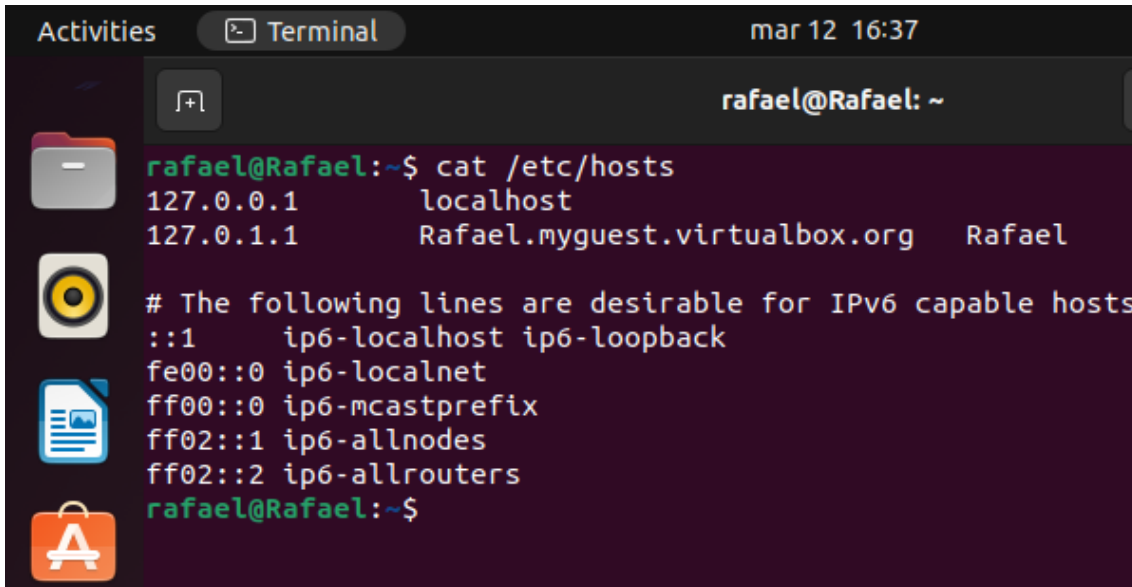
```
Activities Terminal mar 12 16:36
rafael@Rafael: ~
rafael@Rafael:~$ sudo apt install net-tools
[sudo] password for rafael:
rafael is not in the sudoers file. This incident will be
rafael@Rafael:~$
```

Listagem 9.2: Comando hostname



```
Activities Terminal mar 12 16:36
rafael@Rafael: ~
rafael@Rafael:~$ hostname
Rafael
rafael@Rafael:~$
```

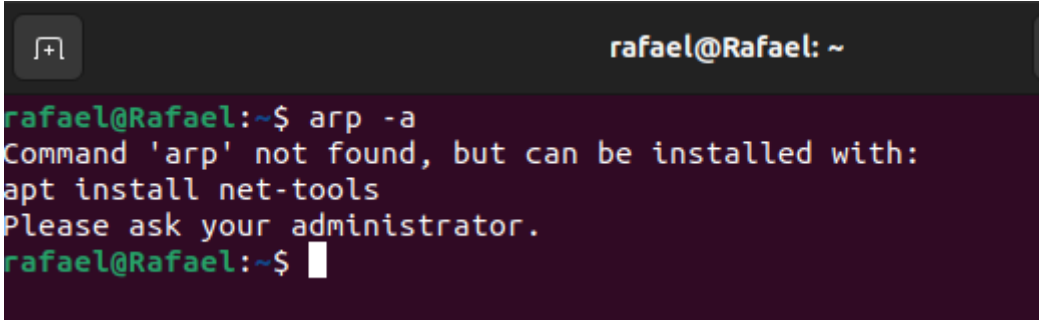
Listagem 9.3: Nome da Máquina com cat



```
Activities Terminal mar 12 16:37
rafael@Rafael: ~
rafael@Rafael:~$ cat /etc/hosts
127.0.0.1    localhost
127.0.1.1    Rafael.myguest.virtualbox.org  Rafael

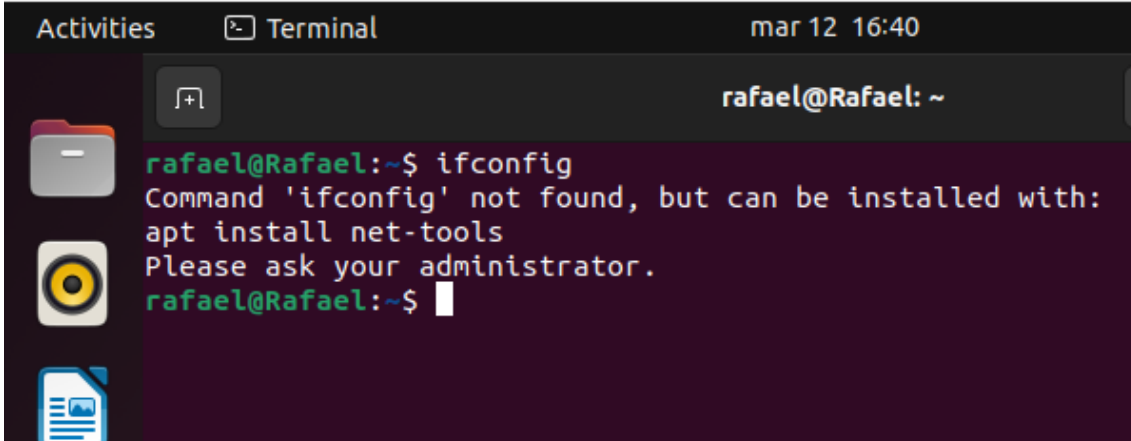
# The following lines are desirable for IPv6 capable hosts
::1        ip6-localhost ip6-loopback
fe00::0    ip6-localnet
ff00::0    ip6-mcastprefix
ff02::1    ip6-allnodes
ff02::2    ip6-allrouters
rafael@Rafael:~$
```


Listagem 9.4: Tabela ARP



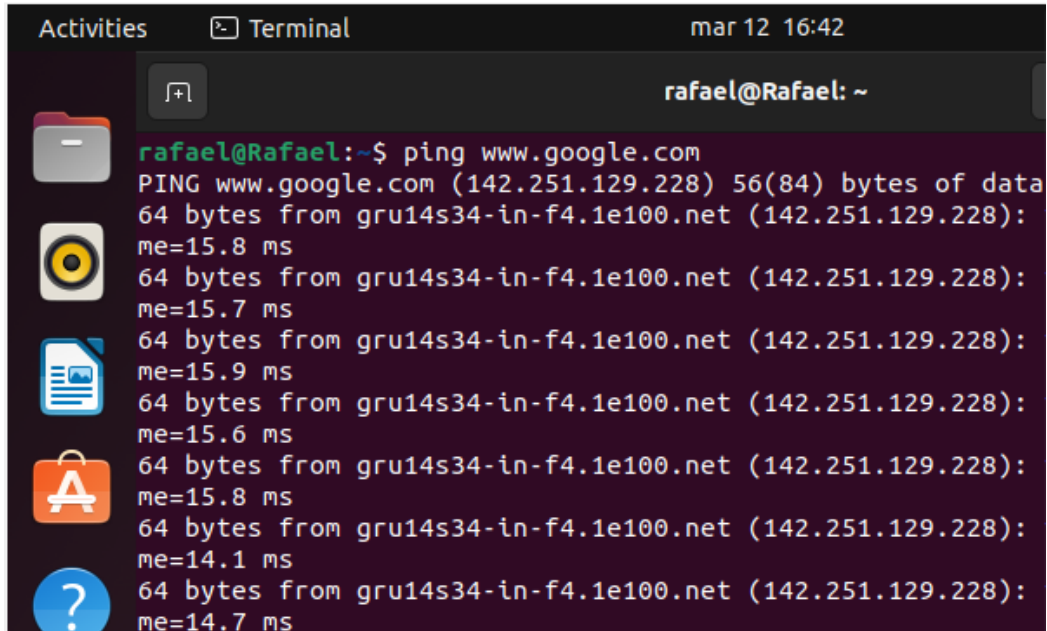
```
rafael@Rafael: ~  
rafael@Rafael:~$ arp -a  
Command 'arp' not found, but can be installed with:  
apt install net-tools  
Please ask your administrator.  
rafael@Rafael:~$
```

Listagem 9.5: Verificando o Endereço IP



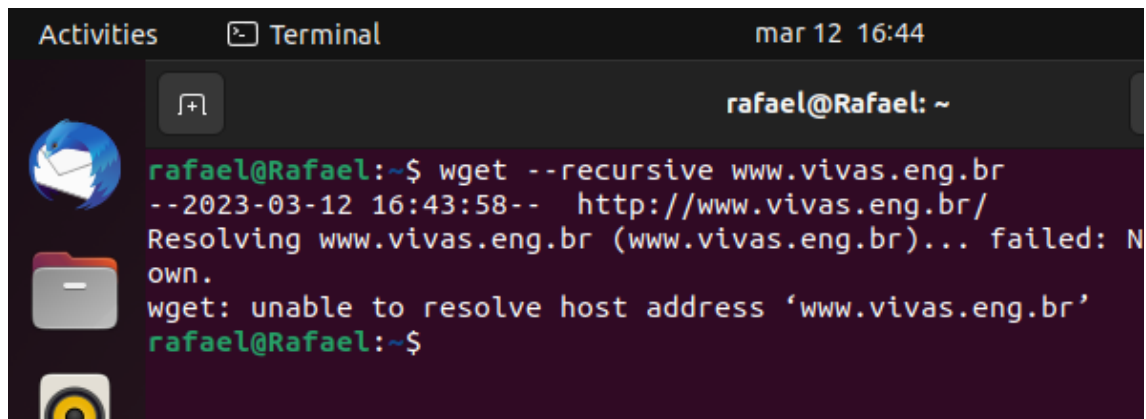
```
rafael@Rafael:~$ ifconfig  
Command 'ifconfig' not found, but can be installed with:  
apt install net-tools  
Please ask your administrator.  
rafael@Rafael:~$
```

Listagem 9.15: Comando ping



```
rafael@Rafael:~$ ping www.google.com  
PING www.google.com (142.251.129.228) 56(84) bytes of data  
64 bytes from gru14s34-in-f4.1e100.net (142.251.129.228):  
me=15.8 ms  
64 bytes from gru14s34-in-f4.1e100.net (142.251.129.228):  
me=15.7 ms  
64 bytes from gru14s34-in-f4.1e100.net (142.251.129.228):  
me=15.9 ms  
64 bytes from gru14s34-in-f4.1e100.net (142.251.129.228):  
me=15.6 ms  
64 bytes from gru14s34-in-f4.1e100.net (142.251.129.228):  
me=15.8 ms  
64 bytes from gru14s34-in-f4.1e100.net (142.251.129.228):  
me=14.1 ms  
64 bytes from gru14s34-in-f4.1e100.net (142.251.129.228):  
me=14.7 ms
```

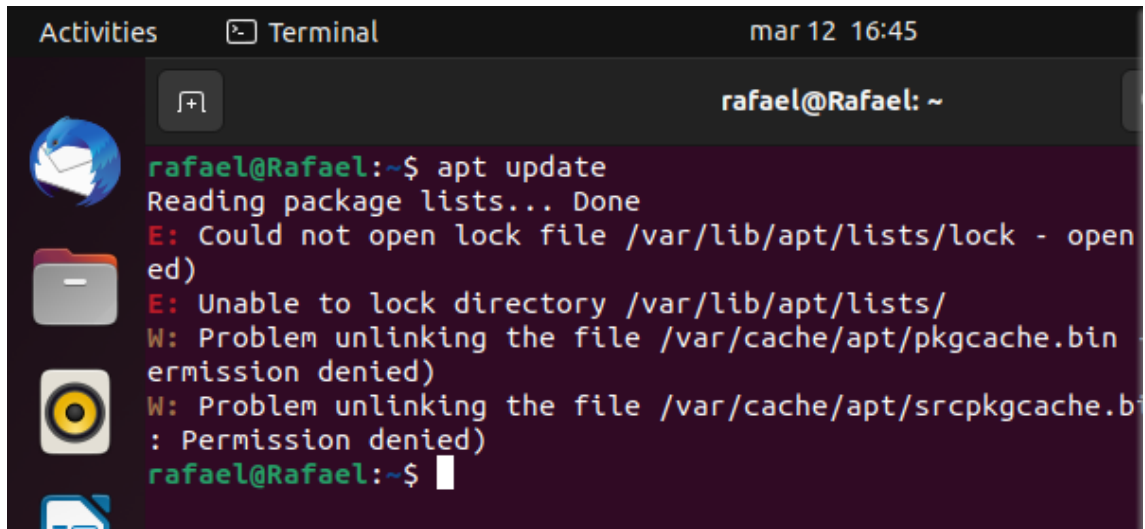
Listagem 9.55: Baixando Sites com wget

A screenshot of a Linux terminal window. The title bar shows 'Activities', 'Terminal', and the date/time 'mar 12 16:44'. The terminal prompt is 'rafael@Rafael: ~'. The user has entered the command 'wget --recursive www.vivas.eng.br'. The output shows the command was executed on 2023-03-12 at 16:43:58, attempting to connect to 'http://www.vivas.eng.br/'. It then shows 'Resolving www.vivas.eng.br (www.vivas.eng.br)... failed: Name or service not known.' followed by 'wget: unable to resolve host address 'www.vivas.eng.br''. The prompt returns to 'rafael@Rafael:~\$'.

```
rafael@Rafael:~$ wget --recursive www.vivas.eng.br
--2023-03-12 16:43:58--  http://www.vivas.eng.br/
Resolving www.vivas.eng.br (www.vivas.eng.br)... failed: Name or service not known.
wget: unable to resolve host address 'www.vivas.eng.br'
rafael@Rafael:~$
```

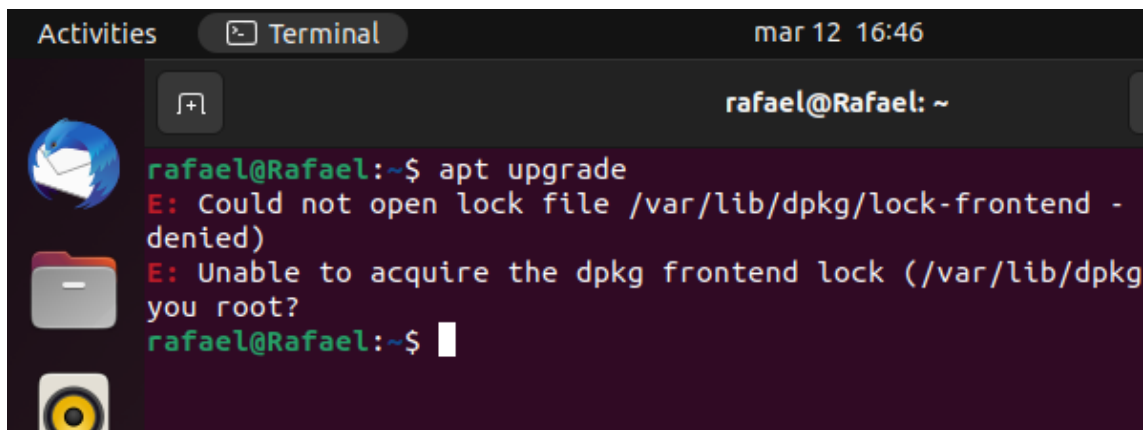
Capítulo 10

Listagem 10.1: Atualização da Lista de Pacotes Disponíveis



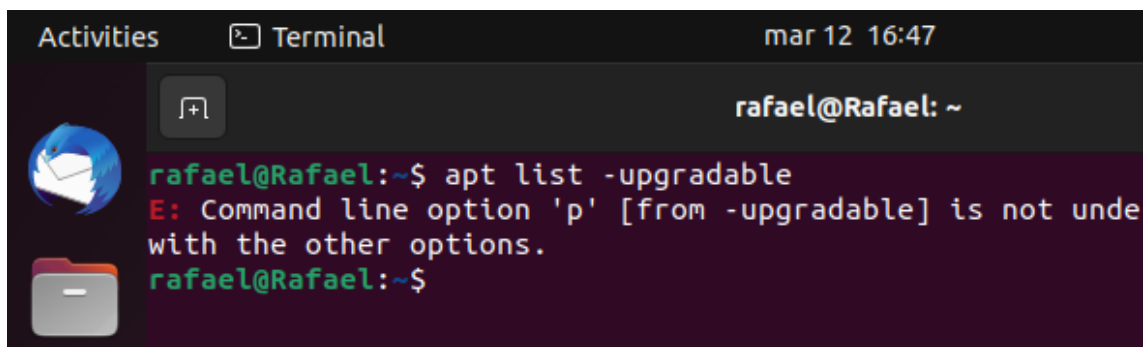
```
rafael@Rafael: ~  
rafael@Rafael:~$ apt update  
Reading package lists... Done  
E: Could not open lock file /var/lib/apt/lists/lock - open  
ed)  
E: Unable to lock directory /var/lib/apt/lists/  
W: Problem unlinking the file /var/cache/apt/pkgcache.bin  
ermission denied)  
W: Problem unlinking the file /var/cache/apt/srcpkgcache.b  
: Permission denied)  
rafael@Rafael:~$
```

Listagem 10.2: Atualização de Pacotes



```
rafael@Rafael:~$ apt upgrade  
E: Could not open lock file /var/lib/dpkg/lock-frontent -  
denied)  
E: Unable to acquire the dpkg frontend lock (/var/lib/dpkg  
you root?  
rafael@Rafael:~$
```

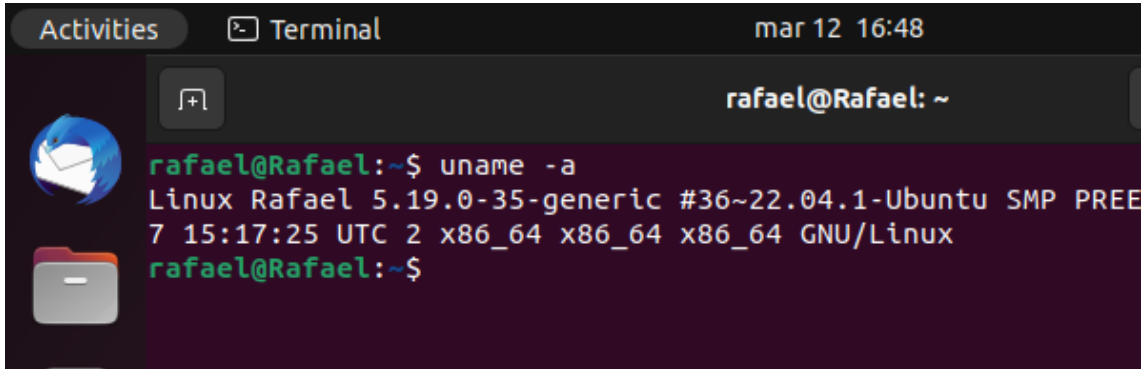
Listagem 10.3: Lista de Pacotes para Upgrade



```
rafael@Rafael:~$ apt list -upgradable  
E: Command line option 'p' [from -upgradable] is not unde  
with the other options.  
rafael@Rafael:~$
```

Capítulo 14

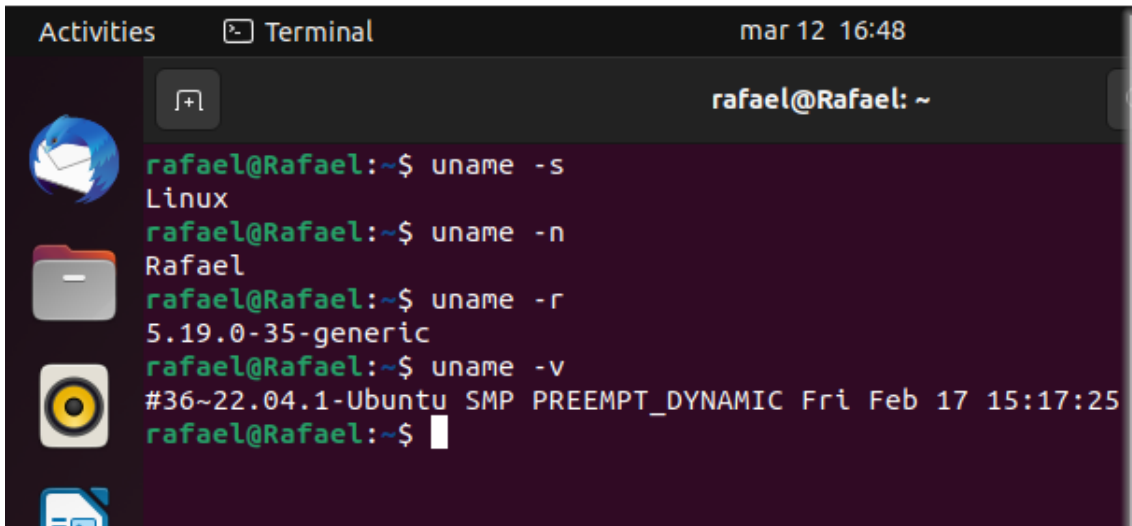
Listagem 14.1: Versão do Kernel



A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:48'. The prompt is 'rafael@Rafael: ~'. The user enters the command 'uname -a'. The output is: 'Linux Rafael 5.19.0-35-generic #36~22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Fri Feb 17 15:17:25 UTC 2 x86_64 x86_64 x86_64 GNU/Linux'. The prompt returns to 'rafael@Rafael:~\$'.

```
rafael@Rafael:~$ uname -a
Linux Rafael 5.19.0-35-generic #36~22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Fri Feb 17 15:17:25 UTC 2 x86_64 x86_64 x86_64 GNU/Linux
rafael@Rafael:~$
```

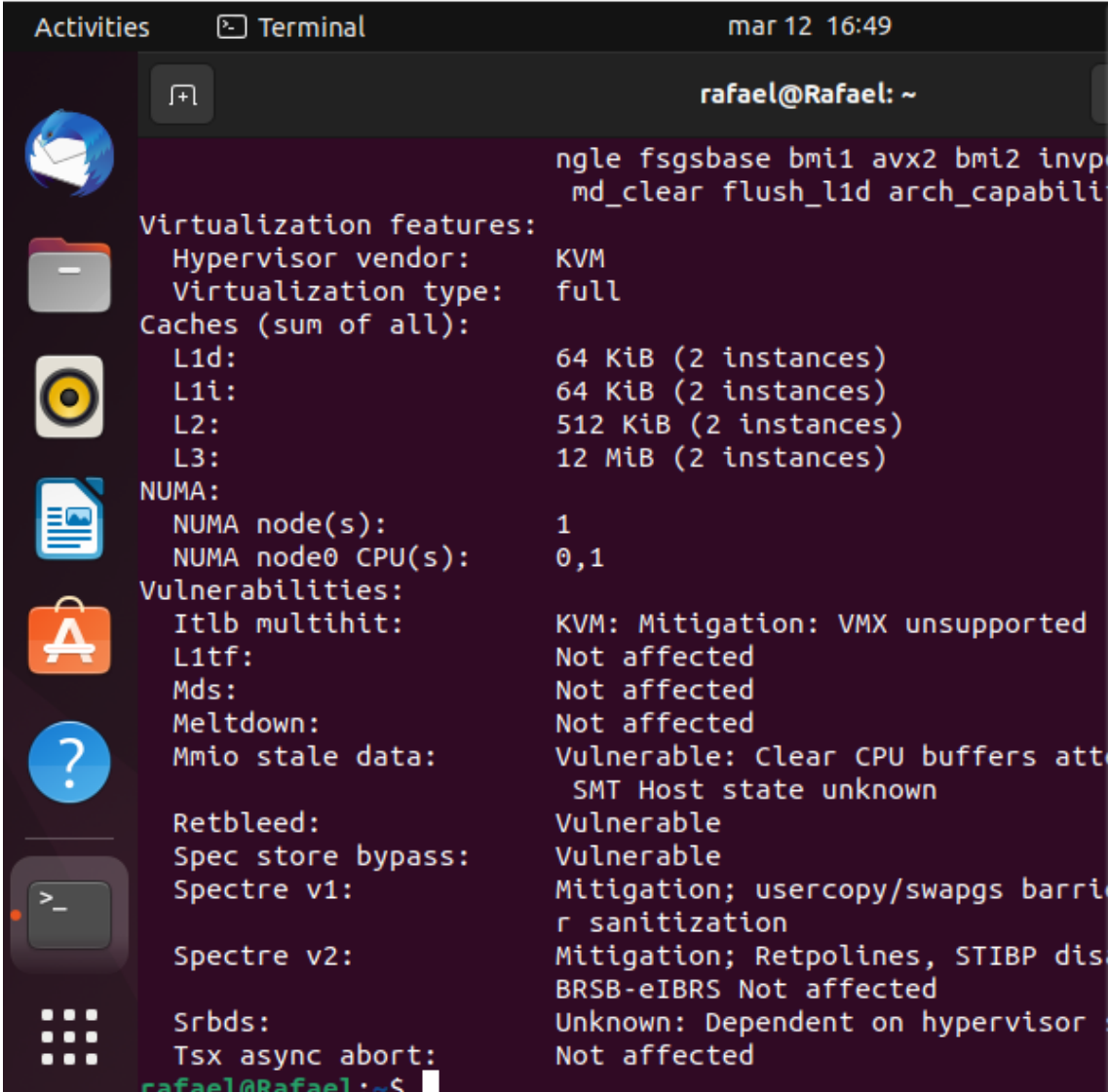
Listagem 14.2: Versão do Kernel



A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:48'. The prompt is 'rafael@Rafael: ~'. The user enters four commands: 'uname -s', 'uname -n', 'uname -r', and 'uname -v'. The outputs are: 'Linux', 'Rafael', '5.19.0-35-generic', and '#36~22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Fri Feb 17 15:17:25 UTC 2 x86_64 x86_64 x86_64 GNU/Linux' respectively. The prompt returns to 'rafael@Rafael:~\$' after each command.

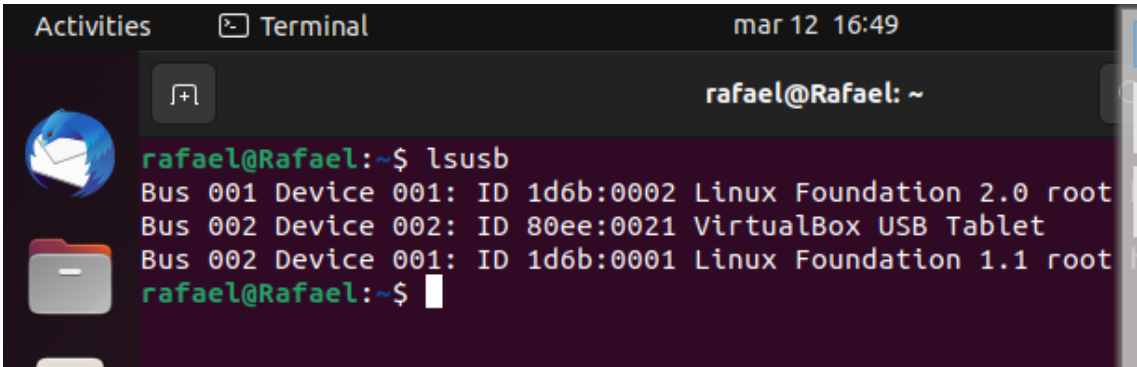
```
rafael@Rafael:~$ uname -s
Linux
rafael@Rafael:~$ uname -n
Rafael
rafael@Rafael:~$ uname -r
5.19.0-35-generic
rafael@Rafael:~$ uname -v
#36~22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Fri Feb 17 15:17:25 UTC 2 x86_64 x86_64 x86_64 GNU/Linux
rafael@Rafael:~$
```

Listagem 14.4: Verificando Informações sobre a CPU



```
Activities Terminal mar 12 16:49
rafael@Rafael: ~
Virtualization features:
Hypervisor vendor: KVM
Virtualization type: full
Caches (sum of all):
L1d: 64 KiB (2 instances)
L1i: 64 KiB (2 instances)
L2: 512 KiB (2 instances)
L3: 12 MiB (2 instances)
NUMA:
NUMA node(s): 1
NUMA node0 CPU(s): 0,1
Vulnerabilities:
Itlb multihit: KVM: Mitigation: VMX unsupported
L1tf: Not affected
Mds: Not affected
Meltdown: Not affected
Mmio stale data: Vulnerable: Clear CPU buffers after 0 minutes
SMT Host state unknown
Retbleed: Vulnerable
Spec store bypass: Vulnerable
Spectre v1: Mitigation; usercopy/swapgs barriers and r
sanitization
Spectre v2: Mitigation; Retpolines, STIBP disabled,
BRSB-eIBRS Not affected
Srbds: Unknown: Dependent on hypervisor status
Tsx async abort: Not affected
rafael@Rafael:~$
```

Listagem 14.5: Verificando a CPU



```
Activities Terminal mar 12 16:49
rafael@Rafael: ~
rafael@Rafael:~$ lsusb
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root
Bus 002 Device 002: ID 80ee:0021 VirtualBox USB Tablet
Bus 002 Device 001: ID 1d6b:0001 Linux Foundation 1.1 root
rafael@Rafael:~$
```

Listagem 14.7: Listando Dispositivos PCI

Activities Terminal mar 12 16:50

rafael@Rafael: ~

```
rafael@Rafael:~$ lspci
00:00.0 Host bridge: Intel Corporation 440FX - 82441FX PMC
00:01.0 ISA bridge: Intel Corporation 82371SB PIIX3 ISA [Na
00:01.1 IDE interface: Intel Corporation 82371AB/EB/MB PIIX
00:02.0 VGA compatible controller: VMware SVGA II Adapter
00:03.0 Ethernet controller: Intel Corporation 82540EM Giga
ler (rev 02)
00:04.0 System peripheral: InnoTek Systemberatung GmbH Virt
00:05.0 Multimedia audio controller: Intel Corporation 8280
roller (rev 01)
00:06.0 USB controller: Apple Inc. KeyLargo/Intrepid USB
00:07.0 Bridge: Intel Corporation 82371AB/EB/MB PIIX4 ACPI
00:0b.0 USB controller: Intel Corporation 82801FB/FBM/FR/FV
SB2 EHCI Controller
00:0d.0 SATA controller: Intel Corporation 82801HM/HEM (ICH
troller [AHCI mode] (rev 02)
rafael@Rafael:~$
```

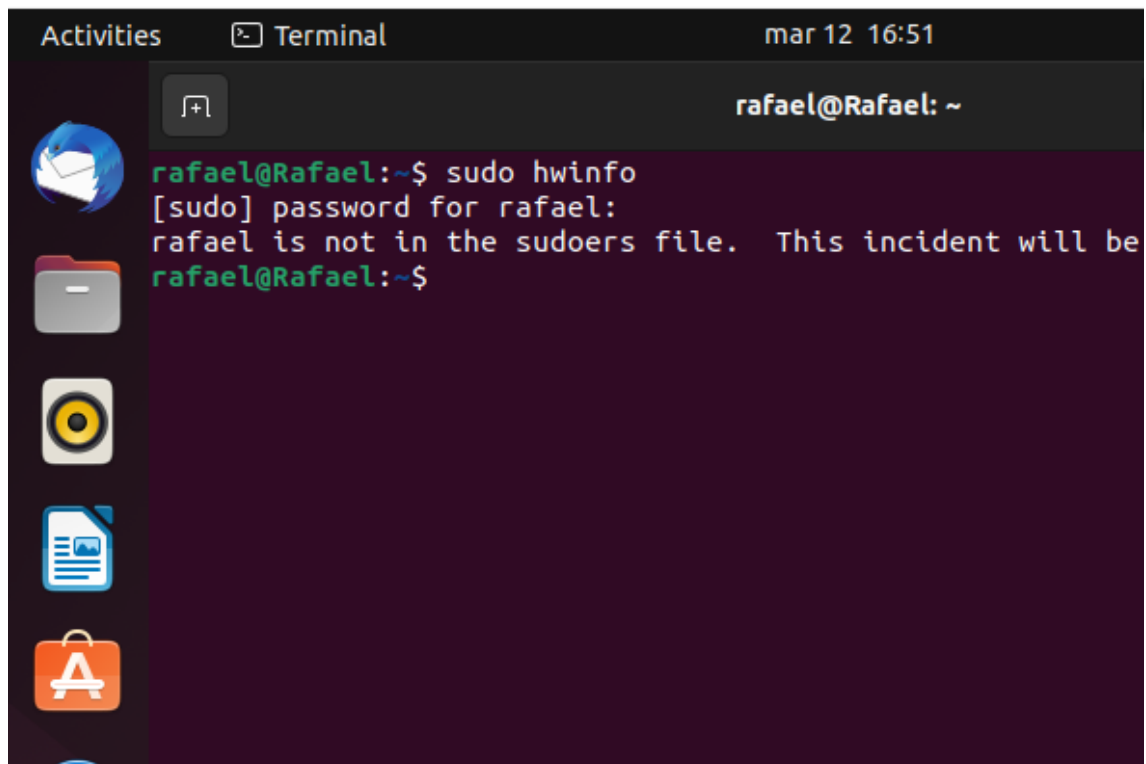
Listagem 14.13: Listando Informações sobre a Memória

Activities Terminal mar 12 16:50

rafael@Rafael: ~

```
rafael@Rafael:~$ free
              total        used        free      shared
Mem:         3011848        928276        395448         35524
Swap:        3297276           0        3297276
rafael@Rafael:~$
```

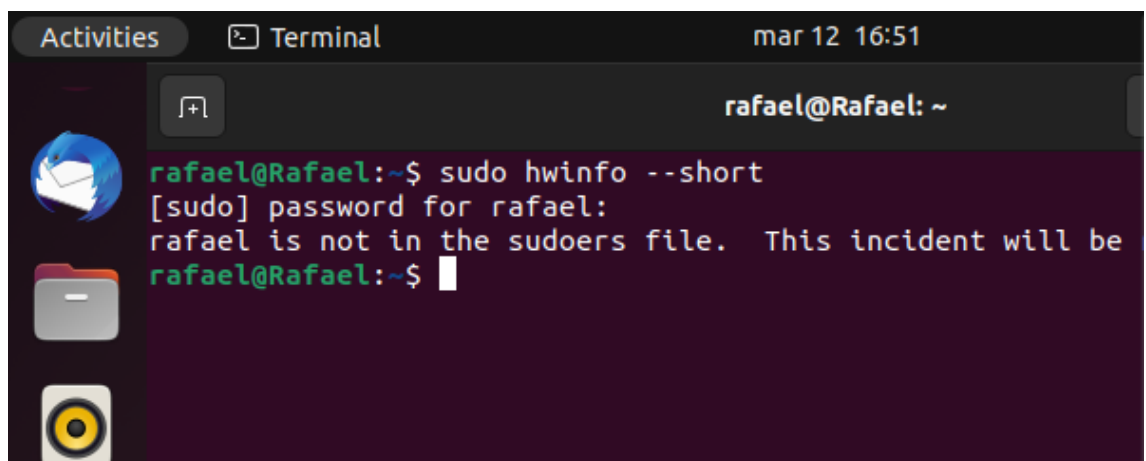
Listagem 14.20: Analisando os Dispositivos de Hardware



A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:51'. The prompt is 'rafael@Rafael: ~'. The user enters the command 'sudo hwinfo'. The terminal shows the prompt '[sudo] password for raphael:' followed by the message 'rafael is not in the sudoers file. This incident will be reported.' and then the prompt 'rafael@Rafael:~\$'.

```
rafael@Rafael:~$ sudo hwinfo
[sudo] password for raphael:
rafael is not in the sudoers file. This incident will be reported.
rafael@Rafael:~$
```

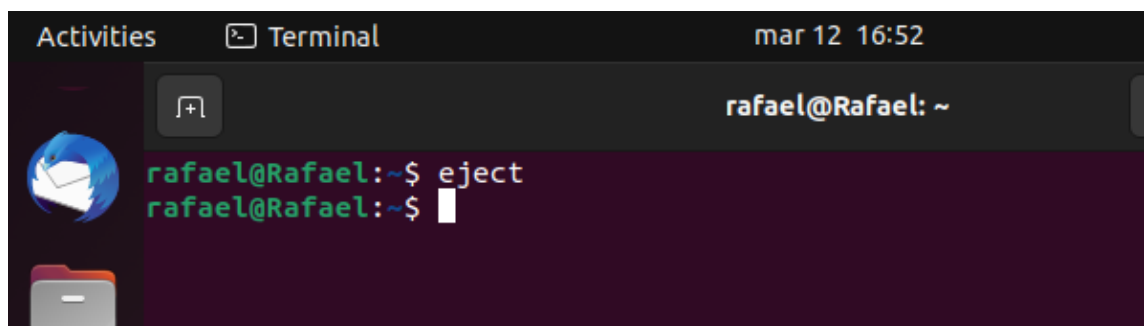
Listagem 14.21: Versão Resumida do Relatório do Lshw



A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:51'. The prompt is 'rafael@Rafael: ~'. The user enters the command 'sudo hwinfo --short'. The terminal shows the prompt '[sudo] password for raphael:' followed by the message 'rafael is not in the sudoers file. This incident will be reported.' and then the prompt 'rafael@Rafael:~\$'.

```
rafael@Rafael:~$ sudo hwinfo --short
[sudo] password for raphael:
rafael is not in the sudoers file. This incident will be reported.
rafael@Rafael:~$
```

Listagem 14.22: Comando para remover CDROM



A terminal window titled 'Terminal' with a timestamp of 'mar 12 16:52'. The prompt is 'rafael@Rafael: ~'. The user enters the command 'eject'. The terminal shows the prompt 'rafael@Rafael:~\$' followed by the command 'eject' and then the prompt 'rafael@Rafael:~\$'.

```
rafael@Rafael:~$ eject
rafael@Rafael:~$
```