

Semana 01b

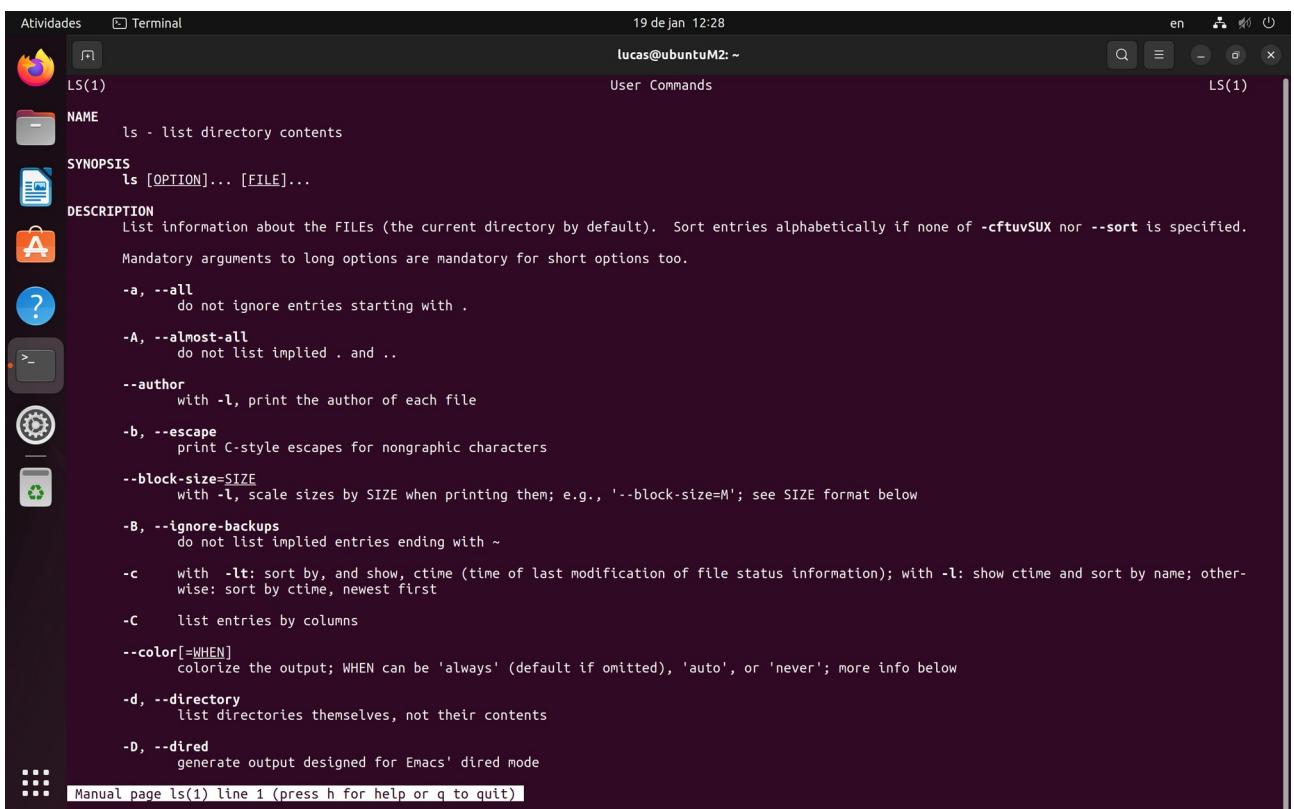
Exercício 2a

1. ls: Comando de listagem para ver o conteúdo dentro de uma pasta.



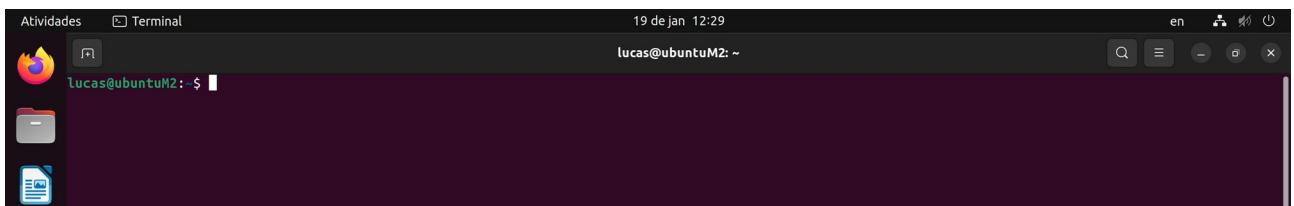
```
Atividades Terminal 19 de jan 12:20 lucas@ubuntuM2: ~
ls
'Área de Trabalho' Documentos Downloads Imagens Modelos Música PÚblico snap Vídeos
lucas@ubuntuM2: ~
```

2. man: Manual de cada comando.



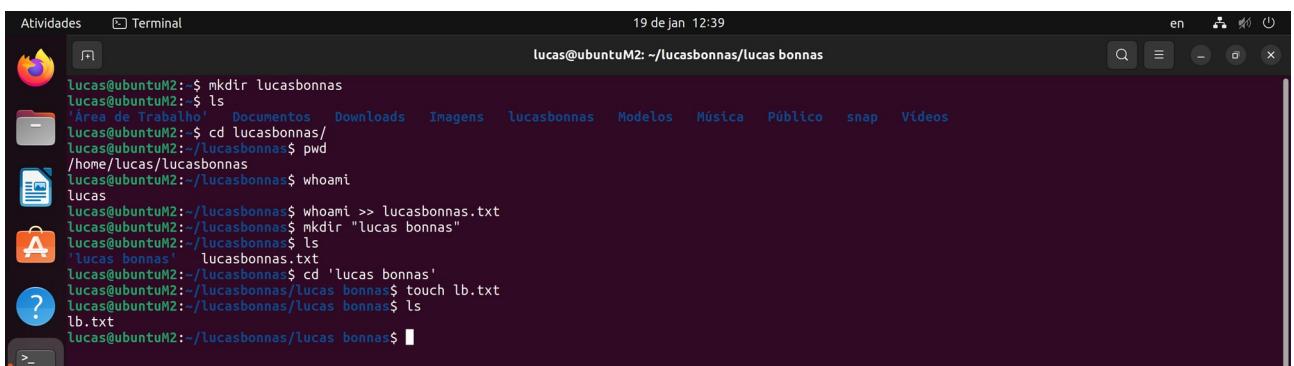
```
Atividades Terminal 19 de jan 12:28 lucas@ubuntuM2: ~
LS(1) User Commands LS(1)
NAME
ls - list directory contents
SYNOPSIS
ls [OPTION]... [FILE]...
DESCRIPTION
List information about the FILES (the current directory by default). Sort entries alphabetically if none of -cftuvSUX nor --sort is specified.
Mandatory arguments to long options are mandatory for short options too.
-a, --all
do not ignore entries starting with .
-A, --almost-all
do not list implied . and ..
--author
with -l, print the author of each file
-b, --escape
print C-style escapes for nongraphic characters
--block-size=SIZE
with -l, scale sizes by SIZE when printing them; e.g., '--block-size=M'; see SIZE format below
-B, --ignore-backups
do not list implied entries ending with ~
-c
with -lt: sort by, and show, ctime (time of last modification of file status information); with -l: show ctime and sort by name; otherwise: sort by ctime, newest first
-C
list entries by columns
--color[=WHEN]
colorize the output; WHEN can be 'always' (default if omitted), 'auto', or 'never'; more info below
-d, --directory
list directories themselves, not their contents
-D, --dired
generate output designed for Emacs' dired mode
Manual page ls(1) line 1 (press h for help or q to quit)
```

3. clear: Limpar o terminal.



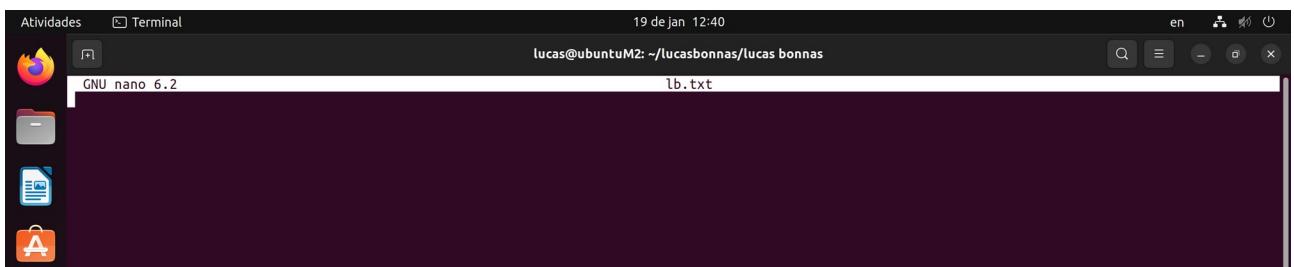
```
Atividades Terminal 19 de jan 12:29 lucas@ubuntuM2: ~
clear
lucas@ubuntuM2: ~
```

4. mkdir: Criar diretórios.
5. cd: Navegar nas pastas.
6. pwd: Visualizar o caminho do diretório atual.
7. whoami: Mostrar o usuário atual.
8. Redirecionadores: Utiliza “>>” para direcionar os comandos.
9. Criar e acessar pastas com nome composto: Utiliza “” para criar e acessar estas pastas.
10. touch: Criar arquivos sem utilizar os redirecionadores.



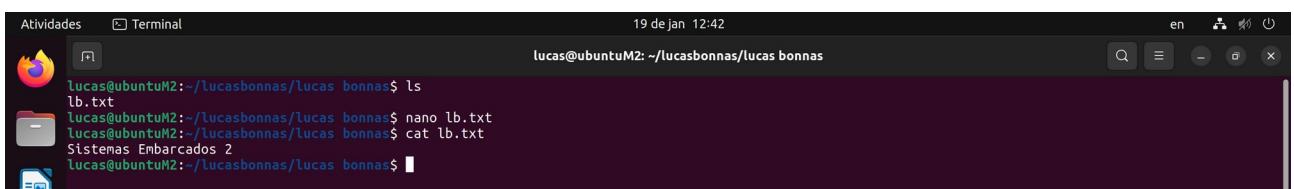
```
Atividades Terminal 19 de jan 12:39
lucas@ubuntuM2: ~ /lucasbonnas/lucas bonnas
ls
'Área de Trabalho' Documentos Downloads Imagens lucasbonnas Modelos Música PÚblico snap Vídeos
cd lucasbonnas/
pwd
/home/lucas/lucasbonnas
./lucasbonnas$ whoami
lucas
./lucasbonnas$ whoami >> lucasbonnas.txt
./lucasbonnas$ mkdir "lucas bonnas"
./lucasbonnas$ ls
'lucas bonnas' lucasbonnas.txt
./lucasbonnas$ cd 'lucas bonnas'
./lucasbonnas$ ./lucas bonnas$ touch lb.txt
./lucasbonnas$ ./lucas bonnas$ ls
lb.txt
./lucasbonnas$ ./lucas bonnas$
```

12. nano: Editor de texto no terminal.



```
Atividades Terminal 19 de jan 12:40
lucas@ubuntuM2: ~ /lucasbonnas/lucas bonnas
lb.txt
GNU nano 6.2
```

13. cat: Acessar o conteúdo dentro do arquivo pelo terminal.



```
Atividades Terminal 19 de jan 12:42
lucas@ubuntuM2: ~ /lucasbonnas/lucas bonnas
ls
lb.txt
./lucasbonnas$ nano lb.txt
./lucasbonnas$ ./lucas bonnas$ cat lb.txt
Sistemas Embarcados 2
./lucasbonnas$ ./lucas bonnas$
```

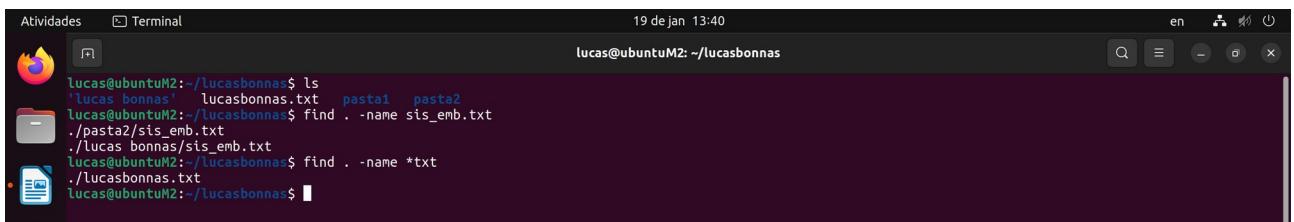
14. mv: Modificar o nome dos arquivos.

15. cp: Copiar arquivos de um diretório para outro.



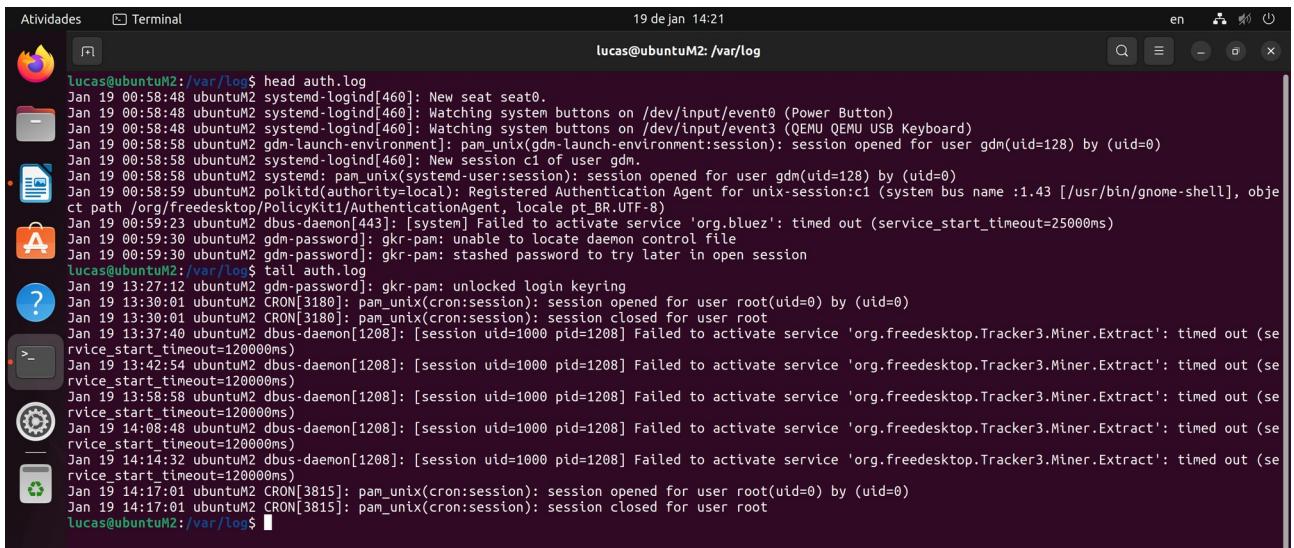
```
lucas@ubuntuM2:~/lucasbonnas/lucas bonna: ls
lb.txt
lucas@ubuntuM2:~/lucasbonnas/lucas bonna: $ mv lb.txt sis_emb.txt
lucas@ubuntuM2:~/lucasbonnas/lucas bonna: $ ls
sis_emb.txt
lucas@ubuntuM2:~/lucasbonnas/lucas bonna: $ cp sis_emb.txt ~/lucasbonnas/pasta2/
lucas@ubuntuM2:~/lucasbonnas/lucas bonna: $ ls
sis_emb.txt
lucas@ubuntuM2:~/lucasbonnas/lucas bonna: $ cd ..
lucas@ubuntuM2:~/lucasbonnas$ ls
'lucas bonnas'  lucasbonnas.txt  pasta1  pasta2
lucas@ubuntuM2:~/lucasbonnas$ cd pasta2
lucas@ubuntuM2:~/lucasbonnas/pasta2$ ls
sis_emb.txt
lucas@ubuntuM2:~/lucasbonnas/pasta2$ cat sis_emb.txt
Sistemas Embarcados 2
lucas@ubuntuM2:~/lucasbonnas/pasta2$
```

16. find: Encontrar arquivos dentro de diretórios.



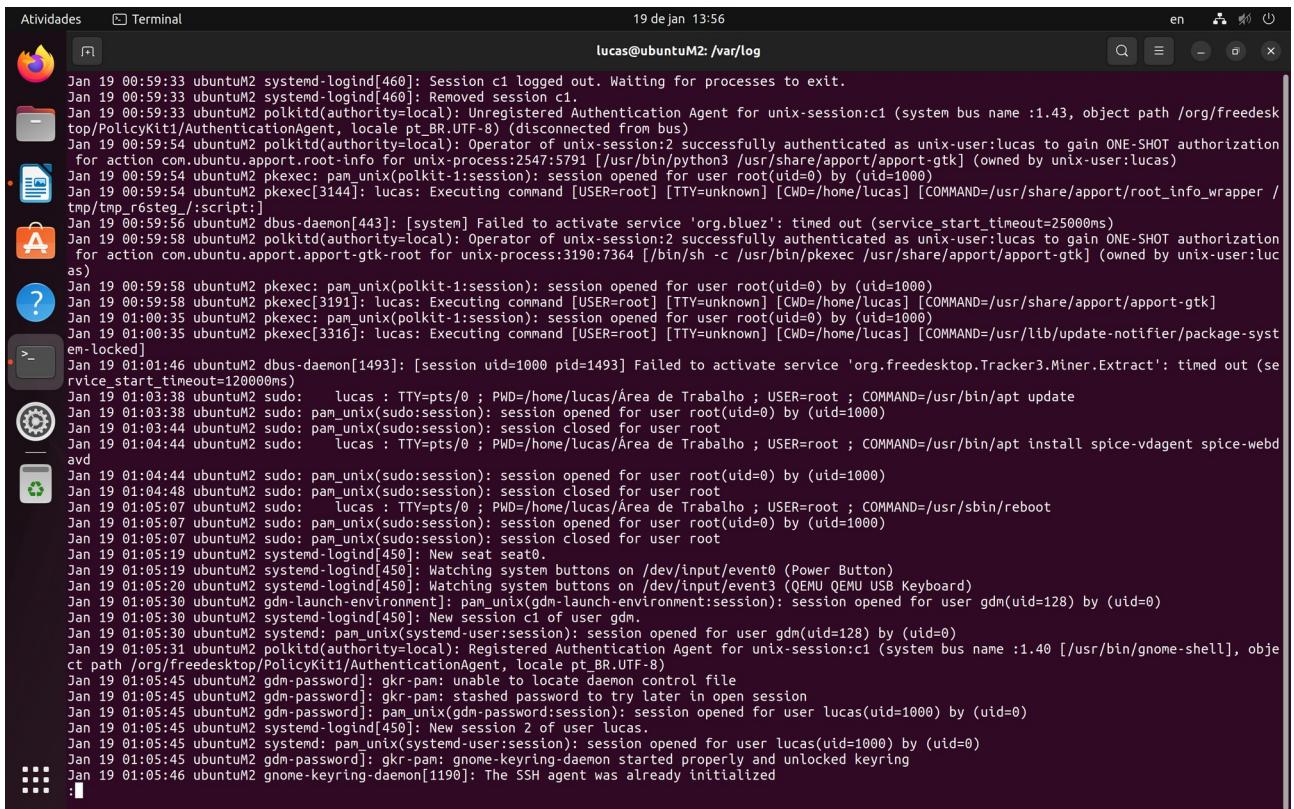
```
lucas@ubuntuM2:~/lucasbonnas$ ls
'lucas bonnas'  lucasbonnas.txt  pasta1  pasta2
lucas@ubuntuM2:~/lucasbonnas$ find . -name sis_emb.txt
./pasta2/sis_emb.txt
./lucas bonnas/sis_emb.txt
lucas@ubuntuM2:~/lucasbonnas$ find . -name *txt
./lucasbonnas.txt
lucas@ubuntuM2:~/lucasbonnas$
```

17. head & tail: Leitura de arquivos grandes. “head” mostra as primeiras linhas do arquivo e “tail” mostra a parte final do arquivo.



```
lucas@ubuntuM2:/var/log$ head auth.log
Jan 19 00:58:48 ubuntuM2 systemd-logind[460]: New seat seat0.
Jan 19 00:58:48 ubuntuM2 systemd-logind[460]: Watching system buttons on /dev/input/event0 (Power Button)
Jan 19 00:58:48 ubuntuM2 systemd-logind[460]: Watching system buttons on /dev/input/event3 (QEMU QEMU USB Keyboard)
Jan 19 00:58:58 ubuntuM2 gdm-launch-environment: pam_unix(gdm-launch-environment:session): session opened for user gdm(uid=128) by (uid=0)
Jan 19 00:58:58 ubuntuM2 systemd: pam_unix(systemd-user:session): session opened for user gdm(uid=128) by (uid=0)
Jan 19 00:58:59 ubuntuM2 polkitd(authority=local): Registered Authentication Agent for unix-session:c1 (system bus name :1.43 [/usr/bin/gnome-shell], object path /org/freedesktop/PolicyKit1/AuthenticationAgent, locale pt_BR.UTF-8)
Jan 19 00:59:23 ubuntuM2 dbus-daemon[443]: [system] Failed to activate service 'org.bluez': timed out (service_start_timeout=25000ms)
Jan 19 00:59:30 ubuntuM2 gdm-password: gkr-pam: unable to locate daemon control file
Jan 19 00:59:30 ubuntuM2 gdm-password: gkr-pam: stashed password to try later in open session
lucas@ubuntuM2:/var/log$ tail auth.log
Jan 19 13:27:12 ubuntuM2 gdm-password: gkr-pam: unlocked login keyring
Jan 19 13:30:01 ubuntuM2 CRON[3180]: pam_unix(cron:session): session opened for user root(uid=0) by (uid=0)
Jan 19 13:30:01 ubuntuM2 CRON[3180]: pam_unix(cron:session): session closed for user root
Jan 19 13:37:40 ubuntuM2 dbus-daemon[1208]: [session uid=1000 pid=1208] Failed to activate service 'org.freedesktop.Tracker3.Miner.Extract': timed out (service_start_timeout=120000ms)
Jan 19 13:42:54 ubuntuM2 dbus-daemon[1208]: [session uid=1000 pid=1208] Failed to activate service 'org.freedesktop.Tracker3.Miner.Extract': timed out (service_start_timeout=120000ms)
Jan 19 13:58:58 ubuntuM2 dbus-daemon[1208]: [session uid=1000 pid=1208] Failed to activate service 'org.freedesktop.Tracker3.Miner.Extract': timed out (service_start_timeout=120000ms)
Jan 19 14:08:48 ubuntuM2 dbus-daemon[1208]: [session uid=1000 pid=1208] Failed to activate service 'org.freedesktop.Tracker3.Miner.Extract': timed out (service_start_timeout=120000ms)
Jan 19 14:14:32 ubuntuM2 dbus-daemon[1208]: [session uid=1000 pid=1208] Failed to activate service 'org.freedesktop.Tracker3.Miner.Extract': timed out (service_start_timeout=120000ms)
Jan 19 14:17:01 ubuntuM2 CRON[3815]: pam_unix(cron:session): session opened for user root(uid=0) by (uid=0)
Jan 19 14:17:01 ubuntuM2 CRON[3815]: pam_unix(cron:session): session closed for user root
lucas@ubuntuM2:/var/log$
```

18. less: Carrega o arquivo em partes para leitura dividida.

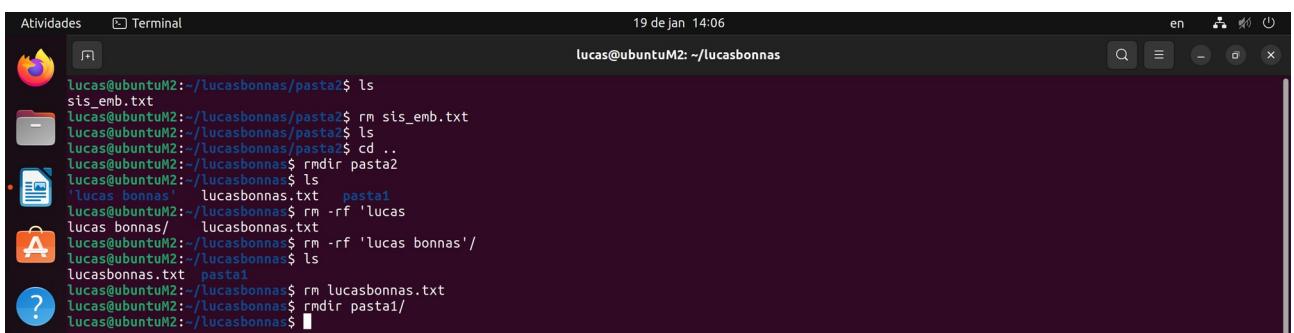


```
Atividades Terminal 19 de jan 13:56 lucas@ubuntuM2: /var/log
Jan 19 00:59:33 ubuntuM2 systemd-logind[460]: Session c1 logged out. Waiting for processes to exit.
Jan 19 00:59:33 ubuntuM2 systemd-logind[460]: Removed session c1.
Jan 19 00:59:33 ubuntuM2 polkitd(authority=local): Unregistered Authentication Agent for unix-session:c1 (system bus name :1.43, object path /org/freedesktop/PolicyKit1/AuthenticationAgent, locale pt_BR.UTF-8) (disconnected from bus)
Jan 19 00:59:54 ubuntuM2 polkitd(authority=local): Operator of unix-session:2 successfully authenticated as unix-user:lucas to gain ONE-SHOT authorization for action com.ubuntu.apport.root-info for unix-process:2547:5791 [/usr/bin/python3 /usr/share/apport/apport-gtk] (owned by unix-user:lucas)
Jan 19 00:59:54 ubuntuM2 pkexec: pam_unix(polkit-1:session): session opened for user root(uid=0) by (uid=1000)
Jan 19 00:59:54 ubuntuM2 pkexec[3144]: lucas: Executing command [USER=root] [TTY=unknown] [CWD=/home/lucas] [COMMAND=/usr/share/apport/apport/root_info_wrapper /tmp/tmp_r6steg_/.script:]
Jan 19 00:59:56 ubuntuM2 dbus-daemon[443]: [system] Failed to activate service 'org.bluez': timed out (service_start_timeout=25000ms)
Jan 19 00:59:58 ubuntuM2 polkitd(authority=local): Operator of unix-session:2 successfully authenticated as unix-user:lucas to gain ONE-SHOT authorization for action com.ubuntu.apport.apport-gtk-root for unix-process:3190:7364 [/bin/sh -c /usr/bin/pkexec /usr/share/apport/apport-gtk] (owned by unix-user:lucas)
Jan 19 00:59:58 ubuntuM2 pkexec: pam_unix(polkit-1:session): session opened for user root(uid=0) by (uid=1000)
Jan 19 00:59:58 ubuntuM2 pkexec[3191]: lucas: Executing command [USER=root] [TTY=unknown] [CWD=/home/lucas] [COMMAND=/usr/share/apport/apport-gtk]
Jan 19 01:00:35 ubuntuM2 pkexec: pam_unix(polkit-1:session): session opened for user root(uid=0) by (uid=1000)
Jan 19 01:00:35 ubuntuM2 pkexec[3316]: lucas: Executing command [USER=root] [TTY=unknown] [CWD=/home/lucas] [COMMAND=/usr/lib/update-notifier/package-system-locked]
Jan 19 01:01:46 ubuntuM2 dbus-daemon[1493]: [session uid=1000 pid=1493] Failed to activate service 'org.freedesktop.Tracker3.Miner.Extract': timed out (service_start_timeout=12000ms)
Jan 19 01:03:38 ubuntuM2 sudo:    lucas : TTY=pts/0 ; PWD=/home/lucas/Área de Trabalho ; USER=root ; COMMAND=/usr/bin/apt update
Jan 19 01:03:38 ubuntuM2 sudo: pam_unix(sudo:session): session opened for user root(uid=0) by (uid=1000)
Jan 19 01:03:44 ubuntuM2 sudo: pam_unix(sudo:session): session closed for user root
Jan 19 01:04:44 ubuntuM2 sudo:    lucas : TTY=pts/0 ; PWD=/home/lucas/Área de Trabalho ; USER=root ; COMMAND=/usr/bin/apt install spice-vdagent spice-webdav
Jan 19 01:04:44 ubuntuM2 sudo: pam_unix(sudo:session): session opened for user root(uid=0) by (uid=1000)
Jan 19 01:04:48 ubuntuM2 sudo: pam_unix(sudo:session): session closed for user root
Jan 19 01:05:07 ubuntuM2 sudo:    lucas : TTY=pts/0 ; PWD=/home/lucas/Área de Trabalho ; USER=root ; COMMAND=/usr/sbin/reboot
Jan 19 01:05:07 ubuntuM2 sudo: pam_unix(sudo:session): session opened for user root(uid=0) by (uid=1000)
Jan 19 01:05:07 ubuntuM2 sudo: pam_unix(sudo:session): session closed for user root
Jan 19 01:05:19 ubuntuM2 systemd-logind[450]: New seat seat0.
Jan 19 01:05:19 ubuntuM2 systemd-logind[450]: Watching system buttons on /dev/input/event0 (Power Button)
Jan 19 01:05:20 ubuntuM2 systemd-logind[450]: Watching system buttons on /dev/input/event3 (QEMU QEMU USB Keyboard)
Jan 19 01:05:30 ubuntuM2 gdm-launch-environment: pam_unix(gdm-launch-environment:session): session opened for user gdm(uid=128) by (uid=0)
Jan 19 01:05:30 ubuntuM2 systemd-logind[450]: New session c1 of user gdm.
Jan 19 01:05:30 ubuntuM2 polkitd(authority=local): Registered Authentication Agent for unix-session:c1 (system bus name :1.40 [/usr/bin/gnome-shell], object path /org/freedesktop/PolicyKit1/AuthenticationAgent, locale pt_BR.UTF-8)
Jan 19 01:05:45 ubuntuM2 gdm-password: gkr-pam: unable to locate daemon control file
Jan 19 01:05:45 ubuntuM2 gdm-password: gkr-pam: stashed password to try later in open session
Jan 19 01:05:45 ubuntuM2 gdm-password: pam_unix(gdm-password:session): session opened for user lucas(uid=1000) by (uid=0)
Jan 19 01:05:45: ubuntuM2 systemd-logind[450]: New session 2 of user lucas.
Jan 19 01:05:45 ubuntuM2 systemd-logind[450]: pam_unix(systemd-user:session): session opened for user lucas(uid=1000) by (uid=0)
Jan 19 01:05:45 ubuntuM2 gdm-password: gkr-pam: gnome-keyring-daemon started properly and unlocked keyring
Jan 19 01:05:46 ubuntuM2 gnome-keyring-daemon[1190]: The SSH agent was already initialized
```

19. rm: Remover um arquivo pelo terminal.

20. rmdir: Remover um diretório pelo terminal.

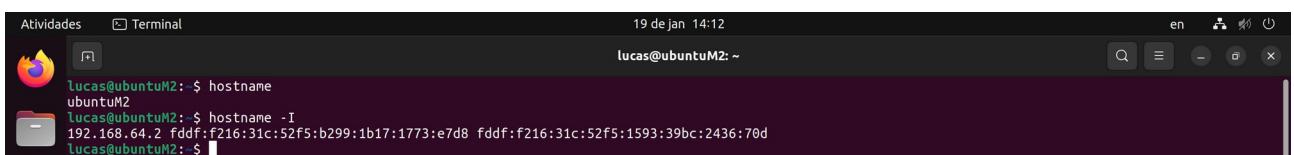
21. rm -rf: Remover um diretório não vazio.



```
Atividades Terminal 19 de jan 14:06 lucas@ubuntuM2: ~/lucasbonnas
lucas@ubuntuM2:~/lucasbonnas/pasta2$ ls
sis_emb.txt
lucas@ubuntuM2:~/lucasbonnas/pasta2$ rm sis_emb.txt
lucas@ubuntuM2:~/lucasbonnas/pasta2$ ls
lucas@ubuntuM2:~/lucasbonnas/pasta2$ cd ..
lucas@ubuntuM2:~/lucasbonnas$ rmdir pasta2
lucas@ubuntuM2:~/lucasbonnas$ ls
'lucas bonnas'  lucasbonnas.txt  pasta1
lucas@ubuntuM2:~/lucasbonnas$ rm -rf 'lucas bonnas'
lucas bonnas/
lucas@ubuntuM2:~/lucasbonnas$ rm -rf 'lucas bonnas'/
lucas@ubuntuM2:~/lucasbonnas$ ls
lucasbonnas.txt  pasta1
lucas@ubuntuM2:~/lucasbonnas$ rm lucasbonnas.txt
lucas@ubuntuM2:~/lucasbonnas$ rmdir pasta1/
lucas@ubuntuM2:~/lucasbonnas$
```

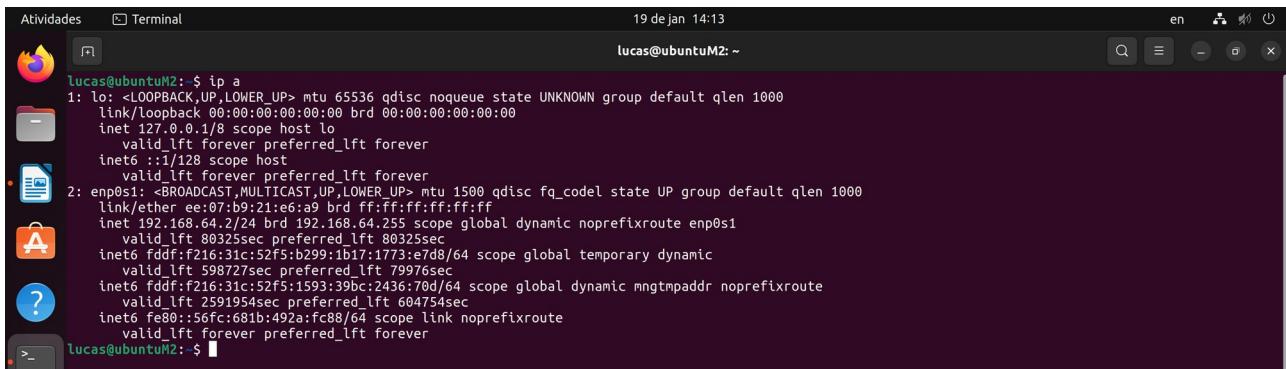
22. hostname: Ver o nome da sua máquina.

23. hostname -I: Mostrar o endereço IP.



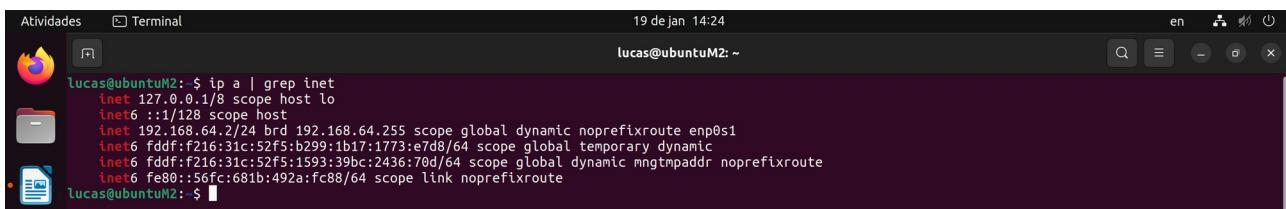
```
Atividades Terminal 19 de jan 14:12 lucas@ubuntuM2: ~
lucas@ubuntuM2: $ hostname
ubuntuM2
lucas@ubuntuM2: $ hostname -I
192.168.64.2 fddf:f216:31c:52f5:b299:1b17:1773:e7d8 fddf:f216:31c:52f5:1593:39bc:2436:70d
lucas@ubuntuM2: $
```

24. ip a: Mostra todas as informações de IP.



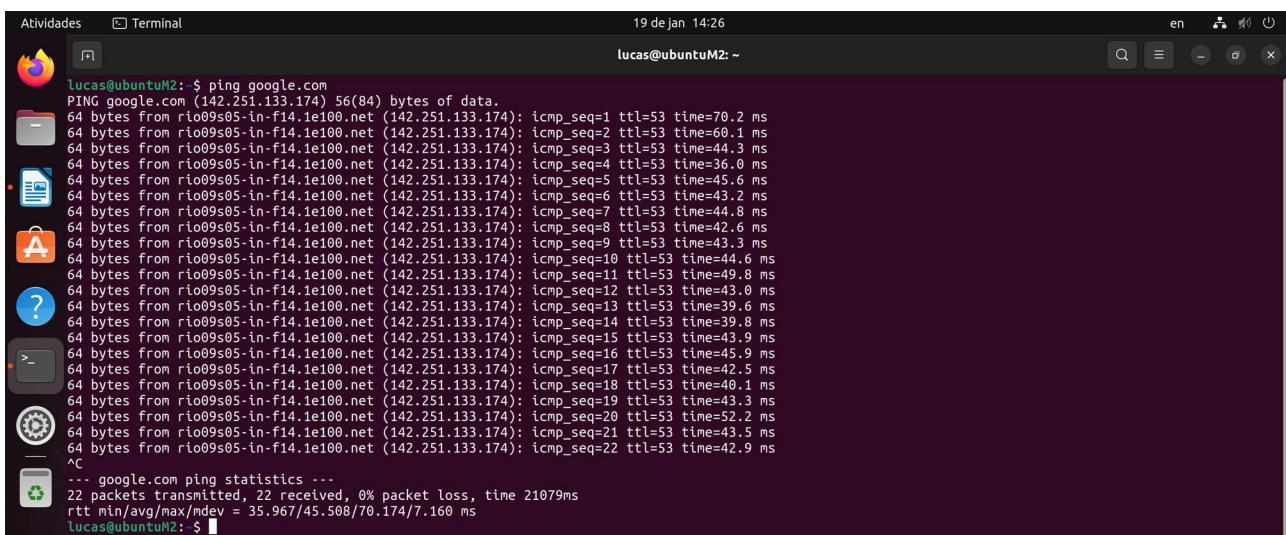
```
lucas@ubuntuM2: $ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
        inet 127.0.0.1/8 scope host lo
            valid_lft forever preferred_lft forever
    inetc6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp0s1: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether ee:07:b9:21:e6:a9 brd ff:ff:ff:ff:ff:ff
        inet 192.168.64.2/24 brd 192.168.64.255 scope global dynamic noprefixroute enp0s1
            valid_lft 80325sec preferred_lft 80325sec
        inetc6 fdd:ff:216:31c:52f5:b299:1b17:1773:e7d8/64 scope global temporary dynamic
            valid_lft 598727sec preferred_lft 79976sec
        inetc6 fdd:ff:216:31c:52f5:1593:39bc:2436:70d/64 scope global dynamic mngtmpaddr noprefixroute
            valid_lft 2591954sec preferred_lft 604754sec
        inetc6 fe80::56fc:681b:492a:fc88/64 scope link noprefixroute
            valid_lft forever preferred_lft forever
lucas@ubuntuM2: $
```

25. grep: Filtrar as informações do comando.



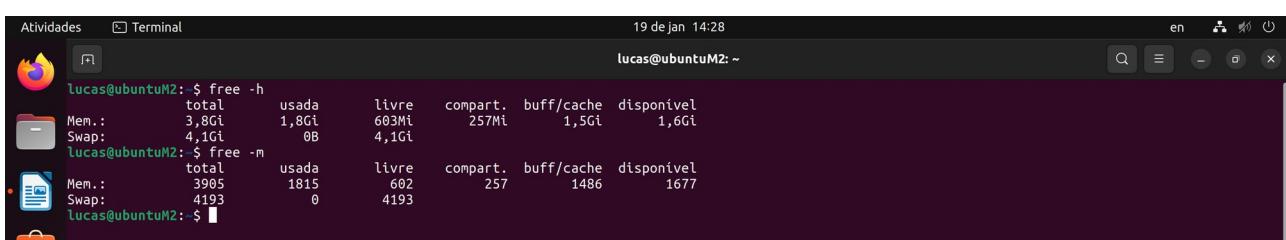
```
lucas@ubuntuM2: $ ip a | grep inet
    inet 127.0.0.1/8 scope host lo
        inet 192.168.64.2/24 brd 192.168.64.255 scope global dynamic noprefixroute enp0s1
            valid_lft 80325sec preferred_lft 80325sec
        inetc6 fdd:ff:216:31c:52f5:b299:1b17:1773:e7d8/64 scope global temporary dynamic
            valid_lft 598727sec preferred_lft 79976sec
        inetc6 fdd:ff:216:31c:52f5:1593:39bc:2436:70d/64 scope global dynamic mngtmpaddr noprefixroute
            valid_lft 2591954sec preferred_lft 604754sec
        inetc6 fe80::56fc:681b:492a:fc88/64 scope link noprefixroute
            valid_lft forever preferred_lft forever
lucas@ubuntuM2: $
```

26. ping: Verificar a conexão de rede.



```
lucas@ubuntuM2: $ ping google.com
PING google.com (142.251.133.174) 56(84) bytes of data.
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=1 ttl=53 time=70.2 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=2 ttl=53 time=60.1 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=3 ttl=53 time=44.3 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=4 ttl=53 time=36.0 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=5 ttl=53 time=45.6 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=6 ttl=53 time=43.2 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=7 ttl=53 time=44.8 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=8 ttl=53 time=42.6 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=9 ttl=53 time=43.3 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=10 ttl=53 time=44.6 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=11 ttl=53 time=49.8 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=12 ttl=53 time=43.0 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=13 ttl=53 time=39.6 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=14 ttl=53 time=39.8 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=15 ttl=53 time=43.9 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=16 ttl=53 time=45.9 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=17 ttl=53 time=42.5 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=18 ttl=53 time=40.1 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=19 ttl=53 time=43.3 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=20 ttl=53 time=52.2 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=21 ttl=53 time=43.5 ms
64 bytes from rio09s05-in-f14.1e100.net (142.251.133.174): icmp_seq=22 ttl=53 time=42.9 ms
^C
--- google.com ping statistics ---
22 packets transmitted, 22 received, 0% packet loss, time 21079ms
rtt min/avg/max/mdev = 35.967/45.508/70.174/7.160 ms
lucas@ubuntuM2: $
```

27. free-h & free-m: Monitora o uso de memoria do computador.



```
lucas@ubuntuM2: $ free -h
              total        usada        livre  compart.  buff/cache  disponivel
Mem.:      3,8Gi       1,8Gi     603Mi      257Mi      1,5Gi      1,6Gi
Swap:      4,1Gi        0B      4,1Gi
lucas@ubuntuM2: $ free -m
              total        usada        livre  compart.  buff/cache  disponivel
Mem.:      3905        1815       602        257       1486       1677
Swap:      4193         0        4193
```

28. top: Monitor do sistema simplificado via terminal.

```

Atividades Terminal 19 de jan 14:30
lucas@ubuntuM2: ~

top - 14:30:35 up 1:58, 1 user, load average: 0,16, 0,25, 0,20
Tarefas: 200 total, 1 em exec., 199 dormindo, 0 parado, 0 zumbi
%CPU(s): 0,8 us, 0,4 sy, 0,0 ni, 98,7 id, 0,0 wa, 0,0 hi, 0,0 si, 0,0 st
MB mem : 3905,0 total, 341,3 livre, 2044,1 usados, 1519,6 buff/cache
MB swap: 4194,0 total, 4194,0 livre, 0,0 usados, 1448,3 mem dispon.

PID USUARIO PR NI VIRT RES SHR S %CPU %MEM TEMPO+ COMANDO
1417 lucas 20 0 4786604 343592 181976 S 4,0 8,6 5:03.21 gnome-shell
4018 lucas 20 0 592588 69896 56956 S 1,7 1,7 0:02.66 gnome-terminal-
1091 root 20 0 89068 6968 4096 S 0,7 0,2 0:11.01 spice-vdagentd
16 root 20 0 0 0 0 I 0,3 0,0 0:05.42 rcu_preempt
383 systemd+ 20 0 15000 6144 5376 S 0,3 0,2 0:10.25 systemd-oomd
2964 root 20 0 0 0 0 I 0,3 0,0 0:01.82 kworker/2:0-events
1 root 20 0 166892 10416 7216 S 0,0 0,3 0:00.73 systemd
2 root 20 0 0 0 0 S 0,0 0,0 0:00.00 kthreadd
3 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 rcu_gp
4 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 rcu_par_gp
5 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 stub_flushwq
6 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 netns
8 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 kworker/0:0H-events_highpri
11 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 mm_percpu_wq
12 root 20 0 0 0 0 I 0,0 0,0 0:00.00 rcu_tasks_kthread
13 root 20 0 0 0 0 I 0,0 0,0 0:00.00 rcu_tasks_rude_kthread
14 root 20 0 0 0 0 I 0,0 0,0 0:00.00 rcu_tasks_trace_kthread
15 root 20 0 0 0 0 S 0,0 0,0 0:00.11 ksoftirqd/0
17 root rt 0 0 0 0 S 0,0 0,0 0:00.08 migration/0
18 root -51 0 0 0 0 S 0,0 0,0 0:00.00 idle_inject/0
19 root 20 0 0 0 0 S 0,0 0,0 0:00.00 cpuhp/0
20 root 20 0 0 0 0 S 0,0 0,0 0:00.00 cpuhp/1
21 root -51 0 0 0 0 S 0,0 0,0 0:00.00 idle_inject/1
22 root rt 0 0 0 0 S 0,0 0,0 0:00.08 migration/1
23 root 20 0 0 0 0 S 0,0 0,0 0:00.03 ksoftirqd/1
25 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 kworker/1:0H-events_highpri
26 root 20 0 0 0 0 S 0,0 0,0 0:00.00 cpuhp/2
27 root -51 0 0 0 0 S 0,0 0,0 0:00.00 idle_inject/2
28 root rt 0 0 0 0 S 0,0 0,0 0:00.09 migration/2
29 root 20 0 0 0 0 S 0,0 0,0 0:00.03 ksoftirqd/2
31 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 kworker/2:0H-events_highpri
32 root 20 0 0 0 0 S 0,0 0,0 0:00.00 cpuhp/3
33 root -51 0 0 0 0 S 0,0 0,0 0:00.08 migration/3
34 root rt 0 0 0 0 S 0,0 0,0 0:00.00 cpuhp/4
35 root 20 0 0 0 0 S 0,0 0,0 0:00.03 ksoftirqd/3
37 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 kworker/3:0H-events_highpri
38 root 20 0 0 0 0 S 0,0 0,0 0:00.00 kdevtmpfs
39 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 inet_frag_wq
41 root 20 0 0 0 0 S 0,0 0,0 0:00.00 kauditd

```

29. htop: Monitor do sistema melhorado.

```

Atividades Terminal 19 de jan 14:32
lucas@ubuntuM2: ~

[ 0 ||| 2.0% Tasks: 116, 273 thr; 1 running
[ 1 ||| 2.0% Load average: 0.77 0.37 0.24
[ 2 ||| 0.7% Uptime: 02:00:37
[ 3 ||| 0.0%
Mem[|||||] 2.25G/3.81G
Swap[ 0K/4.10G]

PID USER PRI NI VIRT RES SHR S CPU% MEM% TIME+ Command
1417 lucas 20 0 46800 335M 177M S 2.6 8.6 5:10.01 /usr/bin/gnome-shell
5006 lucas 20 0 19516 4480 3072 R 0.7 0.1 0:00.00 htop
1 root 20 0 162M 10416 7216 S 0.0 0.3 0:00.75 /sbin/init splash
208 root 19 -1 65260 29440 28160 S 0.0 0.7 0:00.52 /lib/systemd/systemd-journald
236 root 20 0 26748 6272 4096 S 0.0 0.2 0:00.10 /lib/systemd/systemd-udevd
383 systemd-o 20 0 15000 6144 5376 S 0.0 0.2 0:00.44 /lib/systemd/systemd-oomd
384 systemd-r 20 0 25224 12528 8448 S 0.0 0.3 0:00.19 /lib/systemd/systemd-resolved
386 systemd-t 20 0 88740 6272 5504 S 0.0 0.2 0:00.00 /lib/systemd/systemd-timesyncd
399 systemd-t 20 0 88740 6272 5504 S 0.0 0.2 0:00.00 /lib/systemd/systemd-timesyncd
432 root 20 0 243M 7164 6396 S 0.0 0.2 0:00.30 /usr/libexec/accounts-daemon
435 avahi 20 0 7856 2944 2688 S 0.0 0.1 0:00.14 avahi-daemon: running [ubuntuM2.local]
436 root 20 0 17772 2432 2304 S 0.0 0.1 0:00.02 /usr/sbin/cron -f -p
437 messagebu 20 0 11364 5888 3328 S 0.0 0.1 0:00.62 @ibus-daemon -system --address=systemd: --nofork --nopidfile --systemd-activation --sysl
439 root 20 0 266M 18308 15168 S 0.0 0.5 0:00.75 /usr/sbin/NetworkManager --no-daemon
444 root 20 0 82100 3072 2816 S 0.0 0.1 0:00.67 /usr/sbin/irqlbalance --foreground
446 root 20 0 50316 19456 10368 S 0.0 0.5 0:00.03 /usr/bin/python3 /usr/bin/networkd-dispatcher --run-startup-triggers
447 root 20 0 246M 18904 7040 S 0.0 0.3 0:00.67 /usr/libexec/polkitd --no-debug
448 root 20 0 243M 6656 6144 S 0.0 0.2 0:00.01 /usr/libexec/power-profiles-daemon
449 syslog 20 0 216M 4608 3456 S 0.0 0.1 0:00.12 /usr/sbin/rsyslogd -n -iNONE
452 root 20 0 1431M 27736 17536 S 0.0 0.7 0:00.95 /usr/lib/snapd/snapd
453 root 20 0 246M 18904 7040 S 0.0 0.3 0:00.00 /usr/libexec/polkitd --no-debug
454 root 20 0 239M 5760 5376 S 0.0 0.1 0:00.00 /usr/libexec/swtcheroo-control
455 root 20 0 15652 7296 6144 S 0.0 0.2 0:00.14 /lib/systemd/systemd-logind
457 root 20 0 384M 11656 9352 S 0.0 0.3 0:00.04 /usr/libexec/udisks2/udisksd
458 root 20 0 82100 3072 2816 S 0.0 0.1 0:00.00 /usr/bin/irqlbalance --foreground
459 root 20 0 15244 5632 4864 S 0.0 0.1 0:00.06 /sbin/wpa_supplicant -u -s -0 /run/wpa_supplicant
467 avahi 20 0 7668 1280 1024 S 0.0 0.0 0:00.00 avahi-daemon: chroot helper
470 syslog 20 0 216M 4608 3456 S 0.0 0.1 0:00.05 /usr/sbin/rsyslogd -n -iNONE
471 syslog 20 0 216M 4608 3456 S 0.0 0.1 0:00.00 /usr/sbin/rsyslogd -n -iNONE
473 syslog 20 0 216M 4608 3456 S 0.0 0.1 0:00.06 /usr/sbin/rsyslogd -n -iNONE
475 root 20 0 384M 11656 9352 S 0.0 0.3 0:00.00 /usr/libexec/udisks2/udisksd
483 root 20 0 239M 5760 5376 S 0.0 0.1 0:00.00 /usr/libexec/swtcheroo-control
486 root 20 0 243M 6656 6144 S 0.0 0.2 0:00.00 /usr/libexec/power-profiles-daemon
488 root 20 0 243M 7164 6396 S 0.0 0.2 0:00.26 /usr/libexec/accounts-daemon
499 root 20 0 384M 11656 9352 S 0.0 0.3 0:00.00 /usr/libexec/udisks2/udisksd

```

30. ps: Mostra os processos em execução na instância do terminal.

```
Atividades Terminal 19 de jan 14:37 lucas@ubuntuM2: ~
lucas@ubuntuM2: $ ps
  PID TTY      TIME CMD
 4036 pts/0    00:00:00 bash
 5048 pts/0    00:00:00 ps
lucas@ubuntuM2: $
```

31. ps aux: Mostra todos os processos em execução.

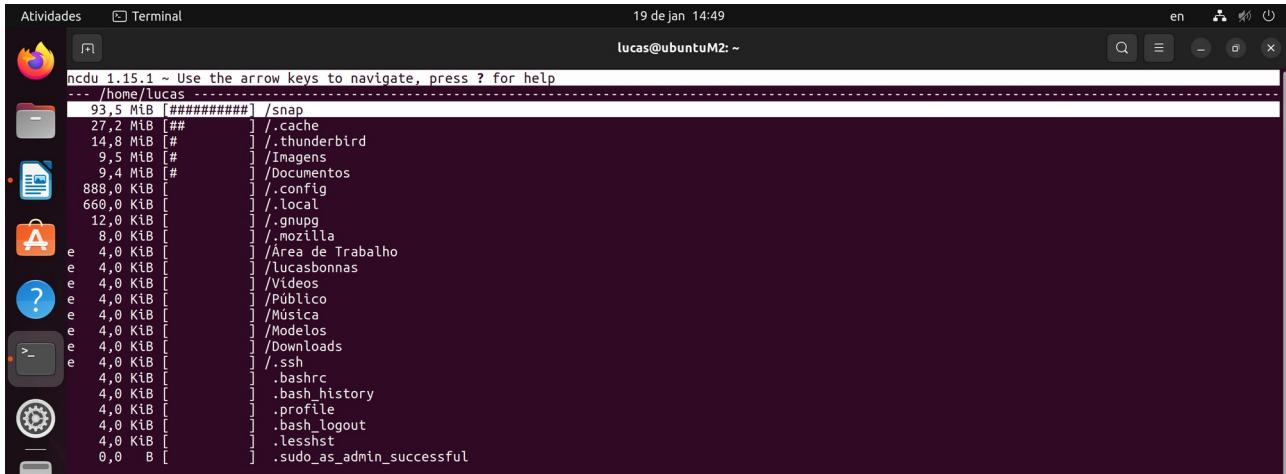
```
Atividades Terminal 19 de jan 14:38 lucas@ubuntuM2: ~
lucas@ubuntuM2: $ ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START  TIME COMMAND
root      1  0.0  0.2 166892 10416 ?        Ss  12:32  0:00 /sbin/init splash
root      2  0.0  0.0     0  0 ?        S     12:32  0:00 [kthreadd]
root      3  0.0  0.0     0  0 ?        I<  12:32  0:00 [rcu_gp]
root      4  0.0  0.0     0  0 ?        I<  12:32  0:00 [rcu_par_gp]
root      5  0.0  0.0     0  0 ?        I<  12:32  0:00 [slub_flushwq]
root      6  0.0  0.0     0  0 ?        I<  12:32  0:00 [netns]
root      8  0.0  0.0     0  0 ?        I<  12:32  0:00 [kworker/0:0H-events_highpri]
root     11  0.0  0.0     0  0 ?        I<  12:32  0:00 [mm_percpu_wq]
root     12  0.0  0.0     0  0 ?        I     12:32  0:00 [rcu_tasks_kthread]
root     13  0.0  0.0     0  0 ?        I     12:32  0:00 [rcu_tasks_rude_kthread]
root     14  0.0  0.0     0  0 ?        I     12:32  0:00 [rcu_tasks_trace_kthread]
root     15  0.0  0.0     0  0 ?        S     12:32  0:00 [ksoftirqd/0]
root     16  0.0  0.0     0  0 ?        I     12:32  0:05 [rcu_preempt]
root     17  0.0  0.0     0  0 ?        S     12:32  0:00 [migration/0]
root     18  0.0  0.0     0  0 ?        S     12:32  0:00 [idle_inject/0]
root     19  0.0  0.0     0  0 ?        S     12:32  0:00 [cpuhp/0]
root     20  0.0  0.0     0  0 ?        S     12:32  0:00 [cpuhp/1]
root     21  0.0  0.0     0  0 ?        S     12:32  0:00 [idle_inject/1]
root     22  0.0  0.0     0  0 ?        S     12:32  0:00 [migration/1]
root     23  0.0  0.0     0  0 ?        S     12:32  0:00 [ksoftirqd/1]
root     25  0.0  0.0     0  0 ?        I<  12:32  0:00 [kworker/1:0H-events_highpri]
root     26  0.0  0.0     0  0 ?        S     12:32  0:00 [cpuhp/2]
root     27  0.0  0.0     0  0 ?        S     12:32  0:00 [idle_inject/2]
root     28  0.0  0.0     0  0 ?        S     12:32  0:00 [migration/2]
root     29  0.0  0.0     0  0 ?        S     12:32  0:00 [ksoftirqd/2]
root     31  0.0  0.0     0  0 ?        I<  12:32  0:00 [kworker/2:0H-events_highpri]
root     32  0.0  0.0     0  0 ?        S     12:32  0:00 [cpuhp/3]
root     33  0.0  0.0     0  0 ?        S     12:32  0:00 [idle_inject/3]
root     34  0.0  0.0     0  0 ?        S     12:32  0:00 [migration/3]
root     35  0.0  0.0     0  0 ?        S     12:32  0:00 [ksoftirqd/3]
root     37  0.0  0.0     0  0 ?        I<  12:32  0:00 [kworker/3:0H-events_highpri]
root     38  0.0  0.0     0  0 ?        S     12:32  0:00 [kdevtmpfs]
root     39  0.0  0.0     0  0 ?        I<  12:32  0:00 [inet_frag_wq]
root     41  0.0  0.0     0  0 ?        S     12:32  0:00 [kaudittd]
root     42  0.0  0.0     0  0 ?        S     12:32  0:00 [khungtaskd]
root     43  0.0  0.0     0  0 ?        S     12:32  0:00 [oom_reaper]
root     44  0.0  0.0     0  0 ?        I<  12:32  0:00 [writeback]
root     45  0.0  0.0     0  0 ?        S     12:32  0:00 [kcompactd0]
root     46  0.0  0.0     0  0 ?        SN    12:32  0:00 [ksmd]
root     47  0.0  0.0     0  0 ?        SN    12:32  0:00 [khugepaged]
root     48  0.0  0.0     0  0 ?        I<  12:32  0:00 [kintegrityd]
root     49  0.0  0.0     0  0 ?        I<  12:32  0:00 [kblockd]
root     50  0.0  0.0     0  0 ?        I<  12:32  0:00 [blkcg_punt_bio]
root     53  0.0  0.0     0  0 ?        I<  12:32  0:00 [tpm_dev_wq]
root     54  0.0  0.0     0  0 ?        I<  12:32  0:00 [ata_sff]
```

32. kill: Comando para gerenciar processos.

33. df -h: Visualizar o uso dos sistemas de arquivos.

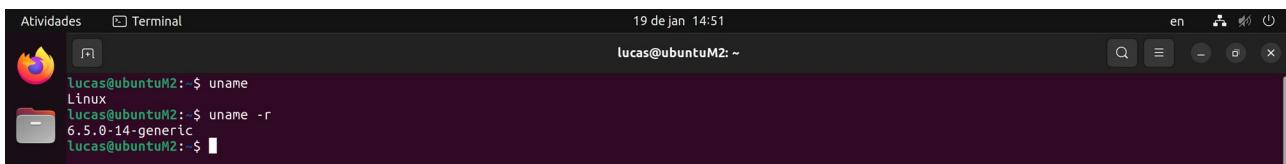
```
Atividades Terminal 19 de jan 14:45 lucas@ubuntuM2: ~
lucas@ubuntuM2: $ df -h
Sist. Arq. Tam. Usado Disp. Uso% Montado em
tmpfs 391M 1,8M 389M 1% /run
/dev/vda2 68G 13G 52G 20% /
tmpfs 2,0G 0 2,0G 0% /dev/shm
tmpfs 5,0M 4,0K 5,0M 1% /run/lock
efivarfs 256K 25K 232K 10% /sys/firmware/efi/efivars
/dev/vda1 512M 5,3M 507M 2% /boot/efi
tmpfs 391M 116K 391M 1% /run/user/1000
lucas@ubuntuM2: $
```

34. ncdū: Escaneia o disco e oferece a opção de gerenciar os arquivos.



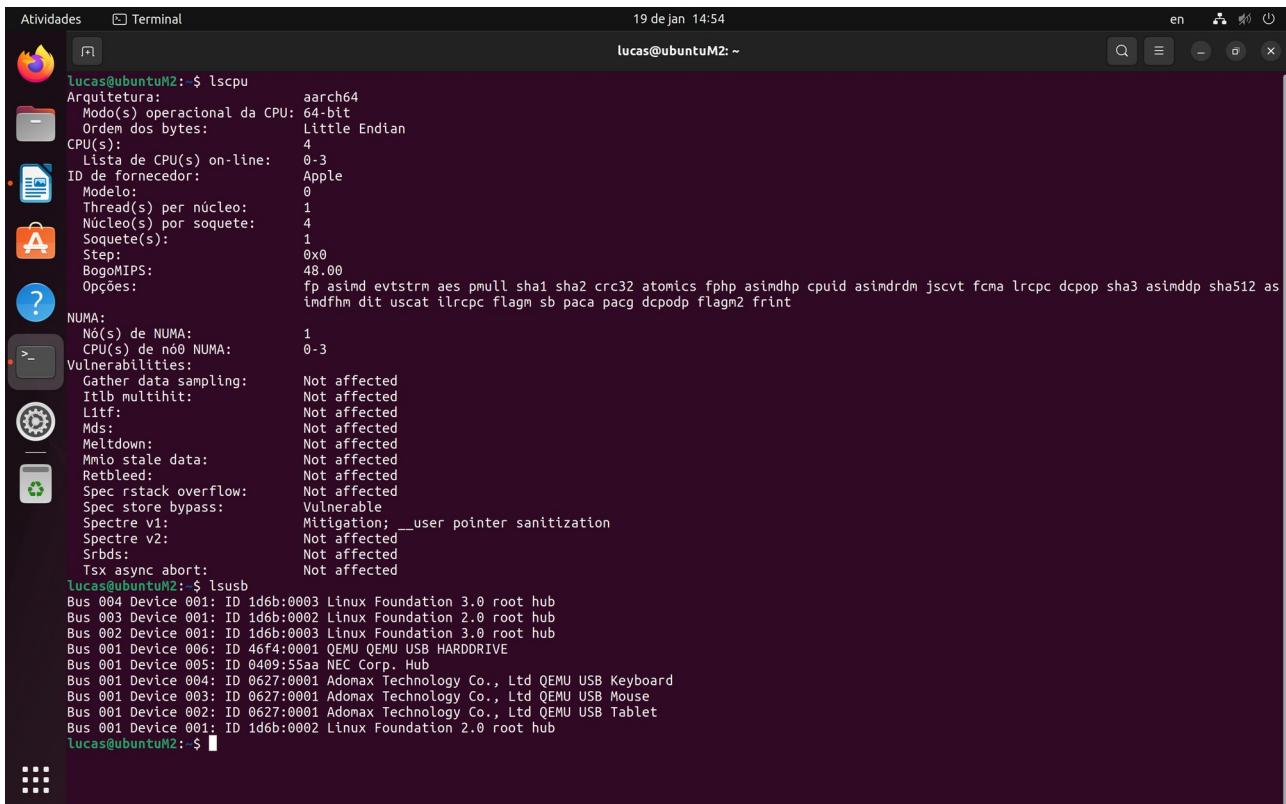
```
Atividades Terminal 19 de jan 14:49 lucas@ubuntuM2: ~
ncdu 1.15.1 ~ Use the arrow keys to navigate, press ? for help
-- /home/lucas
 93,5 MiB [#####] /snap
 27,2 MiB [##] /.cache
 14,8 MiB [#] /.thunderbird
  9,5 MiB [#] /Imagens
  9,4 MiB [#] /Documentos
 888,0 KiB [ . ]/.config
 660,0 KiB [ . ]/.local
 12,0 KiB [ . ]/.gnupg
  8,0 KiB [ . ]/.mozilla
e 4,0 KiB [ . ]/Área de Trabalho
e 4,0 KiB [ . ]/lucasbonnas
e 4,0 KiB [ . ]/Vídeos
e 4,0 KiB [ . ]/Público
e 4,0 KiB [ . ]/Música
e 4,0 KiB [ . ]/Modelos
e 4,0 KiB [ . ]/Downloads
e 4,0 KiB [ . ]/.ssh
4,0 KiB [ . ]/.bashrc
4,0 KiB [ . ]/.bash_history
4,0 KiB [ . ]/.profile
4,0 KiB [ . ]/.bash_logout
4,0 KiB [ . ]/.lessht
0,0 B [ . ]/.sudo_as_admin_successful
```

35. uname: Informações a respeito do kernel.



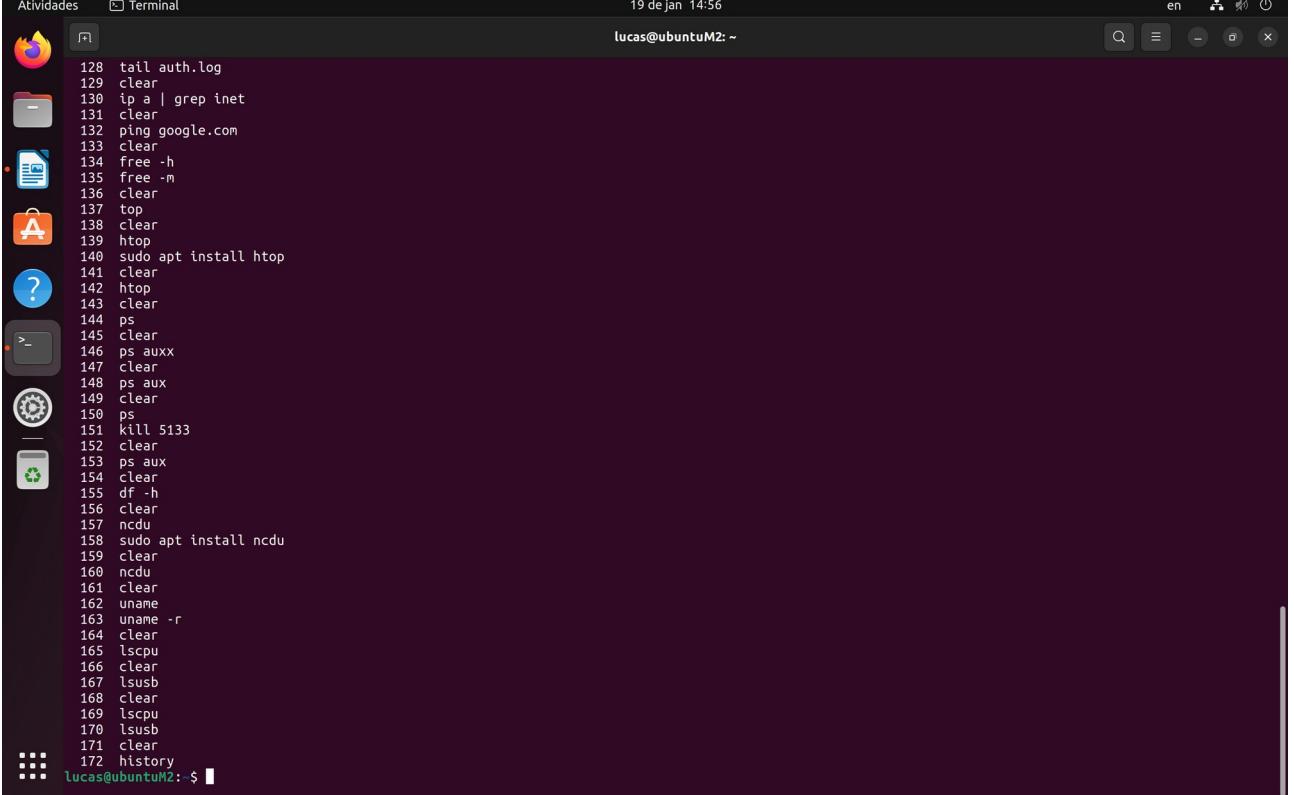
```
Atividades Terminal 19 de jan 14:51 lucas@ubuntuM2: ~
lucas@ubuntuM2: $ uname
Linux
lucas@ubuntuM2: $ uname -r
6.5.0-14-generic
lucas@ubuntuM2: $
```

36. lscpu & lsusb: “lscpu” mostra informações do processador e “lsusb” mostra informações das conexões usb.



```
Atividades Terminal 19 de jan 14:54 lucas@ubuntuM2: ~
lucas@ubuntuM2: $ lscpu
Arquitetura:          aarch64
Modo(s) operacional da CPU: 64-bit
Ordem dos bytes:      Little Endian
CPU(s):               4
Lista de CPU(s) on-line: 0-3
ID de fornecedor:    Apple
Modelo:                0
Thread(s) per núcleo: 1
Núcleo(s) por soquete: 4
Soquete(s):           1
Step:                 0x0
BogoMIPS:             48.00
Opções:               fp asimd evtstrm aes pmull sha1 sha2 crc32 atomics fphp asimdhpm cpuid asimdrdm jscvt fcma lrcpc dcpop sha3 asimddp sha512 asimdfhm dit uscat llrcpc flagm sb paca pacg dcpopd flagm2 frint
NUMA:
Nó(s) de NUMA:        1
CPU(s) de nō0 NUMA:   0-3
Vulnerabilities:
Gather data sampling: Not affected
I1lb multihit:        Not affected
L1tf:                 Not affected
Mds:                  Not affected
Meltdown:             Not affected
Mmio stale data:     Not affected
Retbleed:              Not affected
Spec rstack overflow: Not affected
Spec store bypass:    Vulnerable
Spectre v1:            Mitigation: __user pointer sanitization
Spectre v2:            Not affected
Srbds:                Not affected
Tsx async abort:      Not affected
lucas@ubuntuM2: $ lsusb
Bus 004 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 003 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 002 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 001 Device 006: ID 46f4:0001 QEMU QEMU USB HARDDRIVE
Bus 001 Device 005: ID 0409:55a5 NEC Corp. Hub
Bus 001 Device 004: ID 0627:0001 Adomax Technology Co., Ltd QEMU USB Keyboard
Bus 001 Device 003: ID 0627:0001 Adomax Technology Co., Ltd QEMU USB Mouse
Bus 001 Device 002: ID 0627:0001 Adomax Technology Co., Ltd QEMU USB Tablet
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
lucas@ubuntuM2: $
```

37. history: Histórico dos comandos usados no terminal.



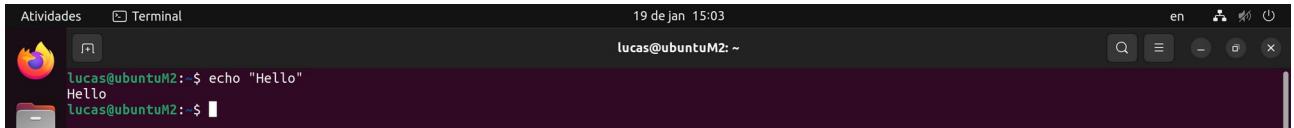
The screenshot shows a Linux desktop environment with a terminal window open. The terminal window title is "Terminal" and the status bar indicates the date and time as "19 de jan 14:56" and the user as "lucas@ubuntuM2: ~". The terminal content displays a command history from session 128 to 172. The commands include various system utilities like tail, clear, ip, grep, ping, free, top, htop, sudo apt install, ps, kill, ncdu, df, uname, lscpu, and lsusb. The terminal prompt at the bottom is "lucas@ubuntuM2: ~ \$".

```
128 tail auth.log
129 clear
130 ip a | grep inet
131 clear
132 ping google.com
133 clear
134 free -h
135 free -m
136 clear
137 top
138 clear
139 htop
140 sudo apt install htop
141 clear
142 htop
143 clear
144 ps
145 clear
146 ps aux
147 clear
148 ps aux
149 clear
150 ps
151 kill 5133
152 clear
153 ps aux
154 clear
155 df -h
156 clear
157 ncdu
158 sudo apt install ncdu
159 clear
160 ncdu
161 clear
162 uname
163 uname -r
164 clear
165 lscpu
166 clear
167 lsusb
168 clear
169 lscpu
170 lsusb
171 clear
172 history
```

lucas@ubuntuM2: ~ \$

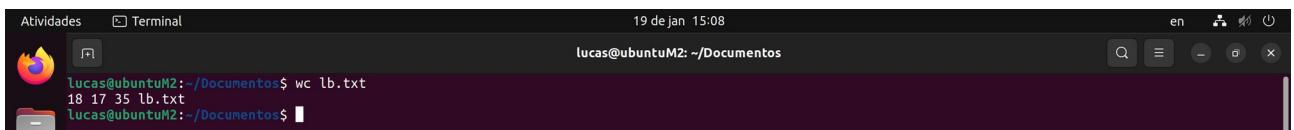
Exercício 2b

1. echo: Retorna na tela o argumento digitado ou redireciona para algum arquivo.



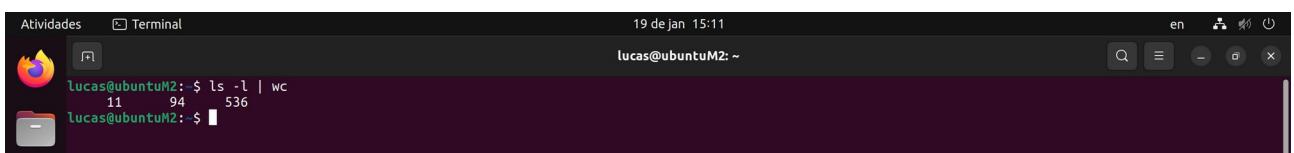
```
Atividades Terminal 19 de jan 15:03 lucas@ubuntuM2: ~ lucas@ubuntuM2: $ echo "Hello" Hello lucas@ubuntuM2: ~
```

2. wc: Conta as palavras, bytes e linhas de um arquivo.



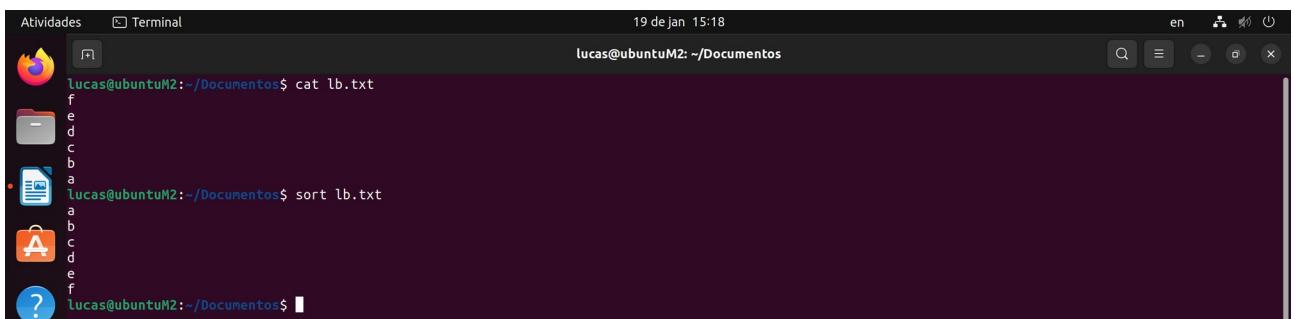
```
Atividades Terminal 19 de jan 15:08 lucas@ubuntuM2: ~/Documentos lucas@ubuntuM2: ~/Documentos$ wc lb.txt 18 17 35 lb.txt lucas@ubuntuM2: ~/Documentos$
```

3. piping: Permite usar dois ou mais comandos, de forma que a saída de um comando sirva como entrada para o próximo.



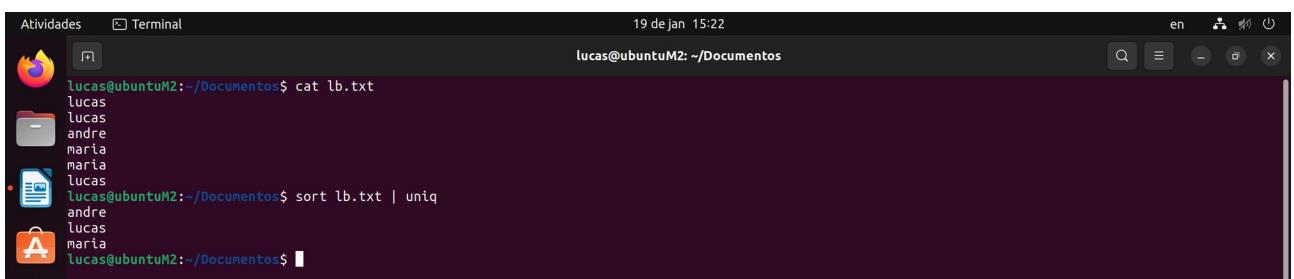
```
Atividades Terminal 19 de jan 15:11 lucas@ubuntuM2: ~ lucas@ubuntuM2: $ ls -l | wc 11 94 536 lucas@ubuntuM2: ~
```

4. sort: Organiza em ordem alfabética algum arquivo.



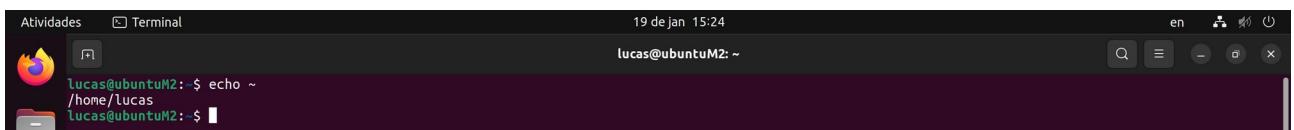
```
Atividades Terminal 19 de jan 15:18 lucas@ubuntuM2: ~/Documentos lucas@ubuntuM2: ~/Documentos$ cat lb.txt f f e d c b a lucas@ubuntuM2: ~/Documentos$ sort lb.txt a a b c d e f lucas@ubuntuM2: ~/Documentos$
```

5. uniq: Reporta e omite linhas repetidas.



```
Atividades Terminal 19 de jan 15:22 lucas@ubuntuM2: ~/Documentos lucas@ubuntuM2: ~/Documentos$ cat lb.txt lucas lucas andre maria maria lucas lucas@ubuntuM2: ~/Documentos$ sort lb.txt | uniq andre lucas maria lucas@ubuntuM2: ~/Documentos$
```

6. expansions: Caracteres especiais como o “~”.



```
Atividades Terminal 19 de jan 15:24 lucas@ubuntuM2: ~ lucas@ubuntuM2: $ echo ~ /home/lucas lucas@ubuntuM2: ~
```

7. diff: Encontrar diferenças entre 2 arquivos distintos.

```
Atividades Terminal 19 de jan 15:27 lucas@ubuntuM2: ~/Documentos
lucas@ubuntuM2:~/Documentos$ cp lb.txt lb2.txt
lucas@ubuntuM2:~/Documentos$ ls
lb2.txt lb.txt Semana01
lucas@ubuntuM2:~/Documentos$ diff lb.txt lb2.txt
lucas@ubuntuM2:~/Documentos$
```

8. find: Encontrar arquivos dentro de diretórios.

```
Atividades Terminal 19 de jan 13:40 lucas@ubuntuM2: ~/lucasbonnas
lucas@ubuntuM2:~/lucasbonnas$ ls
'Lucas bonnas' lucasbonnas.txt pasta1 pasta2
lucas@ubuntuM2:~/lucasbonnas$ find . -name sis_emb.txt
./pasta2/sis_emb.txt
./Lucas bonnas/sis_emb.txt
lucas@ubuntuM2:~/lucasbonnas$ find . -name *txt
./lucasbonnas.txt
lucas@ubuntuM2:~/lucasbonnas$
```

9. grep: Filtrar informações do comando.

```
Atividades Terminal 19 de jan 14:24 lucas@ubuntuM2: ~
lucas@ubuntuM2: $ ip a | grep inet
    inet 127.0.0.1/8 brd 127.255.0.0 scope host lo
        inet6 ::1/128 scope host
            inet 192.168.64.2/24 brd 192.168.64.255 scope global dynamic noprefixroute enp0s1
                inet6 fddff:216:31c:52f5:b299:1b17:1773:e7d8/64 scope global temporary dynamic
                    inet6 fddff:216:31c:52f5:1593:39bc:2436:70d/64 scope global dynamic mngtmpaddr noprefixroute
                        inet6 fe80::56fc:681b:492a:fc88/64 scope link noprefixroute
lucas@ubuntuM2: $
```

10. du: Calcula o tamanho do diretório.

```
Atividades Terminal 19 de jan 15:33 lucas@ubuntuM2: ~/Documentos
lucas@ubuntuM2:~/Documentos$ du
4     ./Semana01/Exercicio02
13628  ./Semana01
13640  .
lucas@ubuntuM2:~/Documentos$
```

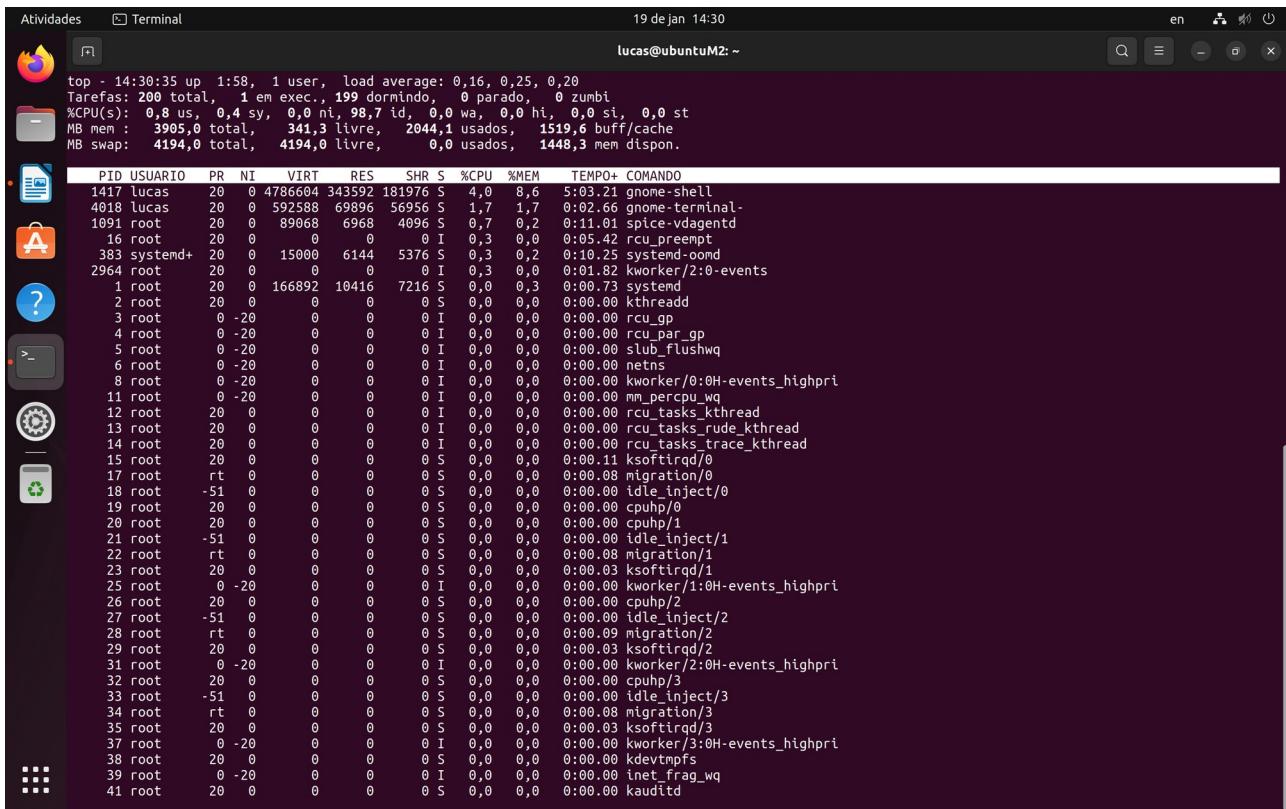
11. df: Mostrar informações do uso de disco.

```
Atividades Terminal 19 de jan 15:34 lucas@ubuntuM2: ~
lucas@ubuntuM2: $ df
Sist. Arq.   Blocos de 1K   Usado   Disponível  Uso% Montado em
tmpfs          399876      1788    398088   1% /run
/dev/vda2      71152792  13533972   53958740  21% /
tmpfs          1999372       0    1999372   0% /dev/shm
tmpfs          5120         4     5116   1% /run/lock
efivarfs        256         25     232   10% /sys/firmware/efi/efivars
/dev/vda1      524000      5392    518608   2% /boot/efi
tmpfs          399872      116    399756   1% /run/user/1000
lucas@ubuntuM2: $
```

12. ps: Mostra os processos em execução na instancia do terminal.

```
Atividades Terminal 19 de jan 14:37 lucas@ubuntuM2: ~
lucas@ubuntuM2: $ ps
  PID TTY      TIME CMD
 4036 pts/0    00:00:00 bash
 5648 pts/0    00:00:00 ps
lucas@ubuntuM2: $
```

13. top: Monitor do sistema simplificado via terminal.



```
Atividades Terminal 19 de jan 14:30 lucas@ubuntuM2: ~
top - 14:30:35 up 1:58, 1 user, load average: 0,16, 0,25, 0,20
Tarefas: 200 total, 1 em exec., 199 dormindo, 0 parado, 0 zumbi
%CPU(s): 0,8 us, 0,4 sy, 0,0 ni, 98,7 id, 0,0 wa, 0,0 hi, 0,0 si, 0,0 st
MB mem : 3905,0 total, 341,3 livre, 2044,1 usados, 1519,6 buff/cache
MB swap: 4194,0 total, 4194,0 livre, 0,0 usados, 1448,3 mem dispon.

PID USUARIO PR NI VIRT RES SHR S %CPU %MEM TEMPO+ COMANDO
1417 lucas 20 0 4786604 343592 181976 S 4,0 8,6 5:03.21 gnome-shell
4018 lucas 20 0 592588 69896 56956 S 1,7 1,7 0:02.66 gnome-terminal-
1091 root 20 0 89068 6968 4096 S 0,7 0,2 0:11.01 spice-vdagentd
16 root 20 0 0 0 0 I 0,3 0,0 0:05.42 rcu_preempt
383 systemd+ 20 0 15000 6144 5376 S 0,3 0,2 0:10.25 systemd-oomd
2964 root 20 0 0 0 0 I 0,3 0,0 0:01.82 kworker/2:0-events
1 root 20 0 166892 10416 7216 S 0,0 0,3 0:00.73 systemd
2 root 20 0 0 0 0 S 0,0 0,0 0:00.00 kthreadd
3 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 rCU_gp
4 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 rCU_par_gp
5 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 slub_flushwq
6 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 netns
8 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 kworker/0:0H-events_highpri
11 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 mm_percpu_wq
12 root 20 0 0 0 0 I 0,0 0,0 0:00.00 rCU_tasks_kthread
13 root 20 0 0 0 0 I 0,0 0,0 0:00.00 rCU_tasks_rude_kthread
14 root 20 0 0 0 0 I 0,0 0,0 0:00.00 rCU_tasks_trace_kthread
15 root 20 0 0 0 0 S 0,0 0,0 0:00.11 ksoftirqd/0
17 root rt 0 0 0 0 S 0,0 0,0 0:00.08 migration/0
18 root -51 0 0 0 0 S 0,0 0,0 0:00.00 idle_inject/0
19 root 20 0 0 0 0 S 0,0 0,0 0:00.00 cpuhp/0
20 root 20 0 0 0 0 S 0,0 0,0 0:00.00 cpuhp/1
21 root -51 0 0 0 0 S 0,0 0,0 0:00.00 idle_inject/1
22 root rt 0 0 0 0 S 0,0 0,0 0:00.08 migration/1
23 root 20 0 0 0 0 S 0,0 0,0 0:00.03 ksoftirqd/1
25 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 kworker/1:0H-events_highpri
26 root 20 0 0 0 0 S 0,0 0,0 0:00.00 cpuhp/2
27 root -51 0 0 0 0 S 0,0 0,0 0:00.00 idle_inject/2
28 root rt 0 0 0 0 S 0,0 0,0 0:00.09 migration/2
29 root 20 0 0 0 0 S 0,0 0,0 0:00.03 ksoftirqd/2
31 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 kworker/2:0H-events_highpri
32 root 20 0 0 0 0 S 0,0 0,0 0:00.00 cpuhp/3
33 root -51 0 0 0 0 S 0,0 0,0 0:00.08 migration/3
34 root rt 0 0 0 0 S 0,0 0,0 0:00.00 idle_inject/3
35 root 20 0 0 0 0 S 0,0 0,0 0:00.03 ksoftirqd/3
37 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 kworker/3:0H-events_highpri
38 root 20 0 0 0 0 S 0,0 0,0 0:00.00 kdevtmpfs
39 root 0 -20 0 0 0 I 0,0 0,0 0:00.00 inet_frag_wq
41 root 20 0 0 0 0 S 0,0 0,0 0:00.00 kauditd
```

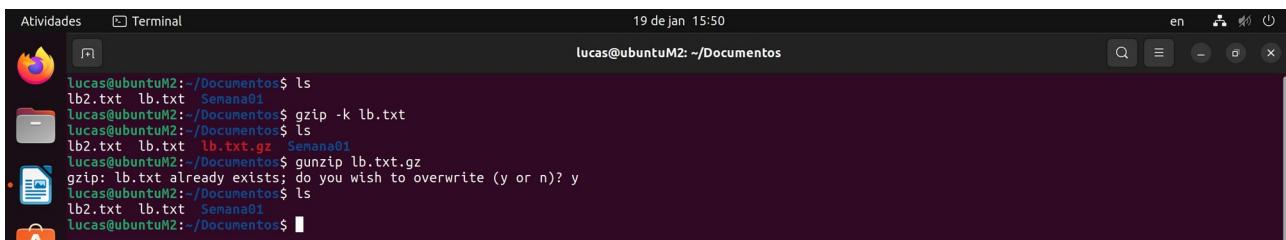
14. kill: Comando para gerenciar processos.

15. kill: Comando para gerenciar processos múltiplos.

16. jobs & bg & fg: “jobs” coloca um comando para rodar em segundo plano .“bg” suspende um programa utilizando o atalho “cntrl-z”. “fg” coloca o programa para rodar em primeiro plano.

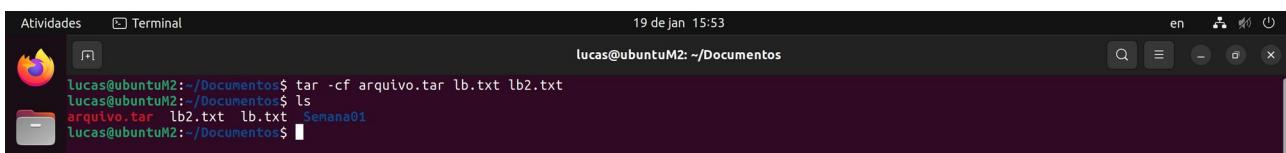
17. gzip: Comando para comprimir um arquivo.

18. gunzip: Descomprime algum arquivo comprimido.



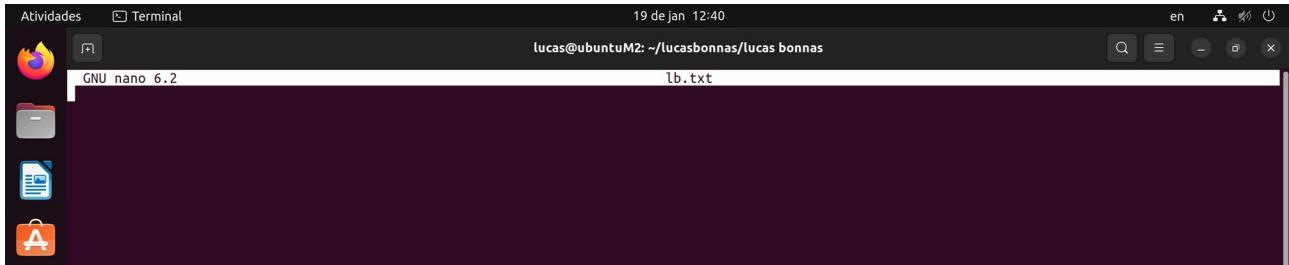
```
Atividades Terminal 19 de jan 15:50 lucas@ubuntuM2: ~/Documentos
lucas@ubuntuM2:~/Documentos$ ls
lb2.txt lb.txt Semana01
lucas@ubuntuM2:~/Documentos$ gzip -k lb.txt
lucas@ubuntuM2:~/Documentos$ ls
lb2.txt lb.txt.gz Semana01
lucas@ubuntuM2:~/Documentos$ gunzip lb.txt.gz
gunzip: lb.txt already exists; do you wish to overwrite (y or n)? y
lucas@ubuntuM2:~/Documentos$ ls
lb2.txt lb.txt Semana01
lucas@ubuntuM2:~/Documentos$
```

19. tar: Cria um arquivo agrupando múltiplos arquivos em um único.



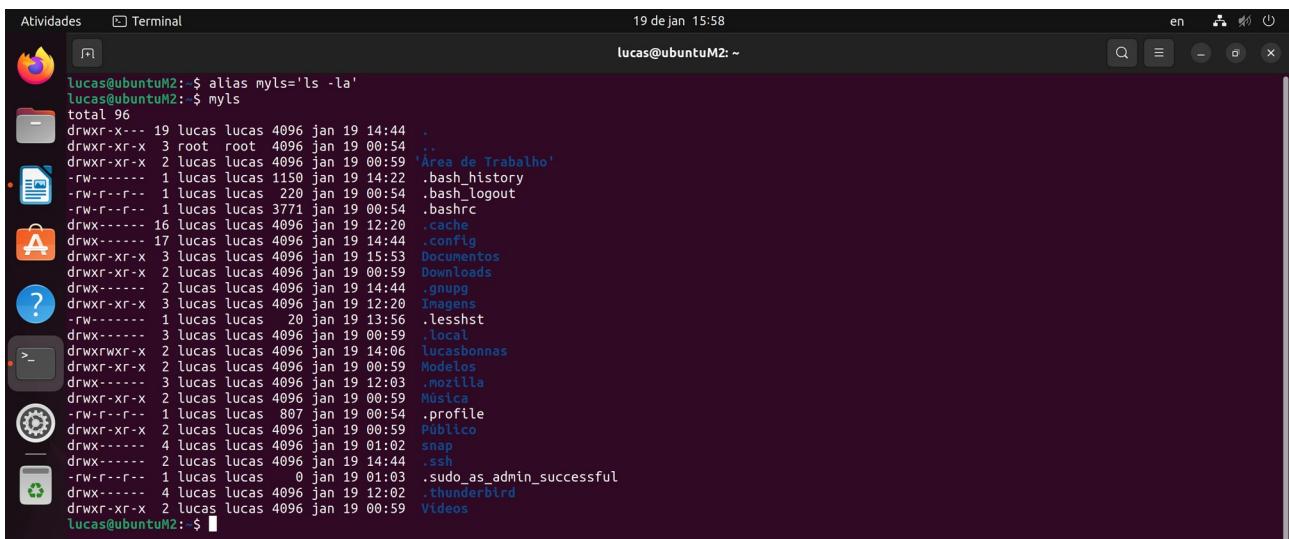
```
Atividades Terminal 19 de jan 15:53 lucas@ubuntuM2: ~/Documentos
lucas@ubuntuM2:~/Documentos$ tar -cf arquivo.tar lb2.txt lb.txt
lucas@ubuntuM2:~/Documentos$ ls
arquivo.tar lb2.txt lb.txt Semana01
lucas@ubuntuM2:~/Documentos$
```

20. nano: Editor de texto no terminal.



```
Atividades Terminal 19 de jan 12:40 lucas@ubuntuM2: ~/lucasbonnas/lucas bonnas lb.txt
```

21. alias: Usado para mostrar no terminal informações mais uteis de alguns comandos, criando atalhos para comandos.

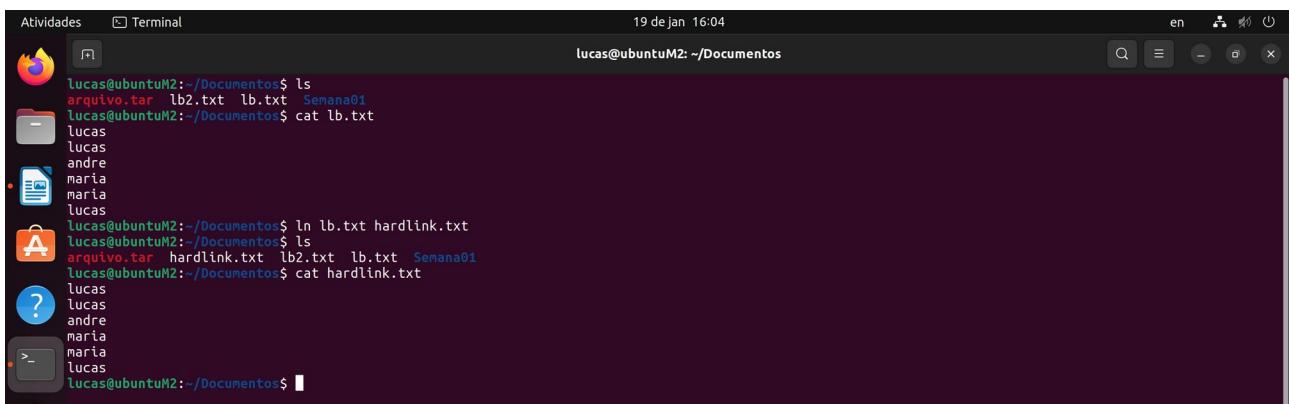


```
Atividades Terminal 19 de jan 15:58 lucas@ubuntuM2: ~
```

```
lucas@ubuntuM2: $ alias myls='ls -la'
lucas@ubuntuM2: $ myls
total 96
drwxr-x--- 19 lucas lucas 4096 jan 19 14:44 .
drwxr-xr-x  3 root  root 4096 jan 19 00:54 ..
drwxr-xr-x  2 lucas lucas 4096 jan 19 00:59 'Área de Trabalho'
-rw-----  1 lucas lucas 1150 jan 19 14:22 .bash_history
-rw-r--r--  1 lucas lucas 220 jan 19 00:54 .bash_logout
-rw-r--r--  1 lucas lucas 3771 jan 19 00:54 .bashrc
drwx----- 16 lucas lucas 4096 jan 19 12:20 .cache
drwx----- 17 lucas lucas 4096 jan 19 14:44 .config
drwxr-xr-x  3 lucas lucas 4096 jan 19 15:53 Documentos
drwxr-xr-x  2 lucas lucas 4096 jan 19 00:59 Downloads
drwx----- 2 lucas lucas 4096 jan 19 14:44 .gnupg
drwxr-xr-x  3 lucas lucas 4096 jan 19 12:20 Imagens
-rw-----  1 lucas lucas 20 jan 19 13:56 .lesshst
drwx----- 3 lucas lucas 4096 jan 19 00:59 .local
drwxrwxr-x  2 lucas lucas 4096 jan 19 14:06 lucasbonnas
drwxr-xr-x  2 lucas lucas 4096 jan 19 00:59 Modelos
drwx----- 3 lucas lucas 4096 jan 19 12:03 .mozilla
drwxr-xr-x  2 lucas lucas 4096 jan 19 00:59 Música
-rw-r--r--  1 lucas lucas 807 jan 19 00:54 .profile
drwxr-xr-x  2 lucas lucas 4096 jan 19 00:59 Público
drwx----- 4 lucas lucas 4096 jan 19 01:02 snap
drwx----- 2 lucas lucas 4096 jan 19 14:44 .ssh
-rw-r--r--  1 lucas lucas  0 jan 19 01:03 .sudo_as_admin_successful
drwx----- 4 lucas lucas 4096 jan 19 12:02 .thunderbird
drwxr-xr-x  2 lucas lucas 4096 jan 19 00:59 Videos
lucas@ubuntuM2: $
```

22. xargs: Executa o comando ou programa e passa como argumento para esse comando o que foi recebido como entrada padrão.

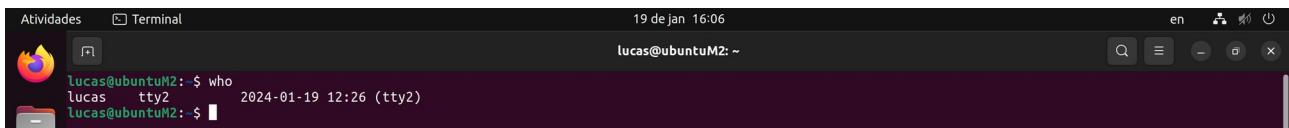
23. ln: Comando usado para criar links.



```
Atividades Terminal 19 de jan 16:04 lucas@ubuntuM2: ~/Documentos
```

```
lucas@ubuntuM2: ~/Documentos $ ls
arquivo.tar lb2.txt lb.txt Semana01
lucas@ubuntuM2: ~/Documentos $ cat lb.txt
lucas
lucas
andre
Maria
Maria
lucas
lucas@ubuntuM2: ~/Documentos $ ln lb.txt hardlink.txt
lucas@ubuntuM2: ~/Documentos $ ls
arquivo.tar hardlink.txt lb2.txt lb.txt Semana01
lucas@ubuntuM2: ~/Documentos $ cat hardlink.txt
lucas
lucas
andre
maria
maria
lucas
lucas@ubuntuM2: ~/Documentos $
```

24. who: Mostram os usuários conectados ao sistema.



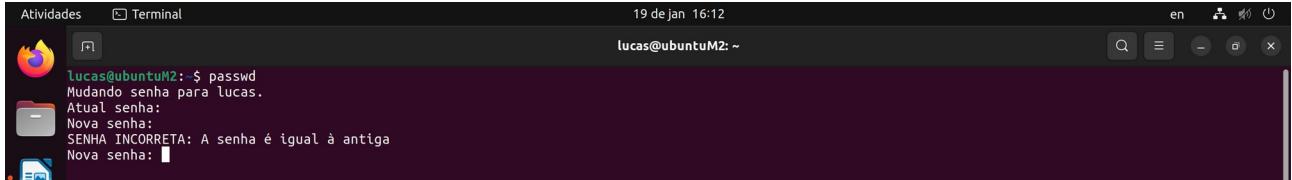
```
Atividades Terminal 19 de jan 16:06 lucas@ubuntuM2: ~
```

```
lucas@ubuntuM2: $ who
lucas  tty2  2024-01-19 12:26 (tty2)
lucas@ubuntuM2: $
```

25. su: Usado para trocar de usuário no terminal.

26. sudo: Permite usuários normais a executarem outros utilitários com permissões mais elevadas.

27. passwd: Mudar a senha do usuário.



A screenshot of a terminal window titled "Terminal". The window shows the command "passwd" being run by the user "lucas" on the system "ubuntuM2". The terminal output indicates that the user is changing their password for the user "lucas". It prompts for the current password ("Atual senha:"), the new password ("Nova senha:"), and then displays an error message ("SENHA INCORRETA: A senha é igual à antiga") because the new password is identical to the old one. The terminal interface includes a header bar with icons for activities, terminal, date/time, user, and system status.

```
Atividades Terminal 19 de jan 16:12 lucas@ubuntuM2: ~
lucas@ubuntuM2: $ passwd
Mudando senha para lucas.
Atual senha:
Nova senha:
SENHA INCORRETA: A senha é igual à antiga
Nova senha: █
```

28. chown: Mudar o dono de um arquivo ou diretório para outro usuário.

29. chmod: Comando que altera as permissões de um arquivo ou diretório.