



# Sistemas Embarcados II

## Tarefa 01

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Uberlândia

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## Sumário

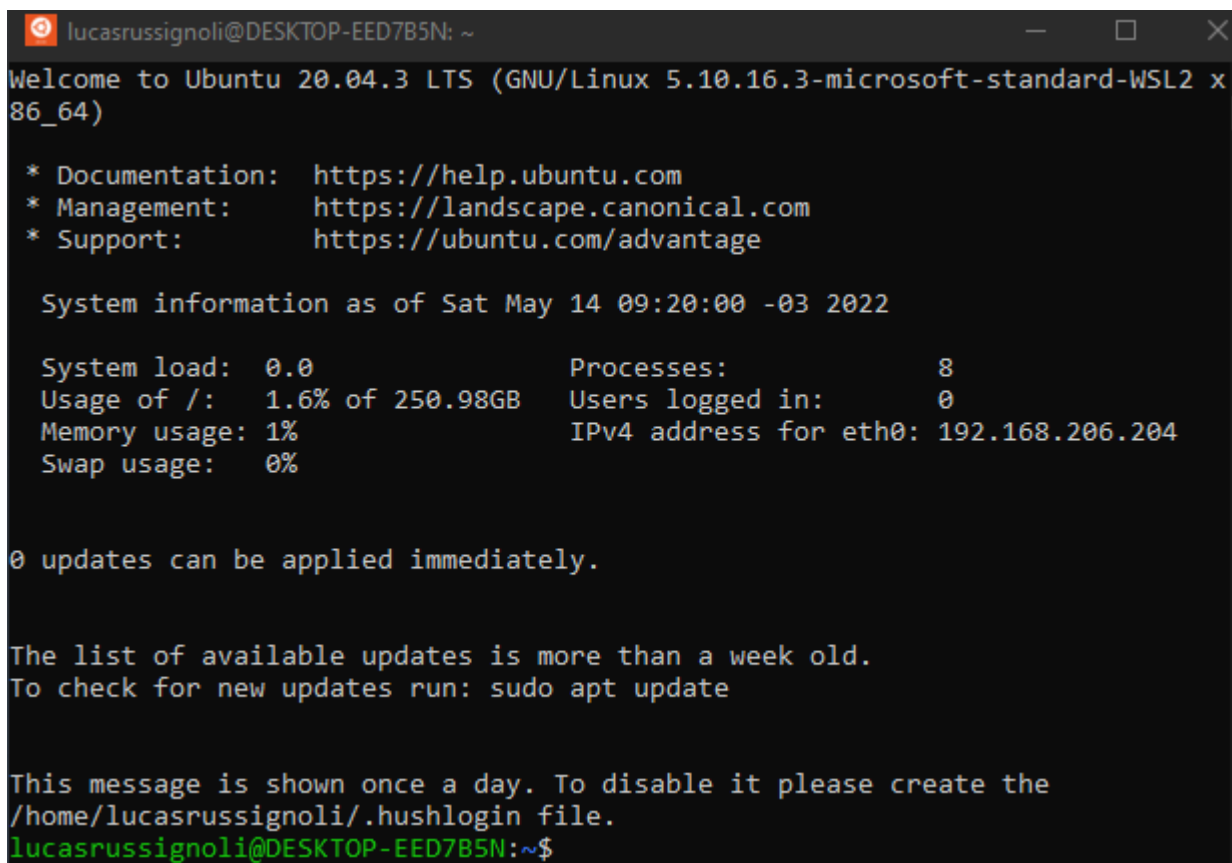
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## 1. Objetivo

Esse relatório tem como objetivo reproduzir os comandos dos capítulos 1 ao 10 e 14 do livro “Linux: Comandos Básicos e Avançados”. O formato será título do comando e print do terminal com o comando estudado.

## 2. Comandos

Acesso ao sistema



```
lucasrussignoli@DESKTOP-EED7B5N: ~  
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.10.16.3-microsoft-standard-WSL2 x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:        https://ubuntu.com/advantage  
  
System information as of Sat May 14 09:20:00 -03 2022  
  
System load:  0.0      Processes:            8  
Usage of /:   1.6% of 250.98GB  Users logged in:     0  
Memory usage: 1%      IPv4 address for eth0: 192.168.206.204  
Swap usage:   0%  
  
0 updates can be applied immediately.  
  
The list of available updates is more than a week old.  
To check for new updates run: sudo apt update  
  
This message is shown once a day. To disable it please create the  
/home/lucasrussignoli/.hushlogin file.  
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Formato dos comandos

```
root@DESKTOP-EED7B5N: /home/lucasrussignoli
lucasrussignoli@DESKTOP-EED7B5N:~$ su
Password:
root@DESKTOP-EED7B5N:/home/lucasrussignoli# ls
SEII-LucasRussignoli  fun-programs
root@DESKTOP-EED7B5N:/home/lucasrussignoli#
```

## Opções de Comandos

```
root@DESKTOP-EED7B5N: /home/lucasrussignoli
root@DESKTOP-EED7B5N:/home/lucasrussignoli# cd --help
cd: cd [-L|[-P [-e]] [-@]] [dir]
    Change the shell working directory.

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

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

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

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

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

Exit Status:
Returns 0 if the directory is changed, and if $PWD is set successfully when
-P is used; non-zero otherwise.
root@DESKTOP-EED7B5N:/home/lucasrussignoli#
```

```

root@DESKTOP-EED7B5N: /home/lucasrussignoli
Returns 0 if the directory is changed, and if $PWD is set successfully when
-P is used; non-zero otherwise.
root@DESKTOP-EED7B5N:/home/lucasrussignoli# ls -la
total 68
drwxr-xr-x 9 lucasrussignoli lucasrussignoli 4096 May 12 16:26 .
drwxr-xr-x 3 root root 4096 Dec 6 16:05 ..
-rw-r----- 1 lucasrussignoli lucasrussignoli 5089 May 13 09:57 .bash_history-rw-r--r-- 1 lucasrus
signoli lucasrussignoli 220 Dec 6 16:05 .bash_logout
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 3771 Dec 6 16:05 .bashrc
drwxr-xr-x 8 lucasrussignoli lucasrussignoli 4096 May 13 09:48 .git
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 71 Dec 6 16:29 .gitconfig
drwxr-xr-x 2 lucasrussignoli lucasrussignoli 4096 Dec 6 16:05 .landscape
drwxr-xr-x 3 lucasrussignoli lucasrussignoli 4096 Dec 6 16:36 .local
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 0 May 14 09:20 .motd_shown
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 807 Dec 6 16:05 .profile
drwx----- 2 lucasrussignoli lucasrussignoli 4096 May 12 08:02 .ssh
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 0 Dec 6 16:06 .sudo_as_admin_successful
-rw-r----- 1 lucasrussignoli lucasrussignoli 2 Dec 7 21:32 .testesoma.save
drwxr-xr-x 5 lucasrussignoli lucasrussignoli 4096 Dec 13 15:33 .vscode-server
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 183 May 12 16:05 .wget-hsts
drwxr-xr-x 6 lucasrussignoli lucasrussignoli 4096 May 13 09:56 SEII-LucasRussignoli
drwxr-xr-x 3 lucasrussignoli lucasrussignoli 4096 May 12 16:16 fun-programs
root@DESKTOP-EED7B5N:/home/lucasrussignoli# ls -all
total 68
drwxr-xr-x 9 lucasrussignoli lucasrussignoli 4096 May 12 16:26 .
drwxr-xr-x 3 root root 4096 Dec 6 16:05 ..
-rw-r----- 1 lucasrussignoli lucasrussignoli 5089 May 13 09:57 .bash_history
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 220 Dec 6 16:05 .bash_logout
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 3771 Dec 6 16:05 .bashrc
drwxr-xr-x 8 lucasrussignoli lucasrussignoli 4096 May 13 09:48 .git
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 71 Dec 6 16:29 .gitconfig
drwxr-xr-x 2 lucasrussignoli lucasrussignoli 4096 Dec 6 16:05 .landscape
drwxr-xr-x 3 lucasrussignoli lucasrussignoli 4096 Dec 6 16:36 .local
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 0 May 14 09:20 .motd_shown
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 807 Dec 6 16:05 .profile
drwx----- 2 lucasrussignoli lucasrussignoli 4096 May 12 08:02 .ssh
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 0 Dec 6 16:06 .sudo_as_admin_successful
-rw-r----- 1 lucasrussignoli lucasrussignoli 2 Dec 7 21:32 .testesoma.save
drwxr-xr-x 5 lucasrussignoli lucasrussignoli 4096 Dec 13 15:33 .vscode-server
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 183 May 12 16:05 .wget-hsts
drwxr-xr-x 6 lucasrussignoli lucasrussignoli 4096 May 13 09:56 SEII-LucasRussignoli
drwxr-xr-x 3 lucasrussignoli lucasrussignoli 4096 May 12 16:16 fun-programs
root@DESKTOP-EED7B5N:/home/lucasrussignoli#

```

## Shells

```

lucasrussignoli@DESKTOP-EED7B5N: ~
lucasrussignoli@DESKTOP-EED7B5N:~$ echo
lucasrussignoli@DESKTOP-EED7B5N:~$ echo $SHELL
/bin/bash
lucasrussignoli@DESKTOP-EED7B5N:~$ cat /etc/shells
# /etc/shells: valid login shells
/bin/sh
/bin/bash
/usr/bin/bash
/bin/rbash
/usr/bin/rbash
/bin/dash
/usr/bin/dash
/usr/bin/tmux
/usr/bin/screen
lucasrussignoli@DESKTOP-EED7B5N:~$ _

```

## Caminho Completo

```
Selecionar lucasrussignoli@DESKTOP-EED7B5N: ~
lucasrussignoli@DESKTOP-EED7B5N:~$ /bin/ls
SEII-LucasRussignoli  fun-programs
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Limpar tela

```
lucasrussignoli@DESKTOP-EED7B5N: ~
lucasrussignoli@DESKTOP-EED7B5N:~$ clear
```

## Exibindo mensagens

```
lucasrussignoli@DESKTOP-EED7B5N: ~
lucasrussignoli@DESKTOP-EED7B5N:~$ echo teste
teste
lucasrussignoli@DESKTOP-EED7B5N:~$ echo 'teste'
teste
lucasrussignoli@DESKTOP-EED7B5N:~$ echo "teste"
teste
lucasrussignoli@DESKTOP-EED7B5N:~$ echo -e " string1 \ tstring2 \
> nstring3 "
 string1 \ tstring2 nstring3
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Histórico no terminal

```
lucasrussignoli@DESKTOP-EED7B5N: ~  
lucasrussignoli@DESKTOP-EED7B5N:~$ history  
 1 sudo apt update  
 2 sudo apt install git build -essential  
 3 man apt  
 4 sudo apt install git  
 5 sudo apt upgrade  
 6 sudo apt install build -essential  
 7 sudo apt install git build -essential  
 8 sudo apt install build -essential  
 9 sudo apt install build-essential  
10 sudo apt install git  
11 git config --global user.name "Lucas Russignoli"  
12 git config --global user.email "lucasrussignoli1998@gmail.com"  
13 ls -la  
14 cd /  
15 list  
16 ls  
17 home  
18 /home  
19 nano  
20 git checkout  
21 clear  
22 git status  
23 -l
```

## Busca no histórico

```
lucasrussignoli@DESKTOP-EED7B5N:~$  
lucasrussignoli@DESKTOP-EED7B5N:~$ history | grep clear  
 21 clear  
 27 clear  
199 clear  
262 clear  
337 clear  
388 clear  
391 clear  
394 clear  
397 clear  
399 clear  
403 clear  
405 clear  
410 clear  
412 history | grep clear  
lucasrussignoli@DESKTOP-EED7B5N:~$
```

Limpar histórico \*não foi executado pelo fato da escolha de manter meu histórico

```
412 history | grep clear
lucasrussignoli@DESKTOP-EED7B5N:~$ hisroty -c_
```

Tamanho Histórico

```
412 history | grep clear
lucasrussignoli@DESKTOP-EED7B5N:~$ echo $HISTSIZE
1000
lucasrussignoli@DESKTOP-EED7B5N:~$ _
```

Logar como root

```
root@DESKTOP-EED7B5N: /home/lucasrussignoli
lucasrussignoli@DESKTOP-EED7B5N:~$ su
Password:
root@DESKTOP-EED7B5N:/home/lucasrussignoli# _
```

```
root@DESKTOP-EED7B5N: /home/lucasrussignoli
lucasrussignoli@DESKTOP-EED7B5N:~$ su
Password:
root@DESKTOP-EED7B5N:/home/lucasrussignoli# sudo apt install vim
Reading package lists... Done
Building dependency tree
Reading state information... Done
vim is already the newest version (2:8.1.2269-1ubuntu5.4).
vim set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@DESKTOP-EED7B5N:/home/lucasrussignoli# _
```



Saindo do sistema

```
lucassignoli@DESKTOP-EED7B5N:~$ exit
```

Desligando sistema imediatamente

```
exit  
lucassignoli@DESKTOP-EED7B5N:~$ shutdown -h now_
```

Desligando em 5 minutos

```
exit  
lucassignoli@DESKTOP-EED7B5N:~$ shutdown -h +5_
```

Desligando em hora agendada

```
exit  
lucassignoli@DESKTOP-EED7B5N:~$ sudo shutdown -h 06:12_
```

Cancelando desligamento

```
lucassignoli@DESKTOP-EED7B5N:~$ sudo shutdown -c
```

Reinicializar

```
exit  
lucassignoli@DESKTOP-EED7B5N:~$ sudo reboot
```

Reinicializar com shutdown

```
exit  
lucasrussignoli@DESKTOP-EED7B5N:~$ sudo shutdown -r now
```

Reinicializa em 3 minutos

```
exit  
lucasrussignoli@DESKTOP-EED7B5N:~$ sudo shutdown -r +3_
```

Listando conteúdos

```
lucasrussignoli@DESKTOP-EED7B5N: ~  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls  
SEII-LucasRussignoli  fun-programs  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls -l  
SEII-LucasRussignoli  
fun-programs  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls -l  
total 8  
drwxr-xr-x 6 lucasrussignoli lucasrussignoli 4096 May 13 09:56 SEII-LucasRussignoli  
drwxr-xr-x 3 lucasrussignoli lucasrussignoli 4096 May 12 16:16 fun-programs  
lucasrussignoli@DESKTOP-EED7B5N:~$ _
```

## Listando arquivos e somente arquivos ocultos

```
lucasrussignoli@DESKTOP-EED7B5N: ~  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls -l  
total 8  
drwxr-xr-x 6 lucasrussignoli lucasrussignoli 4096 May 13 09:56 SEII-LucasRussignoli  
drwxr-xr-x 3 lucasrussignoli lucasrussignoli 4096 May 12 16:16 fun-programs  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls -l /home  
total 4  
drwxr-xr-x 9 lucasrussignoli lucasrussignoli 4096 May 12 16:26 lucasrussignoli  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls -ld /home  
drwxr-xr-x 3 root root 4096 Dec 6 16:05 /home  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls -all /home  
total 12  
drwxr-xr-x 3 root root 4096 Dec 6 16:05 .  
drwxr-xr-x 19 root root 4096 May 14 09:20 ..  
drwxr-xr-x 9 lucasrussignoli lucasrussignoli 4096 May 12 16:26 lucasrussignoli  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls -ld .*?  
drwxr-xr-x 3 root root 4096 Dec 6 16:05 ..  
-rw----- 1 lucasrussignoli lucasrussignoli 5089 May 13 09:57 .bash_history  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 220 Dec 6 16:05 .bash_logout  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 3771 Dec 6 16:05 .bashrc  
drwxr-xr-x 8 lucasrussignoli lucasrussignoli 4096 May 13 09:48 .git  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 71 Dec 6 16:29 .gitconfig  
drwxr-xr-x 2 lucasrussignoli lucasrussignoli 4096 Dec 6 16:05 .landscape  
drwxr-xr-x 3 lucasrussignoli lucasrussignoli 4096 Dec 6 16:36 .local  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 0 May 14 09:20 .motd_shown  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 807 Dec 6 16:05 .profile  
drwx----- 2 lucasrussignoli lucasrussignoli 4096 May 12 08:02 .ssh  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 0 Dec 6 16:06 .sudo_as_admin_successful  
-rw----- 1 lucasrussignoli lucasrussignoli 2 Dec 7 21:32 .testesoma.save  
drwxr-xr-x 5 lucasrussignoli lucasrussignoli 4096 Dec 13 15:33 .vscode-server  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 183 May 12 16:05 .wget-hsts  
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Classificando arquivos e checando o tamanho dos diretórios

```
lucasrussignoli@DESKTOP-EED7B5N: ~  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls  
SEII-LucasRussignoli fun-programs  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls -F  
SEII-LucasRussignoli/ fun-programs/  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls -s  
total 8  
4 SEII-LucasRussignoli 4 fun-programs  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls -alF  
total 68  
drwxr-xr-x 9 lucasrussignoli lucasrussignoli 4096 May 12 16:26 ./  
drwxr-xr-x 3 root root 4096 Dec 6 16:05 ../  
-rw----- 1 lucasrussignoli lucasrussignoli 5089 May 13 09:57 .bash_history  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 220 Dec 6 16:05 .bash_logout  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 3771 Dec 6 16:05 .bashrc  
drwxr-xr-x 8 lucasrussignoli lucasrussignoli 4096 May 13 09:48 .git/  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 71 Dec 6 16:29 .gitconfig  
drwxr-xr-x 2 lucasrussignoli lucasrussignoli 4096 Dec 6 16:05 .landscape/  
drwxr-xr-x 3 lucasrussignoli lucasrussignoli 4096 Dec 6 16:36 .local/  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 0 May 14 09:20 .motd_shown  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 807 Dec 6 16:05 .profile  
drwx----- 2 lucasrussignoli lucasrussignoli 4096 May 12 08:02 .ssh/  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 0 Dec 6 16:06 .sudo_as_admin_successful  
-rw----- 1 lucasrussignoli lucasrussignoli 2 Dec 7 21:32 .testesoma.save  
drwxr-xr-x 5 lucasrussignoli lucasrussignoli 4096 Dec 13 15:33 .vscode-server/  
-rw-r--r-- 1 lucasrussignoli lucasrussignoli 183 May 12 16:05 .wget-hsts  
drwxr-xr-x 6 lucasrussignoli lucasrussignoli 4096 May 13 09:56 SEII-LucasRussignoli/  
drwxr-xr-x 3 lucasrussignoli lucasrussignoli 4096 May 12 16:16 fun-programs/  
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Listando Recursivamente

```
lucasrussignoli@DESKTOP-EED7B5N:~$ ls -R
.:
SEII-LucasRussignoli  fun-programs

./SEII-LucasRussignoli:
README.md  semana01  semana02  semana03

./SEII-LucasRussignoli/semana01:
readme01.md

./SEII-LucasRussignoli/semana02:
readme02.md

./SEII-LucasRussignoli/semana03:
readme03.md

./fun-programs:
script.sh  script.sh.save  turtleteste.py  youtube.py
lucasrussignoli@DESKTOP-EED7B5N:~$ _
```

## Navegando em diretórios

```
lucasrussignoli@DESKTOP-EED7B5N:~$ ls
SEII-LucasRussignoli  fun-programs
lucasrussignoli@DESKTOP-EED7B5N:~$ cd SEII-LucasRussignoli/
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$ ls
README.md  semana01  semana02  semana03
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$ cd semana02
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ _
```

## Diretório raiz

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ cd ~
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Pwd

```
lucasrussignoli@DESKTOP-EED7B5N:~$ pwd
/home/lucasrussignoli
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Copiando arquivos

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana01$ cp /SEII-LucasRussignoli/semana01/readme01.md
```

## Renomear arquivos

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana01$ rename readme02.md
```

## Apagando arquivos

```
lucasrussignoli@DESKTOP-EED7B5N: ~/SEII-LucasRussignoli/semana02  
lucasrussignoli@DESKTOP-EED7B5N:~$ ls  
SEII-LucasRussignoli fun-programs  
lucasrussignoli@DESKTOP-EED7B5N:~$ cd SEII-LucasRussignoli/  
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$ cd semana02  
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ ls  
readme02.md  
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ rm readme02.md_
```

## Criando e apagando diretório

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$ mkdir teste  
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$ ls  
README.md semana01 semana02 semana03 teste  
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$ rm -R teste  
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$ ls  
README.md semana01 semana02 semana03  
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$
```

## Criando arquivo e adicionando algo

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$ touch arq1  
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$ echo 'Laranja' >> arq1  
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$ ls  
README.md arq1 semana01 semana02 semana03  
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$ cat arq1  
Laranja  
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli$ _
```

## Echo e cat

```
lucasrussignoli@DESKTOP-EED7B5N: ~/SEII-LucasRussignoli/semana02
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ echo OLA LUCAS
OLA LUCAS
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ cat readme02.md
Conteúdos avaliativos referentes a semana02
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ _
```

## Cut

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ echo 'lucas russignoli peixoto'
| cut -c 1-10
lucas russ
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$
```

## Seq

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ seq 5 8
5
6
7
8
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ seq 10 25
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$
```

### Comando substituir

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ echo 'a{1}' | tr '{} '()'
a(1)
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$
```

### Comando paste

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ nano nomes.txt
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ cat nomes.txt
Lucas
Mauricio
Eder
Andressa
Pedr

lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ nano notas.txt
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ paste nomes.txt notas.txt
Lucas 10
Mauricio 20
Eder 30
Andressa 40
Pedr 50

lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$
```

### Comando ver

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ echo 'teste' | rev
etset
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$
```

### Comando sort

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ cat notas.txt | sort -n
10
20
30
40
50
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$
```

## Comando wc

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ wc notas.txt
 5  5 15 notas.txt
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$
```

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ echo "áéíóú" | wc -m
6
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ echo "áéíóú" | wc -c
11
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$
```

## Who am i

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ whoami
lucasrussignoli
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ pwd
/home/lucasrussignoli/SEII-LucasRussignoli/semana02
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$
```

## Arquivo passwd

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ cat /etc/passwd
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
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin)/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,:/run/systemd:/usr/sbin/nologin
systemd-timesync:x:102:104:systemd Time Synchronization,,:/run/systemd:/usr/sbin/nologin
messagebus:x:103:106:/:nonexistent:/usr/sbin/nologin
syslog:x:104:110:/:home/syslog:/usr/sbin/nologin
_apt:x:105:65534:/:nonexistent:/usr/sbin/nologin
tss:x:106:111:TPM software stack,,:/var/lib/tpm:/bin/false
uuidd:x:107:112:/:run/uuidd:/usr/sbin/nologin
tcpdump:x:108:113:/:nonexistent:/usr/sbin/nologin
sshd:x:109:65534:/:run/sshd:/usr/sbin/nologin
landscape:x:110:115:/:var/lib/landscape:/usr/sbin/nologin
pollinate:x:111:1:/:var/cache/pollinate:/bin/false
lucasrussignoli:x:1000:1000:,,:/home/lucasrussignoli:/bin/bash
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$
```



## Comando id

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ id
uid=1000(lucasrussignoli) gid=1000(lucasrussignoli) groups=1000(lucasrussignoli),4(adm),20(dialou
t),24(cdrom),25(floppy),27(sudo),29(audio),30(dip),44(video),46(plugdev),117(netdev)
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$
```

## Alterar senha

```
lucasrussignoli@DESKTOP-EED7B5N:~/SEII-LucasRussignoli/semana02$ passwd
Changing password for lucasrussignoli.
Current password: 
```

## Comando finger

```
lucasrussignoli@DESKTOP-EED7B5N:~$ finger lucasrussignoli
Login: lucasrussignoli          Name:
Directory: /home/lucasrussignoli  Shell: /bin/bash
Never logged in.
No mail.
No Plan.
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Comando free

```
lucasrussignoli@DESKTOP-EED7B5N: ~
lucasrussignoli@DESKTOP-EED7B5N:~$ free
              total        used        free      shared  buff/cache   available
Mem:           6397240        65544       6120404          72       211292       6108208
Swap:          2097152           0       2097152
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Comando uname

```
lucasrussignoli@DESKTOP-EED7B5N:~$ uname -s
Linux
lucasrussignoli@DESKTOP-EED7B5N:~$ uname -r
5.10.16.3-microsoft-standard-WSL2
lucasrussignoli@DESKTOP-EED7B5N:~$ uname -m
x86_64
lucasrussignoli@DESKTOP-EED7B5N:~$ uname -n
DESKTOP-EED7B5N
lucasrussignoli@DESKTOP-EED7B5N:~$ uname -a
Linux DESKTOP-EED7B5N 5.10.16.3-microsoft-standard-WSL2 #1 SMP Fri Apr 2 22:23:49 UTC 2021 x86_64
x86_64 x86_64 GNU/Linux
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Comando Uptime

```
lucasrussignoli@DESKTOP-EED7B5N: ~
lucasrussignoli@DESKTOP-EED7B5N:~$ uptime
12:28:32 up 3:08, 0 users, load average: 0.00, 0.00, 0.00
lucasrussignoli@DESKTOP-EED7B5N:~$ uptime
12:28:37 up 3:08, 0 users, load average: 0.00, 0.00, 0.00
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Versão

```
lucasrussignoli@DESKTOP-EED7B5N:~$ ls --version
ls (GNU coreutils) 8.30
Copyright (C) 2018 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by Richard M. Stallman and David MacKenzie.
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Path

```
lucasrussignoli@DESKTOP-EED7B5N:~$ echo $PATH
/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/usr/lib
/wsl/lib:/mnt/c/Program Files/WindowsApps/CanonicalGroupLimited.Ubuntu20.04onWindows_2004.2022.8.
0_x64__79rhkp1fndgsc:/mnt/c/Program Files (x86)/Rockwell Software/RSCommon:/mnt/c/Program Files (
x86)/Common Files/Oracle/Java/javapath:/mnt/c/Program Files/Java/jdk-11.0.13:/mnt/c/Program Files
/Git/cmd:/mnt/c/Program Files/Dart/dart-sdk/bin:/mnt/c/ProgramData/chocolatey/bin:/mnt/c/laragon/
bin/php/php-7.4.19-Win32-vc15-x64:/mnt/c/ProgramData/ComposerSetup/bin:/mnt/c/Users/Windows 10/App
pData/Local/Programs/Python/Python310/Scripts:/mnt/c/Users/Windows 10/AppData/Local/Programs/Pyt
hon/Python310:/mnt/c/Users/Windows 10/Desktop/Sistemas Embarcados 1/9 2020-q2-update/bin:/mnt/c/
Program Files (x86)/GNU Arm Embedded Toolchain/9 2020-q2-update/bin:/mnt/c/Users/Windows 10/AppDa
ta/Local/Microsoft/WindowsApps:/mnt/c/Users/Windows 10/AppData/Local/Programs/Microsoft VS Code/b
in:/mnt/c/Users/Windows 10/AppData/Local/GitHubDesktop/bin:/mnt/c/Users/Windows 10/Documents/flut
ter/bin:/mnt/c/tools/dart-sdk/bin:/mnt/c/Users/Windows 10/AppData/Roaming/Pub/Cache/bin:/mnt/c/Fl
utterSDK/Flutter_2.8.1/flutter/bin:/mnt/c/tools/dart-sdk:/mnt/c/tools/dart-sdk/bin:/mnt/c/flutter
/bin:/mnt/c/Users/Windows 10/AppData/Roaming/Composer/vendor/bin:/mnt/c/laragon/bin/nodejs/node-v
14:/snap/bin
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Comando w

```
lucasrussignoli@DESKTOP-EED7B5N:~$ w
 12:30:19 up 3:10, 0 users, load average: 0.00, 0.00, 0.00
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU WHAT
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Whereis

```
lucasrussignoli@DESKTOP-EED7B5N:~$ w
 12:30:19 up 3:10, 0 users, load average: 0.00, 0.00, 0.00
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU WHAT
lucasrussignoli@DESKTOP-EED7B5N:~$ whereis gcc
gcc: /usr/bin/gcc /usr/lib/gcc /usr/share/gcc /usr/share/man/man1/gcc.1.gz
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Which

```
lucasrussignoli@DESKTOP-EED7B5N:~$ which ls
/usr/bin/ls
lucasrussignoli@DESKTOP-EED7B5N:~$ which gcc
/usr/bin/gcc
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Whatis

```
lucasrussignoli@DESKTOP-EED7B5N:~$ whatis
whatis what?
lucasrussignoli@DESKTOP-EED7B5N:~$ whatis clear
clear (1)          - clear the terminal screen
lucasrussignoli@DESKTOP-EED7B5N:~$ D_
```

## Multiplos comandos

```
lucasrussignoli@DESKTOP-EED7B5N:~$ hostname; date; ls;
DESKTOP-EED7B5N
Sat May 14 12:35:01 -03 2022
SEII-LucasRussignoli  fun-programs
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Todos os processos em execução

```
lucasrussignoli@DESKTOP-EED7B5N: ~
lucasrussignoli@DESKTOP-EED7B5N:~$ ps -aef
UID          PID    PPID  C STIME TTY          TIME CMD
root           1        0  0  09:19 ?           00:00:00 /init
root           8          1  0  09:19 ?           00:00:00 /init
root           9          8  0  09:19 ?           00:00:00 /init
lucasru+     10          9  0  09:19 pts/0       00:00:00 -bash
root        716        10  0 12:34 pts/0       00:00:00 sudo login
root        717       716  0 12:34 pts/0       00:00:00 login
lucasru+     792       717  0 12:34 pts/0       00:00:00 -bash
lucasru+     834       792  0 12:39 pts/0       00:00:00 ps -aef
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Processos listados por ordem de consumo de CPU

```
lucasrussignoli@DESKTOP-EED7B5N:~$ ps -aef -r | head -5
PID TTY      STAT   TIME COMMAND
 836 pts/0    R+      0:00 ps -aef -r SHELL=/bin/bash PWD=/home/lucasrussignoli LOGNAME=lucasrussignoli MOTD_SHOWN=pam HOME=/home/lucasrussignoli LANG=C.UTF-8 LS_COLORS=rs=0:di=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;01:cd=40;33;01:or=40;31;01:mi=00:su=37;41:sg=30;43:ca=30;41:tw=30;42:ow=34;42:st=37;44:ex=01;32:*.tar=01;31:*.tgz=01;31:*.arc=01;31:*.arj=01;31:*.taz=01;31:*.lha=01;31:*.lz4=01;31:*.lzh=01;31:*.lzma=01;31:*.tlz=01;31:*.txz=01;31:*.tzo=01;31:*.t7z=01;31:*.zip=01;31:*.z=01;31:*.dz=01;31:*.gz=01;31:*.lrz=01;31:*.lz=01;31:*.lzo=01;31:*.xz=01;31:*.zst=01;31:*.tztst=01;31:*.bz2=01;31:*.bz=01;31:*.tbz=01;31:*.tbz2=01;31:*.taz=01;31:*.deb=01;31:*.rpm=01;31:*.jar=01;31:*.war=01;31:*.ear=01;31:*.sar=01;31:*.rar=01;31:*.alz=01;31:*.ace=01;31:*.zoo=01;31:*.cpio=01;31:*.7z=01;31:*.rz=01;31:*.cab=01;31:*.wim=01;31:*.swm=01;31:*.dwm=01;31:*.esd=01;31:*.jpg=01;35:*.jpeg=01;35:*.mjpg=01;35:*.mjpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pbm=01;35:*.pgm=01;35:*.ppm=01;35:*.tga=01;35:*.xbm=01;35:*.xpm=01;35:*.tif=01;35:*.tiff=01;35:*.png=01;35:*.svg=01;35:*.svgz=01;35:*.mng=01;35:*.pcx=01;35:*.mov=01;35:*.mpg=01;35:*.mpeg=01;35:*.m2v=01;35:*.mkv=01;35:*.webm=01;35:*.ogm=01;35:*.mp4=01;35:*.m4v=01;35:*.mp4v=01;35:*.vob=01;35:*.qt=01;35:*.nuv
```

## Comando pstree

```
lucasrussignoli@DESKTOP-EED7B5N:~$ pstree
init--init--init--bash--sudo--login--bash--pstree
  |
  +--{init}
```

## Sinais com comando kill

```
lucasrussignoli@DESKTOP-EED7B5N: ~
lucasrussignoli@DESKTOP-EED7B5N:~$ kill -l
 1) SIGHUP      2) SIGINT      3) SIGQUIT     4) SIGILL      5) SIGTRAP
 6) SIGABRT     7) SIGBUS     8) SIGFPE     9) SIGKILL    10) SIGUSR1
11) SIGSEGV    12) SIGUSR2   13) SIGPIPE   14) SIGALRM   15) SIGTERM
16) SIGSTKFLT 17) SIGCHLD  18) SIGCONT   19) SIGSTOP   20) SIGTSTP
21) SIGTTIN   22) SIGTTOU  23) SIGURG    24) SIGXCPU   25) SIGXFSZ
26) SIGVTALRM 27) SIGPROF  28) SIGWINCH  29) SIGIO      30) SIGPWR
31) SIGSYS     34) SIGRTMIN 35) SIGRTMIN+1 36) SIGRTMIN+2 37) SIGRTMIN+3
38) SIGRTMIN+4 39) SIGRTMIN+5 40) SIGRTMIN+6 41) SIGRTMIN+7 42) SIGRTMIN+8
43) SIGRTMIN+9 44) SIGRTMIN+10 45) SIGRTMIN+11 46) SIGRTMIN+12 47) SIGRTMIN+13
48) SIGRTMIN+14 49) SIGRTMIN+15 50) SIGRTMAX-14 51) SIGRTMAX-13 52) SIGRTMAX-12
53) SIGRTMAX-11 54) SIGRTMAX-10 55) SIGRTMAX-9 56) SIGRTMAX-8 57) SIGRTMAX-7
58) SIGRTMAX-6 59) SIGRTMAX-5 60) SIGRTMAX-4 61) SIGRTMAX-3 62) SIGRTMAX-2
63) SIGRTMAX-1 64) SIGRTMAX
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Controlando processos

```
lucasrussignoli@DESKTOP-EED7B5N:~$ ps -u
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
lucasru+   10  0.0  0.0  10460  5616 pts/0    Ss   09:19   0:00 -bash
lucasru+   792  0.0  0.0  10548  5624 pts/0    S    12:34   0:00 -bash
lucasru+   843  0.0  0.0  10620  3204 pts/0    R+   12:45   0:00 ps -u
lucasrussignoli@DESKTOP-EED7B5N:~$ ps -u lucasrussignoli
  PID TTY          TIME CMD
   10 pts/0    00:00:00 bash
   792 pts/0    00:00:00 bash
   844 pts/0    00:00:00 ps
lucasrussignoli@DESKTOP-EED7B5N:~$ top &
[1] 845
lucasrussignoli@DESKTOP-EED7B5N:~$ jobs -l
[1]+  845 Stopped (signal)                  top
lucasrussignoli@DESKTOP-EED7B5N:~$
```

```
lucasrussignoli@DESKTOP-EED7B5N:~$ ps aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.0  0.0   896    528 ?        Sl   09:19   0:00 /init
root         8  0.0  0.0   896     84 ?        Ss   09:19   0:00 /init
root         9  0.0  0.0   896     84 ?        D    09:19   0:00 /init
lucasru+   10  0.0  0.0  10460  5616 pts/0    Ss   09:19   0:00 -bash
root       716  0.0  0.0  11024  4644 pts/0    S    12:34   0:00 sudo login
root       717  0.0  0.0  10676  4300 pts/0    S    12:34   0:00 login
lucasru+   792  0.0  0.0  10548  5624 pts/0    S    12:34   0:00 -bash
lucasru+   845  0.0  0.0  10400  3268 pts/0    T    12:45   0:00 top
lucasru+   854  0.0  0.0  10620  3220 pts/0    R+   12:46   0:00 ps aux
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Listar o proprietário e as permissões dos arquivos

```
lucasrussignoli@DESKTOP-EED7B5N:~$ ls -l
total 8
drwxr-xr-x 6 lucasrussignoli lucasrussignoli 4096 May 14 12:48 SEII-LucasRussignoli
drwxr-xr-x 3 lucasrussignoli lucasrussignoli 4096 May 12 16:16 fun-programs
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Listando Todos os Usuários do Sistema

```
lucasrussignoli@DESKTOP-EED7B5N:~$ 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
lucasrussignoli@DESKTOP-EED7B5N:~$
```

```
lucasrussignoli@DESKTOP-EED7B5N:~$ cut -d: -f1 /etc/passwd | head -10
root
daemon
bin
sys
sync
games
man
lp
mail
news
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Listando Grupos

```
lucasrussignoli@DESKTOP-EED7B5N:~$ cat /etc/group | head -10
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:syslog,lucasrussignoli
tty:x:5:syslog
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Adicionando Usuários

```
lucasrussignoli@DESKTOP-EED7B5N:~$ sudo adduser teste
[sudo] password for lucasrussignoli:
Adding user `teste' ...
Adding new group `teste' (1001) ...
Adding new user `teste' (1001) with group `teste' ...
Creating home directory `/home/teste' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for teste
Enter the new value, or press ENTER for the default
    Full Name []: teste_semb2
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Apagando uma Conta de Usuário

```
lucasrussignoli@DESKTOP-EED7B5N:~$ sudo userdel teste
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Adicionando um Novo Grupo e Deletando um Grupo

```
lucasrussignoli@DESKTOP-EED7B5N:~$ sudo usermod -e 2015-11-25 teste
lucasrussignoli@DESKTOP-EED7B5N:~$ sudo groupadd professores
lucasrussignoli@DESKTOP-EED7B5N:~$ sudo groupdel professores3
groupdel: group 'professores3' does not exist
lucasrussignoli@DESKTOP-EED7B5N:~$ sudo groupdel professores
```



## Hostname

```
lucasrussignoli@DESKTOP-EED7B5N:~$ hostname
DESKTOP-EED7B5N
lucasrussignoli@DESKTOP-EED7B5N:~$ cat /etc/hosts
# This file was automatically generated by WSL. To stop automatic generation of this file, add the
# following entry to /etc/wsl.conf:
# [network]
# generateHosts = false
127.0.0.1    localhost
127.0.1.1    DESKTOP-EED7B5N.localdomain      DESKTOP-EED7B5N
127.0.0.1    apps.corel.com
127.0.0.1    corel.com
127.0.0.1    mc.corel.com
127.0.0.1    activation.cyberlink.com
127.0.0.1    cap.cyberlink.com
127.0.0.1    2.20.235.247
127.0.0.1    13.80.12.54
127.0.0.1    23.74.204.49
127.0.0.1    63.140.41.167
127.0.0.1    66.117.29.4
127.0.0.1    151.101.12.143
127.0.0.1    216.58.214.40
127.0.0.1    239.255.255.250

# 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
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Endereço IP da máquina

```
lucasrussignoli@DESKTOP-EED7B5N:~$ arp -a
DESKTOP-EED7B5N.mshome.net (192.168.192.1) at 00:15:5d:17:16:f3 [ether] on eth0
lucasrussignoli@DESKTOP-EED7B5N:~$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
    inet 192.168.206.204  netmask 255.255.240.0  broadcast 192.168.207.255
    inet6 fe80::215:5dff:fee9:2e97  prefixlen 64  scopeid 0x20<link>
    ether 00:15:5d:e9:2e:97  txqueuelen 1000  (Ethernet)
    RX packets 11660  bytes 3915984 (3.9 MB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 159  bytes 12056 (12.0 KB)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
    inet 127.0.0.1  netmask 255.0.0.0
    inet6 ::1  prefixlen 128  scopeid 0x10<host>
    loop txqueuelen 1000  (Local Loopback)
    RX packets 0  bytes 0 (0.0 B)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 0  bytes 0 (0.0 B)
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0
```

## Comando nmap

```
lucasrussignoli@DESKTOP-EED7B5N: ~$ nmap www.ufu.br
Starting Nmap 7.80 ( https://nmap.org ) at 2022-05-14 13:11 -03
Nmap scan report for www.ufu.br (200.19.145.55)
Host is up (0.033s latency).
rDNS record for 200.19.145.55: bulma.dr.ufu.br
Not shown: 996 filtered ports
PORT      STATE SERVICE
80/tcp    open  http
113/tcp   closed ident
443/tcp    open  https
8008/tcp   open  http

Nmap done: 1 IP address (1 host up) scanned in 4.58 seconds
lucasrussignoli@DESKTOP-EED7B5N: ~$
```

## Nmap com mais informações

```
lucasrussignoli@DESKTOP-EED7B5N: ~$ nmap -v localhost
Starting Nmap 7.80 ( https://nmap.org ) at 2022-05-14 13:12 -03
Initiating Ping Scan at 13:12
Scanning localhost (127.0.0.1) [2 ports]
Completed Ping Scan at 13:12, 0.00s elapsed (1 total hosts)
Initiating Connect Scan at 13:12
Scanning localhost (127.0.0.1) [1000 ports]
Completed Connect Scan at 13:12, 0.01s elapsed (1000 total ports)
Nmap scan report for localhost (127.0.0.1)
Host is up (0.000071s latency).
All 1000 scanned ports on localhost (127.0.0.1) are closed

Read data files from: /usr/bin/./share/nmap
Nmap done: 1 IP address (1 host up) scanned in 0.05 seconds
lucasrussignoli@DESKTOP-EED7B5N: ~$
```

## Comando route

```
lucasrussignoli@DESKTOP-EED7B5N: ~$ route
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
default DESKTOP-EED7B5N 0.0.0.0 UG 0 0 0 eth0
192.168.192.0 0.0.0.0 255.255.240.0 U 0 0 0 eth0
lucasrussignoli@DESKTOP-EED7B5N: ~$
```

## Atualização de Pacotes

```
lucasrussignoli@DESKTOP-EED7B5N:~$ sudo apt update
Hit:1 http://archive.ubuntu.com/ubuntu focal InRelease
Get:2 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:3 http://archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get:5 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [1450 kB]
Get:6 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [1789 kB]
Get:7 http://archive.ubuntu.com/ubuntu focal-updates/main Translation-en [329 kB]
Get:8 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 c-n-f Metadata [15.1 kB]
Get:9 http://archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [972 kB]
Get:10 http://archive.ubuntu.com/ubuntu focal-updates/restricted Translation-en [138 kB]
Get:11 http://archive.ubuntu.com/ubuntu focal-updates/restricted amd64 c-n-f Metadata [528 B]
Get:12 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [921 kB]
Get:13 http://archive.ubuntu.com/ubuntu focal-updates/universe Translation-en [206 kB]
Get:14 http://archive.ubuntu.com/ubuntu focal-updates/universe amd64 c-n-f Metadata [20.6 kB]
Get:15 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [24.4 kB]
Get:16 http://archive.ubuntu.com/ubuntu focal-updates/multiverse Translation-en [7336 B]
Get:17 http://archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 c-n-f Metadata [592 B]
Get:18 http://archive.ubuntu.com/ubuntu focal-backports/main amd64 Packages [42.2 kB]
Get:19 http://security.ubuntu.com/ubuntu focal-security/main Translation-en [249 kB]
Get:20 http://security.ubuntu.com/ubuntu focal-security/main amd64 c-n-f Metadata [10.2 kB]
Get:21 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 Packages [911 kB]
Get:22 http://archive.ubuntu.com/ubuntu focal-backports/main Translation-en [10.1 kB]
Get:23 http://archive.ubuntu.com/ubuntu focal-backports/main amd64 c-n-f Metadata [864 B]
Get:24 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [22.7 kB]
Get:25 http://archive.ubuntu.com/ubuntu focal-backports/universe Translation-en [15.5 kB]
Get:26 http://archive.ubuntu.com/ubuntu focal-backports/universe amd64 c-n-f Metadata [804 B]
Get:27 http://security.ubuntu.com/ubuntu focal-security/restricted Translation-en [130 kB]
Get:28 http://security.ubuntu.com/ubuntu focal-security/restricted amd64 c-n-f Metadata [532 B]
Get:29 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [702 kB]
Get:30 http://security.ubuntu.com/ubuntu focal-security/universe Translation-en [125 kB]
Get:31 http://security.ubuntu.com/ubuntu focal-security/universe amd64 c-n-f Metadata [14.4 kB]
Get:32 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 Packages [20.7 kB]
Get:33 http://security.ubuntu.com/ubuntu focal-security/multiverse Translation-en [5196 B]
Get:34 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 c-n-f Metadata [500 B]
Fetched 8472 kB in 4s (2220 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
149 packages can be upgraded. Run 'apt list --upgradable' to see them.
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Atualizando a Distribuição

```
lucasrussignoli@DESKTOP-EED7B5N: ~  
lucasrussignoli@DESKTOP-EED7B5N:~$ sudo apt list --upgradable  
Listing... Done  
alsa-ucm-conf/focal-updates 1.2.2-1ubuntu0.13 all [upgradable from: 1.2.2-1ubuntu0.11]  
apparmor/focal-updates 2.20.11-0ubuntu27.23 all [upgradable from: 2.20.11-0ubuntu27.21]  
base-files/focal-updates 11ubuntu5.5 amd64 [upgradable from: 11ubuntu5.4]  
bash/focal-updates,focal-security 5.0-6ubuntu1.2 amd64 [upgradable from: 5.0-6ubuntu1.1]  
bind9-dnsutils/focal-updates,focal-security 1:9.16.1-0ubuntu2.10 amd64 [upgradable from: 1:9.16.1-0ubuntu2.9]  
bind9-host/focal-updates,focal-security 1:9.16.1-0ubuntu2.10 amd64 [upgradable from: 1:9.16.1-0ubuntu2.9]  
bind9-libs/focal-updates,focal-security 1:9.16.1-0ubuntu2.10 amd64 [upgradable from: 1:9.16.1-0ubuntu2.9]  
bolt/focal-updates 0.9.1-2~ubuntu20.04.1 amd64 [upgradable from: 0.8-4ubuntu1]  
bsdutils/focal-updates,focal-security 1:2.34-0.1ubuntu9.3 amd64 [upgradable from: 1:2.34-0.1ubuntu9.1]  
busybox-initramfs/focal-updates,focal-security 1:1.30.1-4ubuntu6.4 amd64 [upgradable from: 1:1.30.1-4ubuntu6.3]  
busybox-static/focal-updates,focal-security 1:1.30.1-4ubuntu6.4 amd64 [upgradable from: 1:1.30.1-4ubuntu6.3]  
cloud-init/focal-updates 22.1-14-g2e17a0d6-0ubuntu1~20.04.3 all [upgradable from: 21.4-0ubuntu1~20.04.1]  
command-not-found/focal-updates 20.04.6 all [upgradable from: 20.04.4]  
cpp-9/focal-updates,focal-security 9.4.0-1ubuntu1~20.04.1 amd64 [upgradable from: 9.3.0-17ubuntu1~20.04]  
cryptsetup-bin/focal-updates,focal-security 2:2.2.2-3ubuntu2.4 amd64 [upgradable from: 2:2.2.2-3ubuntu2.3]  
cryptsetup-initramfs/focal-updates,focal-security 2:2.2.2-3ubuntu2.4 all [upgradable from: 2:2.2.2-3ubuntu2.3]  
cryptsetup-run/focal-updates,focal-security 2:2.2.2-3ubuntu2.4 all [upgradable from: 2:2.2.2-3ubuntu2.3]  
cryptsetup/focal-updates,focal-security 2:2.2.2-3ubuntu2.4 amd64 [upgradable from: 2:2.2.2-3ubuntu2.3]  
curl/focal-updates,focal-security 7.68.0-1ubuntu2.11 amd64 [upgradable from: 7.68.0-1ubuntu2.7]  
dbus-user-session/focal-updates,focal-security 1.12.16-2ubuntu2.2 amd64 [upgradable from: 1.12.16-2ubuntu2.1]  
dbus-x11/focal-updates,focal-security 1.12.16-2ubuntu2.2 amd64 [upgradable from: 1.12.16-2ubuntu2.1]  
dbus/focal-updates,focal-security 1.12.16-2ubuntu2.2 amd64 [upgradable from: 1.12.16-2ubuntu2.1]  
distro-info-data/focal-updates,focal-security 0.43ubuntu1.10 all [upgradable from: 0.43ubuntu1.9]  
fdisk/focal-updates,focal-security 2.34-0.1ubuntu9.3 amd64 [upgradable from: 2.34-0.1ubuntu9.1]  
fwupd-signed/focal-updates 1.27.1ubuntu7+1.2-2~20.04.1 amd64 [upgradable from: 1.27.1ubuntu5+1.5.11-0ubuntu1~20.04.2]  
fwupd/focal-updates 1.7.5-3~20.04.1 amd64 [upgradable from: 1.5.11-0ubuntu1~20.04.2]
```

## Instalando Softwares

```
lucasrussignoli@DESKTOP-EED7B5N:~$ sudo apt install vim
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  vim-common vim-runtime vim-tiny
Suggested packages:
  ctags vim-doc vim-scripts indent
The following packages will be upgraded:
  vim vim-common vim-runtime vim-tiny
4 upgraded, 0 newly installed, 0 to remove and 145 not upgraded.
Need to get 7773 kB of archives.
After this operation, 4096 B of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 vim amd64 2:8.1.2269-1ubuntu5.7 [1238 kB]
Get:2 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 vim-tiny amd64 2:8.1.2269-1ubuntu5.7 [578 kB]
Get:3 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 vim-runtime all 2:8.1.2269-1ubuntu5.7 [5872 kB]
Get:4 http://archive.ubuntu.com/ubuntu focal-updates/main amd64 vim-common all 2:8.1.2269-1ubuntu5.7 [85.0 kB]
Fetched 7773 kB in 3s (2827 kB/s)
(Reading database ... 42659 files and directories currently installed.)
Preparing to unpack .../vim_2%3a8.1.2269-1ubuntu5.7_amd64.deb ...
Unpacking vim (2:8.1.2269-1ubuntu5.7) over (2:8.1.2269-1ubuntu5.4) ...
Preparing to unpack .../vim-tiny_2%3a8.1.2269-1ubuntu5.7_amd64.deb ...
Unpacking vim-tiny (2:8.1.2269-1ubuntu5.7) over (2:8.1.2269-1ubuntu5.4) ...
Preparing to unpack .../vim-runtime_2%3a8.1.2269-1ubuntu5.7_all.deb ...
Unpacking vim-runtime (2:8.1.2269-1ubuntu5.7) over (2:8.1.2269-1ubuntu5.4) ...
Preparing to unpack .../vim-common_2%3a8.1.2269-1ubuntu5.7_all.deb ...
Unpacking vim-common (2:8.1.2269-1ubuntu5.7) over (2:8.1.2269-1ubuntu5.4) ...
Setting up vim-common (2:8.1.2269-1ubuntu5.7) ...
Setting up vim-runtime (2:8.1.2269-1ubuntu5.7) ...
Setting up vim (2:8.1.2269-1ubuntu5.7) ...
Setting up vim-tiny (2:8.1.2269-1ubuntu5.7) ...
Processing triggers for mime-support (3.64ubuntu1) ...
Processing triggers for man-db (2.9.1-1) ...
lucasrussignoli@DESKTOP-EED7B5N:~$
```

## Informações sobre a CPU

```
lucasrussignoli@DESKTOP-EED7B5N:~$ lscpu
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
Address sizes:         39 bits physical, 48 bits virtual
CPU(s):                4
On-line CPU(s) list:   0-3
Thread(s) per core:    2
Core(s) per socket:    2
Socket(s):             1
Vendor ID:             GenuineIntel
CPU family:            6
Model:                 142
Model name:            Intel(R) Core(TM) i5-7200U CPU @ 2.50GHz
Stepping:              9
CPU MHz:               2712.000
BogoMIPS:              5424.00
Hypervisor vendor:     Microsoft
Virtualization type:   full
L1d cache:             64 KiB
L1i cache:             64 KiB
L2 cache:              512 KiB
L3 cache:              3 MiB
Vulnerability Itlb multihit: KVM: Mitigation: VMX unsupported
Vulnerability L1tf:      Mitigation; PTE Inversion
Vulnerability Mds:       Vulnerable: Clear CPU buffers attempted, no microcode; SMT Host state unknown
Vulnerability Meltdown:  Mitigation; PTI
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2: Mitigation; Full generic retpoline, IBPB conditional, IBRS_FW, STIBP conditional, RSB filling
Vulnerability Srbds:      Unknown: Dependent on hypervisor status
Vulnerability Tsx async abort: Not affected
Flags:                  fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mmx fxsr sse sse2 ss ht syscall nx pdpe1gb rdtscp lm constant_tsc rep_good nopl xtopology cpuid pni pclmulqdq ssse3 fma cx16 pcid sse4_1 sse4_2 movbe popcnt aes xsave avx f16c rdrand hypervisor lahf_lm abm 3dnowprefetch invpcid_single pti sbd ibrs ibpb stibp fsgsbase bmi1 avx2 smep bmi2 erms invpcid rd
```

## Listando dispositivos de bloco

```
lucasrussignoli@DESKTOP-EED7B5N:~$ lsblk
NAME MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sda   8:0    0 256G  0 disk
sdb   8:16   0 256G  0 disk /
```



## Verificando partições

```
lucasrussignoli@DESKTOP-EED7B5N:~$ cat /proc/partitions
major minor #blocks name
1        0      65536 ram0
1        1      65536 ram1
1        2      65536 ram2
1        3      65536 ram3
1        4      65536 ram4
1        5      65536 ram5
1        6      65536 ram6
1        7      65536 ram7
1        8      65536 ram8
1        9      65536 ram9
1       10      65536 ram10
1       11      65536 ram11
1       12      65536 ram12
1       13      65536 ram13
1       14      65536 ram14
1       15      65536 ram15
8         0 268435456 sda
8        16 268435456 sdb
lucasrussignoli@DESKTOP-EED7B5N:~$
```

```
lucasrussignoli@DESKTOP-EED7B5N:~$ sudo fdisk -l
Disk /dev/ram0: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram1: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram2: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram3: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram4: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram5: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes

Disk /dev/ram6: 64 MiB, 67108864 bytes, 131072 sectors
Units: sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 4096 bytes
I/O size (minimum/optimal): 4096 bytes / 4096 bytes
```

Listando informações sobre a memória

```
lucasrussignoli@DESKTOP-EED7B5N:~$ free
              total        used        free      shared  buff/cache   available
Mem:      6397240      70644      5851044         76      475552      6094924
Swap:      2097152           0      2097152
```



```

Swap: 2097152 0 2097152
lucasrussignoli@DESKTOP-EED7B5N:~$ vmstat -s
 6397240 K total memory
  70896 K used memory
 190380 K active memory
 248520 K inactive memory
5850792 K free memory
 25524 K buffer memory
 450028 K swap cache
2097152 K total swap
   0 K used swap
2097152 K free swap
  2116 non-nice user cpu ticks
   804 nice user cpu ticks
  2058 system cpu ticks
6072212 idle cpu ticks
  2134 IO-wait cpu ticks
    0 IRQ cpu ticks
   351 softirq cpu ticks
    0 stolen cpu ticks
 280238 pages paged in
4752412 pages paged out
    0 pages swapped in
    0 pages swapped out
  98698 interrupts
 501849 CPU context switches
1652530796 boot time
   2880 forks
lucasrussignoli@DESKTOP-EED7B5N:~$

```

```

2880 forks
lucasrussignoli@DESKTOP-EED7B5N:~$ lsmem
RANGE                                SIZE  STATE  REMOVABLE  BLOCK
0x0000000000000000-0x00000000f7ffffff 3.9G  online        yes    0-30
0x00000000100000000-0x0000000019ffffff 2.5G  online        yes   32-51

Memory block size:      128M
Total online memory:    6.4G
Total offline memory:   0B
lucasrussignoli@DESKTOP-EED7B5N:~$

```