

Trabalho 1 – Sistemas Embarcados 2

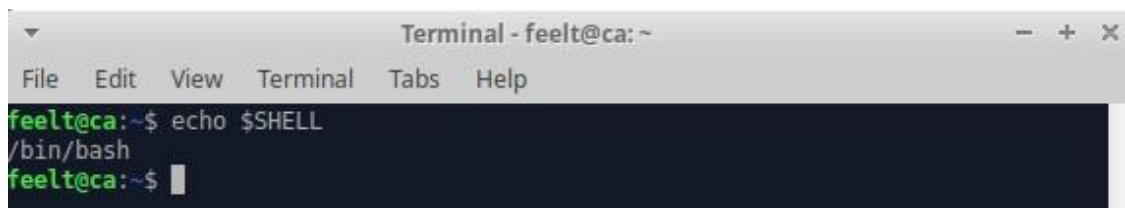
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Neves

N: 12011EAU020

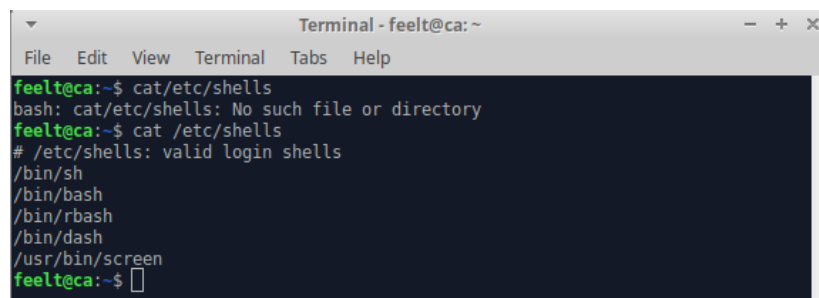
Comandos:

- Echo \$SHELL



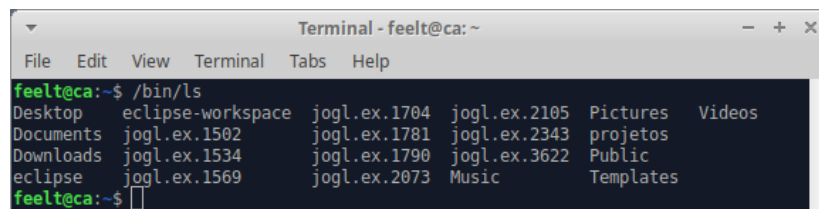
```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ echo $SHELL
/bin/bash
felt@ca:~$
```

- Echo /cat/shells



```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ cat/etc/shells
bash: cat/etc/shells: No such file or directory
felt@ca:~$ cat /etc/shells
# /etc/shells: valid login shells
/bin/sh
/bin/bash
/bin/rbash
/bin/dash
/usr/bin/screen
felt@ca:~$
```

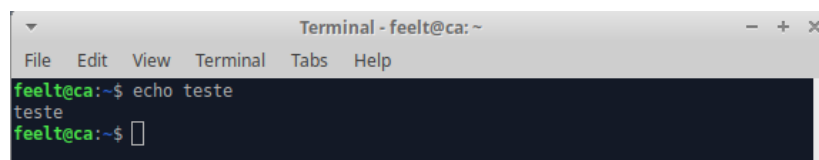
- /bin/ls



```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ /bin/ls
Desktop  eclipse-workspace  jogl.ex.1704  jogl.ex.2105  Pictures  Videos
Documents  jogl.ex.1502      jogl.ex.1781  jogl.ex.2343  projetos
Downloads  jogl.ex.1534      jogl.ex.1790  jogl.ex.3622  Public
eclipse    jogl.ex.1569      jogl.ex.2073  Music         Templates
felt@ca:~$
```

- Clear

- Echo/teste



```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ echo teste
teste
felt@ca:~$
```

- echo -e " string1 \ tstring2 \ nstring3 "

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ echo -e " string1 \ tstring2 \ nstring3 "
string1 \ tstring2 \ nstring3
felt@ca:~$
```

- `Ctrl R`

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
(reverse-i-search)`':
```

- `history`

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
775 echo $SHELL
776 clear
777 echo $SHELL
778 clear
779 cat/etc/shells
780 cat /etc/shells
781 /bin/ls
782 ls
783 clear
784 /bin/ls
785 echo teste
786 echo oi thiago
787 clear
788 echo teste
789 clear
790 cls
791*
792 *echo -e " string1 \ tstring2 \ nstring3 "
793 echo -e " string1 \ tstring2 \ nstring3 "
794 clear
795 echo -e " string1 \ tstring2 \ nstring3 "
796 clear
797 history
felt@ca:~$
```

- `!4`

```
felt@ca:~$ !4
ls
Desktop    eclipse-workspace  jogl.ex.1704  jogl.ex.2105  Pictures  Videos
Documents  jogl.ex.1502       jogl.ex.1781  jogl.ex.2343  projetos
Downloads  jogl.ex.1534       jogl.ex.1790  jogl.ex.3622  Public
eclipse    jogl.ex.1569       jogl.ex.2073  Music         Templates
felt@ca:~$
```

- `History | grep echo`

```
felt@ca:~$ history | grep echo
510 echo $PATH
777 history | grep echo teste
778 history | grep echo
felt@ca:~$
```

- `History -c`

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ history -c
felt@ca:~$ history
1 history
felt@ca:~$
```

- echo \$HISTSIZ

```
feelt@ca:~$ echo $HISTSIZ
1000
feelt@ca:~$
```

- export HISTSIZ=1500

```
feelt@ca:~$ export HISTSIZ=1500
feelt@ca:~$ echo $HISTSIZ
1500
feelt@ca:~$
```

- cat ~/. Bash_history

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

dir
cd GatewayModbus/
dir
cd qmodbus-master/
dir
cd build
dir
./qmodbus
ssh -X root@192.168.7.2
ssh -X 19.2.168.7.2
ssh -X 192.168.7.2
ssh -X root@192.168.7.2
dir
ssh -X root@192.168.7.2
ifconfig
ssh -X root@192.168.7.2
dir
cd Documents/
dir
cd GatewayModbus/
dir
cd qmodbus-master/
dir
cd build/
```

- sudo apt install vim

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

cd ..
dir
ssh -X root@192.168.7.2
python version--
python --version
ssh -X root@192.168.7.2
ssh -X root@192.168.7.2
feelt@ca:~$ cat ~/. Bash_history
cat: /home/feelt/./: Is a directory
cat: Bash_history: No such file or directory
feelt@ca:~$ sudo apt install vim
[sudo] password for felt:
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 NEW packages will be installed:
  vim vim-runtime
The following packages will be upgraded:
  vim-common vim-tiny
2 upgraded, 2 newly installed, 0 to remove and 622 not upgraded.
Need to get 7,136 kB of archives.
After this operation, 32.0 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 vim-tiny amd64 2:8.0.1453-1ubuntu1.8 [476 k
B]
Get:2 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 vim-common all 2:8.0.1453-1ubuntu1.8 [71.1
kB]
Get:3 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 vim-runtime all 2:8.0.1453-1ubuntu1.8 [5,43
5 kB]
61% [3 vim-runtime 3,973 kB/5,435 kB 73%] 397 kB/s 6s
```

Capítulo 2

- Logout/exit

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ logout
bash: logout: not login shell: use `exit`
felt@ca:~$ exit
```

- Shutdown -h now

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ shutdown -h now
```

- Sudo shutdown -h +3 “Desligando”

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ sudo shutdown -h +3 "Desligando"
[sudo] password for felt:
```

- Sudo shutdown -h 10:10 “Desligando”

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ sudo shutdown -h +3 "Desligando"
[sudo] password for felt:
felt@ca:~$ sudo shutdown -h 15:25 "desligando"
[sudo] password for felt:
```

- Sudo shutdown -c

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ sudo shutdown -h +3 "Desligando"
[sudo] password for felt:
felt@ca:~$ sudo shutdown -h 15:25 "desligando"
[sudo] password for felt:
felt@ca:~$ sudo shutdown -h 15:30 "desligando"
[sudo] password for felt:
Shutdown scheduled for Thu 2022-05-19 15:30:00 -03, use 'shutdown -c' to cancel.
felt@ca:~$ shutdown -c
felt@ca:~$
```

- Sudo reboot

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ sudo reboot
```

- Sudo shutdown -r +3 “Reboot em 3 minutos”

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ sudo shutdown -r +3 "reboot em 3 minutos"
[sudo] password for felt:
Shutdown scheduled for Thu 2022-05-19 15:41:38 -03, use 'shutdown -c' to cancel.
felt@ca:~$ shutdown -c
felt@ca:~$
```

Capitulo 3

- Ls

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ ls
Desktop  eclipse-workspace  jogl.ex.1704  jogl.ex.2105  Pictures  Videos
Documents  jogl.ex.1502      jogl.ex.1781  jogl.ex.2343  projetos
Downloads  jogl.ex.1534      jogl.ex.1790  jogl.ex.3622  Public
eclipse    jogl.ex.1569      jogl.ex.2073  Music         Templates
felt@ca:~$
```

- Ls -l

```
felt@ca:~$ ls -l
Desktop
Documents
Downloads
eclipse
eclipse-workspace
jogl.ex.1502
jogl.ex.1534
jogl.ex.1569
jogl.ex.1704
jogl.ex.1781
jogl.ex.1790
jogl.ex.2073
jogl.ex.2105
jogl.ex.2343
jogl.ex.3622
Music
Pictures
projetos
Public
Templates
Videos
felt@ca:~$
```

- Ls -l

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ ls -l
total 124
drwxr-xr-x 5 felt felt 4096 May 14 18:38 Desktop
drwxr-xr-x 6 felt felt 4096 Sep 24 2021 Documents
drwxr-xr-x 5 felt felt 4096 May 14 18:47 Downloads
drwxrwxr-x 3 felt felt 4096 Sep 26 2021 eclipse
drwxrwxr-x 7 felt felt 4096 Sep 26 2021 eclipse-workspace
-rw-rw-r-- 1 felt felt 503 Aug 17 2018 jogl.ex.1502
-rw-rw-r-- 1 felt felt 7960 Aug 17 2018 jogl.ex.1534
-rw-rw-r-- 1 felt felt 503 Aug 17 2018 jogl.ex.1569
-rw-rw-r-- 1 felt felt 7960 Aug 17 2018 jogl.ex.1704
-rw-rw-r-- 1 felt felt 503 Aug 17 2018 jogl.ex.1781
-rw-rw-r-- 1 felt felt 8463 Aug 17 2018 jogl.ex.1790
-rw-rw-r-- 1 felt felt 8463 Aug 17 2018 jogl.ex.2073
-rw-rw-r-- 1 felt felt 7960 Aug 17 2018 jogl.ex.2105
-rw-rw-r-- 1 felt felt 8463 Aug 17 2018 jogl.ex.2343
-rw-rw-r-- 1 felt felt 7960 Aug 17 2018 jogl.ex.3622
drwxr-xr-x 2 felt felt 4096 Aug 16 2018 Music
drwxr-xr-x 2 felt felt 4096 Sep 24 2021 Pictures
drwxrwxr-x 3 felt felt 4096 Sep 12 2018 projetos
drwxr-xr-x 2 felt felt 4096 Aug 16 2018 Public
drwxr-xr-x 2 felt felt 4096 Aug 16 2018 Templates
drwxr-xr-x 2 felt felt 4096 Aug 16 2018 Videos
felt@ca:~$
```

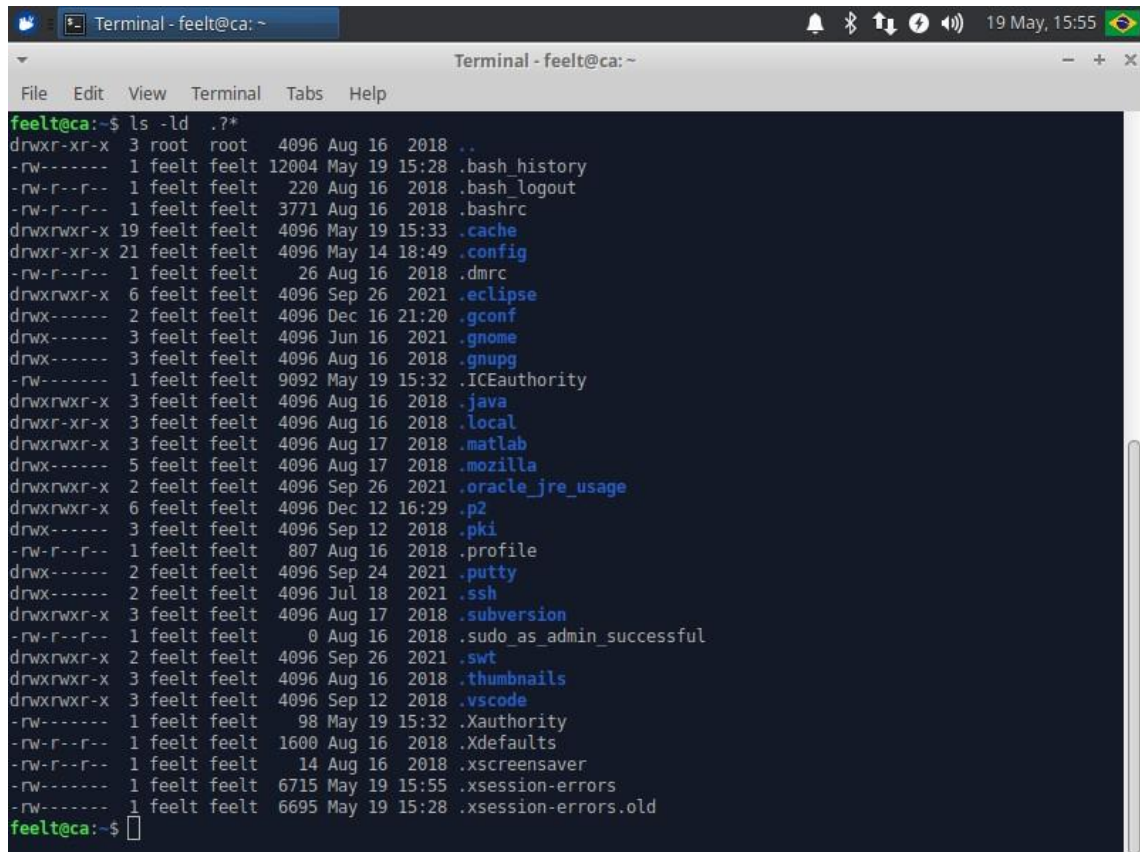
- Ls -ld/pasta especifica

```
felt@ca:~/Documents$ ls -ld
drwxr-xr-x 6 felt felt 4096 Sep 24 2021 .
felt@ca:~/Documents$
```

- Ls -all

```
felt@ca:~/Documents$ ls -all
total 128648
drwxr-xr-x  6 felt felt      4096 Sep 24  2021 .
drwxr-xr-x 32 felt felt      4096 May 19  15:32 ..
-rw-r--r--  1 felt felt 131705480 Jun 14  2021 arduino-1.8.15-linux64.tar.xz
drwxrwxr-x  9 felt felt      4096 Feb 28  12:37 GatewayModbus
drwxrwxr-x  2 felt felt      4096 Aug 17  2018 IESCA
drwxrwxr-x  6 felt felt      4096 Sep 24  2021 RFF1
drwxrwxr-x  6 felt felt      4096 Sep 24  2021 SDCA
felt@ca:~/Documents$
```

- Ls -ld .*?



```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

felt@ca:~$ ls -ld .*?
drwxr-xr-x  3 root root      4096 Aug 16  2018 ..
-rw-r----- 1 felt felt 12004 May 19  15:28 .bash_history
-rw-r--r--  1 felt felt    220 Aug 16  2018 .bash_logout
-rw-r--r--  1 felt felt  3771 Aug 16  2018 .bashrc
drwxrwxr-x 19 felt felt      4096 May 19  15:33 .cache
drwxr-xr-x 21 felt felt      4096 May 14  18:49 .config
-rw-r--r--  1 felt felt    26 Aug 16  2018 .dmrc
drwxrwxr-x  6 felt felt      4096 Sep 26  2021 .eclipse
drwx----- 2 felt felt      4096 Dec 16  21:20 .gconf
drwx----- 3 felt felt      4096 Jun 16  2021 .gnome
drwx----- 3 felt felt      4096 Aug 16  2018 .gnupg
-rw-r----- 1 felt felt  9092 May 19  15:32 .ICEauthority
drwxrwxr-x  3 felt felt      4096 Aug 16  2018 .java
drwxr-xr-x  3 felt felt      4096 Aug 16  2018 .local
drwxrwxr-x  3 felt felt      4096 Aug 17  2018 .matlab
drwx----- 5 felt felt      4096 Aug 17  2018 .mozilla
drwxrwxr-x  2 felt felt      4096 Sep 26  2021 .oracle_jre_usage
drwxrwxr-x  6 felt felt      4096 Dec 12  16:29 .p2
drwx----- 3 felt felt      4096 Sep 12  2018 .pki
-rw-r--r--  1 felt felt    807 Aug 16  2018 .profile
drwx----- 2 felt felt      4096 Sep 24  2021 .putty
drwx----- 2 felt felt      4096 Jul 18  2021 .ssh
drwxrwxr-x  3 felt felt      4096 Aug 17  2018 .subversion
-rw-r--r--  1 felt felt      0 Aug 16  2018 .sudo_as_admin_successful
drwxrwxr-x  2 felt felt      4096 Sep 26  2021 .swt
drwxrwxr-x  3 felt felt      4096 Aug 16  2018 .thumbnails
drwxrwxr-x  3 felt felt      4096 Sep 12  2018 .vscode
-rw-r----- 1 felt felt    98 May 19  15:32 .Xauthority
-rw-r--r--  1 felt felt  1600 Aug 16  2018 .Xdefaults
-rw-r--r--  1 felt felt    14 Aug 16  2018 .xscreensaver
-rw-r----- 1 felt felt  6715 May 19  15:55 .xsession-errors
-rw-r----- 1 felt felt  6695 May 19  15:28 .xsession-errors.old
felt@ca:~$
```

- Ls -F

```
felt@ca:~$ ls -F
jogl.ex.2105      projetos                jogl.ex.2073            .Xauthority           .dmrc
eclipse-workspace .ICEauthority           jogl.ex.2343            .eclipse              Documents
jogl.ex.1781     .bash_logout           .gnupg                  ..                    .cache
.Xdefaults       jogl.ex.1502            .pki                    .java                 jogl.ex.1704
Downloads        .matlab                 .sudo_as_admin_successful .oracle_jre_usage     jogl.ex.3622
.local           .bashrc                 .xsession-errors        Templates              .swt
.vscode          .xsession-errors.old   .profile                .p2                   .putty
.config          Pictures                .gnome                  Music                  .ssh
jogl.ex.1534     .mozilla                .thumbnails              .                      jogl.ex.1790
.bash_history    Public                  .gconf                  .xscreensaver         .subversion
jogl.ex.1569     Desktop                 Videos                  eclipse
felt@ca:~$
```

- Ls -s

```
feelt@ca:~$ ls -s
total 124
 4 Desktop          4 eclipse-workspace  8 jogl.ex.1704      8 jogl.ex.2105      4 Pictures          4 Videos
 4 Documents        4 jogl.ex.1502       4 jogl.ex.1781     12 jogl.ex.2343      4 projetos
 4 Downloads        8 jogl.ex.1534      12 jogl.ex.1790     8 jogl.ex.3622      4 Public
 4 eclipse          4 jogl.ex.1569      12 jogl.ex.2073     4 Music              4 Templates
feelt@ca:~$
```

- Ls -alF

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

feelt@ca:~$ ls -alF
total 276
drwxr-xr-x 32 felt felt 4096 May 19 15:32 ./
drwxr-xr-x  3 root root 4096 Aug 16 2018 ../
-rw-r----- 1 felt felt 12004 May 19 15:28 .bash_history
-rw-r--r--  1 felt felt  220 Aug 16 2018 .bash_logout
-rw-r--r--  1 felt felt 3771 Aug 16 2018 .bashrc
drwxrwxr-x 19 felt felt 4096 May 19 15:33 .cache/
drwxr-xr-x 21 felt felt 4096 May 14 18:49 .config/
drwxr-xr-x  5 felt felt 4096 May 14 18:38 Desktop/
-rw-r--r--  1 felt felt  26 Aug 16 2018 .dmrc
drwxr-xr-x  6 felt felt 4096 Sep 24 2021 Documents/
drwxr-xr-x  5 felt felt 4096 May 14 18:47 Downloads/
drwxrwxr-x  3 felt felt 4096 Sep 26 2021 eclipse/
drwxrwxr-x  6 felt felt 4096 Sep 26 2021 .eclipse/
drwxrwxr-x  7 felt felt 4096 Sep 26 2021 eclipse-workspace/
drwx----- 2 felt felt 4096 Dec 16 21:20 .gconf/
drwx----- 3 felt felt 4096 Jun 16 2021 .gnome/
drwx----- 3 felt felt 4096 Aug 16 2018 .gnupg/
-rw-----  1 felt felt 9092 May 19 15:32 .ICEauthority
drwxrwxr-x  3 felt felt 4096 Aug 16 2018 .java/
-rw-rw-r--  1 felt felt  503 Aug 17 2018 jogl.ex.1502
-rw-rw-r--  1 felt felt 7960 Aug 17 2018 jogl.ex.1534
-rw-rw-r--  1 felt felt  503 Aug 17 2018 jogl.ex.1569
-rw-rw-r--  1 felt felt 7960 Aug 17 2018 jogl.ex.1704
-rw-rw-r--  1 felt felt  503 Aug 17 2018 jogl.ex.1781
-rw-rw-r--  1 felt felt 8463 Aug 17 2018 jogl.ex.1790
-rw-rw-r--  1 felt felt 8463 Aug 17 2018 jogl.ex.2073
-rw-rw-r--  1 felt felt 7960 Aug 17 2018 jogl.ex.2105
-rw-rw-r--  1 felt felt 8463 Aug 17 2018 jogl.ex.2343
-rw-rw-r--  1 felt felt 7960 Aug 17 2018 jogl.ex.3622
drwxr-xr-x  3 felt felt 4096 Aug 16 2018 .local/
drwxrwxr-x  3 felt felt 4096 Aug 17 2018 .matlab/
drwx----- 5 felt felt 4096 Aug 17 2018 .mozilla/
drwxr-xr-x  2 felt felt 4096 Aug 16 2018 Music/
```

- Cd

```
feelt@ca:~$ cd Downloads
feelt@ca:~/Downloads$
```

- Cd ~

```
feelt@ca:~$ cd Downloads
feelt@ca:~/Downloads$ cd ~
feelt@ca:~$
```

- Echo ~

```
feelt@ca:~/Downloads$ echo ~
/home/feelt
feelt@ca:~/Downloads$
```


- Ls -la.

```
feelt@ca:~/Downloads$ ls -la .
total 516000
drwxr-xr-x  5 felt felt    4096 May 14 18:47 .
drwxr-xr-x 32 felt felt    4096 May 19 15:32 ..
drwxr-xr-x 10 felt felt    4096 May 14 2021 arduino-1.8.15
-rw-r--r--  1 felt felt 131705480 Jun 14 2021 arduino-1.8.15-linux64.tar.xz
-rw-rw-r--  1 felt felt  45361392 Sep 12 2018 code_1.27.1-1536226049_amd64.deb
drwxrwxr-x  2 felt felt    4096 Jun  3 2021 codeblocks_20.03_amd64_oldstable
-rw-rw-r--  1 felt felt 173390536 Jun  3 2021 codeblocks_20.03_amd64_oldstable.tar.xz
-rwxr--r--  1 felt felt    15331 Dec 14 14:24 demo.c
drwxr-xr-x  7 felt felt    4096 Sep  7 2021 eclipse-installer
-rw-rw-r--  1 felt felt  93625795 Sep 26 2021 eclipse-inst-jre-linux64.tar.gz
-rw-rw-r--  1 felt felt  84229920 May 14 18:47 opera-stable_86.0.4363.59_amd64.deb
-rwxr--r--  1 felt felt    12315 Dec 16 21:31 porttcp.c
feelt@ca:~/Downloads$
```

- Ls -F ..

```
feelt@ca:~/Downloads$ ls -F .
arduino-1.8.15/
arduino-1.8.15-linux64.tar.xz
code_1.27.1-1536226049_amd64.deb
codeblocks_20.03_amd64_oldstable/
codeblocks_20.03_amd64_oldstable.tar.xz
demo.c*
eclipse-installer/
eclipse-inst-jre-linux64.tar.gz
opera-stable_86.0.4363.59_amd64.deb
porttcp.c*
feelt@ca:~/Downloads$
```

- Cd ..

```
feelt@ca:~/Downloads$ cd ..
feelt@ca:~$
```

- Pwd

```
feelt@ca:~$ pwd
/home/feelt
```

- Cp
- Cp -r
- Rename

```
Terminal - felt@ca: ~/Documents
File Edit View Terminal Tabs Help
feelt@ca:~/Documents$ dir
arduino-1.8.15-linux64.tar.xz GatewayModbus IESCA RFF1 SDCA teste teste.txt
feelt@ca:~/Documents$ rename teste.txt test1.txt
Bareword "teste" not allowed while "strict subs" in use at (user-supplied code) line 3.
feelt@ca:~/Documents$
```

- Touch

```
feelt@ca:~/Documents$ touch teste.txt
feelt@ca:~/Documents$
```

- Mkdir

```
feelt@ca:~/Documents$ TMPFILE=$(mktemp)
feelt@ca:~/Documents$ echo $TMPFILE
/tmp/tmp.JHbcV8Yv2C
```


- rm arquivo

```
Terminal - felt@ca: ~/Documents
File Edit View Terminal Tabs Help
felt@ca:~/Documents$ dir
arduino-1.8.15-linux64.tar.xz  GatewayModbus  RFF1  teste
file.txt                      IESCA          SDCA  teste.txt
felt@ca:~/Documents$ rm file.txt
felt@ca:~/Documents$ dir
arduino-1.8.15-linux64.tar.xz  IESCA  SDCA  teste.txt
GatewayModbus                 RFF1   teste
felt@ca:~/Documents$
```

- Rm -R diretório

```
felt@ca:~/Documents$ rm -R teste.txt
felt@ca:~/Documents$ dir
arduino-1.8.15-linux64.tar.xz  GatewayModbus  IESCA  RFF1  SDCA  teste
felt@ca:~/Documents$
```

- Rmdir

```
felt@ca:~/Documents$ dir
arduino-1.8.15-linux64.tar.xz  GatewayModbus  IESCA  RFF1  SDCA  teste
felt@ca:~/Documents$ rmdir teste
felt@ca:~/Documents$ dir
arduino-1.8.15-linux64.tar.xz  GatewayModbus  IESCA  RFF1  SDCA
felt@ca:~/Documents$
```

- Mkdir -p temp/temp1/tempdir

```
Terminal - felt@ca: ~/Documents/temp/temp1
File Edit View Terminal Tabs Help
felt@ca:~/Documents/temp$ cd ..
felt@ca:~/Documents$ dir
arduino-1.8.15-linux64.tar.xz  GatewayModbus  IESCA  RFF1  SDCA  temp
felt@ca:~/Documents$ cd temp
felt@ca:~/Documents/temp$ dir
temp1
felt@ca:~/Documents/temp$ cd temp1
felt@ca:~/Documents/temp/temp1$ dir
tempdir
felt@ca:~/Documents/temp/temp1$
```

Capítulo 4

- Echo

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ echo 'ola thiago'
ola thiago
felt@ca:~$
```

- Cat

```
felt@ca:~/Documents/GatewayModbus/LINUXTCP$ dir
demo.c demo.o Makefile Makefile.bkp Modbus port SlaveModbus
felt@ca:~/Documents/GatewayModbus/LINUXTCP$ cat demo.c
/*
 * FreeModbus Library: Win32 Demo Application
 * Copyright (C) 2006 Christian Walter <wolti@sil.at>
 *
 * This library is free software; you can redistribute it and/or
 * modify it under the terms of the GNU Lesser General Public
 * License as published by the Free Software Foundation; either
 * version 2.1 of the License, or (at your option) any later version.
 *
 * This library is distributed in the hope that it will be useful,
 * but WITHOUT ANY WARRANTY; without even the implied warranty of
 * MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
 * Lesser General Public License for more details.
 *
 * You should have received a copy of the GNU Lesser General Public
 * License along with this library; if not, write to the Free Software
 * Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA 02110-1301 USA
 *
 * File: $Id: demo.c,v 1.1 2007/09/12 10:15:56 wolti Exp $
```

- Seq

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

felt@ca:~$ seq 10
1
2
3
4
5
6
7
8
9
10
felt@ca:~$
```

- Expand

- Tr

- Fmt

```
felt@ca:~/Desktop$ fmt teste.txt
Antes da chegada dos colonizadores portugueses no Brasil...
felt@ca:~/Desktop$
```

- Fold

```
feelt@ca:~/Desktop$ fold -w 10 teste.txt
Antes da c
hegada dos
colonizad
ores portg
ueses no B
rasil...feelt@ca:~/Desktop$
```

- Grep

```
feelt@ca:~/Desktop$ cat teste.txt | grep Brasil
Antes da chegada dos colonizadores portugueses no Brasil...
feelt@ca:~/Desktop$
```

- Egrep

```
feelt@ca:~/Desktop$ dmesg | egrep " firmware | Brasild"
feelt@ca:~/Desktop$ dmesg | egrep " portugueses | Brasil"
feelt@ca:~/Desktop$ dmesg | egrep " Alemanha | Brasil"
feelt@ca:~/Desktop$ dmesg | egrep " Alemanha | Brasil"
```

- Fgrep

```
feelt@ca:~/Desktop$ dmesg | fgrep "@"
[ 0.000000] Linux version 4.15.0-34-generic (buildd@lgw01-amd64-047) (gcc ver
sion 7.3.0 (Ubuntu 7.3.0-16ubuntu3)) #37-Ubuntu SMP Mon Aug 27 15:21:48 UTC 2018
(Ubuntu 4.15.0-34.37-generic 4.15.18)
[ 0.000000] percpu: Embedded 46 pages/cpu @ (ptrval) s151552 r8192 d28
672 u262144
[ 0.081355] smpboot: CPU0: Intel(R) Core(TM) i5-4210U CPU @ 1.70GHz (family:
0x6, model: 0x45, stepping: 0x1)
[ 2.967821] agpgart-intel 0000:00:00.0: AGP aperture is 256M @ 0x0
[ 3.061582] device-mapper: ioctl: 4.37.0-ioclt (2017-09-20) initialised: dm-d
evel@redhat.com
[ 4.281196] ata3: SATA max UDMA/133 abar m4096@0xfd5ee000 port 0xfd5ee100 irq
57
[ 4.281198] ata4: SATA max UDMA/133 abar m4096@0xfd5ee000 port 0xfd5ee180 irq
57
[ 4.281199] ata5: SATA max UDMA/133 abar m4096@0xfd5ee000 port 0xfd5ee200 irq
57
[ 4.281201] ata6: SATA max UDMA/133 abar m4096@0xfd5ee000 port 0xfd5ee280 irq
```

- Head

```
feelt@ca:~/Desktop$ head teste.txt
Antes da chegada dos colonizadores portugueses no Brasil...feelt@ca:~/Desktop$
```

- Tail

```
feelt@ca:~/Desktop$ tail teste.txt
Antes da chegada dos colonizadores portugueses no Brasil...feelt@ca:~/Desktop$
```

- File

```
feelt@ca:~/Desktop$ file teste.txt
teste.txt: ASCII text, with no line terminators
feelt@ca:~/Desktop$
```

- Look

```
Terminal - felt@ca: ~/Desktop
File Edit View Terminal Tabs Help
feelt@ca:~/Desktop$ look Brasil teste.txt
feelt@ca:~/Desktop$
```

- More

```
Terminal - felt@ca: ~/Desktop
File Edit View Terminal Tabs Help
feelt@ca:~/Desktop$ more teste.txt
Antes da chegada dos colonizadores portugueses no Brasil...
feelt@ca:~/Desktop$
```

- nl

```
Terminal - felt@ca: ~/Desktop
File Edit View Terminal Tabs Help
feelt@ca:~/Desktop$ more teste.txt
Antes da chegada dos colonizadores portugueses no Brasil...
feelt@ca:~/Desktop$ nl teste.txt
     1  Antes da chegada dos colonizadores portugueses no Brasil...
     2  O Brasil eh um pais maravilhoso...
feelt@ca:~/Desktop$
```

- Paste

```
Terminal - felt@ca: ~/Desktop
File Edit View Terminal Tabs Help
feelt@ca:~/Desktop$ cat teste.txt
Antes da chegada dos colonizadores portugueses no Brasil...
O Brasil eh um pais maravilhoso...feelt@ca:~/Desktop$
feelt@ca:~/Desktop$ cat teste2.txt
A alemanha ganhou do Brasil de 7x1 feelt@ca:~/Desktop$ paste teste.txt teste2.txt
Antes da chegada dos colonizadores portugueses no Brasil...      A alemanha ganhou do Brasil de 7x1
O Brasil eh um pais maravilhoso...
feelt@ca:~/Desktop$
```

- rev

```
Terminal - felt@ca: ~/Desktop
File Edit View Terminal Tabs Help
feelt@ca:~/Desktop$ echo ' teste ' | rev
' etset '
feelt@ca:~/Desktop$
```

- Sort

```
feelt@ca:~/Desktop$ cat teste.txt | sort -n
Antes da chegada dos colonizadores portugueses no Brasil...
0 Brasil eh um pais maravilhoso...
feelt@ca:~/Desktop$
```

- Uniq

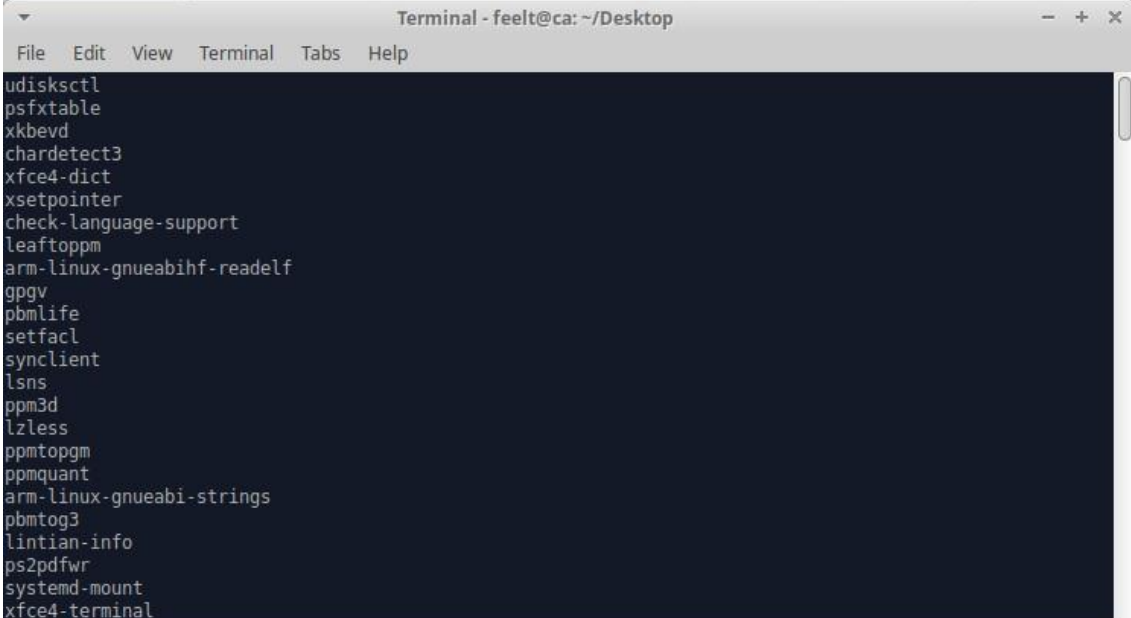
```
feelt@ca:~/Desktop$ uniq -c teste.txt
1 Antes da chegada dos colonizadores portugueses no Brasil...
1 0 Brasil eh um pais maravilhoso...
feelt@ca:~/Desktop$
```

- Wc

```
feelt@ca:~/Desktop$ wc teste.txt
1 14 93 teste.txt
feelt@ca:~/Desktop$
```

CAPITULO 5

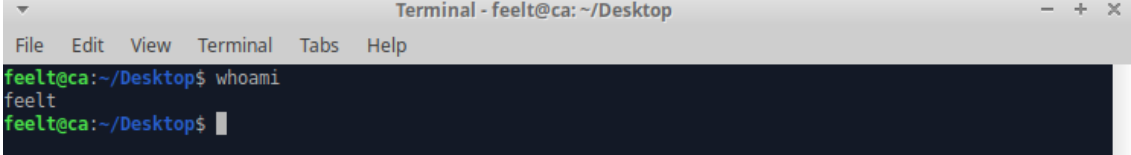
- Compgen .



A terminal window titled "Terminal - felt@ca: ~/Desktop" with a menu bar (File, Edit, View, Terminal, Tabs, Help). The terminal displays the output of the 'ls' command, listing various system utilities and tools installed on the system.

```
udisksctl
psfxtable
xkbevd
chardetect3
xfce4-dict
xsetpointer
check-language-support
leaftoppm
arm-linux-gnueabi-hf-readelf
gpgv
pbmlife
setfacl
synclient
lsns
ppm3d
lzless
ppmtopgm
ppmquant
arm-linux-gnueabi-strings
pbmtog3
lintian-info
ps2pdfwr
systemd-mount
xfce4-terminal
```

- Whoami



A terminal window titled "Terminal - felt@ca: ~/Desktop" with a menu bar (File, Edit, View, Terminal, Tabs, Help). The terminal displays the output of the 'whoami' command, which returns the username 'felt'.

```
feelt@ca:~/Desktop$ whoami
felt
feelt@ca:~/Desktop$
```

- Passwd

```
feelt@ca:~/Desktop$ 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/netif:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd/resolve:/usr/sbin/nologin
syslog:x:102:106:/:/home/syslog:/usr/sbin/nologin
messagebus:x:103:107:/:/nonexistent:/usr/sbin/nologin
```

- Id

```
Terminal - felt@ca: ~/Desktop
File Edit View Terminal Tabs Help
feelt@ca:~/Desktop$ id
uid=1000(feelt) gid=1000(feelt) groups=1000(feelt),4(adm),5(tty),20(dialout),24(cdrom),27(sudo),30(dip),
46(plugdev),118(lpadmin),126(smbashare)
feelt@ca:~/Desktop$
```

- Finger

```
feelt@ca:~$ finger root
Login: root                Name: root
Directory: /root           Shell: /bin/bash
Never logged in.
No mail.
No Plan.
```

- Free

```
feelt@ca:~$ free
              total        used        free      shared  buff/cache   available
Mem:           4015688      428700       3011008         4328       575980       3350508
Swap:          1942896           0       1942896
```

- Su

```
feelt@ca:~$ su -
Password:
root@ca:~#
```

- Uname

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
feelt@ca:~$ uname -s
Linux
feelt@ca:~$
```

- Uptime

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

felt@ca:~$ uptime
22:39:55 up 1:43, 1 user, load average: 0.00, 0.02, 0.00
felt@ca:~$
```

- Ls --version

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

felt@ca:~$ ls --version
ls (GNU coreutils) 8.28
Copyright (C) 2017 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <http://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.
felt@ca:~$
```

- Timeout

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

felt@ca:~$ timeout ping www.google.com.br
timeout: invalid time interval 'ping'
Try 'timeout --help' for more information.
felt@ca:~$ timeout 5 ping www.google.com
PING www.google.com (142.250.218.228) 56(84) bytes of data.
felt@ca:~$
```

- W

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

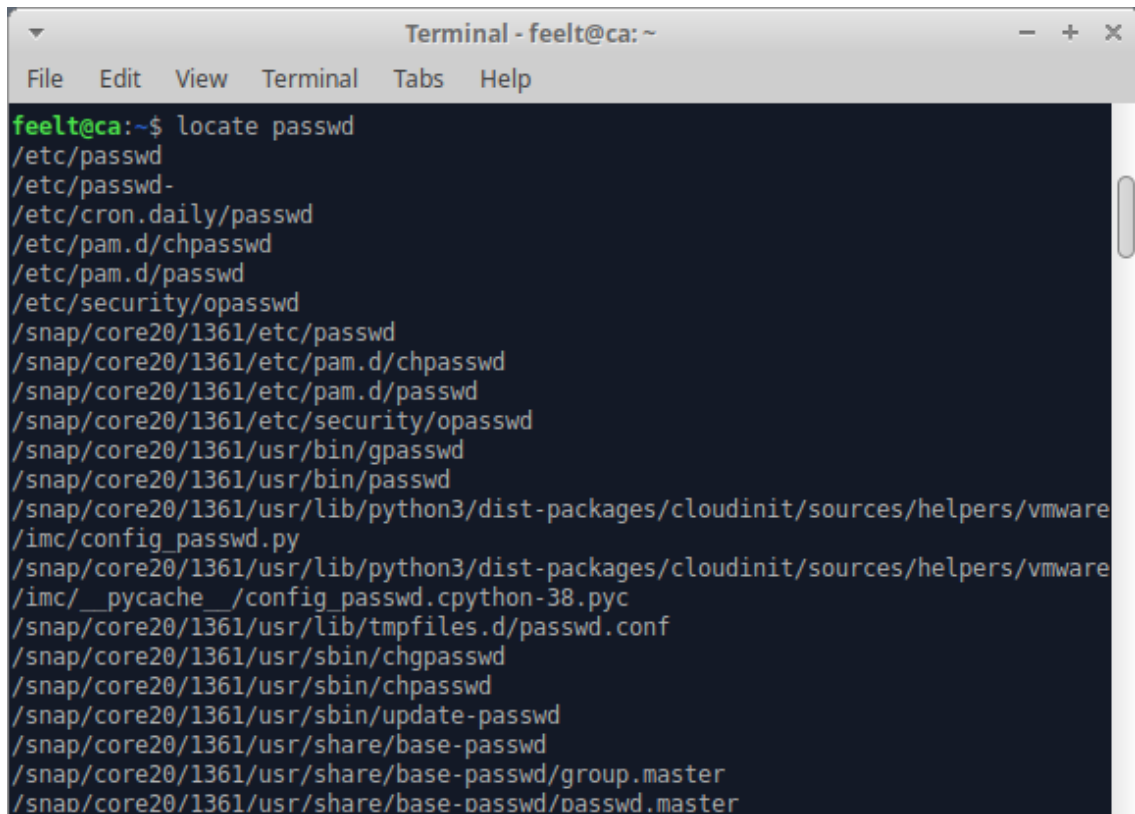
felt@ca:~$ w
22:43:36 up 1:47, 1 user, load average: 0.00, 0.00, 0.00
USER      TTY      FROM          LOGIN@      IDLE   JCPU   PCPU WHAT
felt      tty7     :0            21:05       1:46m 36.91s 0.06s /bin/sh /etc/xd
felt@ca:~$
```

- Whereis

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

felt@ca:~$ whereis gcc
gcc: /usr/bin/gcc /usr/lib/gcc /usr/share/man/man1/gcc.1.gz
felt@ca:~$
```


- Locate



```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

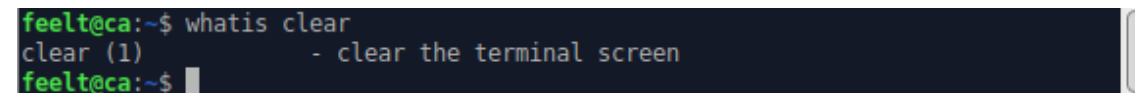
felt@ca:~$ locate passwd
/etc/passwd
/etc/passwd-
/etc/cron.daily/passwd
/etc/pam.d/chpasswd
/etc/pam.d/passwd
/etc/security/opasswd
/snap/core20/1361/etc/passwd
/snap/core20/1361/etc/pam.d/chpasswd
/snap/core20/1361/etc/pam.d/passwd
/snap/core20/1361/etc/security/opasswd
/snap/core20/1361/usr/bin/gpasswd
/snap/core20/1361/usr/bin/passwd
/snap/core20/1361/usr/lib/python3/dist-packages/cloudinit/sources/helpers/vmware
/imc/config_passwd.py
/snap/core20/1361/usr/lib/python3/dist-packages/cloudinit/sources/helpers/vmware
/imc/__pycache__/config_passwd.cpython-38.pyc
/snap/core20/1361/usr/lib/tmpfiles.d/passwd.conf
/snap/core20/1361/usr/sbin/chgpasswd
/snap/core20/1361/usr/sbin/chpasswd
/snap/core20/1361/usr/sbin/update-passwd
/snap/core20/1361/usr/share/base-passwd
/snap/core20/1361/usr/share/base-passwd/group.master
/snap/core20/1361/usr/share/base-passwd/passwd.master
```

- Which



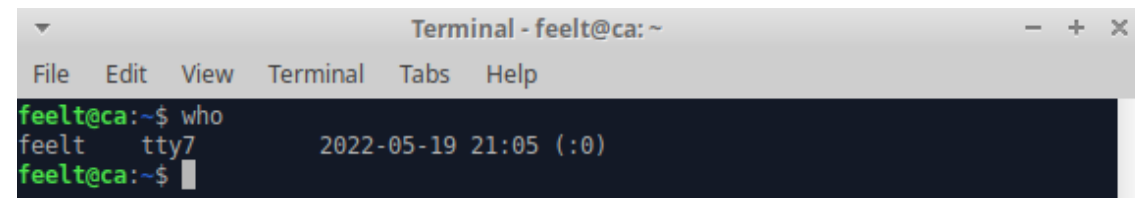
```
felt@ca:~$ which ls
/bin/ls
felt@ca:~$
```

- Whatis



```
felt@ca:~$ whatis clear
clear (1) - clear the terminal screen
felt@ca:~$
```

- Who



```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

felt@ca:~$ who
felt    tty7        2022-05-19 21:05 (:0)
felt@ca:~$
```

- Emacs

```
feelt@ca:~$ emacs &
[1] 2656
feelt@ca:~$
Command 'emacs' not found, but can be installed with:

sudo apt install emacs25
sudo apt install emacs25-nox
sudo apt install e3
sudo apt install emacs25-lucid
sudo apt install jove
```

- OS

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

feelt@ca:~$ ps -aef
UID          PID    PPID  C STIME TTY          TIME CMD
root           1        0  0  20:56 ?        00:00:03 /sbin/init auto noprompt
root           2        0  0  20:56 ?        00:00:00 [kthreadd]
root           4         2  0  20:56 ?        00:00:00 [kworker/0:0H]
root           6         2  0  20:56 ?        00:00:00 [mm_percpu_wq]
root           7         2  0  20:56 ?        00:00:00 [ksoftirqd/0]
root           8         2  0  20:56 ?        00:00:01 [rcu_sched]
root           9         2  0  20:56 ?        00:00:00 [rcu_bh]
root          10         2  0  20:56 ?        00:00:00 [migration/0]
root          11         2  0  20:56 ?        00:00:00 [watchdog/0]
root          12         2  0  20:56 ?        00:00:00 [cpuhp/0]
root          13         2  0  20:56 ?        00:00:00 [cpuhp/1]
root          14         2  0  20:56 ?        00:00:00 [watchdog/1]
root          15         2  0  20:56 ?        00:00:00 [migration/1]
root          16         2  0  20:56 ?        00:00:00 [ksoftirqd/1]
root          18         2  0  20:56 ?        00:00:00 [kworker/1:0H]
root          19         2  0  20:56 ?        00:00:00 [kdevtmpfs]
root          20         2  0  20:56 ?        00:00:00 [netns]
root          21         2  0  20:56 ?        00:00:00 [rcu_tasks_kthre]
root          22         2  0  20:56 ?        00:00:00 [kauditd]
root          25         2  0  20:56 ?        00:00:00 [khungtaskd]
root          26         2  0  20:56 ?        00:00:00 [oom reaper]
```

- Pstree

```

feelt@ca:~$ pstree
systemd--ModemManager--2*[{ModemManager}]
        |NetworkManager--dhclient
        |                   |2*[{NetworkManager}]
        |Thunar--2*[{Thunar}]
        |VGAuthService
        |accounts-daemon--2*[{accounts-daemon}]
        |acpid
        |agetty
        |avahi-daemon--avahi-daemon
        |cron
        |cups-browsed--2*[{cups-browsed}]
        |cupsd--2*[{dbus}]
        |dbus-daemon
        |gnome-keyring-d--3*[{gnome-keyring-d}]
        |irqbalance--[{irqbalance}]
        |2*[{kerneloops}]
        |lightdm--Xorg--{Xorg}
        |          |lightdm--sh--ssh-agent
        |          |          |xfce4-session--applet.py--[{applet.py}]
        |          |          |blueman-applet--3*[{blueman+
        |          |          |light-locker--3*[{light-loc+

```

- top

```

Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
top - 22:57:02 up 2:00, 1 user, load average: 0.00, 0.00, 0.00
Tasks: 215 total, 1 running, 148 sleeping, 0 stopped, 0 zombie
%Cpu(s): 1.5 us, 3.0 sy, 0.0 ni, 95.5 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
KiB Mem : 4015688 total, 2996064 free, 413184 used, 606440 buff/cache
KiB Swap: 1942896 total, 1942896 free, 0 used. 3364136 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU  %MEM    TIME+  COMMAND
 866 root        20   0   367624   63164  33432 S   5.9   1.6   0:42.55 Xorg
1185 felt       20   0   288816    7716   6760 S    1.0   0.2   0:00.06 gnome-key+
1303 felt       20   0   194404   23256  18260 S    1.0   0.6   0:06.16 xfwm4
1307 felt       20   0   274956   22156  17796 S    1.0   0.6   0:01.91 xfce4-pan+
1311 felt       20   0   503776   35500  25288 S    1.0   0.9   0:06.23 xfdesktop
1925 root        20   0         0         0      0 I    1.0   0.0   0:00.86 kworker/1+
2586 felt       20   0   536992   34156  25856 S    1.0   0.9   0:02.66 xfce4-ter+
2675 felt       20   0   51752    4148   3428 R    1.0   0.1   0:00.09 top
   1 root        20   0   159868    9308   6856 S    0.0   0.2   0:03.90 systemd
   2 root        20   0         0         0      0 S    0.0   0.0   0:00.02 kthreadd
   4 root        0 -20         0         0      0 I    0.0   0.0   0:00.00 kworker/0+
   6 root        0 -20         0         0      0 I    0.0   0.0   0:00.00 mm_percpu+
   7 root        20   0         0         0      0 S    0.0   0.0   0:00.11 ksoftirqd+
   8 root        20   0         0         0      0 I    0.0   0.0   0:01.14 rcu_sched
   9 root        20   0         0         0      0 I    0.0   0.0   0:00.00 rcu_bh
  10 root        rt    0         0         0      0 S    0.0   0.0   0:00.00 migration+
  11 root        rt    0         0         0      0 S    0.0   0.0   0:00.01 watchdog/0

```

- Kill

```

Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
feelt@ca:~$ 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
feelt@ca:~$

```

Capítulo 9

- Hostname

```
Terminal - felt@ca: ~  
File Edit View Terminal Tabs Help  
felt@ca:~$ hostname  
ca  
felt@ca:~$
```

- Arp

```
Terminal - felt@ca: ~  
File Edit View Terminal Tabs Help  
felt@ca:~$ arp -a  
_gateway (192.168.100.2) at 00:50:56:ef:7e:78 [ether] on ens33  
? (192.168.100.254) at 00:50:56:e9:25:08 [ether] on ens33  
felt@ca:~$
```

- Ifconfig

```
Terminal - felt@ca: ~  
File Edit View Terminal Tabs Help  
felt@ca:~$ ifconfig  
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500  
    inet 192.168.100.130 netmask 255.255.255.0 broadcast 192.168.100.255  
    inet6 fe80::e27e:61ef:330a:3ce9 prefixlen 64 scopeid 0x20<link>  
    ether 00:0c:29:f4:2f:06 txqueuelen 1000 (Ethernet)  
    RX packets 1931 bytes 197602 (197.6 KB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 571 bytes 69204 (69.2 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 162 bytes 11319 (11.3 KB)  
    RX errors 0 dropped 0 overruns 0 frame 0  
    TX packets 162 bytes 11319 (11.3 KB)  
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0  
  
felt@ca:~$
```

- Ping

```
felt@ca:~$ ping www.ufu.br  
PING www.ufu.br (200.19.145.55) 56(84) bytes of data.  
64 bytes from www.ufu.br (200.19.145.55): icmp_seq=1 ttl=128 time=40.5 ms  
64 bytes from www.ufu.br (200.19.145.55): icmp_seq=2 ttl=128 time=34.7 ms  
64 bytes from www.ufu.br (200.19.145.55): icmp_seq=3 ttl=128 time=33.8 ms  
^C
```

- dig

```
feelt@ca:~$ dig www.google.com

; <<>> DiG 9.11.3-lubuntu1.1-Ubuntu <<>> www.google.com
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NXDOMAIN, id: 54546
;; flags: qr rd ra; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;www.google.com.                IN      A

;; Query time: 97 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Thu May 19 23:03:10 -03 2022
;; MSG SIZE rcvd: 44
```

- nslookup

```
feelt@ca:~$ nslookup www.google.com
Server:           127.0.0.53
Address:          127.0.0.53#53

Non-authoritative answer:
Name:   www.google.com
Address: 142.250.218.228
Name:   www.google.com
Address: 2800:3f0:4001:82e::2004
```

- Traceroute

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

feelt@ca:~$ sudo apt install traceroute
[sudo] password for felt:
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
  traceroute
0 upgraded, 1 newly installed, 0 to remove and 622 not upgraded.
Need to get 45.4 kB of archives.
After this operation, 152 kB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu bionic/universe amd64 traceroute amd64
  1:2.1.0-2 [45.4 kB]
Fetched 45.4 kB in 1s (50.3 kB/s)
Selecting previously unselected package traceroute.
(Reading database ... 205630 files and directories currently installed.)
Preparing to unpack ../traceroute_1%3a2.1.0-2_amd64.deb ...
Unpacking traceroute (1:2.1.0-2) ...
Processing triggers for man-db (2.8.3-2) ...
Setting up traceroute (1:2.1.0-2) ...
update-alternatives: using /usr/bin/traceroute.db to provide /usr/bin/traceroute
  (traceroute) in auto mode
update-alternatives: using /usr/bin/lft.db to provide /usr/bin/lft (lft) in auto
  mode
```

- Tracepath

```
feelt@ca:~$ tracepath www.ufu.br
1?: [LOCALHOST] pmtu 1500
1: _gateway 0.153ms
1: _gateway 0.220ms
2: no reply
```

- Netsat

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

feelt@ca:~$ netstat -s
Ip:
  Forwarding: 2
  926 total packets received
  3 with invalid addresses
  0 forwarded
  0 incoming packets discarded
  921 incoming packets delivered
  781 requests sent out
Icmp:
  89 ICMP messages received
  0 input ICMP message failed
  ICMP input histogram:
    timeout in transit: 2
    echo requests: 1
    echo replies: 86
  87 ICMP messages sent
  0 ICMP messages failed
  ICMP output histogram:
    echo requests: 86
    echo replies: 1
IcmpMsg:
  InType0: 86
  InType8: 1
```

- Nmap

```
feelt@ca:~$ nmap www.ufu.br

Starting Nmap 7.60 ( https://nmap.org ) at 2022-05-19 23:10 -03
Failed to resolve "www.ufu.br".
WARNING: No targets were specified, so 0 hosts scanned.
Nmap done: 0 IP addresses (0 hosts up) scanned in 1.57 seconds
feelt@ca:~$
```

- Route

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

feelt@ca:~$ route
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
default _gateway 0.0.0.0 UG 100 0 0 ens33
link-local 0.0.0.0 255.255.0.0 U 1000 0 0 ens33
192.168.100.0 0.0.0.0 255.255.255.0 U 100 0 0 ens33
feelt@ca:~$
```

- telnet

```
felt@ca:~$ telnet www.ufu.br
Trying 200.19.145.55...
telnet: Unable to connect to remote host: Connection refused
felt@ca:~$
```

- Tcpdump

```
felt@ca:~$ tcpdump -D
1.ens33 [Up, Running]
2.any (Pseudo-device that captures on all interfaces) [Up, Running]
3.lo [Up, Running, Loopback]
4.nflog (Linux netfilter log (NFLOG) interface)
5.nfqueue (Linux netfilter queue (NFQUEUE) interface)
6.usbmon1 (USB bus number 1)
7.usbmon2 (USB bus number 2)
felt@ca:~$
```

- Lynx

```
www.google.com cookie: 1P_JAR=2022-05-20-02 Allow? (Y/N/Always/neVer)
```

- uname -s/ uname -n/ uname -r/ uname -v

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ uname -s
Linux
felt@ca:~$ uname -n
ca
felt@ca:~$ uname -r
4.15.0-34-generic
felt@ca:~$ uname -v
#37-Ubuntu SMP Mon Aug 27 15:21:48 UTC 2018
felt@ca:~$
```

- Head

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help
felt@ca:~$ head - n1 / etc / issue
==> standard input <==
```


- Lspci

```
Terminal - felt@ca: ~
File Edit View Terminal Tabs Help

felt@ca:~$ lspci
00:00.0 Host bridge: Intel Corporation 440BX/ZX/DX - 82443BX/ZX/DX Host bridge (rev 01)
00:01.0 PCI bridge: Intel Corporation 440BX/ZX/DX - 82443BX/ZX/DX AGP bridge (rev 01)
00:07.0 ISA bridge: Intel Corporation 82371AB/EB/MB PIIX4 ISA (rev 08)
00:07.1 IDE interface: Intel Corporation 82371AB/EB/MB PIIX4 IDE (rev 01)
00:07.3 Bridge: Intel Corporation 82371AB/EB/MB PIIX4 ACPI (rev 08)
00:07.7 System peripheral: VMware Virtual Machine Communication Interface (rev 10)
00:0f.0 VGA compatible controller: VMware SVGA II Adapter
00:10.0 SCSI storage controller: LSI Logic / Symbios Logic 53c1030 PCI-X Fusion-MPT Dual Ultra320 SCSI (rev 01)
00:11.0 PCI bridge: VMware PCI bridge (rev 02)
00:15.0 PCI bridge: VMware PCI Express Root Port (rev 01)
00:15.1 PCI bridge: VMware PCI Express Root Port (rev 01)
00:15.2 PCI bridge: VMware PCI Express Root Port (rev 01)
00:15.3 PCI bridge: VMware PCI Express Root Port (rev 01)
00:15.4 PCI bridge: VMware PCI Express Root Port (rev 01)
00:15.5 PCI bridge: VMware PCI Express Root Port (rev 01)
00:15.6 PCI bridge: VMware PCI Express Root Port (rev 01)
00:15.7 PCI bridge: VMware PCI Express Root Port (rev 01)
00:16.0 PCI bridge: VMware PCI Express Root Port (rev 01)
00:16.1 PCI bridge: VMware PCI Express Root Port (rev 01)
```

- Lsblk

```
felt@ca:~$ lsblk
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINT
loop0 7:0 0 61.9M 1 loop /snap/core20/1405
loop1 7:1 0 61.9M 1 loop /snap/core20/1434
loop2 7:2 0 65.2M 1 loop /snap/gtk-common-themes/1519
loop3 7:3 0 248.8M 1 loop /snap/gnome-3-38-2004/99
loop4 7:4 0 61.9M 1 loop /snap/core20/1361
loop5 7:5 0 81.3M 1 loop /snap/gtk-common-themes/1534
loop6 7:6 0 4K 1 loop /snap/bare/5
sda 8:0 0 50G 0 disk
└─sda1 8:1 0 40G 0 part /
sr0 11:0 1 1024M 0 rom

felt@ca:~$
```

- Hwinfo / Lshw

```
felt@ca:~$ sudo hwinfo --short
cpu:
    Intel(R) Core(TM) i5-4210U CPU @ 1.70GHz, 2400 MHz
    Intel(R) Core(TM) i5-4210U CPU @ 1.70GHz, 2400 MHz
keyboard:
    /dev/input/event1 AT Translated Set 2 keyboard
mouse:
    /dev/input/mice VMware Virtual Mouse
    /dev/input/mice VirtualPS/2 VMware VMMouse
    /dev/input/mice VirtualPS/2 VMware VMMouse
graphics card:
    VMware VMWARE0405
sound:
    Ensoniq Audio PCI 64V/128/5200 / Creative CT4810/CT5803/C
    T5806 [Sound Blaster PCI]
storage:
    VMware SATA AHCI controller
    VMware Virtual Machine Chipset
    VMware LSI Logic Parallel SCSI Controller
network:
    ens33 VMware PRO/1000 MT Single Port Adapter
network interface:
```

- Eject

```
felt@ca:~$ eject
eject: unable to eject, last error: Inappropriate ioctl for device
felt@ca:~$
```