

# Atividade Sistemas Operacionais

## Lucas Alves Fidelis Araújo

### QUESTÃO 1:

```
lucas@lucas-Inspiron-3584:/proc$ ls -li
15875 1 50164 1928 34591 404 34603 775
16987 10 52257 1931 17049 41 35385 831
38335 1001 49125 1935 34592 418 35398 835
39037 1005 52304 1937 17051 42 35404 837
38453 1007 17125 194 17053 43 37282 849
17081 102 52351 1946 34594 439 37300 865
17083 103 53267 1949 17055 44 16985 9
39086 1043 50317 1950 34595 440 17059 91
36649 1047 53533 1952 34596 441 17061 92
17085 105 51227 1956 34597 461 17063 93
17087 106 51271 1957 34598 462 17067 95
17089 108 50422 1972 34599 463 17069 96
17091 109 50475 1981 34602 469 17071 97
16989 11 50529 1986 76826 4889 17073 98
17093 110 16971 2 77243 5128 17075 99
17103 115 17007 20 76459 5261 4026532016 acpi
40976 1161 17127 200 80303 5325 4026532249 asound
17109 118 17129 201 82067 5435 4026532051 bootconfig
17111 119 17131 202 81169 5550 4026531856 buddyinfo
16991 12 51361 2020 82562 5621 4026531853 bus
17113 122 17133 203 82563 5622 4026531855 cgroups
39308 1243 17135 204 81424 5656 4026532035 cmdline
17115 129 52790 2058 78597 5672 4026532036 consoles
16993 13 53698 2064 83179 5708 4026532037 cpuinfo
17117 132 52814 2082 81456 5731 4026532100 crypto
16995 14 51541 2139 82783 5740 4026532038 devices
17121 140 53749 2150 81487 5748 4026532101 diskstats
43790 1410 51607 2194 81635 5874 4026532084 dma
39779 1420 17011 22 83469 5880 4026531846 driver
42531 1421 17145 228 83470 5881 4026532052 dynamic_debug
44073 1448 17147 229 82878 5883 4026532076 execdomains
45099 1453 17013 23 78714 5885 4026532014 fb
45103 1455 17015 24 78728 5891 4026532090 filesystems
45150 1458 54375 2427 82890 5892 4026531845 fs
45279 1477 52009 2431 82908 5893 4026532260 i8k
45327 1482 55361 2442 83471 5896 4026532039 interrupts
45324 1485 51030 2480 83428 5917 4026532078 iomem
44435 1485 17017 25 82043 5918 4026532077 ioparts
```

```
lucas@lucas-Inspiron-3584:/proc$ ps -lax
F UID PID PPID PRI NI VSZ RSS WCHAN STAT TTY TIME COMMAND
4 0 1 0 20 0 169144 11892 - Ss ? 0:05 /sbin/init splash
1 0 2 0 20 0 0 0 - S ? 0:00 [kthreadd]
1 0 3 2 0 -20 0 0 0 - I< ? 0:00 [rcu_gp]
1 0 4 2 0 -20 0 0 0 - I< ? 0:00 [rcu_par_gp]
1 0 6 2 0 -20 0 0 0 - I< ? 0:00 [kworker/0:0H-events_highpri]
1 0 9 2 0 -20 0 0 0 - I< ? 0:00 [mm_percpu_wq]
1 0 10 2 20 0 0 0 - S ? 0:00 [rcu_tasks_rude_]
1 0 11 2 20 0 0 0 - S ? 0:00 [rcu_tasks_trace]
1 0 12 2 20 0 0 0 - S ? 0:00 [ksoftirqd/0]
1 0 13 2 20 0 0 0 - I ? 0:06 [rcu_sched]
1 0 14 2 -100 - 0 0 - S ? 0:00 [migration/0]
1 0 15 2 -51 - 0 0 - S ? 0:00 [idle_inject/0]
1 0 16 2 20 0 0 0 - S ? 0:00 [cpuhp/0]
5 0 17 2 20 0 0 0 - S ? 0:00 [cpuhp/1]
1 0 18 2 -51 - 0 0 - S ? 0:00 [idle_inject/1]
1 0 19 2 -100 - 0 0 - S ? 0:00 [migration/1]
1 0 20 2 20 0 0 0 - S ? 0:08 [ksoftirqd/1]
1 0 22 2 0 -20 0 0 - I< ? 0:00 [kworker/1:0H-events_highpri]
5 0 23 2 20 0 0 0 - S ? 0:00 [cpuhp/2]
1 0 24 2 -51 - 0 0 - S ? 0:00 [idle_inject/2]
1 0 25 2 -100 - 0 0 - S ? 0:00 [migration/2]
1 0 26 2 20 0 0 0 - S ? 0:00 [ksoftirqd/2]
1 0 28 2 0 -20 0 0 - I< ? 0:00 [kworker/2:0H-events_highpri]
5 0 29 2 20 0 0 0 - S ? 0:00 [cpuhp/3]
1 0 30 2 -51 - 0 0 - S ? 0:00 [idle_inject/3]
1 0 31 2 -100 - 0 0 - S ? 0:00 [migration/3]
1 0 32 2 20 0 0 0 - S ? 0:00 [ksoftirqd/3]
1 0 34 2 0 -20 0 0 - I< ? 0:00 [kworker/3:0H-events_highpri]
5 0 35 2 20 0 0 0 - S ? 0:00 [kdevtmpfs]
1 0 36 2 0 -20 0 0 - I< ? 0:00 [netns]
1 0 37 2 0 -20 0 0 - I< ? 0:00 [inet_frag_wq]
1 0 38 2 20 0 0 0 - S ? 0:00 [kauditd]
1 0 39 2 20 0 0 0 - S ? 0:00 [khungtaskd]
1 0 40 2 20 0 0 0 - S ? 0:00 [oom_reaper]
1 0 41 2 0 -20 0 0 - I< ? 0:00 [writeback]
1 0 42 2 20 0 0 0 - S ? 0:02 [kcompactd0]
```

### QUESTÃO 2:

```

lucas@lucas-Insptiron-3584:/proc/20574$ ps
  PID TTY          TIME CMD
 20574 pts/0    00:00:00 bash
 22485 pts/0    00:00:00 ps
lucas@lucas-Insptiron-3584:/proc/20574$ more /proc/20574/cmdline
bash
lucas@lucas-Insptiron-3584:/proc/20574$ more /proc/20574/maps
55e96d8d8000-55e96d905000 r--p 00000000 08:02 13762653 /usr/bin/bash
55e96d905000-55e96d9b6000 r-xp 0002d000 08:02 13762653 /usr/bin/bash
55e96d9b6000-55e96d9ed000 r--p 000de000 08:02 13762653 /usr/bin/bash
55e96d9ed000-55e96d9f1000 r--p 00114000 08:02 13762653 /usr/bin/bash
55e96d9f1000-55e96d9fa000 rw-p 00118000 08:02 13762653 /usr/bin/bash
55e96d9fa000-55e96da04000 rw-p 00000000 00:00 0
55e96ed28000-55e96ee8e000 rw-p 00000000 00:00 0
[heap]
7f2b22b89000-7f2b22baf000 r--p 00000000 08:02 16125289 /usr/share/locale-langpack/pt_BR/LC_MESSAGES/libc.mo
7f2b22baf000-7f2b23121000 r--p 00000000 08:02 13765811 /usr/lib/locale/locale-archive
7f2b23121000-7f2b23124000 rw-p 00000000 00:00 0
7f2b23124000-7f2b23146000 r--p 00000000 08:02 13764741 /usr/lib/x86_64-linux-gnu/libc-2.31.so
7f2b23146000-7f2b232be000 r-xp 00022000 08:02 13764741 /usr/lib/x86_64-linux-gnu/libc-2.31.so
7f2b232be000-7f2b2330c000 r--p 0019a000 08:02 13764741 /usr/lib/x86_64-linux-gnu/libc-2.31.so
7f2b2330c000-7f2b23310000 r--p 001e7000 08:02 13764741 /usr/lib/x86_64-linux-gnu/libc-2.31.so
7f2b23310000-7f2b23312000 rw-p 001eb000 08:02 13764741 /usr/lib/x86_64-linux-gnu/libc-2.31.so
7f2b23312000-7f2b23316000 rw-p 00000000 00:00 0
7f2b23316000-7f2b23317000 r--p 00000000 08:02 13764742 /usr/lib/x86_64-linux-gnu/libdl-2.31.so
7f2b23317000-7f2b23319000 r-xp 00001000 08:02 13764742 /usr/lib/x86_64-linux-gnu/libdl-2.31.so
7f2b23319000-7f2b2331a000 r--p 00003000 08:02 13764742 /usr/lib/x86_64-linux-gnu/libdl-2.31.so
7f2b2331a000-7f2b2331b000 r--p 00003000 08:02 13764742 /usr/lib/x86_64-linux-gnu/libdl-2.31.so
7f2b2331b000-7f2b2331c000 rw-p 00004000 08:02 13764742 /usr/lib/x86_64-linux-gnu/libdl-2.31.so
7f2b2331c000-7f2b2332a000 r--p 00000000 08:02 13770339 /usr/lib/x86_64-linux-gnu/libtinfo.so.6.2
7f2b2332a000-7f2b23339000 r-xp 0000e000 08:02 13770339 /usr/lib/x86_64-linux-gnu/libtinfo.so.6.2
7f2b23339000-7f2b23347000 r--p 0001d000 08:02 13770339 /usr/lib/x86_64-linux-gnu/libtinfo.so.6.2
7f2b23347000-7f2b2334b000 r--p 0002a000 08:02 13770339 /usr/lib/x86_64-linux-gnu/libtinfo.so.6.2
7f2b2334b000-7f2b2334c000 rw-p 0002e000 08:02 13770339 /usr/lib/x86_64-linux-gnu/libtinfo.so.6.2
7f2b2334c000-7f2b2334e000 rw-p 00000000 00:00 0
7f2b2334f000-7f2b23352000 r--p 00000000 08:02 13764749 /usr/lib/x86_64-linux-gnu/libnss_files-2.31.so
7f2b23352000-7f2b23359000 r-xp 00003000 08:02 13764749 /usr/lib/x86_64-linux-gnu/libnss_files-2.31.so
7f2b23359000-7f2b2335b000 r--p 0000a000 08:02 13764749 /usr/lib/x86_64-linux-gnu/libnss_files-2.31.so
7f2b2335b000-7f2b2335c000 r-p 0000b000 08:02 13764749 /usr/lib/x86_64-linux-gnu/libnss_files-2.31.so
7f2b2335c000-7f2b2335f000 r--p 00000000 00:00 0
lucas@lucas-Insptiron-3584:/proc/20574$ more /proc/20574/stat
20574 (bash) s 20565 20574 20574 34816 22539 4194304 1966 3089 6 13 9 0 16 20 0 1 0 4325080 11304960 1343 18446744073709551
6 94461054637829 140722913911824 0 0 65536 3670020 1266777851 1 0 4 7 3 0 0 51 0 94461054868720 94461054916100 944610750
7299 140722913917304 140722913917304 140722913918958 0
lucas@lucas-Insptiron-3584:/proc/20574$

```

### QUESTÃO 3:

```
lucas@lucas-insptron-3584: /proc$ cd ..
lucas@lucas-insptron-3584: /$ ls -l
total 2097244
lrwxrwxrwx 1 root root 7 jul 9 2021 bin -> usr/bin
drwxr-xr-x 4 root root 4096 fev 21 10:27 boot
drwxrwxr-x 2 root root 4096 jul 9 2021 cdrom
drwxr-xr-x 22 root root 4700 mar 4 23:31 dev
drwxr-xr-x 140 root root 12288 mar 2 15:33 etc
drwxr-xr-x 4 root root 4096 dez 29 20:14 home
lrwxrwxrwx 1 root root 7 jul 9 2021 lib -> usr/lib
lrwxrwxrwx 1 root root 9 jul 9 2021 lib32 -> usr/lib32
lrwxrwxrwx 1 root root 9 jul 9 2021 lib64 -> usr/lib64
lrwxrwxrwx 1 root root 10 jul 9 2021 libx32 -> usr/libx32
drwx----- 2 root root 16384 jul 9 2021 lost+found
drwxr-xr-x 3 root root 4096 ago 17 2021 media
drwxr-xr-x 2 root root 4096 fev 9 2021 mnt
drwxr-xr-x 2 root root 4096 nov 21 03:13 NewFolder
drwxr-xr-x 7 root root 4096 mar 1 19:32 opt
dr-xr-xr-x 326 root root 0 mar 4 16:43 proc
drwx----- 10 root root 4096 dez 10 00:54 root
drwxr-xr-x 35 root root 960 mar 4 23:27 run
lrwxrwxrwx 1 root root 8 jul 9 2021/sbin -> usr/sbin
drwxr-xr-x 19 root root 4096 dez 10 21:27 snap
drwxr-xr-x 2 root root 4096 fev 9 2021 srv
-rw----- 1 root root 2147483648 jul 9 2021 swapfile
dr-xr-xr-x 13 root root 0 mar 4 16:43 sys
drwxrwxrwt 25 root root 12288 mar 4 23:48 tmp
drwxr-xr-x 14 root root 4096 fev 9 2021 usr
drwxr-xr-x 14 root root 4096 fev 9 2021 var

lucas@lucas-insptron-3584: /$
```

## QUESTÃO 4:

```
lucas@lucas-Inspiron-3584:/dev$ ls -l
total 0
crw----- 1 root root 10, 122 mar 4 16:44 acpi_thermal_rel
crw-r--r-- 1 root root 10, 235 mar 4 16:44 autofs
drwxr-xr-x 2 root root 620 mar 4 16:45 block
drwxr-xr-x 2 root root 60 mar 4 16:43 bsg
crw----- 1 root root 10, 234 mar 4 16:44 btrfs-control
drwxr-xr-x 3 root root 60 mar 4 16:43 bus
drwxr-xr-x 2 root root 4520 mar 4 23:31 char
crw--w---- 1 root tty 5, 1 mar 4 16:45 console
lrwxrwxrwx 1 root root 11 mar 4 16:43 core -> /proc/kcore
drwxr-xr-x 6 root root 140 mar 4 22:51 cpu
crw----- 1 root root 10, 123 mar 4 16:44 cpu_dna_latency
crw----- 1 root root 10, 203 mar 4 16:44 cuse
drwxr-xr-x 7 root root 140 mar 4 16:43 disk
drwxr-xr-x 2 root root 60 mar 4 16:43 dna_heap
drwxr-xr-x 3 root root 100 mar 4 16:44 dri
crw----- 1 root root 234, 0 mar 4 16:44 drm_dp_aux0
crw----- 1 root root 234, 1 mar 4 16:44 drm_dp_aux1
crw----- 1 root root 10, 126 mar 4 16:44 ecryptfs
crw-rw---- 1 root video 29, 0 mar 4 16:44 fb0
lrwxrwxrwx 1 root root 13 mar 4 16:43 fd -> /proc/self/fd
crw-rw-rw- 1 root root 1, 7 mar 4 16:44 full
crw-rw-rw- 1 root root 10, 229 mar 4 16:44 fuse
crw----- 1 root root 254, 0 mar 4 16:44 gptochip0
crw----- 1 root root 240, 0 mar 4 16:44 hidraw0
crw----- 1 root root 240, 1 mar 4 23:31 hidraw1
crw----- 1 root root 10, 228 mar 4 16:44 hpet
drwxr-xr-x 2 root root 0 mar 4 16:44 hugepages
crw----- 1 root root 10, 183 mar 4 16:44 hwrng
crw----- 1 root root 89, 0 mar 4 16:44 t2c-0
crw----- 1 root root 89, 1 mar 4 16:44 t2c-1
crw----- 1 root root 89, 2 mar 4 16:44 t2c-2
crw----- 1 root root 89, 3 mar 4 16:44 t2c-3
crw----- 1 root root 89, 4 mar 4 16:44 t2c-4
crw----- 1 root root 89, 5 mar 4 16:44 t2c-5
crw----- 1 root root 89, 6 mar 4 16:44 t2c-6
lrwxrwxrwx 1 root root 12 mar 4 16:44 initctl -> /run/initctl
lucas@lucas-Inspiron-3584:/dev$
```

- A função do zero é exibir quantos caracteres nulos existem no arquivo.
- O random pode gerar números aleatórios
- O null descarta as informações contidas
- O full retorna um erro de “espaço não disponível” quando tentamos escrever algo sobre ele.

## QUESTÃO 5:

```
lucas@lucas-Inspiron-3584:/$ echo "Hello world"
Hello world
lucas@lucas-Inspiron-3584:/$ echo "Hello world" > /dev/null
lucas@lucas-Inspiron-3584:/$
```

Após o segundo comando não aconteceu nada porque arquivo descarta as informações contidas nele.

## QUESTÃO 6:

```
lucas@lucas-Inspiron-3584:/$ echo "Hello world" > /dev/full
bash: echo: erro de escrita: Não há espaço disponível no dispositivo
lucas@lucas-Inspiron-3584:/$
```

Ao tentar escrever sobre um arquivo full, recebemos um retorno de “espaço não disponível”.

## QUESTÃO 7:

```
lucas@lucas-Inspiron-3584:/$ cd home
lucas@lucas-Inspiron-3584:/home$ ls -lai
total 16
8912897 drwxr-xr-x  4 root  root  4096 dez 29 01:14 .
      2 drwxr-xr-x 21 root  root  4096 nov 21 03:13 ..
8920885 drwxr-xr-x  3 root  root  4096 dez 29 01:14 linuxbrew
8912898 drwxr-xr-x 47 lucas  lucas 4096 mar  2 17:34 lucas
lucas@lucas-Inspiron-3584:/home$ cd -
lucas@lucas-Inspiron-3584:~$ ls -lai
total 4364
8912898 drwxr-xr-x 47 lucas  lucas  4096 mar  2 17:34 .
8912897 drwxr-xr-x  4 root  root  4096 dez 29 01:14 ..
9180165 drwxrwxr-x  6 lucas  lucas  4096 dez 12 00:26 .android
9180871 drwxrwxr-x  3 lucas  lucas  4096 dez 10 23:41 Android
8912950 drwxr-xr-x  2 lucas  lucas  4096 out 25 00:22 'Área de Trabalho'
9176718 drwxrwxr-x  6 lucas  lucas  4096 ago 19 2021 arquivos-antigos
8920203 -rw-rw-r--  1 lucas  lucas  3778 nov  7 22:07 atividade_mtd
8933930 -rw-r--r--  1 root  root    58 nov 30 23:47 autosave.chc
8945023 -rw-----  1 lucas  lucas  66096 mar  2 17:34 .bash_history
8912900 -rw-r--r--  1 lucas  lucas   220 jul  9 2021 .bash_logout
8912899 -rw-r--r--  1 lucas  lucas   3771 jul  9 2021 .bashrc
8924348 -rw-rw-r--  1 lucas  lucas 1351329 set 27 2020 brModelo.jar
8933759 -rw-r--r--  1 root  root 1351329 set 27 2020 brModelo.jar.1
8912912 drwxr-xr-x 43 lucas  lucas  4096 fev 26 23:05 .cache
9440717 drwxrwxr-x 10 lucas  lucas  4096 ago 18 2021 celular-velho
8912905 drwxr-xr-x 31 lucas  lucas  4096 mar  1 19:38 .config
8933908 -rw-r--r--  1 root  root   370 nov 30 23:47 config.chc
8918567 drwxrwxr-x  2 lucas  lucas  4096 dez 10 22:21 .dart
9050851 drwxrwxr-x  5 lucas  lucas  4096 dez 11 16:31 .dartServer
14032764 drwxrwxr-x  4 lucas  lucas  4096 set 30 23:04 .designer
8912959 drwxr-xr-x  3 lucas  lucas  4096 mar  4 23:54 Documentos
8923262 -rw-rw-r--  1 lucas  lucas 48379 nov 29 12:06 'Documento sem título 1'
8912955 drwxr-xr-x 61 lucas  lucas 20480 mar  1 19:27 Downloads
8933829 -rw-r--r--  1 root  root 1351329 set 27 2020 'download?use_mirror=sonik'
8938121 -rw-----  1 lucas  lucas   16 dez 11 00:17 .emulator_console_auth_token
8937895 -rw-rw-r--  1 lucas  lucas   78 dez 10 22:23 .flutter
8970737 drwxr-xr-x  4 lucas  lucas  4096 fev  7 14:14 flutter
8920015 -rw-rw-r--  1 lucas  lucas   60 jul  9 2021 .gitconfig
8946556 drwxr-xr-x  3 lucas  lucas  4096 jul  9 2021
```

```
lucas@lucas-Inspiron-3584:/$ ls -lai
total 2097252
      2 drwxr-xr-x 21 root  root  4096 nov 21 03:13 .
      2 drwxr-xr-x 21 root  root  4096 nov 21 03:13 ..
      13 lrwxrwxrwx  1 root  root    7 jul  9 2021 bin -> usr/bin
17694721 drwxr-xr-x  4 root  root  4096 mar 23 07:26 boot
5242881 drwxrwxr-x  2 root  root  4096 jul  9 2021 cdrom
      1 drwxr-xr-x 22 root  root  4720 mar 23 07:03 dev
8650753 drwxr-xr-x 143 root  root 12288 mar 23 07:24 etc
8912897 drwxr-xr-x  4 root  root  4096 dez 29 01:14 home
      14 lrwxrwxrwx  1 root  root    7 jul  9 2021 lib -> usr/lib
      15 lrwxrwxrwx  1 root  root    9 jul  9 2021 lib32 -> usr/lib32
      16 lrwxrwxrwx  1 root  root    9 jul  9 2021 lib64 -> usr/lib64
      17 lrwxrwxrwx  1 root  root   10 jul  9 2021 libx32 -> usr/libx32
      11 drwx-----  2 root  root 16384 jul  9 2021 lost+found
8781825 drwxr-xr-x  3 root  root  4096 ago 17 2021 media
13107201 drwxr-xr-x  2 root  root  4096 fev  9 2021 mnt
6946817 drwxr-xr-x  2 root  root  4096 nov 21 03:13 NewFolder
10092545 drwxr-xr-x  7 root  root  4096 mar  1 19:32 opt
      1 dr-xr-xr-x 337 root  root    0 mar 23 07:02 proc
917505 drwx----- 10 root  root  4096 mar  6 23:07 root
      1 drwxr-xr-x 37 root  root 10608 mar 23 18:38 run
      18 lrwxrwxrwx  1 root  root    8 jul  9 2021 sbin -> usr/sbin
9043969 drwxr-xr-x 19 root  root  4096 dez 10 21:27 snap
6684673 drwxr-xr-x  2 root  root  4096 fev  9 2021 srv
      12 -rw-----  1 root  root 2147483648 jul  9 2021 swapfile
      1 dr-xr-xr-x 13 root  root    0 mar 23 07:02 sys
262145 drwxrwxrwt 25 root  root 12288 mar 23 19:36 tmp
13762561 drwxr-xr-x 14 root  root  4096 fev  9 2021 usr
14942209 drwxr-xr-x 15 root  root  4096 mar  5 23:48 var
lucas@lucas-Inspiron-3584:/$
```

## QUESTÃO 8:

```
lucas@lucas-Inspiron-3584:~$ stat selectsbanco.txt
Arquivo: selectsbanco.txt
  Tamanho: 7702      Blocos: 16      bloco de E/S: 4096  arquivo comum
Dispositivo: 802h/2050d Inode: 8918893  Links: 1
Acesso: (0664/-rw-rw-r--)  Uid: ( 1000/   lucas)   Gid: ( 1000/   lucas)
Acesso: 2022-03-19 23:40:24.515574039 -0300
Modificação: 2022-03-09 22:23:48.604643272 -0300
Alteração: 2022-03-09 22:23:48.692653501 -0300
Criação: -

lucas@lucas-Inspiron-3584:~$ stat package-lock.json
Arquivo: package-lock.json
  Tamanho: 27      Blocos: 8      bloco de E/S: 4096  arquivo comum
Dispositivo: 802h/2050d Inode: 8919422  Links: 1
Acesso: (0664/-rw-rw-r--)  Uid: ( 1000/   lucas)   Gid: ( 1000/   lucas)
Acesso: 2021-12-28 22:57:56.927012941 -0300
Modificação: 2021-12-28 22:57:56.927012941 -0300
Alteração: 2021-12-28 22:57:57.179017215 -0300
Criação: -

lucas@lucas-Inspiron-3584:~$ stat Steam
Arquivo: Steam
  Tamanho: 4096      Blocos: 8      bloco de E/S: 4096  diretório
Dispositivo: 802h/2050d Inode: 12451860  Links: 3
Acesso: (0775/drwxrwxr-x)  Uid: ( 1000/   lucas)   Gid: ( 1000/   lucas)
Acesso: 2022-03-23 19:45:14.534933818 -0300
Modificação: 2021-08-27 16:27:33.613051913 -0300
Alteração: 2021-08-27 16:27:33.613051913 -0300
Criação: -
lucas@lucas-Inspiron-3584:~$
```



## QUESTÃO 9:

```
lucas@lucas-Inspiron-3584:~$ ln -s link
lucas@lucas-Inspiron-3584:~$ ls -l
total 4412
drwxrwxr-x 3 lucas lucas 4096 dez 10 23:41 Android
drwxr-xr-x 2 lucas lucas 4096 out 25 00:22 'Área de Trabalho'
drwxrwxr-x 6 lucas lucas 4096 ago 19 2021 arquivos-antigos
-rw-rw-r-- 1 lucas lucas 3778 nov 7 22:07 atividade_mtd
-rw-r--r-- 1 root root 58 nov 30 23:47 autosave.chc
-rw-rw-r-- 1 lucas lucas 1351329 set 27 2020 brModelo.jar
-rw-r--r-- 1 root root 1351329 set 27 2020 brModelo.jar.1
drwxrwxr-x 10 lucas lucas 4096 ago 18 2021 celular-velho
-rw-r--r-- 1 root root 370 nov 30 23:47 config.chc
drwxr-xr-x 3 lucas lucas 4096 mar 23 19:21 Documentos
-rw-rw-r-- 1 lucas lucas 48379 nov 29 12:06 'Documento sem titulo 1'
drwxr-xr-x 61 lucas lucas 20480 mar 21 22:47 Downloads
-rw-r--r-- 1 root root 1351329 set 27 2020 'download?use_mirror=sonik'
drwxr-xr-x 4 lucas lucas 4096 fev 7 14:14 flutter
drwx----- 2 lucas lucas 4096 jan 31 14:14 GPUCache
drwxr-xr-x 3 lucas lucas 12288 mar 23 19:47 Imagens
-rw-rw-r-- 1 lucas lucas 2436 jan 27 11:19 jantarfilosofos
lrwxrwxrwx 1 lucas lucas 4 mar 23 19:51 link -> link
drwxr-xr-x 2 lucas lucas 4096 jul 9 2021 Modelos
```

## QUESTÃO 10:

```
lucas@lucas-Inspiron-3584:~$ ln selectsbanco.txt link-selectsbanco.txt
lucas@lucas-Inspiron-3584:~$ ls -l
total 4420
drwxrwxr-x 3 lucas lucas 4096 dez 10 23:41 Android
drwxr-xr-x 2 lucas lucas 4096 out 25 00:22 'Área de Trabalho'
drwxrwxr-x 6 lucas lucas 4096 ago 19 2021 arquivos-antigos
-rw-rw-r-- 1 lucas lucas 3778 nov 7 22:07 atividade_mtd
-rw-r--r-- 1 root root 58 nov 30 23:47 autosave.chc
-rw-rw-r-- 1 lucas lucas 1351329 set 27 2020 brModelo.jar
-rw-r--r-- 1 root root 1351329 set 27 2020 brModelo.jar.1
drwxrwxr-x 10 lucas lucas 4096 ago 18 2021 celular-velho
-rw-r--r-- 1 root root 370 nov 30 23:47 config.chc
drwxr-xr-x 3 lucas lucas 4096 mar 23 19:21 Documentos
-rw-rw-r-- 1 lucas lucas 48379 nov 29 12:06 'Documento sem titulo 1'
drwxr-xr-x 61 lucas lucas 20480 mar 21 22:47 Downloads
-rw-r--r-- 1 root root 1351329 set 27 2020 'download?use_mirror=sonik'
drwxr-xr-x 4 lucas lucas 4096 fev 7 14:14 flutter
drwx----- 2 lucas lucas 4096 jan 31 14:14 GPUCache
drwxr-xr-x 3 lucas lucas 12288 mar 23 19:51 Imagens
-rw-rw-r-- 1 lucas lucas 2436 jan 27 11:19 jantarfilosofos
lrwxrwxrwx 1 lucas lucas 4 mar 23 19:51 link -> link
-rw-rw-r-- 2 lucas lucas 7702 mar 9 22:23 link-selectsbanco.txt
drwxr-xr-x 2 lucas lucas 4096 jul 9 2021 Modelos
drwxr-xr-x 2 lucas lucas 4096 jul 9 2021 Música
drwxrwxr-x 3 lucas lucas 20480 dez 25 13:10 node_modules
drwxr-xr-x 6 lucas lucas 4096 dez 1 08:29 node-v16.13.1-linux-x64
-rw-rw-r-- 1 lucas lucas 27 dez 28 22:57 package-lock.json
-rw-rw-r-- 1 lucas lucas 386 mar 18 17:55 package-multi
-rw-rw-r-- 1 lucas lucas 243579 mar 18 17:55 package-multi-2
lrwxrwxrwx 1 lucas lucas 37 out 13 18:39 "PlayOnLinux's virtual drives" -> /home/lucas/.PlayOnLinux/wlneprefix/
drwxrwxr-x 44 lucas lucas 4096 mar 20 18:53 projetos
drwxr-xr-x 2 lucas lucas 4096 jul 9 2021 Público
drwxrwxr-x 2 lucas lucas 4096 set 27 19:47 scikit_learn_data
-rw-rw-r-- 2 lucas lucas 7702 mar 9 22:23 selectsbanco.txt
```

## QUESTÃO 11:

```
lucas@lucas-Inspiron-3584:~$ ln /home/lucas ./projetos
ln: /home/lucas: não são permitidos links absolutos para diretórios
lucas@lucas-Inspiron-3584:~$
```