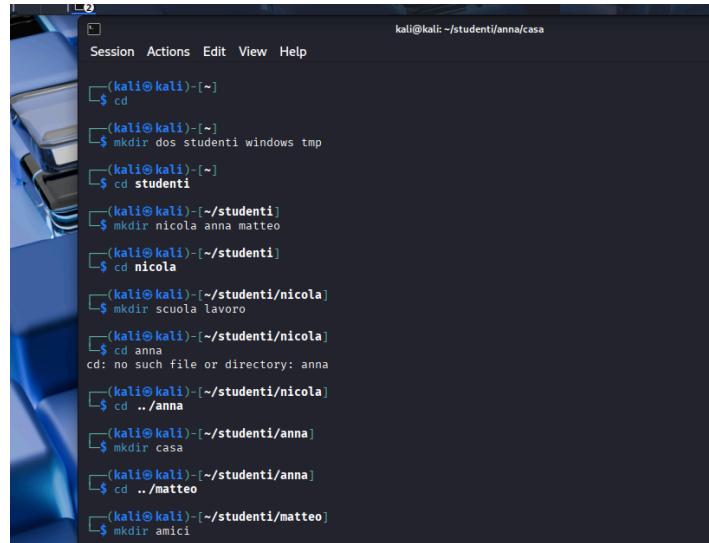


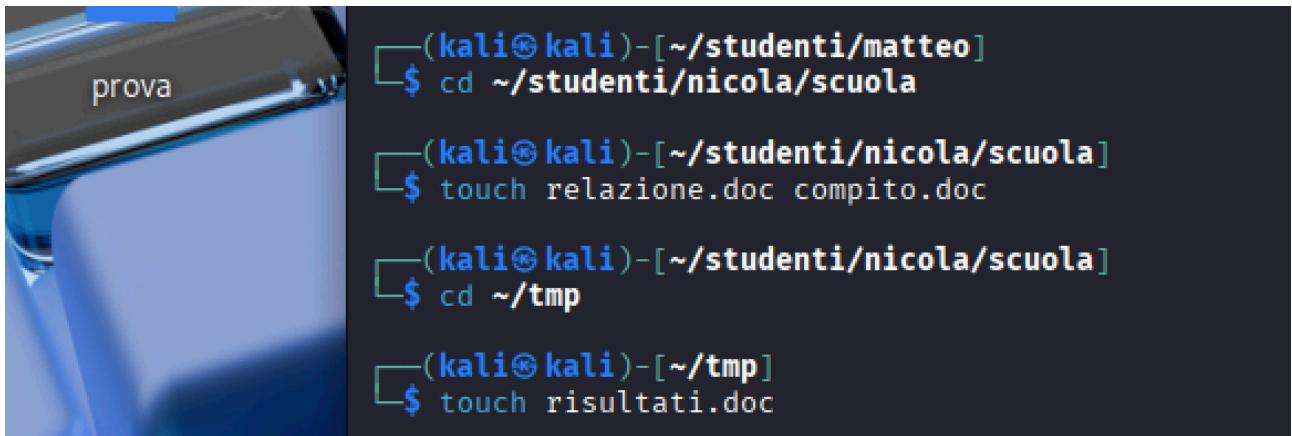
SHELL LINUX

1: Creazione delle cartelle con la struttura iniziale con i seguenti comandi:



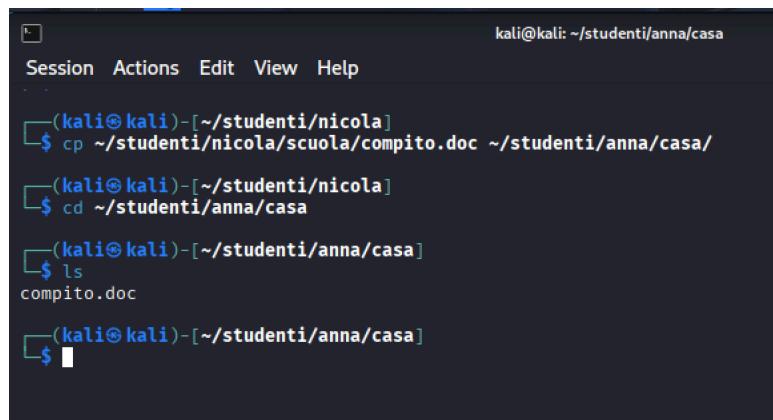
```
kali㉿kali: ~$ cd
kali㉿kali: ~$ mkdir dos studenti windows tmp
kali㉿kali: ~$ cd studenti
kali㉿kali: ~/studenti$ mkdir nicola anna matteo
kali㉿kali: ~/studenti$ cd nicola
kali㉿kali: ~/studenti/nicola$ mkdir scuola lavoro
kali㉿kali: ~/studenti/nicola$ cd anna
kali㉿kali: ~/studenti/nicola/anna$ cd: no such file or directory: anna
kali㉿kali: ~/studenti/nicola$ cd ../anna
kali㉿kali: ~/studenti/anna$ mkdir casa
kali㉿kali: ~/studenti/anna$ cd ../matteo
kali㉿kali: ~/studenti/matteo$ mkdir amici
```

2: Creazione dei file:



```
prova
kali㉿kali: ~$ cd ~/studenti/nicola/scuola
kali㉿kali: ~/studenti/nicola/scuola$ touch relazione.doc compito.doc
kali㉿kali: ~/studenti/nicola/scuola$ cd ~/tmp
kali㉿kali: ~/tmp$ touch risultati.doc
```

A) Copiare **compito.doc** da **/scuola (nicola)** in **/casa (Anna)**



```
kali㉿kali: ~$ cp ~/studenti/nicola/scuola/compito.doc ~/studenti/anna/casa/
kali㉿kali: ~$ cd ~/studenti/anna/casa
kali㉿kali: ~/studenti/anna/casa$ ls
compito.doc
kali㉿kali: ~/studenti/anna/casa$
```

B) Spostare **relazione.doc** in **/casa (Anna)**

```
(kali㉿kali)-[~/studenti/anna/casa]
$ cd ~/studenti/nicola/scuola

(kali㉿kali)-[~/studenti/nicola/scuola]
$ ls
compito.doc  relazione.doc

(kali㉿kali)-[~/studenti/nicola/scuola]
$ mv relazione.doc ~/studenti/anna/casa/

(kali㉿kali)-[~/studenti/anna/casa]
$ cd ~/studenti/anna/casa

(kali㉿kali)-[~/studenti/anna/casa]
$ ls
compito.doc  relazione.doc

(kali㉿kali)-[~/studenti/anna/casa]
$
```

C) Cancellare la cartella **/tmp**

```
kali@kali: ~

Session Actions Edit View Help

(kali㉿kali)-[~]
$ rm -r ~/tmp

(kali㉿kali)-[~]
$ ls
Desktop    dos      Music    pentest   prova    scripts    Templates   Videos    wordlists
Documents  Downloads  osint    Pictures   Public   studenti  'TEST CS'  windows

(kali㉿kali)-[~]
$
```

D) Creare il file **Pippo.txt** nella cartella **/lavoro**

```
kali@kali: ~/studenti/anna/casa
Session Actions Edit View Help

(kali㉿kali)-[~]
$ cd studenti

(kali㉿kali)-[~/studenti]
$ cd nicola/lavoro

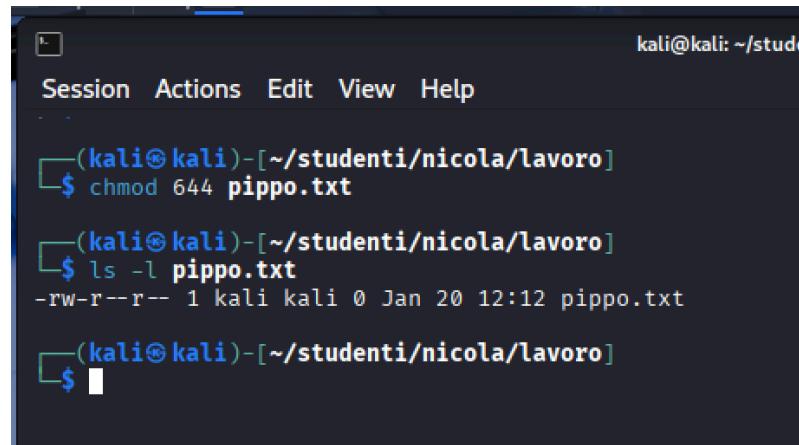
(kali㉿kali)-[~/studenti/nicola/lavoro]
$ touch pippo.txt

(kali㉿kali)-[~/studenti/nicola/lavoro]
$ ls
pippo.txt

(kali㉿kali)-[~/studenti/nicola/lavoro]
$
```

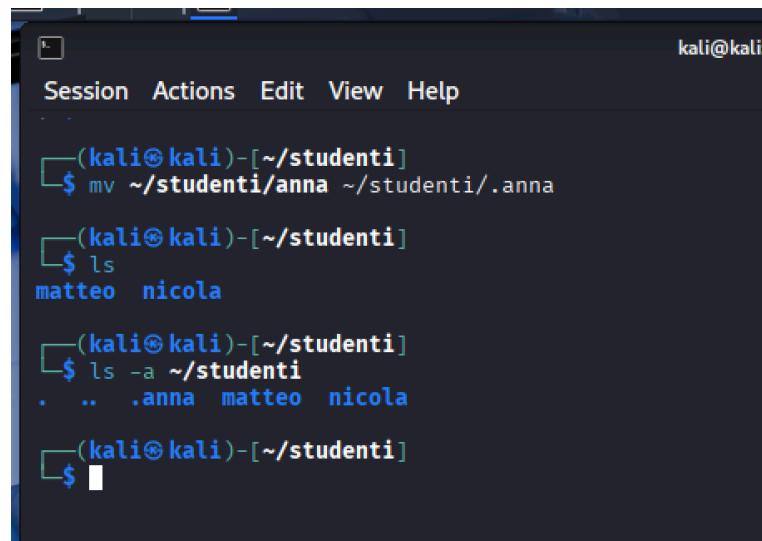
E) Cambiare gli attributi al file pippo.txt e renderlo modificabile e leggibile solo dal proprietario mentre tutti gli altri solo leggibile

(rw- valore 6, r- valore 4) read, write



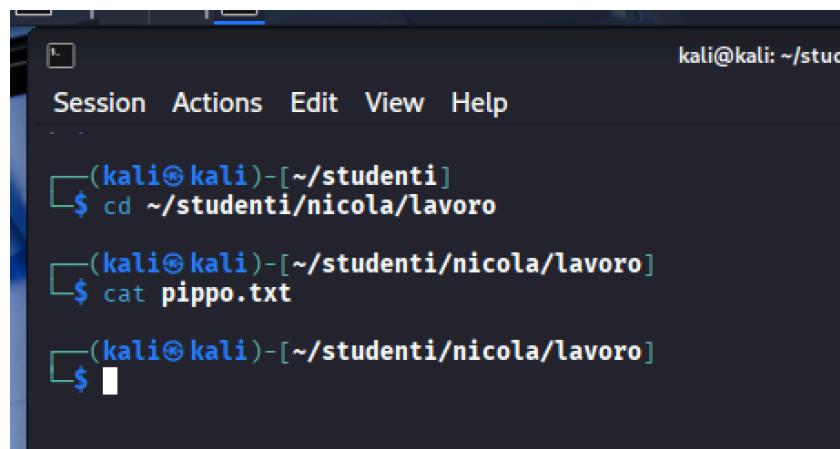
```
kali@kali: ~/studenti/nicola/lavoro
$ chmod 644 pippo.txt
(kali㉿kali)-[~/studenti/nicola/lavoro]
$ ls -l pippo.txt
-rw-r--r-- 1 kali kali 0 Jan 20 12:12 pippo.txt
(kali㉿kali)-[~/studenti/nicola/lavoro]
$
```

F) Nascondere il la cartella /anna



```
kali@kali: ~/studenti
$ mv ~/studenti/anna ~/studenti/.anna
(kali㉿kali)-[~/studenti]
$ ls
matteo nicola
(kali㉿kali)-[~/studenti]
$ ls -a ~/studenti
. .. .anna matteo nicola
(kali㉿kali)-[~/studenti]
$
```

G) spostarsi nella cartella /lavoro e visualizzare il file pippo.txt



```
kali@kali: ~/studenti/nicola/lavoro
$ cd ~/studenti/nicola/lavoro
(kali㉿kali)-[~/studenti/nicola/lavoro]
$ cat pippo.txt
(kali㉿kali)-[~/studenti/nicola/lavoro]
$
```

H) Rimuovere la cartella /amici

```
Session Actions Edit View Help
.
.
.
└─[(kali㉿kali)-[~/studenti/matteo]]$ rm -r ~/studenti/matteo/amici
└─[(kali㉿kali)-[~/studenti/matteo]]$ ls
└─[(kali㉿kali)-[~/studenti/matteo]]$ █
```

I) Rimuovere tutte le cartelle precedentemente create

```
kali㉿kali: ~
Session Actions Edit View Help
(kali㉿kali)-[~]
$ ls
Desktop      dos      Music      pentest      prova      scripts      Templates      Videos      wordlists
Documents    Downloads  osint     Pictures     Public     studenti    'TEST CS'    windows
(kali㉿kali)-[~]
$ rm -r ~/dos ~/studenti ~/windows

(kali㉿kali)-[~]
$ ls
Desktop      Downloads  osint     Pictures     Public     scripts      Templates      Videos
Documents    Music      pentest   prova      'TEST CS'    wordlists
(kali㉿kali)-[~]
$
```

Facoltativo Esercizi-processi

Aprire il terminale e leggere il manuale jobs, ps, kill

When job control is enabled, `Ctrl-D` does not receive keyboard-generated signals such as `SIGQUIT` (if it is waiting for a foreground command). An interactive shell shall not pay attention to the `SIGQUIT`, even if the shell is in the foreground, unless the shell is the current terminal process and the job control is not active, and the foreground command terminates due to the `SIGQUIT`. `bash` pretends it received the `SIGQUIT` instead (see `stty` for, hopefully).

308 CONTROL

`SIGHUP` control refers to the ability to selectively stop and (suspend) the execution of processes, and continue their execution when the signal is removed. `SIGHUP` is generated when a terminal connection is lost. An interactive interface supplied jointly by the operating system kernel's terminal driver and `bash`.

The shell associates each pipeline with a process. It keeps a table of currently executing jobs, which the job control command `jobs` displays. The table is indexed by the process ID of the job. It also maintains a list at 1. When `bash` starts a job non-interactively (in the background), it creates a table that looks like this:

```
[1] 25647
```

Indicating that this job is job number 1 and that the process ID of the last process in the pipeline associated with this job is 25647. All of the processes in a single pipeline are members of the same job.

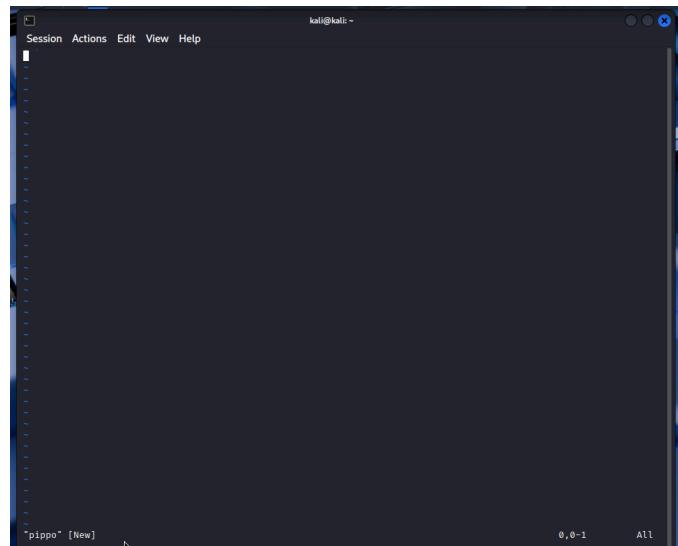
To facilitate the implementation of the user interface to job control, each process has a process group ID, and the operating system maintains the notion of a current terminal process (the terminal process group ID).

Processes that are in the same process group ID shall be said to be part of the same process group. Members of the foreground process group (processes whose process group ID is equal to the current terminal process group ID) are said to be the foreground processes. Background processes are those whose process group ID differs from the current terminal process group ID. The user may use the command `fg` to move a background process to the foreground. Processes are allowed to read from and write to the user as specified with "atty testing", write to the control terminal, and receive signals. The user may use the command `stty` to change the terminal settings. The user may read from (write to when "testng" is in effect) the terminal, which, unless caught, suspends the process.

If the operating system which is running supports job control, `bash` contains facilities to use it. The standard character (`typically ^Z`) controls a process in one of three ways: it suspends that process and returns control to `bash`, it kills that process and returns control to `bash`, or it terminates that process stop when it attempts to read from the terminal, and returns control to `bash`. The user may use the command `fg` to move a background process to the foreground, or the `kill` command to kill it. The suspended character takes effect immediately. The user may use the command `stty` to change the terminal settings. The user may read from (write to when "testng" is in effect) the terminal, which, unless caught, suspends the process.

Manual page `bash(1)` line 2824 (prints 8 for Help or q to quit)

Lanciare il comando **vi pippo**



Visualizzare i processi

A screenshot of a terminal window titled 'kali@kali: ~'. The window has a dark background and a light-colored text area. The terminal shows the following command history:

```
$ ps
  PID TTY      TIME CMD
 4107 pts/2    00:00:11 zsh
34990 pts/2    00:00:00 vi
35193 pts/2    00:00:00 ps

$ ps -u
USER      PID %CPU %MEM    VSZ    RSS TTY      STAT START  TIME COMMAND
kali      2949  0.0  0.1  10180  5656 ttyAMA0   Ss+  11:36  0:00 -zsh
kali      4107  0.3  0.1  11160  6540 pts/2     Ss   11:38  0:11 /usr/bin/zsh
kali      34990  0.0  0.2  15276  9820 pts/2     Tl   12:38  0:00 vi pippo
kali      35240  0.0  0.0   9112  3848 pts/2     R+   12:39  0:00 ps -u

$
```

Termino (killare) il processo vi

A screenshot of a terminal window titled 'kali@kali: ~'. The window has a dark background and a light-colored text area. The terminal shows the following command history:

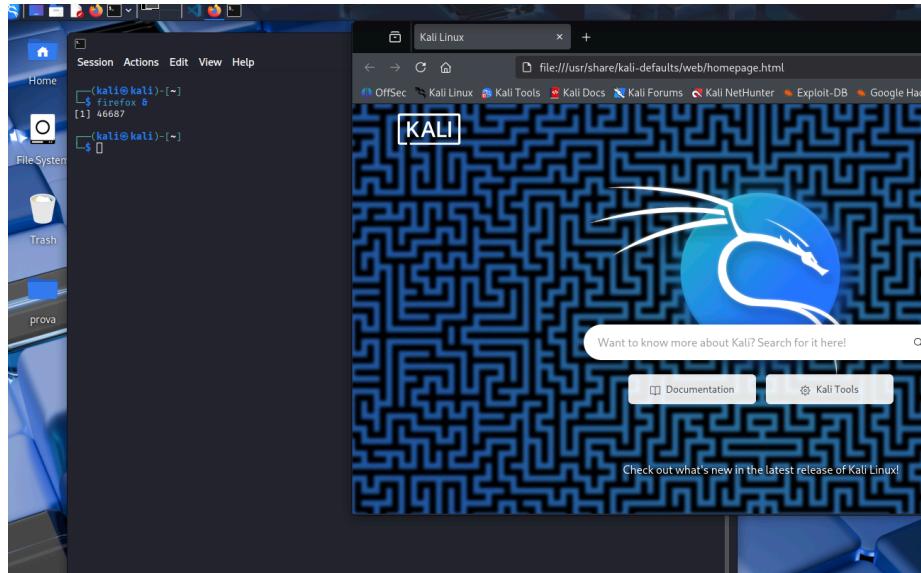
```
$ ps -u
USER      PID %CPU %MEM    VSZ    RSS TTY      STAT START  TIME COMMAND
kali      2949  0.0  0.1  10180  5656 ttyAMA0   Ss+  11:36  0:00 -zsh
kali      44533  0.0  0.1  10892  5984 pts/0     Ss   12:53  0:00 /usr/bin/zsh
kali      44601  0.0  0.2  15568  9840 pts/0     Sl-  12:53  0:00 vi pippo
kali      44631  0.2  0.1  10892  6916 pts/1   Ss   12:53  0:00 /usr/bin/zsh
kali      44676  0.0  0.0   9380  3880 pts/1   R+   12:56  0:00 ps -u

$ kill 44601
$
```

zsh: terminated vi pippo

```
$
```

Lanciare firefox in background



Terminare il processo firefox

```
Session Actions Edit View Help
  (kali㉿kali)-[~]
  $ Firefox 8
  [1] 52814

  (kali㉿kali)-[~]
  $ ps -u
  USER      PID %CPU %MEM    VSZ RSS TTY STAT START  TIME COMMAND
  kali      2949  0.0  0.1 10180 5656 ttymA0 Ss+ 11:36  0:00 -zsh
  kali     44637  0.2  0.1 10980 6100 pts/1 Ss 12:53  0:02 /usr/bin/zsh
  kali     52814  0.0  0.1 10980 5656 ttymA0 Ss+ 11:36  0:00 -zsh
  kali     52881  0.5  12.0 227004 43688 pts/1 S+ 13:08  0:03 firefox-esr
  kali     52908  0.0  1.0 10980 48538 pts/1 S+ 13:08  0:00 /usr/lib/firefox-esr/firefox-esr
  kali     52908  0.0  4.3 19287212 174734 pts/1 S+ 13:08  0:00 /usr/lib/firefox-esr/firefox-esr
  kali     52914  0.8  1.2 343196 48812 pts/1 S+ 13:08  0:00 /usr/lib/firefox-esr/firefox-esr
  kali     52962 10.4  4.1 110900608 167372 pts/1 S+ 13:08  0:00 /usr/lib/firefox-esr/firefox-esr
  kali     52985  6.3  2.7 2467112 109780 pts/1 S+ 13:08  0:00 /usr/lib/firefox-esr/firefox-esr
  kali     53032  0.7  0.9 109000608 39892 pts/1 S+ 13:08  0:00 /usr/lib/firefox-esr/firefox-esr
  kali     53042  1.7  1.0 2424164 77480 pts/1 S+ 13:08  0:00 /usr/lib/firefox-esr/firefox-esr
  kali     53063  0.6  1.0 2424164 77288 pts/1 S+ 13:08  0:00 /usr/lib/firefox-esr/firefox-esr
  kali     53063  1.0  1.0 2424164 77288 pts/1 S+ 13:08  0:00 /usr/lib/firefox-esr/firefox-esr
  kali     53164  0.0  0.0  9380  3928 pts/1 R+ 13:08  0:00 ps -u
  (kali㉿kali)-[~]
  $ kill 52814

  (kali㉿kali)-[~]
  $ Exiting due to channel error.
  [GFX1-]: CompositorBridgeChild receives IPC close with reason=AbnormalShutdown
  Exiting due to channel error.

  [1] + terminated  firefox
  (kali㉿kali)-[~]
  $
```

Verificare quanto spazio ci sta occupando sul disco

```
Session Actions Edit View Help
  (kali㉿kali)-[~]
  $ df -h
  Filesystem      Size  Used Avail Use% Mounted on
  udev            1.8G   0  1.8G  0% /dev
  tmpfs           391M  1.3M 390M  1% /run
  /dev/vda3        27G  21G  5.2G  80% /
  tmpfs           2.0G  12M  1.9G  1% /dev/shm
  efivarsfs       256K  17K 240K  7% /sys/firmware/efi/efivars
  tmpfs           2.0G  3.9M  2.0G  1% /tmp
  /dev/vda2       977M 368K 977M  1% /boot/efi
  none            1.0M   0  1.0M  0% /run/credentials/getty@tty1.service
  none            1.0M   0  1.0M  0% /run/credentials/serial-getty@ttyAMA0.service
  tmpfs           391M 104K 391M  1% /run/user/1000
  none            1.0M   0  1.0M  0% /run/credentials/systemd-journald.service
  (kali㉿kali)-[~]
  $
```