



Esercizio S2 L2

Per visualizzare la seguente schermata digitiamo il comando <<top>> nel terminale.

PID è un numero che identifica un processo. Ad ogni processo è assegnato un PID unico.

COMMAND è il nome del processo a cui è associato il PID.

USER indica quale utente sta avviando i vari processi attivi nella schermata.

```
File Actions Edit View Help
top - 12:06:05 up 12 min, 1 user, load average: 0.02, 0.09, 0.12
Tasks: 142 total, 1 running, 141 sleeping, 0 stopped, 0 zombie
%Cpu(s): 3.5 us, 1.4 sy, 0.0 ni, 94.8 id, 0.3 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 1967.3 total, 1003.7 free, 699.4 used, 416.9 buff/cache
MiB Swap: 976.0 total, 976.0 free, 0.0 used. 1267.9 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
720	root	20	0	393272	127620	58624	S	2.0	6.3	0:09.19	Xorg
7195	kali	20	0	451824	109960	88444	S	1.7	5.5	0:00.42	qterminal
1097	kali	20	0	274924	29704	18816	S	0.7	1.5	0:02.06	panel-13-cpugra
979	kali	20	0	218320	3200	2816	S	0.3	0.2	0:01.56	VBoxClient
1032	kali	20	0	725944	104060	77452	S	0.3	5.2	0:02.21	xfwm4
1063	kali	20	0	217908	3456	2944	S	0.3	0.2	0:00.17	VBoxClient
1099	kali	20	0	432288	30016	20684	S	0.3	1.5	0:01.58	panel-15-genmon
7231	kali	20	0	12176	5248	3072	R	0.3	0.3	0:00.04	top
1	root	20	0	20828	12636	9436	S	0.0	0.6	0:01.21	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_gp
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_par_gp
5	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	slub_flushwq
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	netns
7	root	20	0	0	0	0	I	0.0	0.0	0:00.40	kworker/0:0-events_freezable_power_
10	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_percpu_wq
11	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_kthread
12	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_rude_kthread
13	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_trace_kthread
14	root	20	0	0	0	0	S	0.0	0.0	0:00.35	ksoftirqd/0
15	root	20	0	0	0	0	I	0.0	0.0	0:00.32	rcu_preempt
16	root	rt	0	0	0	0	S	0.0	0.0	0:00.00	migration/0
17	root	-51	0	0	0	0	S	0.0	0.0	0:00.00	idle_inject/0
19	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
21	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kdevtmpfs
22	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	inet_frag_wq
23	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kauditd
24	root	20	0	0	0	0	S	0.0	0.0	0:00.00	khungtaskd
25	root	20	0	0	0	0	S	0.0	0.0	0:00.00	oom_reaper
27	root	20	0	0	0	0	I	0.0	0.0	0:00.11	kworker/u2:2-events_unbound
28	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	writeback
29	root	20	0	0	0	0	S	0.0	0.0	0:00.05	kcompactd0
30	root	25	5	0	0	0	S	0.0	0.0	0:00.00	ksmd
31	root	39	19	0	0	0	S	0.0	0.0	0:00.12	khugepaged
32	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kintegrityd
33	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kblockd
34	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	blkcg_punt_bio
35	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	tpm_dev_wq
36	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	edac-poller
37	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	devfreq_wq
38	root	0	-20	0	0	0	I	0.0	0.0	0:00.07	kworker/0:1H-kblockd
39	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kswapd0
41	root	20	0	0	0	0	I	0.0	0.0	0:00.14	kworker/u2:3-flush-8:0
46	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kthrotld
48	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	acpi_thermal_pm
49	root	20	0	0	0	0	S	0.0	0.0	0:00.00	xenbus_probe

Per filtrare i risultati del comando e mostrare solo i programmi in esecuzione per l'utente «root» inseriamo nel terminale il comando:

`top|grep root`


mentre per filtrare i risultati e mostrare i programmi in esecuzione per l'utente kali inseriamo il comando:

`top|grep kali`

```
File Actions Edit View Help
top - 12:07:23 up 13 min, 1 user, load average: 0.07, 0.08, 0.11
720 root 20 0 393272 127620 58624 S 1.3 6.3 0:10.12 Xorg
1 root 20 0 20828 12636 9436 S 0.0 0.6 0:01.21 systemd
2 root 20 0 0 0 0 S 0.0 0.0 0:00.00 kthreadd
3 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 rcu_gp
4 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 rcu_par+
5 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 slub_fl+
6 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 netns
7 root 20 0 0 0 0 I 0.0 0.0 0:00.44 kworker+
10 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 mm_perc+
11 root 20 0 0 0 0 I 0.0 0.0 0:00.00 rcu_tas+
12 root 20 0 0 0 0 I 0.0 0.0 0:00.00 rcu_tas+
13 root 20 0 0 0 0 I 0.0 0.0 0:00.00 rcu_tas+
14 root 20 0 0 0 0 S 0.0 0.0 0:00.37 ksoftir+
15 root 20 0 0 0 0 I 0.0 0.0 0:00.33 rcu_pre+
16 root rt 0 0 0 0 S 0.0 0.0 0:00.00 migrati+
17 root -51 0 0 0 0 S 0.0 0.0 0:00.00 idle_in+
```

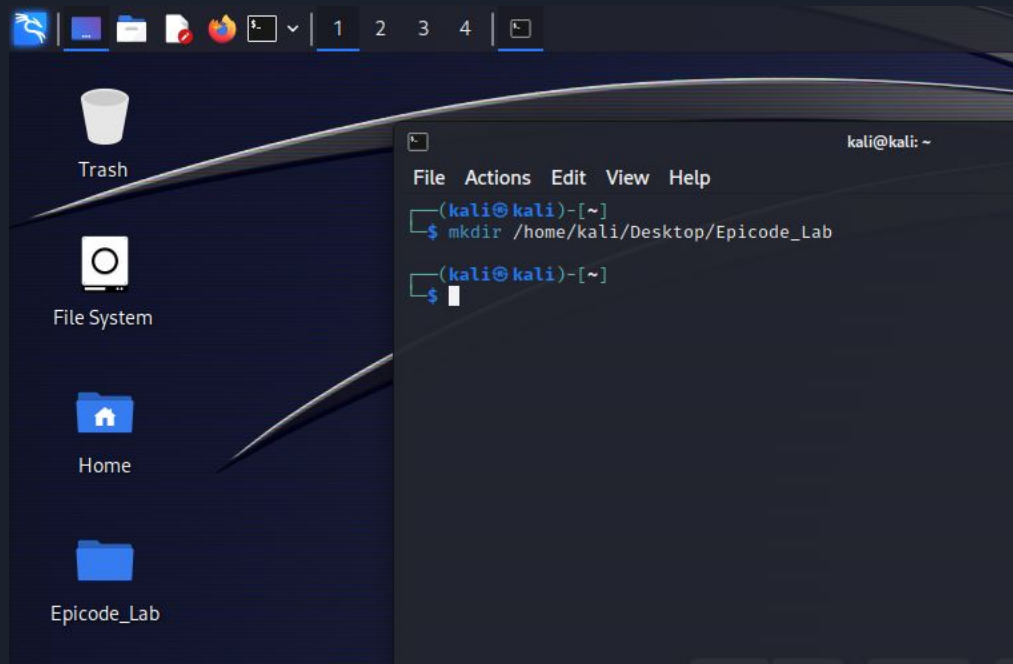
```
File Actions Edit View Help
top - 12:08:43 up 15 min, 1 user, load average: 0.07, 0.08, 0.10
17 root -51 0 0 0 S 0.0 0.0 0:00.00 idle_in+

(kali@kali)-[~]
└─$ top|grep kali
8755 kali 20 0 12116 5120 3072 R 6.2 0.3 0:00.01 top
971 kali 20 0 217804 3200 2688 S 0.3 0.2 0:00.44 VBoxCli+
979 kali 20 0 218320 3200 2816 S 0.3 0.2 0:01.90 VBoxCli+
1032 kali 20 0 725944 104060 77452 S 0.3 5.2 0:02.57 xfwm4
1099 kali 20 0 432288 30016 20684 S 0.3 1.5 0:01.92 panel-1+
1097 kali 20 0 274924 30088 19200 S 0.7 1.5 0:02.49 panel-1+
1032 kali 20 0 725944 104060 77452 S 0.3 5.2 0:02.58 xfwm4
1099 kali 20 0 432288 30016 20684 S 0.3 1.5 0:01.93 panel-1+
7195 kali 20 0 451824 110088 88572 S 0.3 5.5 0:01.22 qtermmin+
8755 kali 20 0 12116 5120 3072 R 0.3 0.3 0:00.02 top
979 kali 20 0 218320 3200 2816 S 0.3 0.2 0:01.91 VBoxCli+
1032 kali 20 0 725944 104060 77452 S 0.3 5.2 0:02.59 xfwm4
7195 kali 20 0 451824 110088 88572 S 0.3 5.5 0:01.23 qtermmin+
7195 kali 20 0 451824 110088 88572 S 0.7 5.5 0:01.25 qtermmin+
1097 kali 20 0 274924 30088 19200 S 0.3 1.5 0:02.50 panel-1+
8755 kali 20 0 12116 5120 3072 R 0.3 0.3 0:00.03 top
979 kali 20 0 218320 3200 2816 S 0.3 0.2 0:01.92 VBoxCli+
1099 kali 20 0 432288 30016 20684 S 0.3 1.5 0:01.94 panel-1+
1032 kali 20 0 725944 104060 77452 S 0.7 5.2 0:02.61 xfwm4
7195 kali 20 0 451824 110088 88572 S 0.7 5.5 0:01.27 qtermmin+
979 kali 20 0 218320 3200 2816 S 0.3 0.2 0:01.93 VBoxCli+
7195 kali 20 0 451824 110088 88572 S 0.7 5.5 0:01.95 panel-1+
1097 kali 20 0 274924 30088 19200 S 0.3 1.5 0:02.51 panel-1+
1099 kali 20 0 432288 30016 20684 S 0.3 1.5 0:01.95 panel-1+
1129 kali 20 0 410612 19584 17152 S 0.3 1.0 0:00.10 xfce4-n+
8755 kali 20 0 12116 5120 3072 R 0.3 0.3 0:00.04 top
1063 kali 20 0 217908 3456 2944 S 0.3 0.2 0:00.21 VBoxCli+
1097 kali 20 0 274924 30088 19200 S 0.3 1.5 0:02.52 panel-1+
8755 kali 20 0 12116 5120 3072 R 0.3 0.3 0:00.05 top
```



Per creare una nuova directory chiamata «Epicode_Lab» nella seguente directory /home/kali/Desktop digitiamo nel terminale il seguente comando:

```
mkdir /home/kali/Desktop/Epicode_Lab
```

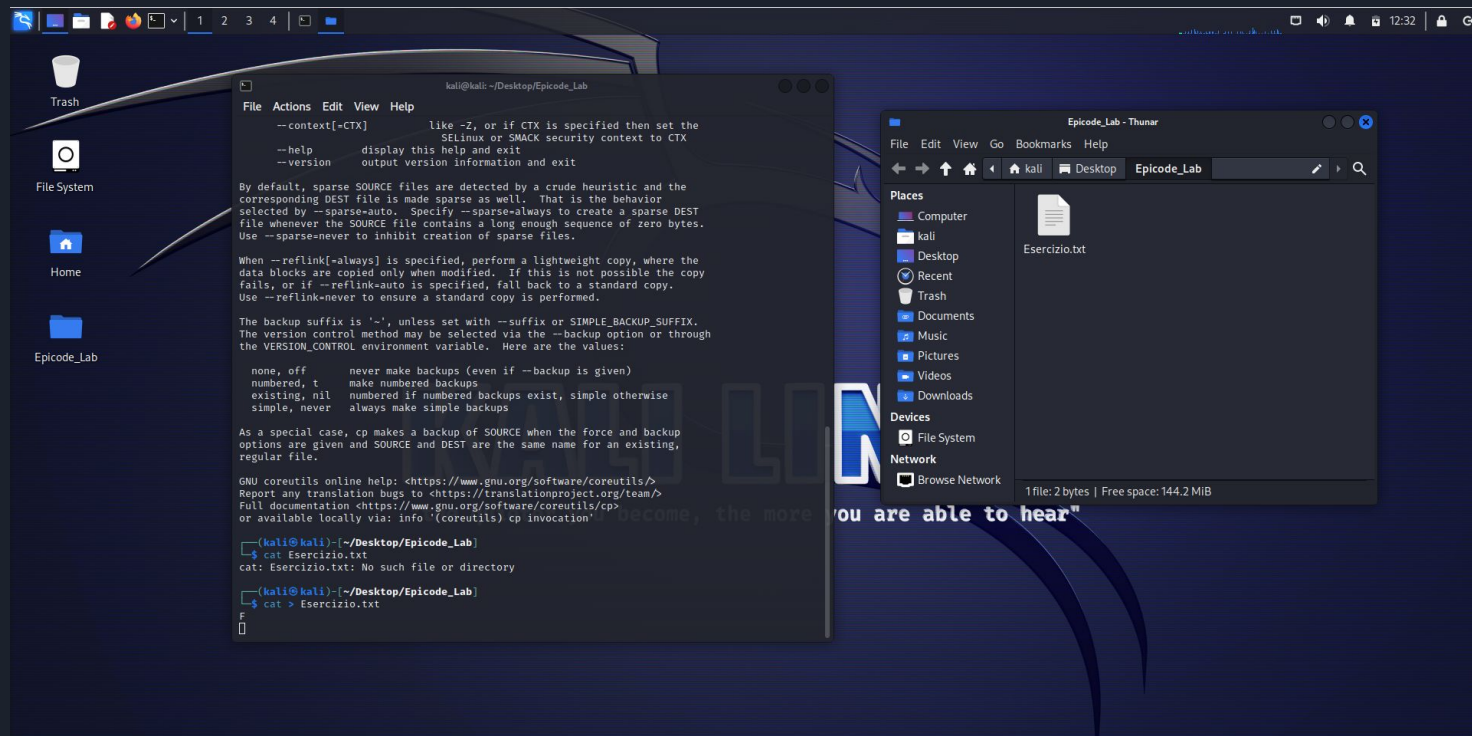



Per Spostarsi nella directory appena creata digitiamo nel terminale il seguente comando:

```
cd  
/home/kali/Desktop/E  
picode_Lab
```

mentre per creare un nuovo file Esercizio.txt digitiamo il comando:

```
cat > Esercizio.txt
```

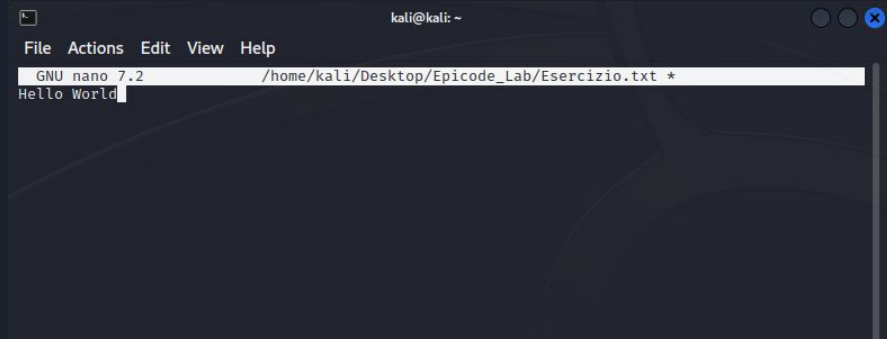




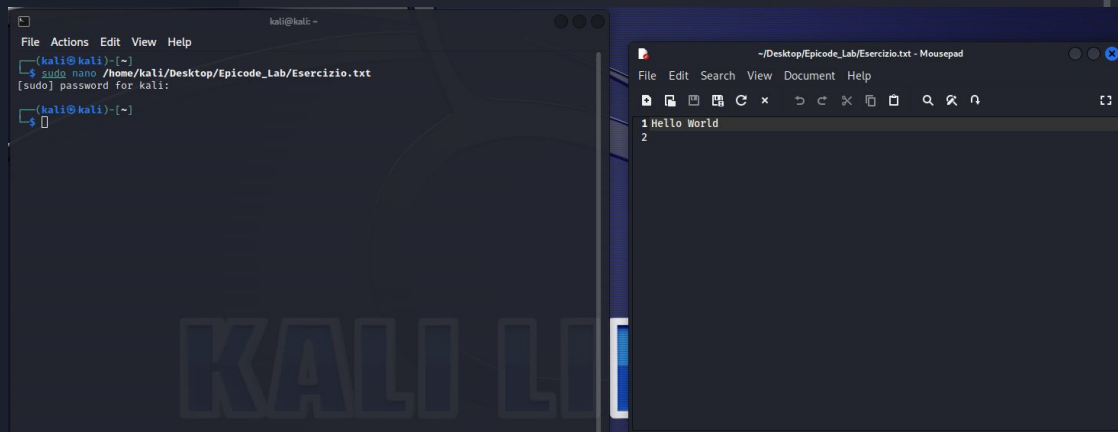
Per modificare il contenuto
del file Esercizio.txt
digitiamo il comando:

```
sudo nano  
/home/kali/Desktop/Epicod  
e_Lab/Esercizio.txt
```

e digitiamo qualcosa nel
documento, io ho scritto
Hello World. Poi salviamo le
modifiche.




```
kali@kali: ~  
File Actions Edit View Help  
GNU nano 7.2 /home/kali/Desktop/Epicode_Lab/Esercizio.txt *  
Hello World
```



```
(kali@kali)-[~]  
$ sudo nano /home/kali/Desktop/Epicode_Lab/Esercizio.txt  
[sudo] password for kali:  
(kali@kali)-[~]  
$
```

```
~/Desktop/Epicode_Lab/Esercizio.txt - Mousepad  
File Edit Search View Document Help  
1 Hello World  
2
```




Utilizziamo il comando «cat» per leggere a schermo il file.txt appena modificato digitando:

cat Esercizio.txt

```
(kali㉿kali)-[~/Desktop/Epicode_Lab]  
$ cat Esercizio.txt  
Hello World
```

```
(kali㉿kali)-[~/Desktop/Epicode_Lab]  
$
```

Controlliamo i permessi
del file con il comando:

`ls -la`

E modifichiamo i privilegi
del file in modo tale che
l'utente corrente abbia
tutti i privilegi (r,w,x), il
gruppo (r,w), gli altri
utenti solo lettura (r).

Per fare ciò ci avvaliamo
del comando `chmod`.

```
(kali@kali)~/Desktop/Epicode_Lab
$ ls -la
total 12
drwxr-xr-x 2 kali kali 4096 Nov 28 12:36 .
drwxr-xr-x 3 kali kali 4096 Nov 28 12:19 ..
-rw-r--r-- 1 kali kali  12 Nov 28 12:36 Esercizio.txt
```


```
(kali@kali)~/Desktop/Epicode_Lab
$ chmod u+x Esercizio.txt
```

```
(kali@kali)~/Desktop/Epicode_Lab
$ ls -la
total 12
drwxr-xr-x 2 kali kali 4096 Nov 28 12:36 .
drwxr-xr-x 3 kali kali 4096 Nov 28 12:19 ..
-rwxr--r-- 1 kali kali  12 Nov 28 12:36 Esercizio.txt
```

```
(kali@kali)~/Desktop/Epicode_Lab
$ chmod g+w Esercizio.txt
```

```
(kali@kali)~/Desktop/Epicode_Lab
$ ls -la
total 12
drwxr-xr-x 2 kali kali 4096 Nov 28 12:36 .
drwxr-xr-x 3 kali kali 4096 Nov 28 12:19 ..
-rwxrw-r-- 1 kali kali  12 Nov 28 12:36 Esercizio.txt
```

```
(kali@kali)~/Desktop/Epicode_Lab
$
```

Creiamo un nuovo
utente coi comandi:

sudo useradd
e
sudo passwd

impostiamo nome
utente e password:
superkali
superkali

poi andiamo a
cambiare i privilegi
del file .txt creato in
precedenza in modo
tale che «altri
utenti» non siano
abilitati alla lettura.

```
(kali@kali)-[/etc/default]
$ sudo useradd superkali

(kali@kali)-[/etc/default]
$ sudo passwd superkali
New password:
Retype new password:
passwd: password updated successfully

(kali@kali)-[/etc/default]
$
```

```
(kali@kali)-[/etc/default]
$ cd /home/kali/Desktop/Epicode_Lab

(kali@kali)-[~/Desktop/Epicode_Lab]
$ ls -la
total 12
drwxr-xr-x 2 kali kali 4096 Nov 28 12:36 .
drwxr-xr-x 3 kali kali 4096 Nov 28 12:19 ..
-rwxrw-r-- 1 kali kali 12 Nov 28 12:36 Esercizio.txt

(kali@kali)-[~/Desktop/Epicode_Lab]
$ chmod o-r Esercizio.txt

(kali@kali)-[~/Desktop/Epicode_Lab]
$ ls -la
total 12
drwxr-xr-x 2 kali kali 4096 Nov 28 12:36 .
drwxr-xr-x 3 kali kali 4096 Nov 28 12:19 ..
-rwxrw---- 1 kali kali 12 Nov 28 12:36 Esercizio.txt

(kali@kali)-[~/Desktop/Epicode_Lab]
$
```

Spostiamo il file
nella directory di
root (/)

```
(kali@kali)-[~/Desktop/Epicode_Lab]
```

```
$ sudo mv Esercizio.txt /
```

```
(kali@kali)-[~/Desktop/Epicode_Lab]
```

```
$ cd /
```

```
(kali@kali)-[/]
```

```
$ ls -la
```

```
total 84
```

```
drwxr-xr-x 19 root root 4096 Nov 28 14:07 .
drwxr-xr-x 19 root root 4096 Nov 28 14:07 ..
drwx----- 2 root root 4096 Nov 20 22:57 .cache
-rwxrwx--- 1 kali kali 12 Nov 28 12:36 Esercizio.txt
lrwxrwxrwx 1 root root 7 Nov 20 22:40 bin -> usr/bin
drwxr-xr-x 3 root root 4096 Nov 20 23:06 boot
drwxr-xr-x 17 root root 3420 Nov 28 13:01 dev
drwxr-xr-x 178 root root 12288 Nov 28 13:58 etc
drwxr-xr-x 3 root root 4096 Nov 20 23:05 home
lrwxrwxrwx 1 root root 33 Nov 20 22:41 initrd.img -> boot/initrd.img-6.3.0-kali1-amd64
lrwxrwxrwx 1 root root 33 Nov 20 22:41 initrd.img.old -> boot/initrd.img-6.3.0-kali1-amd64
4
lrwxrwxrwx 1 root root 7 Nov 20 22:40 lib -> usr/lib
lrwxrwxrwx 1 root root 9 Nov 20 22:40 lib32 -> usr/lib32
lrwxrwxrwx 1 root root 9 Nov 20 22:40 lib64 -> usr/lib64
lrwxrwxrwx 1 root root 10 Nov 20 22:40 libx32 -> usr/libx32
drwx----- 2 root root 16384 Nov 20 22:40 lost+found
drwxr-xr-x 3 root root 4096 Nov 20 22:40 media
drwxr-xr-x 2 root root 4096 Nov 20 22:40 mnt
drwxr-xr-x 3 root root 4096 Nov 20 22:52 opt
dr-xr-xr-x 200 root root 0 Nov 28 11:53 proc
drwx----- 6 root root 4096 Nov 28 11:53 root
drwxr-xr-x 32 root root 800 Nov 28 11:53 run
lrwxrwxrwx 1 root root 8 Nov 20 22:40 sbin -> usr/sbin
drwxr-xr-x 3 root root 4096 Nov 20 22:57 srv
dr-xr-xr-x 13 root root 0 Nov 28 11:53 sys
drwxrwxrwt 14 root root 4096 Nov 28 13:50 tmp
drwxr-xr-x 16 root root 4096 Nov 20 22:45 usr
drwxr-xr-x 12 root root 4096 Nov 20 22:43 var
lrwxrwxrwx 1 root root 30 Nov 20 22:41 vmlinuz -> boot/vmlinuz-6.3.0-kali1-amd64
lrwxrwxrwx 1 root root 30 Nov 20 22:41 vmlinuz.old -> boot/vmlinuz-6.3.0-kali1-amd64
```

cambiamo l'utente col comando visualizzato in figura e proviamo a visualizzare il file.

Riceveremo un messaggio di errore che ci informerà che non abbiamo i permessi per visualizzare il documento.


```
(kali@kali)-[/  
$ sudo su superkali  
$ nano /Esercizio.txt
```



A questo punto
modifichiamo i
permessi come fatto in
precedenza per
permettere a superkali
di visualizzare il file.

```
kali@kali: /  
File Actions Edit View Help  
(kali@kali)-[~]  
$ cd /  
(kali@kali)-[/]  
$ ls -la  
total 84  
drwxr-xr-x 19 root root 4096 Nov 28 14:07 .  
drwxr-xr-x 19 root root 4096 Nov 28 14:07 ..  
drwx----- 2 root root 4096 Nov 20 22:57 .cache  
-rwxrwx 1 kali kali 12 Nov 28 12:36 Esercizio.txt  
lrwxrwxrwx 1 root root 7 Nov 20 22:40 bin -> usr/bin  
drwxr-xr-x 3 root root 4096 Nov 20 23:06 boot  
drwxr-xr-x 17 root root 3420 Nov 28 13:01 dev  
drwxr-xr-x 178 root root 12288 Nov 28 13:58 etc  
drwxr-xr-x 3 root root 4096 Nov 20 23:05 home  
lrwxrwxrwx 1 root root 33 Nov 20 22:41 initrd.img -> boot/initrd.img-6.3.0-kali1-amd64  
lrwxrwxrwx 1 root root 33 Nov 20 22:41 initrd.img.old -> boot/initrd.img-6.3.0-kali1-amd64  
lrwxrwxrwx 1 root root 7 Nov 20 22:40 lib -> usr/lib  
lrwxrwxrwx 1 root root 9 Nov 20 22:40 lib32 -> usr/lib32  
lrwxrwxrwx 1 root root 9 Nov 20 22:40 lib64 -> usr/lib64  
lrwxrwxrwx 1 root root 10 Nov 20 22:40 libx32 -> usr/libx32  
drwx----- 2 root root 16384 Nov 20 22:40 lost+found  
drwxr-xr-x 3 root root 4096 Nov 20 22:40 media  
drwxr-xr-x 2 root root 4096 Nov 20 22:40 mnt  
drwxr-xr-x 3 root root 4096 Nov 20 22:52 opt  
dr-xr-xr-x 200 root root 0 Nov 28 11:53 proc  
drwx----- 6 root root 4096 Nov 28 11:53 root  
drwxr-xr-x 32 root root 800 Nov 28 11:53 run  
lrwxrwxrwx 1 root root 8 Nov 20 22:40 sbin -> usr/sbin  
drwxr-xr-x 3 root root 4096 Nov 20 22:57 srv  
dr-xr-xr-x 13 root root 0 Nov 28 11:53 sys  
drwxrwxrwt 14 root root 4096 Nov 28 14:26 tmp  
drwxr-xr-x 16 root root 4096 Nov 20 22:45 usr  
drwxr-xr-x 12 root root 4096 Nov 20 22:43 var  
lrwxrwxrwx 1 root root 30 Nov 20 22:41 vmlinuz -> boot/vmlinuz-6.3.0-kali1-amd64  
lrwxrwxrwx 1 root root 30 Nov 20 22:41 vmlinuz.old -> boot/vmlinuz-6.3.0-kali1-amd64  
(kali@kali)-[/]  
$ chmod o+r Esercizio.txt  
(kali@kali)-[/]  
$ su superkali  
Password:  
$ nano Esercizio.txt  
Unable to create directory /home/superkali/.local/share/nano/: No such file or directory  
It is required for saving/loading search history or cursor positions.  
$
```

```
kali@kali: /  
File Actions Edit View Help  
GNU nano 7.2 Esercizio.txt  
Hello World  
[File 'Esercizio.txt' is unwritable] .  
Help Write Out Where Is Cut Execute Location  
Exit Read File Replace Paste Justify Go To Line
```



Come ultimo passaggio eliminiamo il file, la cartella e l'utente creati nei passaggi precedenti e l'esercizio sarà concluso.

```
kali@kali: ~  
File Actions Edit View Help  
(kali@kali)-[~]  
$ sudo userdel superkali  
[sudo] password for kali:  
  
(kali@kali)-[~]  
$ su superkali  
su: user superkali does not exist or the user entry does not contain all the required fields  
  
(kali@kali)-[~]  
$
```

```
(kali@kali)-[~/Desktop/Epicode_Lab]  
$ cd /home/kali/Desktop  
  
(kali@kali)-[~/Desktop]  
$ rmdir Epicode_Lab  
  
(kali@kali)-[~/Desktop]  
$
```

```
(kali@kali)-[/]  
$ sudo rm Esercizio.txt  
[sudo] password for kali:
```