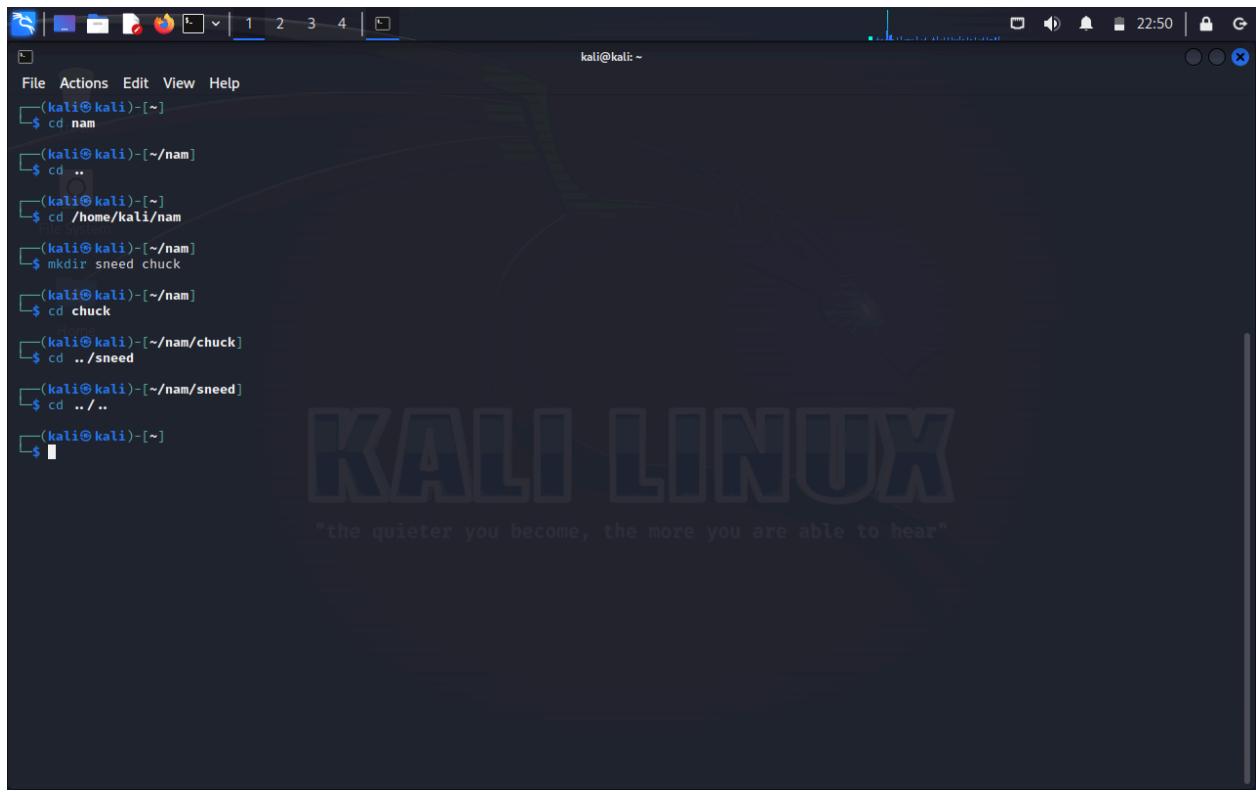


Lab 2.02

2,

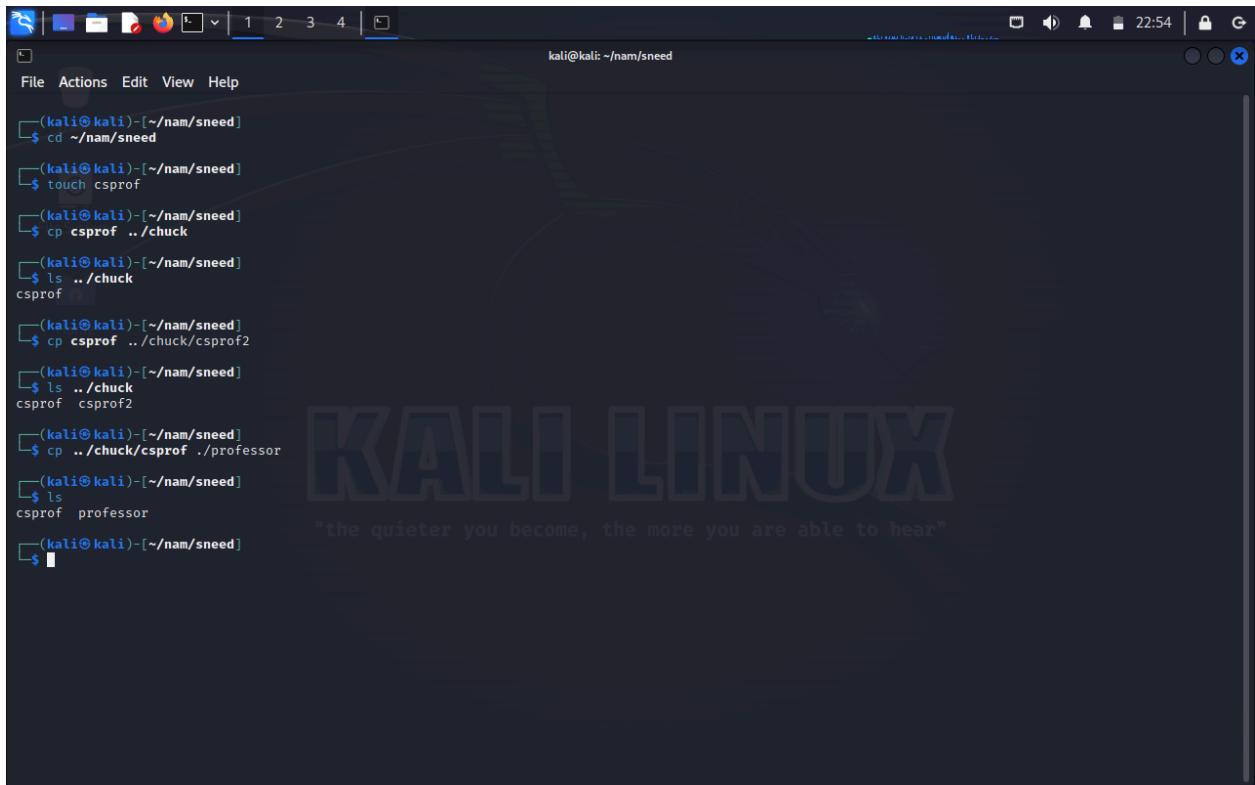


A screenshot of a Kali Linux desktop environment. In the top right corner, there is a terminal window titled "kali@kali: ~". The terminal contains the following command history:

```
(kali㉿kali)-[~]
$ cd nam
(kali㉿kali)-[~/nam]
$ cd ..
(kali㉿kali)-[~]
$ cd /home/kali/nam
(kali㉿kali)-[~/nam]
$ mkdir sneed chuck
(kali㉿kali)-[~/nam]
$ cd chuck
(kali㉿kali)-[~/nam/chuck]
$ cd ../sneed
(kali㉿kali)-[~/nam/sneed]
$ cd ../..
(kali㉿kali)-[~]
```

The background of the desktop features a large, semi-transparent watermark of the word "KALI LINUX" with the tagline "the quieter you become, the more you are able to hear" below it.

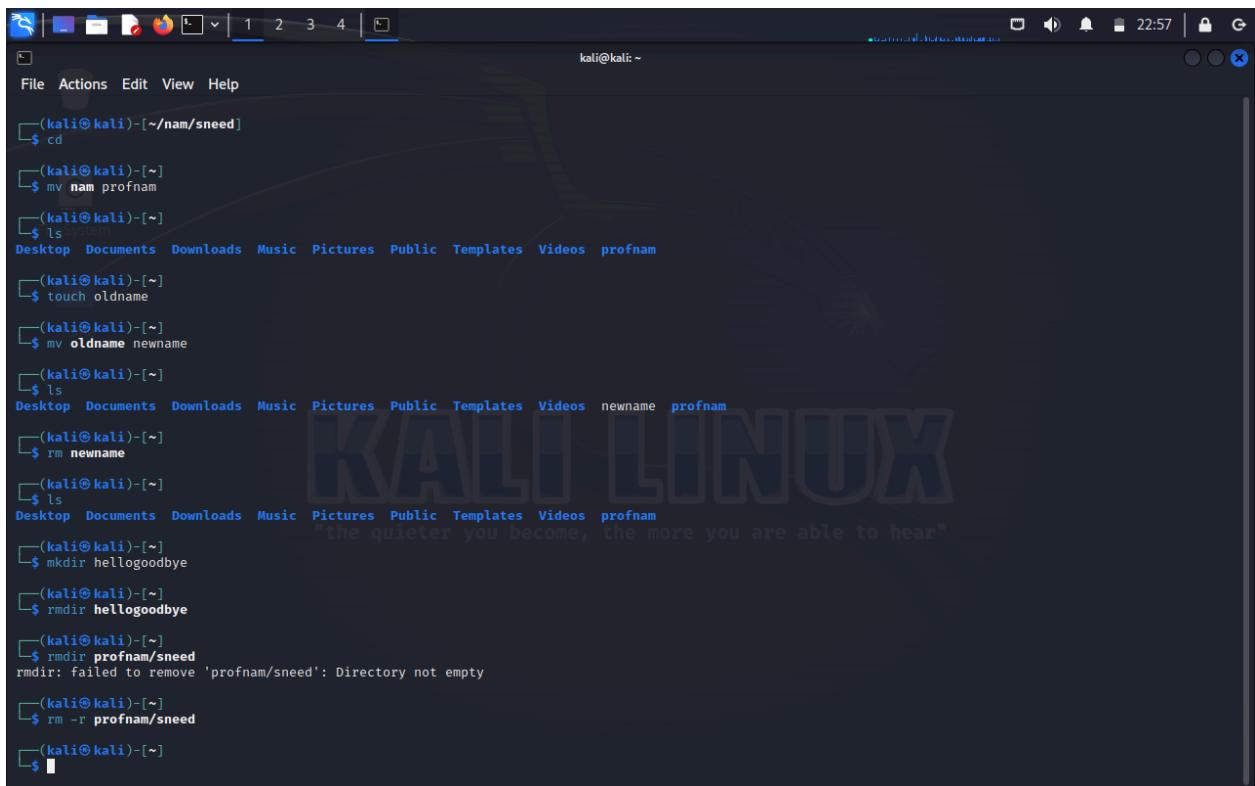
3,



A screenshot of a Kali Linux desktop environment. A terminal window is open in the foreground, showing a series of shell commands being run. The terminal title is 'kali@kali: ~/nam/sneed'. The commands are:

```
(kali㉿kali)-[~/nam/sneed]
$ cd ~/nam/sneed
(kali㉿kali)-[~/nam/sneed]
$ touch csprof
(kali㉿kali)-[~/nam/sneed]
$ cp csprof .. Chuck
(kali㉿kali)-[~/nam/sneed]
$ ls .. Chuck
csprof csprof2
(kali㉿kali)-[~/nam/sneed]
$ cp .. Chuck/csprof ./professor
(kali㉿kali)-[~/nam/sneed]
$ ls
professor
(kali㉿kali)-[~/nam/sneed]
```

4,



A screenshot of a Kali Linux desktop environment. A terminal window is open in the foreground, showing a series of shell commands being run. The terminal title is 'kali@kali: ~'. The commands are:

```
(kali㉿kali)-[~/nam/sneed]
$ cd
(kali㉿kali)-[~]
$ mv nam profnam
(kali㉿kali)-[~]
$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos profnam
(kali㉿kali)-[~]
$ touch oldname
(kali㉿kali)-[~]
$ mv oldname newname
(kali㉿kali)-[~]
$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos newname profnam
(kali㉿kali)-[~]
$ rm newname
(kali㉿kali)-[~]
$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos profnam
(kali㉿kali)-[~]
$ mkdir hellogoodbye
(kali㉿kali)-[~]
$ rmdir hellogoodbye
(kali㉿kali)-[~]
$ rmdir profnam/sneed
rmdir: failed to remove 'profnam/sneed': Directory not empty
(kali㉿kali)-[~]
$ rm -r profnam/sneed
(kali㉿kali)-[~]
```

5,



A screenshot of a Kali Linux desktop environment showing a terminal window. The terminal window has a dark background with light-colored text. It displays a series of commands being typed and their outputs. The commands involve echo, cat, sort, and tac operations on files named rochester, which contain the strings 'Sneed Chuck Nam', 'RIT', and 'FLCC'. The terminal window is titled 'kali@kali: ~' and is part of a larger desktop interface with other windows and icons visible.

```
kali@kali: ~
└$ echo Sneed Chuck Nam
Sneed Chuck Nam

[(kali㉿kali)-~]
└$ echo Sneed Chuck Nam > rochester

[(kali㉿kali)-~]
└$ cat rochester
Sneed Chuck Nam

[(kali㉿kali)-~]
└$ echo RIT > rochester

[(kali㉿kali)-~]
└$ cat rochester
RIT

[(kali㉿kali)-~]
└$ echo FLCC >> rochester

[(kali㉿kali)-~]
└$ echo SU >> rochester

[(kali㉿kali)-~]
└$ cat rochester
RIT
FLCC
SU

[(kali㉿kali)-~]
└$ tac rochester
SU
FLCC
RIT
SU

[(kali㉿kali)-~]
└$ sort rochester
FLCC
RIT
SU

[(kali㉿kali)-~]
└$
```

Lab 2.03

1,



"the quieter you become, the more you are able to hear"

```
[kali㉿kali: ~] 1 2 3 4 [ ] kali@kali: ~
```

File Actions Edit View Help

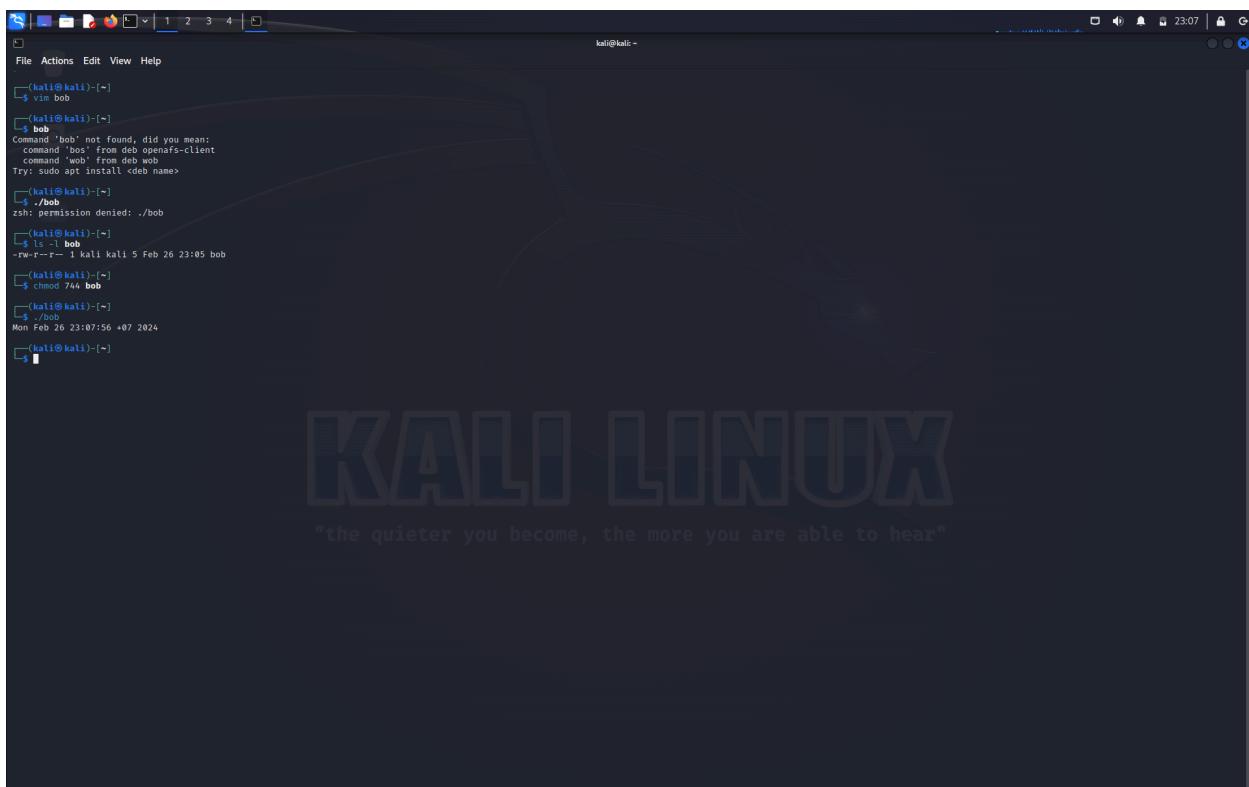
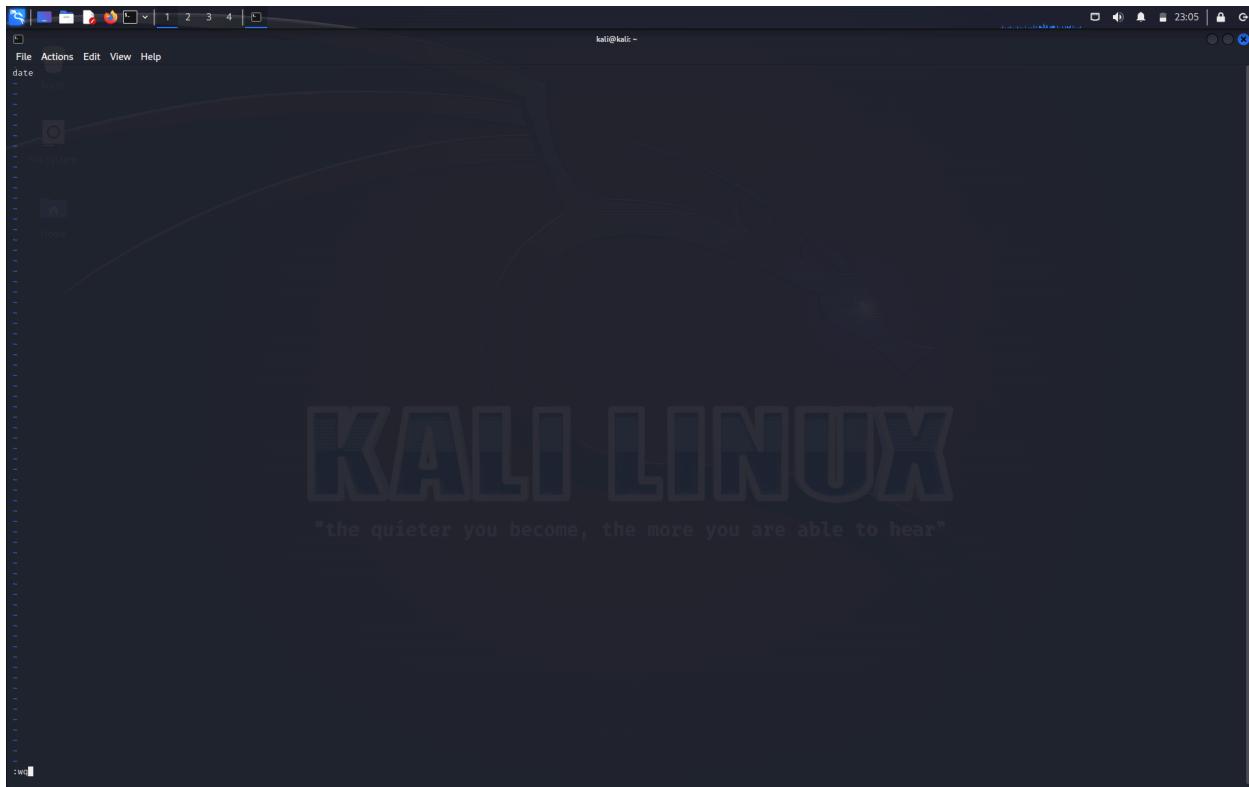
```
[kali㉿kali: ~] sudo adduser bthn
[sudo] password for kali:
[info] Adding user 'bthn' ...
[info] Selecting UID/GID from range 1000 to 59999 ...
[info] Adding new group 'bthn' (1001)
[info] Adding new user 'bthn' (1001) with group 'bthn' (1001) ...
[info] creating home directory '/home/bthn' ...
[info] copying files from '/etc/skel' ...
New password:
Retype new password:
password: password updated successfully
Changing the user information for bthn
Enter the new value, or press ENTER for the default
Full Name []: 
Room Number []:
Work Phone []:
Home Phone []:
Other []:
Is the information correct? [Y/n] y
[info] Adding new user 'bthn' to supplemental / extra groups 'users' ...
[info] Adding user 'bthn' to group 'users' ...

[kali㉿kali: ~] $ sudo passwd bthn
New password:
Retype new password:
password: password updated successfully

[kali㉿kali: ~] $ su bthn
Password:
[bthn㉿kali: /home/kali]
$ whoami
bthn

[bthn㉿kali: /home/kali]
$ exit
[kali㉿kali: ~] $ whoami
kali
[kali㉿kali: ~] $
```

2,
Nội dung file bob



3,

```
kali@kali: ~/monroe
File Actions Edit View Help
(kali㉿kali) ~
$ mkdir monroe
(kali㉿kali) ~
$ ls -l | grep monroe
drwxr-xr-x 2 kali kali 4096 Feb 26 23:08 monroe
(kali㉿kali) ~
$ chmod 754 monroe
(kali㉿kali) ~
$ ls -l | grep monroe
drwxr-xr-- 2 kali kali 4096 Feb 26 23:08 monroe
(kali㉿kali) ~
$ cd monroe
(kali㉿kali) ~/monroe
$ echo meadowbook > brighton
(kali㉿kali) ~/monroe
$ cat brighton
meadowbook
(kali㉿kali) ~/monroe
$ ls -l brighton
-rw-r--r-- 1 kali kali 11 Feb 26 23:10 brighton
(kali㉿kali) ~/monroe
$ su bthn
Password:
(kali㉿kali) /home/kali/monroe
$ ls -l
ls: cannot open directory '.': Permission denied
(kali㉿kali) /home/kali/monroe
$ exit
(kali㉿kali) ~/monroe
$
```

```
kali@kali: ~/monroe
File Actions Edit View Help
(kali㉿kali) ~/monroe
$ cd ..
(kali㉿kali) ~
$ chmod 755 monroe
(kali㉿kali) ~
$ ls -l | grep monroe
drwxr-xr-x 2 kali kali 4096 Feb 26 23:10 monroe
(kali㉿kali) ~
$ cd monroe
(kali㉿kali) ~/monroe
$ su bthn
Password:
(kali㉿kali) /home/kali/monroe
$ ls -l
total 4
-rw-r--r-- 1 kali kali 11 Feb 26 23:10 brighton
(kali㉿kali) ~/monroe
$ cat brighton
meadowbook
(kali㉿kali) ~/monroe
$ echo update > newwork
bash: newwork: Permission denied
(kali㉿kali) ~/monroe
$ echo hi >> brighton
bash: brighton: Permission denied
(kali㉿kali) ~/monroe
$ exit
(kali㉿kali) ~/monroe
$
```

```
kali@kali: ~
```

```
File Actions Edit View Help
(othm㉿kali)-[~/home/kali/monroe]
$ ls -l
total 4
-rw-r--r-- 1 kali kali 11 Feb 26 23:10 brighton
(othm㉿kali)-[~/home/kali/monroe]
$ cat brighton
meadowbook

(othm㉿kali)-[~/home/kali/monroe]
$ echo update > newyork
bash: newyork: Permission denied

(othm㉿kali)-[~/home/kali/monroe]
$ echo hi >> brighton
bash: brighton: Permission denied

(othm㉿kali)-[~/home/kali/monroe]
$ exit
exit

(kali㉿kali)-[~/monroe]
$ cd ..
(kali㉿kali)-[~]
$ chmod 777 monroe
(kali㉿kali)-[~]
$ ls -l | grep monroe
drwxrwxrwx 2 kali kali 4096 Feb 26 23:10 monroe

(kali㉿kali)-[~]
$ cd monroe
(kali㉿kali)-[~/monroe]
$ chmod 777 brighton
(kali㉿kali)-[~/monroe]
$ ls -l | grep brighton
-rwxrwxrwx 1 kali kali 11 Feb 26 23:10 brighton

(kali㉿kali)-[~/monroe]
$ su bthn
Password:
(othm㉿kali)-[~/home/kali/monroe]
$ echo update > newyork

(othm㉿kali)-[~/home/kali/monroe]
$ echo hi >> brighton
(othm㉿kali)-[~/home/kali/monroe]
$ cat newyork
update

(othm㉿kali)-[~/home/kali/monroe]
$ cat brighton
meadowbook
hi

(othm㉿kali)-[~/home/kali/monroe]
$ exit
exit

(kali㉿kali)-[~/monroe]
$ cd ..
(kali㉿kali)-[~]
$
```

6,

```
kali@kali: ~
```

```
File Actions Edit View Help
$ ls -l pizza
-rwxr--r-- 1 kali kali 5 Feb 27 00:00 pizza
(othm㉿kali)-[~]
$ cat ./pizza
[sudo] password for kali:
(othm㉿kali)-[~]
$ ./pizza
-rwxr--r-- 1 bthn kali 5 Feb 27 00:00 pizza

(othm㉿kali)-[~]
$ sudo chgrp bthn pizza
(othm㉿kali)-[~]
$ ls -l pizza
-rwxr--r-- 1 bthn bthn 5 Feb 27 00:00 pizza

(othm㉿kali)-[~]
$ rm pizza
>Password:
(othm㉿kali)-[~/home/kali]
$ ./pizza: Permission denied

(othm㉿kali)-[~/home/kali]
$ exit
exit

(kali㉿kali)-[~]
$ sudo chown kali:kali pizza
(kali㉿kali)-[~]
$ su bthn
Password:
(kali㉿kali)-[~/home/kali]
$ ./pizza
bash: ./pizza: Permission denied

(othm㉿kali)-[~/home/kali]
$ exit
exit

(kali㉿kali)-[~]
$
```

7,

```
kali | File Actions Edit View Help
[~] (kali㉿kali)-[~]
$ sudo groupadd pentesters1
info: Selecting GID from range 1000 to 59999 ...
info: Adding group 'pentesters1' (GID 1002) ...
[~] (kali㉿kali)-[~]
$ sudo usermod -a -G pentesters1,pentesters2 bthn
[~] (kali㉿kali)-[~]
$ grep pentesters /etc/group
pentesters1:x:1002:bthn
pentesters2:x:1003:bthn
[~] (kali㉿kali)-[~]
$ groups bthn
bthn : bthn users pentesters1 pentesters2
[~] (kali㉿kali)-[~]
$ cat /etc/group
root:x:0:
daemon:x:1:
bin:x:2:
sys:x:3:
adm:x:4:
tftp:x:5:
disk:x:6:
lp:x:7:
mail:x:8:
news:x:9:
uucp:x:10:
man:x:12:
proxy:x:13:
www:x:15:
dialout:x:20:kali
fax:x:21:
video:x:22:
cdrom:x:24:kali
floppy:x:25:kali
tape:x:26:
scanner:x:27:kali
audio:x:29:pulse,kali
dip:x:30:kali
www-wm:x:33:
haldaemon:x:34:
operator:x:37:
listx:x:38:
irc:x:39:

```

```
kali | File Actions Edit View Help
[~] (kali㉿kali)-[~]
$ sudo usermod -G pentesters1 bthn
[~] (kali㉿kali)-[~]
$ groups bthn
bthn : bthn pentesters1
[~] (kali㉿kali)-[~]
$ sudo usermod -a -G pentesters1,pentesters2 bthn
[~] (kali㉿kali)-[~]
$ groups bthn
bthn : bthn pentesters1 pentesters2
[~] (kali㉿kali)-[~]
$ sudo gpasswd -d bthn pentesters2
Removing user bthn from group pentesters2
[~] (kali㉿kali)-[~]
$ groups bthn
bthn : bthn pentesters1
[~] (kali㉿kali)-[~]
$ sudo adduser alice
info: Adding user 'alice'
info: Selecting user ID/GID from range 1000 to 59999 ...
info: Adding new user 'alice' (1004) ...
info: Adding new user 'alice' (1004) with group 'alice (1004)' ...
info: Creating home directory '/home/alice' ...
info: Copying files from '/etc/skel' ...
New password:
Retype new password:
password: password updated successfully
Changing the user information for alice
Enter the new value, or press ENTER for the default
  Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n]
info: Adding user 'alice' to supplemental / extra groups 'users' ...
info: Adding user 'alice' to group 'users' ...
[~] (kali㉿kali)-[~]
$ sudo deluser alice
info: Removing crontab ...
info: Removing user 'alice' ...
[~] (kali㉿kali)-[~]
$ 
```



8,



"the quieter you become, the more you are able to hear"

```
(kali㉿kali)-[~]
$ ls -la /etc
ls: cannot open directory './etc/credstore': Permission denied
ls: cannot open directory './etc/credstore.encrypted': Permission denied
ls: cannot open directory './etc/ipsec.d/private': Permission denied
ls: cannot open directory './etc/openssl/group': Permission denied
ls: cannot open directory './etc/polkit-1/rules.d': Permission denied
ls: cannot open directory './etc/redis': Permission denied
.
.
bin
boot
dev
etc
home
initrd.img
initrd.img.old
lib
lib32
lib64
libx32
lost+found
media
mnt
opt
proc
root
run
sbin
sys
tmp
usr
var
vmlinuz
vmlinuz.old

./boot:
System.map-6.3.0-kali1-amd64
config-6.3.0-kali1-amd64
grub
initrd.img-6.3.0-kali1-amd64
vmlinuz-6.3.0-kali1-amd64

./boot/grub:
fonts
grub.cfg
grubenv
i386-pc
lz4.c
themes
unicode.pf2
```



"the quieter you become, the more you are able to hear"

```
(kali㉿kali)-[~]
$ ls -la /lib/modules/6.3.0-kali1-amd64/kernel
bitmap_scales.mod
blocklist.mod
boot.img
boot.mod
bsdtar.mod
bswap_32.mod
btrfs.mod
buffer.mod
cat.mod
cbfs.mod
cbls.mod
cmdline.mod
citable.mod
ctime.mod
chain.mod
cortex_a8t_test.mod
cmosdump.mod
cmostest.mod
cmp.mod
cpu.mod
command_ls.mod
commandfile.mod
core.mod
core_img
cpio.mod
cpio_be.mod
cpuid.mod
crc32.mod
crypto_ls
crypto.mod
cryptodisk.mod
csrss.mod
czt_test.mod
date.mod
datehook.mod
datetime.mod
disk.mod
diskfilter.mod
div.mod
div_test.mod
dm_nv.mod

(kali㉿kali)-[~]
$ ls -la /etc
ls: cannot open directory './etc/credstore': Permission denied
ls: cannot open directory './etc/credstore.encrypted': Permission denied
ls: cannot open directory './etc/ipsec.d/private': Permission denied
ls: cannot open directory './etc/openssl/group': Permission denied
ls: cannot open directory './etc/polkit-1/rules.d': Permission denied
ls: cannot open directory './etc/redis': Permission denied

(kali㉿kali)-[~]
$ clear
```



"the quieter you become, the more you are able to hear"

```

kali㉿kali:[/]
$ find / -ping 2>@1 | grep -v "Permission denied"
/usr/share/bash-completion/completions/ping
/usr/bin/ping
/usr/lib/python/dist-packages/faraday_plugins/plugins/repo/ping
[1]+ 0 S                  find / -ping 2>@1 &

```

File Actions Edit View Help

FIND(1)

Name find - search for files in a directory hierarchy

Synopsis find [-H] [-L] [-P] [-D debugopts] [-Olevel] [starting-point ...] [expression]

Description This manual page documents the GNU version of **find**. GNU **find** searches the directory tree rooted at each given starting-point by evaluating the given expression from left to right, according to the rules of precedence (see section OPERATORS), until the outcome is known (the left hand side is false for **and** operations, true for **or**), at which point **find** moves on to the next file name. If no starting-point is specified, '.' is assumed.

If you are using **find** in an environment where security is important (for example if you are using it to search directories that are writable by other users), you should read the 'Security Considerations' chapter of the **findutils** documentation, which is called **Finding Files** and comes with **findutils**. That document also includes a lot more detail and discussion than this manual page, so you may find it a more useful source of information.

Options

- H, -L and -P options control the treatment of symbolic links. Command-line arguments following these are taken to be names of files or directories to be examined, up to the first argument that begins with '-' or the argument '(' or ')'. That argument and any following arguments are taken to be the expression describing what is to be searched for. If no paths are given, the current directory is used. If no expression is given, the expression **-print** is used (but you should probably consider using **-print0** instead, anyway).
- This manual page talks about 'options' within the expression list. These options control the behaviour of **find** but are specified immediately after the last path name. The five 'real' options -H, -L, -P, -D and -O must appear before the first path name, if at all. A double dash -- could theoretically be used to signal that any remaining arguments are not options, but this does not really work end of the way **find** determines the end of the following path arguments: it does that by reading until an expression argument comes (which also starts with a '-'). Now, if a path argument would start with a '-' the **find** would treat '-' as expression argument instead. Thus, to ensure that all start points are taken as such, and especially to prevent that wildcard patterns expanded by the calling shell are not mistakenly treated as expression arguments, it is generally safest to prefix wildcards or globus path names with either '/' or to use absolute path names starting with '/'. Alternatively, it is generally safe enough non-portable to use the GNU option **-files0-from** to pass arbitrary start points to **find**.
- P Never follow symbolic links. This is the default behaviour. When **find** examines or prints information about files, and the file is a symbolic link, the information used shall be taken from the properties of the symbolic link itself.
- L Follow symbolic links. When **find** examines or prints information about files, the information used shall be taken from the properties of the file to which the link points, not from the link itself (unless it is a broken symbolic link or **find** is unable to examine the file to which the link points). Use of this option implies **-noleaf**. If you later use the -P option, **-noleaf** will still be in effect. If -L is in effect and **find** discovers a symbolic link to a subdirectory during its search, the subdirectory pointed to by the symbolic link will be searched.
- When the -L option is in effect, the **-type** predicate will always match against the type of the file that a symbolic link points to rather than the link itself (unless the symbolic link is broken). Actions that can cause symbolic links to become broken while **find** is executing (for example **-delete**) can give rise to confusing behaviour. Using -L causes the **-lname** and **-ilname** predicates always to return false.
- H Do not follow symbolic links, except while processing the command line arguments. When **find** examines or prints information about files, the information used shall be taken from the properties of the symbolic link itself, unless the expression being evaluated on the file specifies that the link itself is to be followed. In this case, the information used is taken from whatever the link points to (that is, the link is followed). The information about the link itself is used as a fallback if the file pointed to by the symbolic link cannot be examined. If -H is in effect and one of the paths specified on the command line is a symbolic link to a directory, the contents of that directory will be examined (though of course **-maxdepth 0** would prevent this).
- If more than one of -H, -L and -P is specified, each overrides the others; the last one appearing on the command line takes effect. Since it is the default, the -P option should be considered to be in effect unless either -H or -L is specified.
- GNU **find** frequently stats files during the processing of the command line itself, before any searching has begun. These options also effect how those arguments are processed. Specifically, there are a number of tests that **find** applies listed on the command line against a file we are currently considering. In each case, the file specified on the command line will have been examined and some of its properties will have been saved. If the named file is in fact a symbolic link, and the -P option is in effect (or if neither -H nor -L were specified), the information used for the comparison will be taken from the properties of the symbolic link. Otherwise, it will be taken from the properties of the file the link points to. If **find** cannot follow the link (for example because it has insufficient privileges or the link points to a nonexistent file) the properties of the link itself will be used.
- When the -H or -L options are in effect, any symbolic links listed as the argument of **-newer** will be dereferenced, and the timestamp will be taken from the file to which the symbolic link points. The same consideration

Manual page **find(1) line 1 (press h for help or q to quit)**





```
kali@kali: ~
```

```
[kali@kali: ~]$ tail -n -3 months
Feb
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec

[kali@kali: ~]$ tail months
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec

[kali@kali: ~]$ tail -3 months
Oct
Nov
Dec

[kali@kali: ~]$ tail +3 months
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec

[kali@kali: ~]$
```

Lab 2.04:

1,



```
root@kali: ~
```

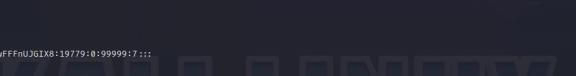
```
[root@kali: ~]$ sudo passwd root
New password:
Retype new password:
passwd: password updated successfully

[root@kali: ~]$ sudo passwd -l root
passwd: password changed.

[root@kali: ~]$ sudo passwd -u root
passwd: password changed.

[root@kali: ~]$ su
Password:
[root@kali: ~]$ whois
Command 'whois' not found, did you mean:
  command 'pm' from deb python-passwordmeter
  command 'pts' from deb opensafs-client
  command 'pps' from deb libpnfs-bin
  command 'pvs' from deb lvm2
  command 'pwsh' from deb powershell
  command 'pws' from deb procps
  command 'aws' from deb awscli
  command 'wpas' from deb wpasupplicant
  command 'psw' from deb wise
  command 'pms' from deb pms
  command 'pc' from deb pcsc
  command 'pwd' from deb coreutils
Try: apt install <deb name>
[root@kali: ~]$ /root/.kali/icon/kali/logo.png
[root@kali: ~]$ exit
[root@kali: ~]$ su
Password:
[root@kali: ~]$
```

2,



```
[root@kali:~]# !/root
[!] /etc/shadow
cat: /etc/shadow: Permission denied
[!] cat: /etc/shadow
Password:
root:$1$979$Hpg6j70791j60UmEWmWg1$3oLLHLozymbkBMjjiGcnDxrnKokEWFFnUJGIX8:19779:0:99999:7:::
daemon:*:19779:0:99999:7:::
sys:*:19779:0:99999:7:::
sync:*:19779:0:99999:7:::
games:*:19779:0:99999:7:::
gdm:*:19779:0:99999:7:::
lp:*:19779:0:99999:7:::
mail:*:19779:0:99999:7:::
news:*:19779:0:99999:7:::
uucp:*:19779:0:99999:7:::
proxy:*:19779:0:99999:7:::
www-data:*:19779:0:99999:7:::
bin:*:19779:0:99999:7:::
daemon:*:19779:0:99999:7:::
list:*:19779:0:99999:7:::
irc:*:19779:0:99999:7:::
apt:*:19779:0:99999:7:::
ntp:*:19779:0:99999:7:::
systemd-network*:!:19779:::::
mysqld!:19779:::::
tss!:19779:::::
kerneld*:19779:::::
systemd-timesync!:19779:::::
redsocks*:!:19779:::::
rhgb-sh*:!:19779:::::
iodine*:!:19779:::::
messagebus*:!:19779:::::
miredo*:!:19779:::::
```

3,

