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BCA 3A
23/SCA/BCA/127

Command: **who**

```
alan@alan-virtual-machine:~$ who
alan      tty2          2024-10-10 13:42 (tty2)
```

Command: **whoami**

```
alan@alan-virtual-machine:~$ whoami
alan
```

Command: **man**

```
LS(1)                                User Commands                                LS(1)

NAME
    ls - list directory contents

SYNOPSIS
    ls [OPTION]... [FILE]...

DESCRIPTION
    List information about the FILES (the current directory by default).
    Sort entries alphabetically if none of -cftuvSUX nor --sort is speci-
    fied.

    Mandatory arguments to long options are mandatory for short options
    too.

    -a, --all
        do not ignore entries starting with .

    -A, --almost-all
        do not list implied . and ..

    --author
    Manual page ls(1) line 1 (press h for help or q to quit)
```

Command: **cal**

```
alan@alan-virtual-machine:~$ cal 08 2020
    August 2020
Su Mo Tu We Th Fr Sa
                1
 2  3  4  5  6  7  8
 9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31
```

Command: **date**

```
alan@alan-virtual-machine:~$ date "+%d %m %Y"
10 10 2024
```

Command: **echo**

```
alan@alan-virtual-machine:~$ echo "This is the echo command"
This is the echo command
```

Command: **passwd**

```
alan@alan-virtual-machine:~$ passwd
Changing password for alan.
Current password:
New password:
Retype new password:
passwd: password updated successfully
```

Command: **cat**

```
alan@alan-virtual-machine:~$ cat file1.txt
This is test file
```

Command: ls

```
alan@alan-virtual-machine:~$ ls
alan1          file1.txt      file4.txt.gz  Pictures      testarchive   Videos
alanarchive.tar file1.txt.gz   Music         proxyshell    testdir
Desktop        file2.txt.gz  name1.txt     Public        testfile1.txt
Documents      file3.txt     name2.txt     snap          testfile2.txt
Downloads      file4.txt     newshell      Templates     testfile.txt
```

```
alan@alan-virtual-machine:~$ ls -l
total 136
drwxrwxr-x 3 alan alan 4096 Sep  5 09:13 alan1
-rw-rw-r-- 1 alan alan 10240 Sep  5 09:16 alanarchive.tar
drwxr-xr-x 3 alan alan 4096 Sep  5 09:18 Desktop
drwxr-xr-x 2 alan alan 4096 Aug  4 17:23 Documents
drwxr-xr-x 2 alan alan 4096 Sep  5 09:24 Downloads
-rw-rw-r-- 1 alan alan  18 Sep 26 08:34 file1.txt
-rwxr-w-rw- 1 alan alan  50 Aug 29 08:36 file1.txt.gz
-rw-rw-r-- 1 alan alan  52 Aug 29 08:37 file2.txt.gz
-r--r--r-- 1 alan alan  39 Aug 29 08:39 file3.txt
-rw-rw-r-- 1 alan alan  57 Sep 26 08:35 file4.txt
-rw-rw-r-- 1 alan alan  63 Aug 29 08:40 file4.txt.gz
drwxr-xr-x 2 alan alan 4096 Aug  4 17:23 Music
-rw-rw-r-- 1 alan alan 10240 Sep 12 09:27 name1.txt
-rw-rw-r-- 1 alan alan  26 Aug 29 09:16 name2.txt
drwxrwxr-x 2 alan alan 4096 Sep 26 09:02 newshell
drwxr-xr-x 2 alan alan 4096 Aug  4 17:23 Pictures
drwxrwxr-x 3 alan alan 4096 Sep 26 09:21 proxyshell
drwxr-xr-x 2 alan alan 4096 Aug  4 17:23 Public
drwx----- 4 alan alan 4096 Aug 29 09:07 snap
drwxr-xr-x 2 alan alan 4096 Aug  4 17:23 Templates
-rw-rw-r-- 1 alan alan 20480 Sep 12 09:27 testarchive
drwxrwxr-x 2 alan alan 4096 Sep 12 09:22 testdir
-rw-rw-r-- 1 alan alan  30 Sep 26 08:38 testfile1.txt
-rw-rw-r-- 1 alan alan  23 Sep 26 08:39 testfile2.txt
-rw-rw-r-- 1 alan alan  20 Sep 12 09:02 testfile.txt
drwxr-xr-x 2 alan alan 4096 Aug  4 17:23 Videos
```

```
alan@alan-virtual-machine:~$ ls -x
alan1      alanarchive.tar  Desktop  Documents  Downloads  file1.txt  file1.txt.gz
file2.txt.gz file3.txt        file4.txt file4.txt.gz Music      name1.txt  name2.txt
newshell   Pictures         proxyshell Public      snap       Templates  testarchive
testdir    testfile1.txt   testfile2.txt testfile.txt Videos
```



```
alan@alan-virtual-machine:~$ ls -F
alan1/      Downloads/  file3.txt  name1.txt  proxyshell/ testarchive  testfile.txt
alanarchive.tar file1.txt  file4.txt  name2.txt  Public/     testdir/     Videos/
Desktop/    file1.txt.gz* file4.txt.gz newshell/  snap/       testfile1.txt
Documents/  file2.txt.gz Music/     Pictures/  Templates/ testfile2.txt
```

```
alan@alan-virtual-machine:~$ ls -R
.:
alan1      Downloads  file3.txt  name1.txt  proxyshell  testarchive  testfile.txt
alanarchive.tar file1.txt  file4.txt  name2.txt  Public      testdir      Videos
Desktop    file1.txt.gz* file4.txt.gz newshell   snap        testfile1.txt
Documents  file2.txt.gz Music      Pictures   Templates  testfile2.txt

./alan1:
alan2

./alan1/alan2:
alan3

./alan1/alan2/alan3:
alan4

./alan1/alan2/alan3/alan4:

./Desktop:
Cfiles

./Desktop/Cfiles:

./Documents:

./Downloads:
cfiles.tar      leapyear.cpp                pattern3.cpp      primeupperlimit.cpp
evenodd.cpp     'output-onlinefiletools(1).txt' pattern.cpp        student.cpp
factorial.cpp   output-onlinefiletools.txt  primeandeven.cpp  sum.cpp
fibonacci.cpp   pattern2.cpp                primenumber.cpp   test1.cpp

./Music:

./newshell:
```

Command: **tty**

```
alan@alan-virtual-machine:~$ tty
/dev/pts/0
```

Command: **wc**

```
alan@alan-virtual-machine:~$ wc file1.txt
 1  4 18 file1.txt
```

Command: **\$PATH**

```
alan@alan-virtual-machine:~$ $PATH
bash: /usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin:/snap/bin: No such file or directory
```

Command: **cd**

```
alan@alan-virtual-machine:/$ cd home/alan
alan@alan-virtual-machine:~$ ls
alan1      Documents  file1.txt.gz  file4.txt      name1.txt     Pictures    snap        testdir      testfile.txt
alanarchive.tar Downloads  file2.txt.gz  file4.txt.gz   name2.txt     proxyshell  Templates   testfile1.txt Videos
Desktop    file1.txt  file3.txt     Music          newshell     Public      testarchive testfile2.txt
alan@alan-virtual-machine:~$ cd ..
alan@alan-virtual-machine:~/home$ ls
alan
```

Command: **mkdir**

```
alan@alan-virtual-machine:~$ mkdir Alan
alan@alan-virtual-machine:~$ ls
Alan      Desktop    file1.txt
Alan1     Documents  file1.txt.gz
```

Command: **rmdir**

```
alan@alan-virtual-machine:~$ rmdir Alan
alan@alan-virtual-machine:~$ ls
alan1      Documents  file1.txt.gz
```

Command: **pwd**

```
alan@alan-virtual-machine:~$ pwd
/home/alan
```

Command: **\$HOME**

```
alan@alan-virtual-machine:~$ $HOME
bash: /home/alan: Is a directory
```

Command: **cmp**

```
alan@alan-virtual-machine:~$ cmp name1.txt name2.txt
name1.txt name2.txt differ: byte 15, line 3
```

Command: **comm**

```
alan@alan-virtual-machine:~$ comm name1.txt name2.txt
      Apple
      Google
Microsoft
      Oppo
Samsung
      Xiaomi
```

Command: **diff**

```
alan@alan-virtual-machine:~$ diff name1.txt name2.txt
3,4c3,4
< Microsoft
< Samsung
--
> Oppo
> Xiaomi
```

Command: **chown**

```
alan@alan-virtual-machine:~$ sudo chown alan:sarthak file1.txt
alan@alan-virtual-machine:~$ ll file1.txt
-rw-rw-rw- 1 alan sarthak 23 Aug 29 08:36 file1.txt
```

Command: **chgrp**

```
alan@alan-virtual-machine:~$ sudo groupadd class
alan@alan-virtual-machine:~$ sudo chgrp class file1.txt
alan@alan-virtual-machine:~$ ll file1.txt
-rw-rw-rw- 1 alan class 23 Aug 29 08:36 file1.txt
```


Command: **chmod**

```
alan@alan-virtual-machine:~$ ll file3.txt
-rw-rw-r-- 1 alan alan 39 Aug 29 08:39 file3.txt
alan@alan-virtual-machine:~$ chmod u+x file3.txt
alan@alan-virtual-machine:~$ ll file3.txt
-rwxrw-r-- 1 alan alan 39 Aug 29 08:39 file3.txt*
```

```
alan@alan-virtual-machine:~$ chmod 444 file3.txt
alan@alan-virtual-machine:~$ ll file3.txt
-r--r--r-- 1 alan alan 39 Aug 29 08:39 file3.txt
```

Command: **gzip** and **gunzip**

```
alan@alan-virtual-machine:~$ ls
alan1      Documents  file2.txt.gz  Music      Pictures    Templates    Videos
alanarchive.tar  Downloads  file3.txt     name1.txt  Public      testdir
Desktop    file1.txt.gz file4.txt.gz  name2.txt  snap        testfile.txt
alan@alan-virtual-machine:~$ gzip file3.txt
alan@alan-virtual-machine:~$ ls
alan1      Documents  file2.txt.gz  Music      Pictures    Templates    Videos
alanarchive.tar  Downloads  file3.txt.gz  name1.txt  Public      testdir
Desktop    file1.txt.gz file4.txt.gz  name2.txt  snap        testfile.txt
alan@alan-virtual-machine:~$ gunzip file3.txt.gz
alan@alan-virtual-machine:~$ ls
alan1      Documents  file2.txt.gz  Music      Pictures    Templates    Videos
alanarchive.tar  Downloads  file3.txt     name1.txt  Public      testdir
Desktop    file1.txt.gz file4.txt.gz  name2.txt  snap        testfile.txt
alan@alan-virtual-machine:~$
```

Command: **tar cf**, **tar tf**, **tar xf**

```
alan@alan-virtual-machine:~$ tar cf testarchive name1.txt name2.txt
alan@alan-virtual-machine:~$ ls
alan1      Documents  file2.txt.gz  Music      Pictures    Templates    testfile.txt
alanarchive.tar  Downloads  file3.txt     name1.txt  Public      testarchive  Videos
Desktop    file1.txt.gz file4.txt.gz  name2.txt  snap        testdir
alan@alan-virtual-machine:~$ tar tf testarchive
name1.txt
name2.txt
alan@alan-virtual-machine:~$ tar xf testarchive
alan@alan-virtual-machine:~$ ls
alan1      Documents  file2.txt.gz  Music      Pictures    Templates    testfile.txt
alanarchive.tar  Downloads  file3.txt     name1.txt  Public      testarchive  Videos
Desktop    file1.txt.gz file4.txt.gz  name2.txt  snap        testdir
alan@alan-virtual-machine:~$
```

Command: **head**

```
alan@alan-virtual-machine:~$ head -n 3 name1.txt
Apple
Google
Microsoft
```

Command: **tail**

```
alan@alan-virtual-machine:~$ tail -n 2 name1.txt
Microsoft
Samsung
```

Command: **grep**

```
alan@alan-virtual-machine:~$ man rm | grep -i "remove"
rm - remove files or directories
This manual page documents the GNU version of rm.  rm removes each specified file.  By default, it does not remove direc-
--interactive=always option is given, rm prompts the user for whether to remove the file.  If the response is not affir-
Remove (unlink) the FILE(s).
do not remove '/' (default); with 'all', reject any command line argument on a separate device from its parent
remove directories and their contents recursively
remove empty directories
By default, rm does not remove directories.  Use the --recursive (-r or -R) option to remove each listed directory, too,
To remove a file whose name starts with a '-', for example '-foo', use one of these commands:
Note that if you use rm to remove a file, it might be possible to recover some of its contents, given sufficient exper-
```

Command: **sort**

```
alan@alan-virtual-machine:~$ cat companies.txt
Google
Xiaomi
Oppo
Apple
alan@alan-virtual-machine:~$ sort companies.txt
Apple
Google
Oppo
Xiaomi
```



```
alan@alan-virtual-machine:~$ cat > numbers.txt
9
4
12
15
3
^Z
[8]+  Stopped                  cat > numbers.txt
alan@alan-virtual-machine:~$ sort -n numbers.txt
3
4
9
12
15
```

```
alan@alan-virtual-machine:~$ sort -r name2.txt
Samsung
Microsoft
Google
Apple
```

Command: **cp**

```
alan@alan-virtual-machine:~$ cp name1.txt name2.txt
alan@alan-virtual-machine:~$ cat name2.txt
Apple
Google
Microsoft
Samsung
```

Command: **mv**

```
alan@alan-virtual-machine:~$ mv alan alan_test
alan@alan-virtual-machine:~$ ls alan_test
alan
```

Command: **ps**

```
(kali㉿kali)-[~]
$ ps
  PID TTY          TIME CMD
 2451 pts/0        00:00:00 zsh
 2468 pts/0        00:00:00 ps
```

Command: **&**

```
(kali㉿kali)-[~]
$ sort -n file1.txt &
[2] 2616

2
3
10
15
27
30
37
72
[2] - done      sort -n file1.txt
```

Command: **nohup**

```
(kali@kali)-[~]  
$ nohup sort -n file1.txt &  
[2] 2945  
  
nohup: ignoring input and appending output to 'nohup.out'  
[2] - done      nohup sort -n file1.txt  
(kali@kali)-[~]
```

Command: **nice**

```
(kali@kali)-[~]  
$ nice wc -l file1.txt &  
[2] 3001  
  
8 file1.txt  
[2] - done      nice wc -l file1.txt  
(kali@kali)-[~]
```

Command: **kill**

```
(kali@kali)-[~]  
$ ps  
  PID TTY          TIME CMD  
 2451 pts/0        00:00:01 zsh  
 2543 pts/0        00:00:00 cat  
 3057 pts/0        00:00:00 cat  
 3099 pts/0        00:00:00 ps  
  
(kali@kali)-[~]  
$ kill -9 2543  
  
[1] - killed    cat > file1.txt  
(kali@kali)-[~]
```


Command: **jobs**

```
(kali㉿kali)-[~]  
$ cat > file1.txt  
This is a test file named file1.txt  
^Z  
zsh: suspended cat > file1.txt  
  
(kali㉿kali)-[~]  
$ cat > file2.txt  
This is another test file named file2.txt  
^Z  
zsh: suspended cat > file2.txt  
  
(kali㉿kali)-[~]  
$ jobs  
[1]  - suspended cat > file1.txt  
[2]   suspended cat > file1.txt  
[3]  + suspended cat > file2.txt
```