Basic commands

1) ls

-ls is list of files and directories.

```
root@kali:~# ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos
root@kali:~# ^C
```

2) cd (change directory)

```
root@kali:~# cd Documents
root@kali:~/Documents#
```

3) mv

-mv(move)command that moves one or more files or directories from one place to another.

```
root@kali:~# ls
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos
root@kali:~# mv Documents Borang
root@kali:~# ls
Borang  Desktop  Downloads  Music  Pictures  Public  Templates  Videos
```

4) rm

-rm (remove) is used to remove objects such as files, directories, device nodes and etc.

```
root@kali:~/Documents# ls
file1.txt
root@kali:~/Documents# rm file1.txt
root@kali:~/Documents# ls
root@kali:~/Documents#
```

5) mkdir/rmdir

-The mkdir (make directory) command is used to make **a new directory**.

```
root@kali:~/Documents# ls
root@kali:~/Documents# mkdir Lab1
root@kali:~/Documents# ls
Lab1
root@kali:~/Documents#
```

-The rmdir (make directory) command is used to remove a **directory**.

```
root@kali:~/Documents# rmdir Lab1
root@kali:~/Documents# ls
root@kali:~/Documents#
```

6) touch

-touch is used to update the access date or modification date of a file or directory.

```
root@kali:~/Documents# touch myFile1
root@kali:~/Documents# touch myFile2
root@kali:~/Documents# ls
myFile1  myFile2
```

7) cat

- Reads files sequentially, writing them to standard output.

cat “file name” – display file

cat > “filename” – create file and add data

cat >> “filename” – add data to existing file

```
root@kali:~/Documents# cat >file1.txt
Hello and Welcome to File1.
Have fun and good luck in exploring Kali linux
```

8) pwd

-The pwd command (print working directory) writes the full pathname of the current working directory to the standard output.

```
root@kali:~/Documents# pwd
/root/Documents
root@kali:~/Documents#
```

9) top

-top (table of processes) is a task manager program found in many Unix-like operating systems. It produces an ordered list of running processes selected by user-specified criteria, and updates it periodically.

```
root@kali:~/Documents# top

top - 23:12:47 up  5:25,  1 user,  load average: 0.00, 0.00, 0.00
Tasks: 197 total,   1 running, 153 sleeping,   0 stopped,   0 zombie
%Cpu(s):  0.1 us,  0.0 sy,  0.0 ni, 99.9 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
KiB Mem :  2039676 total,   471788 free,  1012004 used,   555884 buff/cache
KiB Swap:  2094076 total,  2094076 free,        0 used.   842408 avail Mem

  PID USER      PR  NI    VIRT    RES    SHR S  %CPU %MEM     TIME+ COMMAND
 3377 root      20   0       0      0      0 I   0.3  0.0   0:00.43 kworker/0:2
 3812 root      20   0   46944   3860   3188 R   0.3  0.2   0:01.17 top
    1 root      20   0  219732   8456   6448 S   0.0  0.4   0:03.59 systemd
    2 root      20   0       0      0      0 S   0.0  0.0   0:00.01 kthreadd
    4 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kworker/0:0H
    6 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 mm_percpu_wq
    7 root      20   0       0      0      0 S   0.0  0.0   0:00.05 ksoftirqd/0
    8 root      20   0       0      0      0 I   0.0  0.0   0:01.19 rcu_sched
    9 root      20   0       0      0      0 I   0.0  0.0   0:00.00 rcu_bh
   10 root      rt   0       0      0      0 S   0.0  0.0   0:00.00 migration/0
   11 root      rt   0       0      0      0 S   0.0  0.0   0:00.03 watchdog/0
   12 root      20   0       0      0      0 S   0.0  0.0   0:00.00 cpuhp/0
   13 root      20   0       0      0      0 S   0.0  0.0   0:00.00 cpuhp/1
   14 root      rt   0       0      0      0 S   0.0  0.0   0:00.04 watchdog/1
   15 root      rt   0       0      0      0 S   0.0  0.0   0:00.00 migration/1
   16 root      20   0       0      0      0 S   0.0  0.0   0:00.02 ksoftirqd/1
   18 root       0 -20       0      0      0 I   0.0  0.0   0:00.00 kworker/1:0H
   19 root      20   0       0      0      0 S   0.0  0.0   0:00.00 cpuhp/2
   20 root      rt   0       0      0      0 S   0.0  0.0   0:00.03 watchdog/2
   21 root      rt   0       0      0      0 S   0.0  0.0   0:00.00 migration/2
   22 root      20   0       0      0      0 S   0.0  0.0   0:00.05 ksoftirqd/2
```

10) ps

-The ps program (short for "process status") displays the currently-running processes. A related Unix utility named top provides a real-time view of the running processes.

PID = Process ID number

TTY = Terminal associated with the process

CMD = Name of the process, including arguments.

```
root@kali:~/Documents# ps
  PID TTY          TIME CMD
 1586 pts/0    00:00:00 bash
 3828 pts/0    00:00:00 ps
```

11) kill

- kill is a command that is used to send signals to running processes.

```
 3871 tty2     00:00:01 zenmap
 3877 ?        00:00:00 kworker/u64:0
 3878 pts/0    00:00:00 ps
root@kali:~/Documents# kill 3871
```

12) wc

-wc (short for word count) is a command in Unix-like operating systems.The program reads either standard input or a list of files and generates one or more of the following statistics: newline count, word count, and byte count. If a list of files is provided, both individual file and total statistics follow.

- wc -l <filename> prints the line count (note that if the last line does not have \n, it will not be counted)
- wc -c <filename> prints the byte count
- wc -m <filename> prints the character count
- wc -L <filename> prints the length of longest line (GNU extension)
- wc -w <filename> prints the word count

```
root@kali:~/Documents# cat > Example.txt
Hello there mates!
My name is kali linux
Have fun in exploring kali linux.
^C
root@kali:~/Documents# wc Example.txt
 3 14 75 Example.txt
root@kali:~/Documents#
```

13) grep

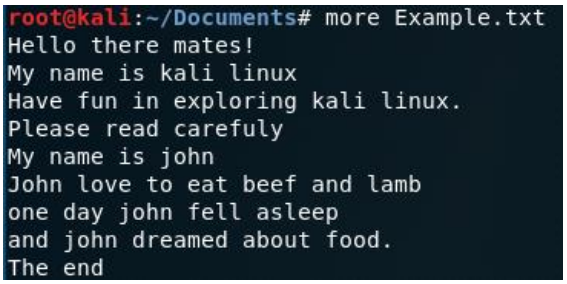
-grep is a command-line utility for searching plain-text data sets for lines that match a regular expression. Its name comes from the ed command g/re/p (globally search a regular expression and print), which has the same effect: doing a global search with the regular expression and printing all matching lines

14) more/less

-more is a command to view (but not modify) the contents of a text file one screen at a time

more [options] [file_name].

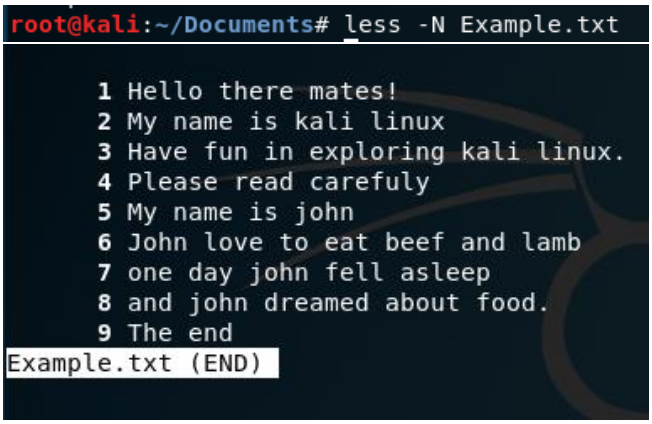
- -num: This option specifies an integer which is the screen size (in lines).
- -d: more will prompt the user with the message "[Press space to continue, 'q' to quit.]" and will display "[Press 'h' for instructions.]" instead of ringing the bell when an illegal key is pressed.
- -l: more usually treats ^L (form feed) as a special character, and will pause after any line that contains a form feed. The -l option will prevent this behavior.
- -f: Causes more to count logical, rather than screen lines (i.e., long lines are not folded).
- -p: Do not scroll. Instead, clear the whole screen and then display the text.
- -c: Do not scroll. Instead, paint each screen from the top, clearing the remainder of each line as it is displayed.
- -s: Squeeze multiple blank lines into one.
- -u: Backspaces and carriage returns to be treated as printable characters;
- +/: This option specifies a string that will be searched for before each file is displayed. (Ex.: more +/Preamble gpl.txt)
- +num: Start at line number num.



-less is a terminal pager program on Unix, Windows, and Unix-like systems used to view (but not change) the contents of a text file one screen at a time. It is similar to more, but has the extended capability of allowing both forward and backward navigation through the file.

less [options] [file_name].

- -g: Highlights just the current match of any searched string.
- -I: Case-insensitive searches.
- -M: Shows more detailed prompt, including file position.
- -N: Shows line numbers (useful for source code viewing).
- -S: Disables line wrap ("chop long lines"). Long lines can be seen by side scrolling.
- -X: Leave file contents on screen when less exits.
- -?: Shows help.
- +F: Follow mode for log.



15) ping

-Ping is a computer network administration software utility used to test the reachability of a host on an Internet Protocol (IP) network. It measures the round-trip time for messages sent from the originating host to a destination computer that are echoed back to the source.

- H, !N or !P – host, network or protocol unreachable
- S – source route failed
- F – fragmentation needed
- U or !W – destination network/host unknown
- I – source host is isolated
- A – communication with destination network administratively prohibited
- Z – communication with destination host administratively prohibited
- Q – for this ToS the destination network is unreachable
- T – for this ToS the destination host is unreachable
- X – communication administratively prohibited
- V – host precedence violation
- C – precedence cutoff in effecter that are echoed back to the source.

```
root@kali:~/Documents# ping facebook.com
PING facebook.com (157.240.10.35) 56(84) bytes of data.
64 bytes from edge-star-mini-shv-01-kut2.facebook.com (157.240.10.35): icmp_seq=
1 ttl=128 time=36.6 ms
64 bytes from edge-star-mini-shv-01-kut2.facebook.com (157.240.10.35): icmp_seq=
2 ttl=128 time=34.9 ms
```

16) uname

-uname (short for unix name) is a computer program in Unix and Unix-like computer operating systems that prints the name, version and other details about the current machine and the operating system running on it

```
root@kali:~/Documents# uname
Linux
```

17) uptime

-Display the time since the last boot

```
root@kali:~/Documents# uptime
 00:35:57 up  6:49,  1 user,  load average: 0.03, 0.02, 0.00
```

18) netstat

-netstat (network statistics) is a command-line network utility tool that displays network connections for the Transmission Control Protocol (both incoming and outgoing), routing tables, and a number of network interface (network interface controller or software-defined network interface) and network protocol statistics.

```
root@kali:~/Documents# netstat
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
udp6       0      0 localhost:49098         localhost:49098         ESTABLISHED
Active UNIX domain sockets (w/o servers)
Proto RefCnt Flags       Type       State         I-Node   Path
unix  2      [ ]         DGRAM                    19762    /run/user/0/systemd/notify
unix  2      [ ]         DGRAM                    14945    /run/user/130/systemd/noti
fy
unix  3      [ ]         DGRAM                    1665     /run/systemd/notify
unix  15     [ ]         DGRAM                    1682     /run/systemd/journal/dev-l
```

19) chmod

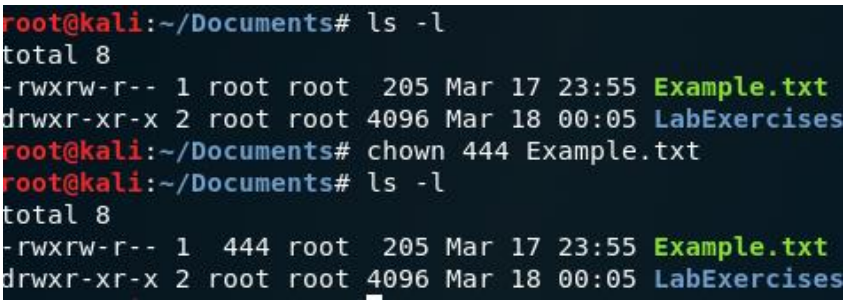
-chmod is the command and system call which may change the access permissions to file system objects (files and directories).

```
root@kali:~/Documents# chmod 764 Example.txt
```

```
root@kali:~/Documents# ls -l Example.txt
-rwxrw-r-- 1 root root 205 Mar 17 23:55 Example.txt
root@kali:~/Documents#
```

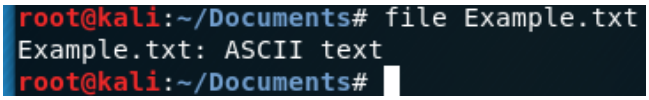
20) chown

-The command chown, an abbreviation of change owner, is used on Unix-like systems to change the owner of file system files, directories. Unprivileged (regular) users who wish to change the group membership of a file that they own.



21) file

-The command file is to determine type of file for example single file, multiple file, viewing mime type and compressed file.



22) ln

-The ln command is a standard Unix command utility used to create a hard link or a symbolic link (symlink) to an existing file.

- -f Force existing destination pathnames to be removed to allow the link.
- -L For each source_file operand that names a file that is a symbolic link, create a hard link to the file referenced by the symbolic link.
- -P For each source_file operand that names a file that is a symbolic link, create a (hard) link to the symbolic link itself.
- -s Create symbolic links instead of hard links. If the -s option is specified, the -L and -P options are silently ignored.