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Cloud & DevOps

Assignment No 1: Study Linux Commands

1) ls

Description: The most frequently used command in Linux to list directories.

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls
'Linux Commands for DevOps Engineer'  test
```

2) Pwd

Description: Print working directory command in Linux.

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ pwd
/home/kali/Desktop/Cloud & DevOps
```

3) Cd

Description: Linux command to navigate through directories.

Output:

```
(kali㉿kali)-[~]
$ cd Desktop/Cloud\ \&\ DevOps
```

4) Mkdir

Description: Command used to create directories in Linux

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ mkdir viit

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls
'Linux Commands for DevOps Engineer'  test  viit
```

5) mv

Description: Move or rename files in Linux.

Output:

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```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ mv Linux\ Commands\ for\ DevOps\ Engineer test

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls
test viit

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ cd test

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls
'Linux Commands for DevOps Engineer'
```

6) cp

Description: Similar usage as mv but for copying files in Linux

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cat new.txt
Hi there! My name's Stark and I'm trying out some linux cmds.

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cp new sample
cp: cannot stat 'new': No such file or directory

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cp new.txt sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls
'Linux Commands for DevOps Engineer'  new.txt  sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cat sample.txt
Hi there! My name's Stark and I'm trying out some linux cmds.
```

7) rm

Description: Delete files or directories

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ rm -r viit

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls
test
```

8) touch

Description: Create blank/empty files

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ touch new.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cat new.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cat >> new.txt
Hi there! My name's Stark and I'm trying out some linux cmds.
^C

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cat new.txt
Hi there! My name's Stark and I'm trying out some linux cmds.
```

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9) ln

Description: Create symbolic links (shortcuts) to other files

Output:

```
(kali㉿kali)-[~]  
$ ln --help  
Usage: ln [OPTION] ... [-T] TARGET LINK_NAME  
or: ln [OPTION] ... TARGET  
or: ln [OPTION] ... TARGET ... DIRECTORY  
or: ln [OPTION] ... -t DIRECTORY TARGET ...
```

10) cat

Description: Display file contents on the terminal

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]  
$ cat new.txt  
  
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]  
$ cat >> new.txt  
Hi there! My name's Stark and I'm trying out some linux cmds.  
^C  
  
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]  
$ cat new.txt  
Hi there! My name's Stark and I'm trying out some linux cmds.
```

11) clear

Description: Clear the terminal display

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]  
$
```

12) echo

Description: Print any text that follows the command

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]  
$ echo new.txt  
new.txt  
  
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]  
$ echo "Jarvis at your service,sir"  
Jarvis at your service,sir
```

13) less

Description: Linux command to display paged outputs in the terminal

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]  
$ less Linux\ Commands\ for\ DevOps\ Engineer
```

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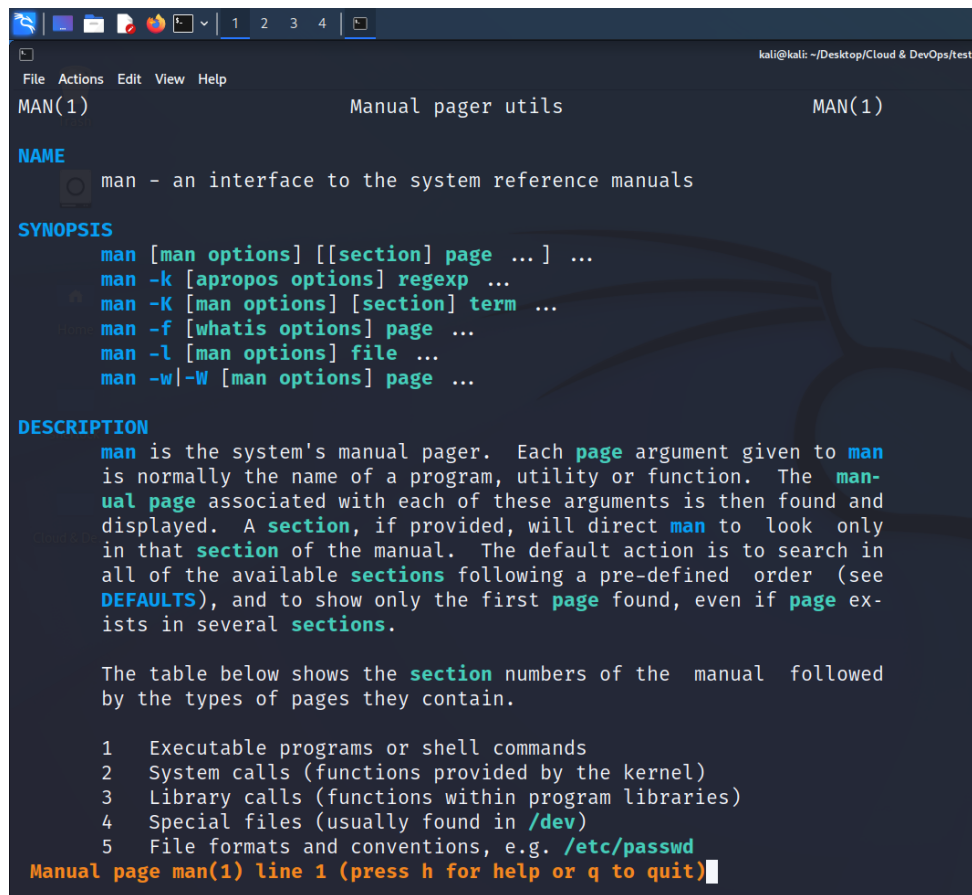
There are the top 55 Linux Commands You Must Know as a cloud&devops engineer:

```
01. ls - The most frequently used command in Linux to list directories
02. pwd - Print working directory command in Linux
03. cd - Linux command to navigate through directories
04. mkdir - Command used to create directories in Linux
05. mv - Move or rename files in Linux
06. cp - Similar usage as mv but for copying files in Linux
07. rm - Delete files or directories
07. touch - Create blank/empty files
07. ln - Create symbolic links (shortcuts) to other files
08. cat - Display file contents on the terminal
09. clear - Clear the terminal display
10. echo - Print any text that follows the command
11. less - Linux command to display paged outputs in the terminal
12. man - Access manual pages for all Linux commands
13. uname - Linux command to get basic information about the OS
14. whoami - Get the active username
15. tar - Command to extract and compress files in Linux
16. grep - Search for a string within an output
17. head - Return the specified number of lines from the top
18. tail - Return the specified number of lines from the bottom
19. diff - Find the difference between two files
20. cmp - Allows you to check if two files are identical
21. comm - Combines the functionality of diff and cmp
22. sort - Linux command to sort the content of a file while outputting
23. export - Export environment variables in Linux
24. zip - Zip files in Linux
25. unzip - Unzip files in Linux
25. ssh - Secure Shell command in Linux
26. service - Linux command to start and stop services
:|
```

14) man

Description: Access manual pages for all Linux commands

Output:



```
kali@kali: ~/Desktop/Cloud & DevOps/test
File Actions Edit View Help
MAN(1) Manual pager utils MAN(1)

NAME
man - an interface to the system reference manuals

SYNOPSIS
man [man options] [[section] page ...] ...
man -k [apropos options] regexp ...
man -K [man options] [section] term ...
man -f [whatis options] page ...
man -l [man options] file ...
man -w|-W [man options] page ...

DESCRIPTION
man is the system's manual pager. Each page argument given to man
is normally the name of a program, utility or function. The manual
page associated with each of these arguments is then found and
displayed. A section, if provided, will direct man to look only
in that section of the manual. The default action is to search in
all of the available sections following a pre-defined order (see
DEFAULTS), and to show only the first page found, even if page exists
in several sections.

The table below shows the section numbers of the manual followed
by the types of pages they contain.

1 Executable programs or shell commands
2 System calls (functions provided by the kernel)
3 Library calls (functions within program libraries)
4 Special files (usually found in /dev)
5 File formats and conventions, e.g. /etc/passwd

Manual page man(1) line 1 (press h for help or q to quit)
```

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15) uname

Description: Linux command to get basic information about the OS

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ uname -a
Linux kali 5.18.0-kali5-amd64 #1 SMP PREEMPT_DYNAMIC Debian 5.18.5-1kali6 (2022-07-07) x86_64 GNU/Linux
```

16) whoami

Description: Get the active username

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ whoami
kali
```

17) tar

Description: Command to extract and compress files in Linux

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ tar -cf archive.tar new.txt sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls
archive.tar 'Linux Commands for DevOps Engineer' new.txt sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ tar -xf archive.tar

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls
archive.tar 'Linux Commands for DevOps Engineer' new.txt sample.txt
```

18) grep

Description: Search for a string within an output

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ grep -i "Stark" new.txt
Hi there! My name's Stark and I'm trying out some linux cmds.

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ grep -c "Hi" new.txt
1

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ grep -l "Stark" *
archive.tar
new.txt
sample.txt
```

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19) head

Description: Return the specified number of lines from the top

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ head Linux\ Commands\ for\ DevOps\ Engineer
There are the top 55 Linux Commands You Must Know as a cloud&devops engineer:

01. ls - The most frequently used command in Linux to list directories
02. pwd - Print working directory command in Linux
03. cd - Linux command to navigate through directories
04. mkdir - Command used to create directories in Linux
05. mv - Move or rename files in Linux
06. cp - Similar usage as mv but for copying files in Linux
07. rm - Delete files or directories
07. touch - Create blank/empty files
```

20) tail

Description: Return the specified number of lines from the bottom

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ tail Linux\ Commands\ for\ DevOps\ Engineer
49. kill --Command to kill the process (PID)
50. w -- to check how many users logged into the linux
51. date -- used to check the current date, time in linux
52. ls -a --List the hidden files in directory (hidden files are denoted as .
.)
53. ls -l --Use to check the permissions on all the files
54. ls -R -- used to list information about files and directories within the f
ile system.
55. rm -rf -- remove directory with the files

Reference: Collected this, from the post of Kishan Patro.
```

21) diff

Description: Find the difference between two files

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ diff new.txt archive.tar
Binary files new.txt and archive.tar differ
```

22) cmp

Description: Allows you to check if two files are identical

Output: \$_ means that they are identical

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cmp new.txt sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$
```

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```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cmp new.txt archive.tar
new.txt archive.tar differ: byte 1, line 1
Options:
1. -b(print-bytes) : if you want cmp
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$
```

23) comm

Description: Combines the functionality of diff and cmp

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ comm new.txt archive.tar
Hi there! My name's Stark and I'm trying out some linux cmds.
new.txt0000644000175000017500000000007614363004564011042 0ustar  kalikaliHi there! My name's Sta
k and I'm trying out some linux cmds.
comm: file 2 is not in sorted order
sample.txt0000644000175000017500000000007614363004746011534 0ustar  kalikaliHi there! My name's
tark and I'm trying out some linux cmds.
comm: input is not in sorted order
```

24) sort

Description: Linux command to sort the content of a file while outputting

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ sort -f new.txt
Hi there! My name's Stark and I'm trying out some linux cmds.
```

25) export

Description: Export environment variables in Linux

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ export -p
export COLORFGBG='15;0'
export COLORTERM=truecolor
export COMMAND_NOT_FOUND_INSTALL_PROMPT=1
export DBUS_SESSION_BUS_ADDRESS='unix:path=/run/user/1000/bus'
export DESKTOP_SESSION=lightdm-xsession
export DISPLAY=:0.0
export DOTNET_CLI_TELEMETRY_OPTOUT=1
export GDMSESSION=lightdm-xsession
export GTK_MODULES=gail:atk-bridge
export HOME=/home/kali
export LANG=en_US.UTF-8
export LANGUAGE=''
export LESS_TERMCAP_mb=$'\C-[[[1;31m'
export LESS_TERMCAP_md=$'\C-[[[1;36m'
export LESS_TERMCAP_me=$'\C-[[[0m'
export LESS_TERMCAP_se=$'\C-[[[0m'
export LESS_TERMCAP_so=$'\C-[[[01;33m'
export LESS_TERMCAP_ue=$'\C-[[[0m'
export LESS_TERMCAP_us=$'\C-[[[1;32m'
export LOGNAME=kali
```

26) zip

Description: Zip files in Linux

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ zip sample.zip sample.txt
adding: sample.txt (stored 0%)
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls
archive.tar  'Linux Commands for DevOps Engineer'  new.txt  sample.txt  sample.zip
```


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27) unzip

Description: Unzip files in Linux

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ unzip sample.zip
Archive:  sample.zip
replace sample.txt? [y]es, [n]o, [A]ll, [N]one, [r]ename: y
extracting: sample.txt
```

28) ssh

Description: Secure shell command Linux

Output:

```
(root㉿kali)-[~]
# ssh
usage: ssh [-46AaCfGgKkMNnqsTtVvXxYy] [-B bind_interface]
          [-b bind_address] [-c cipher_spec] [-D [bind_address:]port]
          [-E log_file] [-e escape_char] [-F configfile] [-I pkcs11]
          [-i identity_file] [-J [user@]host[:port]] [-L address]
          [-l login_name] [-m mac_spec] [-O ctl_cmd] [-o option] [-p port]
          [-Q query_option] [-R address] [-S ctl_path] [-W host:port]
          [-w local_tun[:remote_tun]] destination [command [argument ... ]]
```

29) service

Description: Linux command to start and stop services

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ service --status-all
[ - ] apache-htcacheclean
[ - ] apache2
[ - ] apparmor
[ - ] atftpd
[ - ] avahi-daemon
[ + ] binfmt-support
[ - ] bluetooth
[ - ] console-setup.sh
[ + ] cron
[ - ] cryptdisks
[ - ] cryptdisks-early
[ + ] dbus
[ - ] dns2tcp
[ + ] haveged
[ - ] hwclock.sh
[ - ] inetsim
[ - ] iodined
[ - ] ipsec
[ - ] keyboard-setup.sh
[ + ] kmod
[ + ] lightdm
[ - ] lm-sensors
[ - ] mariadb
[ - ] miredo
```


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30) ps

Description: Display active processes

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ps
  PID TTY          TIME CMD
  6892 pts/0        00:00:01 zsh
 11175 pts/0        00:00:00 ps
```

31) kill/killall

Description: Kill active processes by process ID or name

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ kill -l
HUP INT QUIT ILL TRAP IOT BUS FPE KILL USR1 SEGV USR2 PIPE ALRM TERM STKFLT CHLD CONT STOP TSTP TTIN TTO
U URG XCPU XFSZ VTALRM PROF WINCH POLL PWR SYS
```

32) df

Description: Display disk filesystem information

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ df
Filesystem      1K-blocks      Used Available Use% Mounted on
udev            974100          0    974100   0% /dev
tmpfs           202028        1172    200856   1% /run
/dev/sda1       82083148 13443304  64424296  18% /
tmpfs           1010132          0    1010132   0% /dev/shm
tmpfs            5120           0         5120   0% /run/lock
tmpfs           202024          80    201944   1% /run/user/1000
```

33) mount

Description: Mount file systems in Linux

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ mount -l
sysfs on /sys type sysfs (rw,nosuid,nodev,noexec,relatime)
proc on /proc type proc (rw,nosuid,nodev,noexec,relatime)
udev on /dev type devtmpfs (rw,nosuid,relatime,size=974100k,nr_inodes=243525,mode=755,inode64)
devpts on /dev/pts type devpts (rw,nosuid,noexec,relatime,gid=5,mode=620,ptmxmode=000)
tmpfs on /run type tmpfs (rw,nosuid,nodev,noexec,relatime,size=202028k,mode=755,inode64)
/dev/sda1 on / type ext4 (rw,relatime,errors=remount-ro) [root]
securityfs on /sys/kernel/security type securityfs (rw,nosuid,nodev,noexec,relatime)
tmpfs on /dev/shm type tmpfs (rw,nosuid,nodev,inode64)
tmpfs on /run/lock type tmpfs (rw,nosuid,nodev,noexec,relatime,size=5120k,inode64)
cgroup2 on /sys/fs/cgroup type cgroup2 (rw,nosuid,nodev,noexec,relatime,nsdelegate,memory_recursiveprot)
pstore on /sys/fs/pstore type pstore (rw,nosuid,nodev,noexec,relatime)
bpf on /sys/fs/bpf type bpf (rw,nosuid,nodev,noexec,relatime,mode=700)
systemd-1 on /proc/sys/fs/binfmt_misc type autofs (rw,relatime,fd=29,pgrp=1,timeout=0,minproto=5,maxproto=5,direct,pipe_ino=16270)
hugetlbfs on /dev/hugepages type hugetlbfs (rw,relatime,pagesize=2M)
mqueue on /dev/mqueue type mqueue (rw,nosuid,nodev,noexec,relatime)
debugfs on /sys/kernel/debug type debugfs (rw,nosuid,nodev,noexec,relatime)
tracefs on /sys/kernel/tracing type tracefs (rw,nosuid,nodev,noexec,relatime)
fusectl on /sys/fs/fuse/connections type fusectl (rw,nosuid,nodev,noexec,relatime)
configs on /sys/kernel/config type configs (rw,nosuid,nodev,noexec,relatime)
ramfs on /run/credentials/systemd-sysusers.service type ramfs (ro,nosuid,nodev,noexec,relatime,mode=700)
```

34) chmod

Description: Command to change file permissions

Output:

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```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ chmod u=rw,go=rw sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls -l sample.txt
-rw-rw-rw- 1 kali kali 62 Jan 21 10:51 sample.txt
```

35) chown

Description: Command for granting ownership of files or folders

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ sudo chown root sample.txt

(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ls -l sample.txt
-rw-rw-rw- 1 root kali 62 Jan 21 10:51 sample.txt
```

36) ifconfig

Description: Display network interfaces and IP addresses

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.238.129 netmask 255.255.255.0 broadcast 192.168.238.255
    inet6 fe80::eeb4:a252:ef06:5ea4 prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:17:f3:fb txqueuelen 1000 (Ethernet)
    RX packets 41068 bytes 38282679 (36.5 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 23248 bytes 4982616 (4.7 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

37) traceroute

Description: Trace all the network hops to reach the destination

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ traceroute google.com
traceroute to google.com (142.250.182.238), 30 hops max, 60 byte packets
 1  192.168.238.2 (192.168.238.2)  0.145 ms  0.071 ms  0.119 ms
 2  * * *
 3  * * *
 4  * * *
 5  * * *
 6  * * *
```

38) wget

Description: Direct download files from the internet

Output:

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```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
└─$ wget http://ftp.gnu.org/gnu/wget/wget2-2.0.0.tar.gz
--2023-01-22 15:30:10-- http://ftp.gnu.org/gnu/wget/wget2-2.0.0.tar.gz
Resolving ftp.gnu.org (ftp.gnu.org)... 209.51.188.20, 2001:470:142:3::b
Connecting to ftp.gnu.org (ftp.gnu.org)|209.51.188.20|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3565643 (3.4M) [application/x-gzip]
Saving to: 'wget2-2.0.0.tar.gz'

wget2-2.0.0.tar.gz      100%[=====>]  3.40M  1.78MB/s  in 1.9s
2023-01-22 15:30:12 (1.78 MB/s) - 'wget2-2.0.0.tar.gz' saved [3565643/3565643]
```

39) ufw

Description: Firewall command

Output:

```
(root㉿kali)-[~]
└─# ufw enable
Firewall is active and enabled on system startup
```

40) iptables

Description: Base firewall for all other firewall utilities to interface with

Output:

```
(root㉿kali)-[~]
└─# iptables -h
iptables v1.8.8 (nf_tables)

Usage: iptables -[ACD] chain rule-specification [options]
       iptables -I chain [rulenum] rule-specification [options]
       iptables -R chain rulenum rule-specification [options]
       iptables -D chain rulenum [options]
       iptables -[LS] [chain [rulenum]] [options]
       iptables -[FZ] [chain] [options]
       iptables -[NX] chain [rulenum] [options]
       iptables -E old-chain-name new-chain-name
       iptables -P chain target [options]
       iptables -h (print this help information)
```

41) apt, pacman, yum, rpm

Description: Package managers depending on the distro

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
└─$ sudo apt install ncal
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  ncal
0 upgraded, 1 newly installed, 0 to remove and 1718 not upgraded.
```

42) sudo

Description: Command to escalate privileges in Linux

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
└─$ sudo apt install ncal
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  ncal
0 upgraded, 1 newly installed, 0 to remove and 1718 not upgraded.
```

43) cal

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Description: View a command-line calendar

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ cal
      January 2023
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
```

44) alias

Description: Create custom shortcuts for regularly used commands

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ alias -- CD='cd Desktop'
```

45) dd

Description: Majorly used for creating bootable USB sticks

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/test]
$ dd
-dd
-help
^C0+1 records in
0+0 records out
0 bytes copied, 8.03898 s, 0.0 kB/s
```

46) whereis

Description: Locate the binary, source, and manual pages for a command

Output:

```
(kali㉿kali)-[~]
$ whereis wget
wget: /usr/bin/wget /usr/share/man/man1/wget.1.gz /usr/share/info/wget.info.gz
```

47) whatis

Description: Find what a command is used for

Output:

```
(kali㉿kali)-[~]
$ whatis wget
wget (1) - The non-interactive network downloader.
```

48) top

Description: View active processes live with their system usage

Output:

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```
top - 07:32:41 up 27 min, 1 user, load average: 0.42, 0.25, 0.19
Tasks: 193 total, 1 running, 192 sleeping, 0 stopped, 0 zombie
%Cpu(s): 3.9 us, 9.2 sy, 0.0 ni, 86.8 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 1972.9 total, 402.3 free, 631.1 used, 939.4 buff/cache
MiB Swap: 1024.0 total, 1024.0 free, 0.0 used. 1176.4 avail Mem

  PID USER      PR  NI   VIRT   RES   SHR  S  %CPU  %MEM     TIME+ COMMAND

```

49) useradd and usermod

Description: Add new user or change existing users data

Output:

```
(root@kali)-[~]
# sudo useradd test_user

(root@kali)-[~]
# cat etc/passwd | grep test_user
cat: etc/passwd: No such file or directory

(root@kali)-[~]
# cat /etc/passwd | grep test_user
test_user:x:1002:1002::/home/test_user:/bin/sh

```

50) passwd

Description: Create or update passwords for existing users

Output:

```
(root@kali)-[~]
# passwd -S test_user
test_user L 2023-01-23 0 99999 7 -1

```

51) ls -l | wc -l

Description: Command to get the count of the files present into directory.

Output:

```
(kali@kali)-[~/Desktop/Cloud & DevOps]
$ ls -l | wc -l
1

```

52) Kill-

Description: Command to kill the process (PID)

Output:

```
(kali@kali)-[~/Desktop/Cloud & DevOps]
$ kill -l
HUP INT QUIT ILL TRAP IOT BUS FPE KILL USR1 SEGV USR2 PIPE ALRM TERM STKFLT CHLD CONT STOP TSTP TTIN TTO
U URG XCPU XFSZ VTALRM PROF WINCH POLL PWR SYS

```

53) W

Description: to check how many users logged into the linux

Output:

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```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ w
07:46:04 up 40 min,  1 user,  load average: 0.13, 0.38, 0.35
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU WHAT
kali      tty7      :0                07:05    40:46   2:24   0.73s xfce4-session
```

54) Date

Description: used to check the current date, time in linux

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ date
Mon Jan 23 07:46:11 AM EST 2023
```

55) Ls-a

Description: List the hidden files in directory (hidden files are denoted as ..)

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls -a
.  ..  test
```

56) Ls-l

Description: Use to check the permissions on all the files

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls -l
total 4
drwxr-xr-x 2 kali kali 4096 Jan 22 15:30 test
```

57) Ls-r

Description: used to list information about files and directories within the file system.

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls -r
test
```

58) Rm--rf

Description: remove directory with the files

Output:

```
(kali㉿kali)-[~/Desktop/Cloud & DevOps/case]
$ cd

(kali㉿kali)-[~]
$ cd Desktop/Cloud\ \&\ DevOps/

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ rm -rf case

(kali㉿kali)-[~/Desktop/Cloud & DevOps]
$ ls
test
```

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