

Task 1

Kali Linux

Commands

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Kali Linux Commands

1) pwd

Description: Displays the current working directory.

```
[janhavi㉿kali)-[~/home/kali]
└─$ pwd
/home/kali
```

2) ls

Description: Lists all files and folders in the current directory.

```
[janhavi㉿kali)-[~/]
└─$ ls
bin boot dev etc home initrd.img initrd.img.old lib lib32 lib64 lost+found media mnt opt proc root run sbin srv swap sys tmp usr var vmlinuz vmlinuz.old
```

3) cd

Description: Used to change the current directory.

```
[janhavi㉿kali)-[~]
└─$ cd home
[janhavi㉿kali)-[/home]
└─$ █
```

4) cd ..

Description: Moves one directory back.

```
[janhavi㉿kali)-[~/home/kali]
└─$ cd ..
[janhavi㉿kali)-[~/home]
└─$ cd ..
[janhavi㉿kali)-[~]
```

5) mkdir dirname

Description: Creates a new directory.

```
[janhavi㉿kali)-[~]
└─$ mkdir tasks

[janhavi㉿kali)-[~]
└─$ ls
tasks
```

6) rmdir foldername

Description: Deletes an empty directory.

```
[janhavi㉿kali)-[~]
└─$ rmdir tasks

[janhavi㉿kali)-[~]
└─$ ls
```

7) touch file.txt

Description: Creates an empty file

```
[janhavi㉿kali)-[~]
└─$ touch new.txt

[janhavi㉿kali)-[~]
└─$ ls
new.txt
```

8) vi file.txt

Description : Creates or edit text file

```
[janhavi㉿kali)-[~]
└─$ vi new.txt
```

```
>Hello this is a new file created wherein we can write content and append it as well.

new.txt" 2L, 86B
```

9) cat file.txt

Description: Displays the content of a file.

```
(janhavi㉿kali)-[~]
└─$ cat new.txt
Hello this is a new file created wherein we can write content and append it as well.
```

10) head file.txt

Description: Shows first 10 lines of a file.

```
(janhavi㉿kali)-[~]
└─$ head animals.txt

dog
cat
monkey
tiger
lion
donkey
deer
bear
```

11) tail file.txt

Description: Shows last 10 lines of a file.

```
(janhavi㉿kali)-[~]
└─$ tail animals.txt
zebra
goat
cow
buffalo
bull
gorilla
```

12) wc file.txt

Description: Counts lines, words, and characters in a file.

```
(janhavi㉿kali)-[~]
└─$ wc new.txt
 2 17 86 new.txt
```

13) cp file1 file2

Description: Copies one file to another.

```
[janhavi㉿kali)-[~]
$ cat new.txt
Hello this is a new file created wherein we can write content and append it as well.

[janhavi㉿kali)-[~]
$ cp new.txt old.txt

[janhavi㉿kali)-[~]
$ cat old.txt
Hello this is a new file created wherein we can write content and append it as well.
```

14)rmdir dirname

Description: Deletes an empty directory.

```
[janhavi㉿kali)-[~]
$ ls
animals.txt  new.txt  old.txt  tasks

[janhavi㉿kali)-[~]
$ rmdir tasks

[janhavi㉿kali)-[~]
$ ls
animals.txt  new.txt  old.txt

[janhavi㉿kali)-[~]
```

15) rm filename

Description: Removes a file.

```
[janhavi㉿kali)-[~]
$ cat old.txt
Hello this is a new file created wherein we can write content and append it as well.

[janhavi㉿kali)-[~]
$ rm old.txt

[janhavi㉿kali)-[~]
$ cat old.txt
cat: old.txt: No such file or directory
```

16) whoami

Description: Displays the current logged-in user.

```
(janhavi㉿kali)-[~]
$ whoami
janhavi
```

17) hostname

Description: Displays system hostname.

```
(janhavi㉿kali)-[~]
$ hostname
kali
```

18) uname -a

Description: Shows system and kernel information.

```
(janhavi㉿kali)-[~]
$ uname -a
Linux kali 6.16.8+kali1-amd64 #1 SMP PREEMPT_DYNAMIC Kali 6.16.8-1kali1 (2025-09-24) x86_64 GNU/Linux
```

19) df -h

Description: Displays disk space usage.

```
(janhavi㉿kali)-[~]
$ df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            865M    0  865M  0% /dev
tmpfs           194M  1.2M  193M  1% /run
/dev/sda1        79G   16G   59G  21% /
tmpfs           968M  4.0K  968M  1% /dev/shm
none            1.0M    0  1.0M  0% /run/credentials/systemd-journald.service
tmpfs           968M  260K  968M  1% /tmp
none            1.0M    0  1.0M  0% /run/credentials/getty@tty1.service
tmpfs           194M  104K  194M  1% /run/user/1000
```

20) top

Description: Displays running processes in real time.

```
(janhavi㉿kali)-[~]
$ top
top - 12:47:10 up 1:06, 1 user, load average: 0.03, 0.02, 0.00
Tasks: 217 total, 2 running, 215 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.2 us, 1.2 sy, 0.0 ni, 98.5 id, 0.0 wa, 0.0 hi, 0.1 si, 0.0 st
Mem Mem : 1935.1 total, 349.9 free, 948.0 used, 832.7 buff/cache
Mem Swap: 953.7 total, 953.7 free, 0.0 used. 987.1 avail Mem

PID USER PR NI VIRT RES SHR S %CPU %MEM TIME+ COMMAND
1043 root 20 0 1011976 162840 81564 S 1.6 8.2 0:37.64 Xorg
34069 janhavi 20 0 10436 5812 3636 R 1.3 0.3 0:00.06 top
70 root 20 0 0 0 0 I 1.0 0.0 0:00.09 kworker/u514:2-kvfree_rcu_reclaim
1540 kali 20 0 272760 29072 21756 R 1.0 1.5 0:08.40 wrapper-2.0
2343 root 20 0 21776 7852 6612 S 0.7 0.4 0:00.12 sudo
580 root 20 0 113732 9648 8048 S 0.3 0.5 0:04.51 vmtoolsd
1476 kali 20 0 1196460 140308 91692 S 0.3 7.1 0:08.61 xfwm4
1538 kali 20 0 310956 62904 21212 S 0.3 3.2 0:08.80 wrapper-2.0
1642 kali 20 0 374488 43988 32680 S 0.3 2.2 0:05.40 vmtoolsd
2067 kali 20 0 806052 68232 52472 S 0.3 3.4 0:03.53 qterminal
1 root 20 0 24388 15252 10992 S 0.0 0.8 0:00.79 systemd
2 root 20 0 0 0 0 S 0.0 0.0 0:00.00 kthreadd
3 root 20 0 0 0 0 S 0.0 0.0 0:00.00 pool_workqueue_release
4 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 kworker/R-rcu_gp
5 root 0 -20 0 0 0 I 0.0 0.0 0:00.00 kworker/R-sync_wa
```

21) ip a

Description: Displays IP address and network interfaces.

```
(janhavi㉿kali)-[~]
$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
        inet 127.0.0.1/8 scope host lo
            valid_lft forever preferred_lft forever
        inet6 ::1/128 scope host noprefixroute
            valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 00:0c:29:a6:cd:9b brd ff:ff:ff:ff:ff:ff
        inet 192.168.52.128/24 brd 192.168.52.255 scope global dynamic noprefixroute eth0
            valid_lft 1341sec preferred_lft 1341sec
        inet6 fe80::dd8d:6cd7:9f71:5af6/64 scope link noprefixroute
```

22) ifconfig

Description: Shows network interface configuration.

```
(janhavi㉿kali)-[~]
$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.52.128 netmask 255.255.255.0 broadcast 192.168.52.255
        inet6 fe80::dd8d:6cd7:9f71:5af6 prefixlen 64 scopeid 0x20<link>
            ether 00:0c:29:a6:cd:9b txqueuelen 1000 (Ethernet)
            RX packets 839 bytes 55748 (54.4 KiB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 254 bytes 21842 (21.3 KiB)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
        inet6 ::1 prefixlen 128 scopeid 0x10<host>
            loop txqueuelen 1000 (Local Loopback)
            RX packets 8 bytes 480 (480.0 B)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 8 bytes 480 (480.0 B)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

23) ping

Description: Tests internet connectivity.

```
(janhavi㉿kali)-[~]
$ ping google.com
PING google.com (142.250.67.174) 56(84) bytes of data.
64 bytes from bom12s07-in-f14.1e100.net (142.250.67.174): icmp_seq=1 ttl=128 time=4.01 ms
64 bytes from bom12s07-in-f14.1e100.net (142.250.67.174): icmp_seq=2 ttl=128 time=4.34 ms
64 bytes from bom12s07-in-f14.1e100.net (142.250.67.174): icmp_seq=3 ttl=128 time=5.59 ms
64 bytes from bom12s07-in-f14.1e100.net (142.250.67.174): icmp_seq=4 ttl=128 time=4.78 ms
^C
--- google.com ping statistics ---
124 packets transmitted, 124 received, 0% packet loss, time 123391ms
rtt min/avg/max/mdev = 3.069/7.515/35.383/5.591 ms
```

24) netstat -tuln

Description: Displays open ports and listening services.

```
(janhavi㉿kali)-[~]
$ netstat -tuln
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address          Foreign Address        State
```

25) route

Description: Displays routing table.

```
(janhavi㉿kali)-[~]
$ route
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
default         192.168.52.2   0.0.0.0       UG    100      0        0 eth0
192.168.52.0   0.0.0.0       255.255.255.0 U      100      0        0 eth0
```

26) id

Description: show user id

```
(janhavi㉿kali)-[~]
$ id
uid=1001(janhavi) gid=1001(janhavi) groups=1001(janhavi),27(sudo),100(users)
```

27) adduser

Description: Add new user

```
(janhavi㉿kali)-[~]
$ sudo su
[sudo] password for janhavi:
(janhanvi㉿kali)-[/home/janhavi]
# adduser new
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for new
Enter the new value, or press ENTER for the default
    Full Name []: NewUser
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
(janhanvi㉿kali)-[/home/janhavi]
```

28) groups

Description: The groups command shows which groups a user belongs to.

```
(janhavi㉿kali)-[~]
$ groups
janhavi sudo users
```

29) free -m

Description: free -m shows **system memory (RAM)** usage in megabytes (MB)

```
(janhavi㉿kali)-[~]
$ free -m
              total        used        free      shared  buff/cache   available
Mem:       1935         957         328          15         846         978
Swap:      953           0         953
```

30) sudo su

Description: Switches to root directory

```
(janhavi㉿kali)-[~]
$ sudo su
(janhanvi㉿kali)-[/home/janhavi]
#
```

31) date

Description: Displays the current system date and time.

```
[janhavi㉿kali)-[~]
$ date
Tue Dec 30 01:09:42 PM EST 2025
```

32) history

Description: Shows the list of previously executed commands in the terminal.

```
[janhavi㉿kali)-[~]
$ history
 1 ls
 2 pwd
 3 sudo su
 4 pwd
 5 ls
 6 cd desktop
 7 groups
 8 cd ..
 9 ls
10 ls -la
11 cd home
12 cd desktop
```

33) who

Description : Shows which users are currently logged in to the system.

```
[janhavi㉿kali)-[~]
$ who
kali      seat0      2025-12-30 11:40 (:0)
```

34) tty

Description : Shows the terminal session you are using.

```
[janhavi㉿kali)-[~]
$ tty
/dev/pts/1
```

34) sort

Description : Sorts output alphabetically, numerically, or by specific fields.

```
(janhavi㉿kali)-[~]
$ sort animals.txt

bear
buffalo
bull
cat
cow
deer
dog
donkey
elephant
fox
goat
gorilla
leopard
lion
monkey
panda
tiger
wolf
zebra
```

35)rev

Description: Reverses characters in each line (useful for pattern testing).

```
(janhavi㉿kali)-[~]
$ cat new.txt
Hello this is a new file created wherein we can write content and append it as well.

(janhavi㉿kali)-[~]
$ rev new.txt
olleH si a wen elif detaerc ew nac etirw dna tnetnoc sa ti dneppa llew .
```

36) tree

Description : Shows directory structure in a tree format.

```
(janhavi㉿kali)-[~]
$ tree
.
└── animals.txt
    └── new.txt

1 directory, 2 files
```

37) arch

Description: Shows system architecture (e.g., x86_64)

```
(janhavi㉿kali)-[~]
$ arch
x86_64
```

38) env

Description: Displays environment variables.

```
(janhavi㉿kali)-[~]
$ env
SHELL=/bin/bash
COLORTERM=truecolor
SUDO_GID=1000
POWERSHELL_UPDATECHECK=Off
LANGUAGE=
LESS_TERMCAP_se=
LESS_TERMCAP_so=
POWERSHELL_TELEMETRY_OPTOUT=1
DOTNET_CLI_TELEMETRY_OPTOUT=1
SUDO_COMMAND=/usr/bin/su janhavi
SUDO_USER=kali
SUDO_TTY=/dev/pts/0
PWD=/home/janhavi
LOGNAME=janhavi
SUDO_HOME=/home/kali
XAUTHORITY=/home/kali/.Xauthority
COMMAND_NOT_FOUND_INSTALL_PROMPT=1
HOME=/home/janhavi
LANG=en_US.UTF-8
LS_COLORS=rs=0:di=01;34:ln=01;36:mh=00:pi=40;33:so=01;35:do=01;35:bd=40;33;01:cd
;31:*.arc=01;31:*.arj=01;31:*.bz=01;31:*.bz2=01;31:*.cab=01;31:*.cpio=01;31:*.cr
lrz=01;31:*.lz=01;31:*.lz4=01;31:*.lzh=01;31:*.lzma=01;31:*.lzo=01;31:*.pyz=01;3
31:*.tlz=01;31:*.txz=01;31:*.tz=01;31:*.tzo=01;31:*.tzst=01;31:*.udeb=01;31:*.wa
l=01;35:*.mjpg=01;35:*.mpeg=01;35:*.gif=01;35:*.bmp=01;35:*.pgm=01;35:*.webm=01;35:
*:rmvb=01;35:*.flc=01;35:*.avi=01;35:*.fli=01;35:*.flv=01;35:*.gl=01;35:*.dl=01
;06:*.mid=00;36:*.midi=00;36:*.mka=00;36:*.mp3=00;36:*.mpc=00;36:*.ogg=00;36:*
=00;90:*.dpkg-new=00;90:*.dpkg-old=00;90:*.dpkg-tmp=00;90:*.old=00;90:*.orig=00;
*.ucf-old=00;90::ow=30;44:
XDG_CURRENT_DESKTOP=Xfce
TERM=xterm-256color
LESS_TERMCAP_mb=
LESS_TERMCAP_me=
LESS_TERMCAP_md=
USER=janhavi
DISPLAY=:0.0
LESS_TERMCAP_ue=
SHLVL=1
```

39)last

Description: Shows login history.

```
(janhavi㉿kali)-[~]
$ last
root pts/2 Tue Dec 30 13:31 - 13:33 (00:02)
root pts/2 Tue Dec 30 13:08 - 13:09 (00:01)
root pts/2 Tue Dec 30 12:58 - 13:04 (00:05)
janhavi pts/1 Tue Dec 30 11:41 - still logged in
kali tty7 :0 Tue Dec 30 11:40 - still logged in
lightdm tty7 :0 Tue Dec 30 11:40 - 11:40 (00:00)
root pts/2 Sun Dec 28 23:37 - 23:38 (00:01)
janhavi pts/1 Sun Dec 28 23:35 - 23:38 (00:02)
kali tty7 :0 Sun Dec 28 23:30 - 23:39 (00:08)
lightdm tty7 :0 Sun Dec 28 23:29 - 23:30 (00:00)
kali tty7 :0 Sun Dec 28 23:26 - 23:29 (00:02)
lightdm tty7 :0 Sun Dec 28 23:26 - 23:26 (00:00)
root pts/0 Sun Dec 28 23:23 - 23:26 (00:03)
kali tty1 Sun Dec 28 23:21 - 23:26 (00:04)
root pts/0 Sun Dec 28 23:19 - 23:20 (00:01)
kali tty1 Sun Dec 28 23:19 - 23:20 (00:01)
root pts/1 Sun Dec 28 23:15 - 23:18 (00:03)
kali tty7 :0 Sun Dec 28 23:12 - 23:18 (00:06)
lightdm tty7 :0 Sun Dec 28 23:11 - 23:12 (00:00)
kali tty7 :0 Sun Dec 28 23:03 - 23:11 (00:07)
lightdm tty7 :0 Sun Dec 28 23:03 - 23:03 (00:00)
kali tty7 :0 Sun Dec 28 14:41 - 14:42 (00:01)
lightdm tty7 :0 Sun Dec 28 14:41 - 14:41 (00:00)
kali tty7 :0 Sun Dec 28 14:32 - 14:33 (00:01)
lightdm tty7 :0 Sun Dec 28 14:32 - 14:32 (00:00)
kali tty7 :0 Sun Dec 28 14:28 - 14:32 (00:04)
lightdm tty7 :0 Sun Dec 28 14:26 - 14:28 (00:01)
postgres Tue Dec 2 21:35 - 21:35 (00:00)

wtmpdb begins Tue Dec 2 21:35:30 2025
```

40) clear

Description : Clears the terminal screen

```
Kali      tty/        .0          Sun Dec 28 14:28 - 14:32  (00:04
lightdm   tty7        :0          Sun Dec 28 14:26 - 14:28  (00:02
postgres
wtmpdb begins Tue Dec  2 21:35:30 2025
└─(janhavi㉿kali)-[~]
$ clear
```

