

1. System Commands:

a. whoami:

- Shows the current logged-in username.

```
File Actions Edit View Help
(cadet@kali)-[~]
$ whoami
cadet
```

b. hostname:

- Displays the system's hostname.

```
(cadet@kali)-[~]
$ hostname
kali
```

c. uname:

- Shows system information (use `uname -a` for all details).

```
(cadet@kali)-[~]
$ uname
Linux

(cadet@kali)-[~]
$ uname -a
Linux kali 6.12.33+kali-amd64 #1 SMP PREEMPT_DYNAMIC Kali 6.12.33-1kali1 (2025-06-25) x86_64 GNU/Linux
```

d. uptime:

- Displays how long the system has been running.

```
(cadet@kali)-[~]
$ uptime
18:27:15 up 9 min, 2 users, load average: 0.00, 0.10, 0.09
```

e. Date:

- Shows or sets the system date and time.

```
(cadet@kali)-[~]
$ date
Thu Aug 14 06:27:46 PM +0545 2025
```

f. Cal:

- Displays a calendar.

```
(cadet@kali)-[~]
$ cal
August 2025
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
```

g. Who:

- Shows who is logged in.

```
(cadet@kali)-[~]  
$ who  
cadet    seat0      2025-08-14 18:21 (:0)
```

h. W:

- Displays logged-in users and their activities.

```
(cadet@kali)-[~]  
$ w  
18:30:03 up 12 min,  2 users,  load average: 0.19, 0.12, 0.10  
USER      TTY      FROM            LOGIN@   IDLE   JCPU   PCPU   WHAT  
cadet          -            18:21          0.00s    0.02s  lightdm --session-child 12 24
```

i. Id:

- Shows user identity (UID, GID).

```
(cadet@kali)-[~]  
$ id  
uid=1003(cadet) gid=1003(cadet) groups=1003(cadet),27(sudo),100(users)
```

j. Df:

- Shows disk usage by filesystem.

```
(cadet@kali)-[~]  
$ df  
Filesystem      1K-blocks      Used Available Use% Mounted on  
udev            2964580          0    2964580   0% /dev  
tmpfs           606492         1380     605112   1% /run  
/dev/sda1      82083148 18466012  59401588  24% /  
tmpfs          3032440          4    3032436   1% /dev/shm  
tmpfs           5120            0        5120   0% /run/lock  
tmpfs           1024            0         1024   0% /run/credentials/systemd-journald.service  
tmpfs          3032444          84    3032360   1% /tmp  
tmpfs           1024            0         1024   0% /run/credentials/getty@tty1.service  
tmpfs          606488          128     606360   1% /run/user/1000  
tmpfs          606488          132     606356   1% /run/user/1003
```

k. Du:

- Shows disk usage of files and directories.

```
(cadet@kali)-[~]
$ du
4      ./Downloads
4      ./Videos
4      ./Desktop
4      ../gnupg/private-keys-v1.d
8      ../gnupg
4      ./Music
24     ../.cache/xfce4/notifyd
28     ../.cache/xfce4
4      ../.cache/sessions
4      ../.cache/obexd
1392   ../.cache/gstreamer-1.0
1432   ../.cache
4      ./Documents
8      ../.local/state/wireplumber
12     ../.local/state
12     ../.local/share/keyrings
8      ../.local/share/nautilus/scripts
12     ../.local/share/nautilus
4      ../.local/share/icc
32     ../.local/share
4      ../.local/bin
52     ../.local
60     ../.config/xfce4/xfconf/xfce-perchannel-xml
64     ../.config/xfce4/xfconf
16     ../.config/xfce4/panel/launcher-7
8      ../.config/xfce4/panel/launcher-5
8      ../.config/xfce4/panel/launcher-6
40     ../.config/xfce4/panel
4      ../.config/xfce4/xfwm4
12     ../.config/xfce4/desktop
124    ../.config/xfce4
8      ../.config/pulse
8      ../.config/qt6ct
16     ../.config/Thunar
8      ../.config/nautilus
8      ../.config/dconf
```

l. Free:

- Displays memory usage.

```
(cadet@kali)-[~]
$ free

```

	total	used	free	shared	buff/cache	available
Mem:	6064884	953940	4387588	11468	999104	5110944
Swap:	976556	0	976556			

m. Top:

- Shows running processes and system resource usage.

```
(cadet@kali)-[~]
$ top
top - 18:31:06 up 13 min, 2 users, load average: 0.15, 0.11, 0.09
Tasks: 243 total, 2 running, 241 sleeping, 0 stopped, 0 zombie
%Cpu(s): 2.2 us, 0.7 sy, 0.0 ni, 96.9 id, 0.0 wa, 0.0 hi, 0.2 si, 0.0 st
MiB Mem : 5922.7 total, 4281.4 free, 934.6 used, 976.0 buff/cache
MiB Swap: 953.7 total, 953.7 free, 0.0 used, 4988.1 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
3359	root	20	0	365524	112220	58636	R	7.0	1.9	0:08.96	Xorg
4008	cadet	20	0	721672	58964	49932	S	1.3	1.0	0:00.99	qterminal
332	root	20	0	0	0	0	I	0.3	0.0	0:00.27	kworker/1:2-events
629	root	20	0	113860	9520	8240	S	0.3	0.2	0:02.14	vmtoolsd
3633	cadet	20	0	297812	49588	30944	S	0.3	0.8	0:02.64	xfwm4
3687	cadet	20	0	587108	43520	34952	S	0.3	0.7	0:00.10	nm-applet
3717	cadet	20	0	236552	60160	19432	S	0.3	1.0	0:01.90	wrapper-2.0
3736	cadet	20	0	273968	28216	21312	S	0.3	0.5	0:01.66	wrapper-2.0
8953	cadet	20	0	10460	5764	3588	R	0.3	0.1	0:00.03	top
1	root	20	0	23924	14272	10600	S	0.0	0.2	0:01.53	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.02	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-kvfree_rcu_reclaim
5	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-rcu_gp
6	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-sync_wq
7	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-slub_flushwq
8	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-netns
11	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0H-events_highpri
12	root	20	0	0	0	0	I	0.0	0.0	0:00.00	kworker/u128:0-ipv6_addrconf
13	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/R-mm_percpu_wq
14	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_kthread
15	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_rude_kthread
16	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_trace_kthread
17	root	20	0	0	0	0	S	0.0	0.0	0:00.03	ksoftirqd/0
18	root	20	0	0	0	0	I	0.0	0.0	0:00.22	rcu_preempt
19	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_exp_par_gp_kthread_worker/1

n. Uptime:

- Displays system running time and load average.

```
(cadet@kali)-[~]
$ uptime
18:31:16 up 13 min, 2 users, load average: 0.12, 0.11, 0.09
```

o. Ps:

- Displays running processes.

```
(cadet@kali)-[~]
$ ps
  PID TTY          TIME CMD
  4041 pts/0        00:00:00 bash
  9091 pts/0        00:00:00 ps
```

p. History:

- Shows command history.

```
(cadet@kali)-[~]  
$ history  
1  whoami  
2  hostname  
3  uname  
4  uname -a  
5  uptime  
6  date  
7  sScal  
8  cal  
9  who  
10 w  
11 id  
12 df  
13 du  
14 free  
15 top  
16 uptime  
17 ps
```

- q. Clear:
 - Clears the terminal screen.
- r. shutdown
 - Shuts down or reboots the system.
- s. reboot
 - Reboots the system.

2. File commands:

Basic Navigation

- a. Pwd
 - Shows the current working directory.

```
(cadet@kali)-[~]  
$ pwd  
/home/cadet
```

- b. Cd
 - Changes to the home directory.


```
(cadet@kali)-[~/Desktop]
$ cd

(cadet@kali)-[~]
$
```

- c. Cd/path/to/dir
- Changes to a specific directory.

```
(cadet@kali)-[~]
$ cd Desktop

(cadet@kali)-[~/Desktop]
$
```

- d. Cd..
- Moves up one directory level.

```
(cadet@kali)-[~/Downloads/Hlo]
$ cd ..

(cadet@kali)-[~/Downloads]
$
```

- e. Cd -
- Returns to the previous directory.

```
(cadet@kali)-[~/Downloads]
$ cd -
/home/cadet/Downloads/Hlo

(cadet@kali)-[~/Downloads/Hlo]
$
```

- f. Cd ~
- Jumps to the home directory.

```
(cadet@kali)-[~/Downloads/Hlo]
$ cd ~

(cadet@kali)-[~]
$
```

Listing Files and Info:

a. Ls

- Lists directory contents.

```
(cadet@kali)-[~]  
$ ls  
Desktop Documents Downloads Music Pictures Public Templates Videos
```

b. Ls -a

- Includes hidden files.

```
(cadet@kali)-[~]  
$ ls -a  
. .bashrc .config Documents .face.icon .java Pictures .sudo_as_admin_successful .Xauthority .zshrc  
.. .bashrc.original Desktop Downloads .gnupg .local .profile Templates .xsession-errors  
.bash_logout .cache .dmrc .face .ICEauthority Music Public Videos .zprofile
```

c. Ls -l

- Shows long listing with details.

```
(cadet@kali)-[~]  
$ ls -l  
total 32  
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Desktop  
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Documents  
drwxr-xr-x 3 cadet cadet 4096 Aug 14 18:44 Downloads  
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Music  
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Pictures  
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Public  
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Templates  
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Videos
```

d. Ls -la

- Shows long listing including hidden files.

```

(cadet@kali)-[~]
$ ls -la
total 128
drwx----- 15 cadet cadet 4096 Aug 14 18:28 .
drwxr-xr-x 6 root root 4096 Aug 14 18:19 ..
-rw-r--r-- 1 cadet cadet 220 Aug 14 18:19 .bash_logout
-rw-r--r-- 1 cadet cadet 5551 Aug 14 18:19 .bashrc
-rw-r--r-- 1 cadet cadet 3526 Aug 14 18:19 .bashrc.original
drwxrwxr-x 6 cadet cadet 4096 Aug 14 18:21 .cache
drwxr-xr-x 13 cadet cadet 4096 Aug 14 18:31 .config
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Desktop
-rw-r--r-- 1 cadet cadet 35 Aug 14 18:21 .dmrc
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Documents
drwxr-xr-x 3 cadet cadet 4096 Aug 14 18:44 Downloads
-rw-r--r-- 1 cadet cadet 11759 Aug 14 18:19 .face
lrwxrwxrwx 1 cadet cadet 5 Aug 14 18:19 .face.icon → .face
drwx----- 3 cadet cadet 4096 Aug 14 18:21 .gnupg
-rw----- 1 cadet cadet 0 Aug 14 18:21 .ICEauthority
drwxr-xr-x 3 cadet cadet 4096 Aug 14 18:19 .java
drwxr-xr-x 5 cadet cadet 4096 Aug 14 18:21 .local
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Music
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Pictures
-rw-r--r-- 1 cadet cadet 807 Aug 14 18:19 .profile
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Public
-rw-r--r-- 1 cadet cadet 0 Aug 14 18:28 .sudo_as_admin_successful
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Templates
drwxr-xr-x 2 cadet cadet 4096 Aug 14 18:21 Videos
-rw----- 1 cadet cadet 49 Aug 14 18:21 .Xauthority
-rw----- 1 cadet cadet 9745 Aug 14 18:21 .xsession-errors
-rw-r--r-- 1 cadet cadet 336 Aug 14 18:19 .zprofile
-rw-r--r-- 1 cadet cadet 10856 Aug 14 18:19 .zshrc

```

e. Ls -lh

➤ Displays long listing with human-readable sizes.

```

(cadet@kali)-[~]
$ ls -lh
total 32K
drwxr-xr-x 2 cadet cadet 4.0K Aug 14 18:21 Desktop
drwxr-xr-x 2 cadet cadet 4.0K Aug 14 18:21 Documents
drwxr-xr-x 3 cadet cadet 4.0K Aug 14 18:44 Downloads
drwxr-xr-x 2 cadet cadet 4.0K Aug 14 18:21 Music
drwxr-xr-x 2 cadet cadet 4.0K Aug 14 18:21 Pictures
drwxr-xr-x 2 cadet cadet 4.0K Aug 14 18:21 Public
drwxr-xr-x 2 cadet cadet 4.0K Aug 14 18:21 Templates
drwxr-xr-x 2 cadet cadet 4.0K Aug 14 18:21 Videos

```

f. File filename

➤ Determines the file type.


```
(cadet@kali)-[~/Downloads/Hlo]
$ file file.txt
file.txt: empty
```

g. Stat file.txt

➤ Displays detailed file information.

```
(cadet@kali)-[~/Downloads/Hlo]
$ stat file.txt
File: file.txt
Size: 0          Blocks: 0          IO Block: 4096   regular empty file
Device: 8,1     Inode: 3027021   Links: 1
Access: (0664/-rw-rw-r--)  Uid: ( 1003/   cadet)   Gid: ( 1003/   cadet)
Access: 2025-08-14 18:49:33.245209433 +0545
Modify: 2025-08-14 18:49:33.245209433 +0545
Change: 2025-08-14 18:49:33.245209433 +0545
Birth: 2025-08-14 18:49:33.245209433 +0545
```

h. Ls -R

➤ Recursively lists directory contents.

```
(cadet@kali)-[~/Downloads/Hlo]
$ ls -R
.:
file.txt
```

Creating, Copying, Moving:

a. Touch file.txt

➤ Creates an empty file.

```
(cadet@kali)-[~/Downloads/Hlo]
$ touch file.txt

(cadet@kali)-[~/Downloads/Hlo]
$ ls
file.txt

(cadet@kali)-[~/Downloads/Hlo]
$
```

b. Mkdir newdir

➤ Creates a directory.

```
(cadet@kali)-[~/Downloads/Hlo]
$ ls
file.txt

(cadet@kali)-[~/Downloads/Hlo]
$ mkdir world

(cadet@kali)-[~/Downloads/Hlo]
$ ls
file.txt  world

(cadet@kali)-[~/Downloads/Hlo]
$
```

c. Cp file1 file2

➤ Copies file1 to file2.

```
(cadet@kali)-[~/Downloads/Hlo]
$ ls
file.txt  world

(cadet@kali)-[~/Downloads/Hlo]
$ cp file.txt  file1.txt

(cadet@kali)-[~/Downloads/Hlo]
$ ls
file1.txt  file.txt  world
```

d. Mv file1 file2

➤ Renames a file.

```
(cadet@kali)-[~/Downloads/Hlo]
$ mv file1.txt  hlo

(cadet@kali)-[~/Downloads/Hlo]
$ ls
file.txt  hlo  world
```

Deleting:

a. Rm file.txt

➤ Deletes a file.

```
(cadet@kali)-[~/Downloads/Hlo]
$ ls
file.txt  hlo  world

(cadet@kali)-[~/Downloads/Hlo]
$ rm file.txt

(cadet@kali)-[~/Downloads/Hlo]
$ rm hlo

(cadet@kali)-[~/Downloads/Hlo]
$ ls
world
```

- b. Rmdir dir
 - Removes an empty directory.

```
(cadet@kali)-[~/Downloads/Hlo]
$ ls
world

(cadet@kali)-[~/Downloads/Hlo]
$ rmdir world

(cadet@kali)-[~/Downloads/Hlo]
$ ls

(cadet@kali)-[~/Downloads/Hlo]
$
```

3. Networking commands:

Basic Network Info:

- a. Ip a
 - Shows IP addresses and network interfaces.

```
(cadet@kali)-[~/Downloads/Hlo]
$ 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:d4:97:8d brd ff:ff:ff:ff:ff:ff
    inet 192.168.150.128/24 brd 192.168.150.255 scope global dynamic noprefixroute eth0
        valid_lft 1670sec preferred_lft 1670sec
    inet6 fe80::8d35:f67d:358f:7fed/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
```

b. Ifconfig

- Displays network interface details.

```
(cadet@kali)-[~/Downloads/Hlo]
$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.150.128 netmask 255.255.255.0 broadcast 192.168.150.255
    inet6 fe80::8d35:f67d:358f:7fed prefixlen 64 scopeid 0x20<link>
    ether 00:0c:29:d4:97:8d txqueuelen 1000 (Ethernet)
    RX packets 195 bytes 37672 (36.7 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 209 bytes 18296 (17.8 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 16 bytes 960 (960.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 16 bytes 960 (960.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

c. Hostname

- Shows the system hostname.

```
(cadet@kali)-[~/Downloads/Hlo]
$ hostname
kali
```

Connectivity and Diagnostics:

a. Ping host

- Tests connectivity to a host (e.g., ping google.com).


```
(cadet@kali)-[~/Downloads/Hlo]
$ hostname
kali

(cadet@kali)-[~/Downloads/Hlo]
$ ping google.com
PING google.com (142.251.43.110) 56(84) bytes of data.
64 bytes from tzdela-bd-in-f14.1e100.net (142.251.43.110): icmp_seq=1 ttl=128 time=21.9 ms
64 bytes from tzdela-bd-in-f14.1e100.net (142.251.43.110): icmp_seq=2 ttl=128 time=22.5 ms
64 bytes from tzdela-bd-in-f14.1e100.net (142.251.43.110): icmp_seq=3 ttl=128 time=23.7 ms
64 bytes from tzdela-bd-in-f14.1e100.net (142.251.43.110): icmp_seq=4 ttl=128 time=24.1 ms
64 bytes from tzdela-bd-in-f14.1e100.net (142.251.43.110): icmp_seq=5 ttl=128 time=25.1 ms
64 bytes from tzdela-bd-in-f14.1e100.net (142.251.43.110): icmp_seq=6 ttl=128 time=24.2 ms
64 bytes from tzdela-bd-in-f14.1e100.net (142.251.43.110): icmp_seq=7 ttl=128 time=29.2 ms
^C
— google.com ping statistics —
7 packets transmitted, 7 received, 0% packet loss, time 601ms
rtt min/avg/max/mdev = 21.850/24.399/29.223/2.215 ms
```

- b. Ping -c 4 host
 - Sends 4 ping requests.

```
(cadet@kali)-[~/Downloads/Hlo]
$ ping -c 4 google.com
PING google.com (142.251.43.110) 56(84) bytes of data.
64 bytes from bkk02s03-in-f14.1e100.net (142.251.43.110): icmp_seq=1 ttl=128 time=19.6 ms
64 bytes from bkk02s03-in-f14.1e100.net (142.251.43.110): icmp_seq=2 ttl=128 time=20.3 ms
64 bytes from bkk02s03-in-f14.1e100.net (142.251.43.110): icmp_seq=3 ttl=128 time=21.2 ms
64 bytes from bkk02s03-in-f14.1e100.net (142.251.43.110): icmp_seq=4 ttl=128 time=23.6 ms

— google.com ping statistics —
4 packets transmitted, 4 received, 0% packet loss, time 300ms
rtt min/avg/max/mdev = 19.624/21.165/23.569/1.497 ms

(cadet@kali)-[~/Downloads/Hlo]
$
```

4. Basic shell scripting:

Shebang & Execution:

- a. `#!/bin/bash`
 - Defines the script interpreter.
- b. `Chmod +x script.sh`
 - Makes the script executable.
- c. `./script.sh`
 - Runs the script.

Script.sh:

```
#!/bin/bash
```

```
# =====
```

```
# Basic Shell Scripting Examples (Corrected)
```

```
# =====
```

1. Hello World and Variables

```
echo "Hello World"
name="Sulav"
echo "Hello, $name"
```

2. Arithmetic

```
a=10
b=5
sum=$((a + b))
echo "Sum = $sum"
```

3. User Input

```
read -p "Enter your name: " username
echo "Welcome, $username"
```

4. If-Else Condition (with input check)

```
read -p "Enter a number: " num
if [[ -z "$num" ]]; then
    echo "No number entered. Using 0."
    num=0
fi
if [ "$num" -gt 10 ]; then
    echo "Number is greater than 10"
else
    echo "Number is 10 or less"
fi
```

5. Even or Odd (with input check)

```
read -p "Enter another number: " n
if [[ -z "$n" ]]; then
    echo "No number entered. Using 0."
    n=0
fi
if (( n % 2 == 0 )); then
    echo "The number is even"
else
    echo "The number is odd"
fi
```

6. Simple Calculator

```
read -p "Enter first number: " n1
read -p "Enter second number: " n2
read -p "Choose operation (+ - * /): " op
```

```
if [[ -z "$n1" ]]; then n1=0; fi
if [[ -z "$n2" ]]; then n2=0; fi
```

```
if [ "$op" = "+" ]; then
    result=$((n1 + n2))
elif [ "$op" = "-" ]; then
    result=$((n1 - n2))
elif [ "$op" = "*" ]; then
    result=$((n1 * n2))
elif [ "$op" = "/" ]; then
    if [ "$n2" -ne 0 ]; then
        result=$((n1 / n2))
```

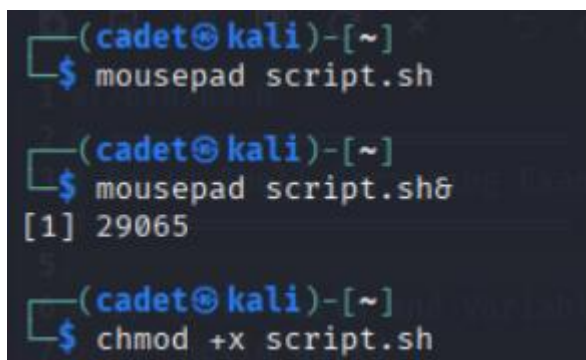
```
else
    result="Error: Division by zero"
fi
else
    result="Invalid operator"
fi
echo "Result: $result"
```

7. System Info

```
echo "Username: $(whoami)"
echo "Hostname: $(hostname)"
echo "OS Info: $(uname -a)"
```

8. File Exists Check

```
read -p "Enter a file name: " filename
if [ -e "$filename" ]; then
    echo "$filename already exists."
else
    echo "Creating $filename..."
    echo "This is a new file." > "$filename"
    echo "$filename created."
fi
```

A terminal window with a dark background and light blue text. The prompt is '(cadet@kali)-[~]'. The user enters '\$ mousepad script.sh'. The prompt changes to '(cadet@kali)-[~] \$' and the user enters 'mousepad script.sh'. The prompt changes to '[1] 29065' and the user enters '\$'. The prompt changes to '(cadet@kali)-[~] \$' and the user enters 'chmod +x script.sh'.

```
(cadet@kali)-[~]
$ mousepad script.sh

(cadet@kali)-[~]
$ mousepad script.sh
[1] 29065
$
(cadet@kali)-[~]
$ chmod +x script.sh
```



```
(cadet@kali)-[~]
$ chmod +x script.sh

(cadet@kali)-[~]
$ ./script.sh
Hello World
Hello, Sulav
Sum = 15
Enter your name: Sulav
Welcome, Sulav
Enter a number:
./script.sh: line 23: [: -gt: unary operator expected
Number is 10 or less
Enter another number: 10
The number is even
Enter first number: 6
Enter second number: 5
Choose operation (+ - * /): +
Result: 11
Username: cadet
Hostname: kali
OS Info: Linux kali 6.12.33+kali-amd64 #1 SMP PREEMPT_DYNAMIC Kali 6.12.33-1kali1 (2025-06-25) x86_64 GNU/Linux
Enter a file name: file
Creating file...
file created.
```

```
(cadet@kali)-[~]
$ ./script.sh
Hello World
Hello, Sulav
Sum = 15
Enter your name: Cadet
Welcome, Cadet
Enter a number: 10
Number is 10 or less
Enter another number: 5
The number is odd
Enter first number: 6
Enter second number: 3
Choose operation (+ - * /): +
Result: 9
Username: cadet
Hostname: kali
OS Info: Linux kali 6.12.33+kali-amd64 #1 SMP PREEMPT_DYNAMIC Kali 6.12.33-1kali1 (2025-06-25) x86_64 GNU/Linux
Enter a file name: file
file already exists.
```