

# ASSESSMENT-1

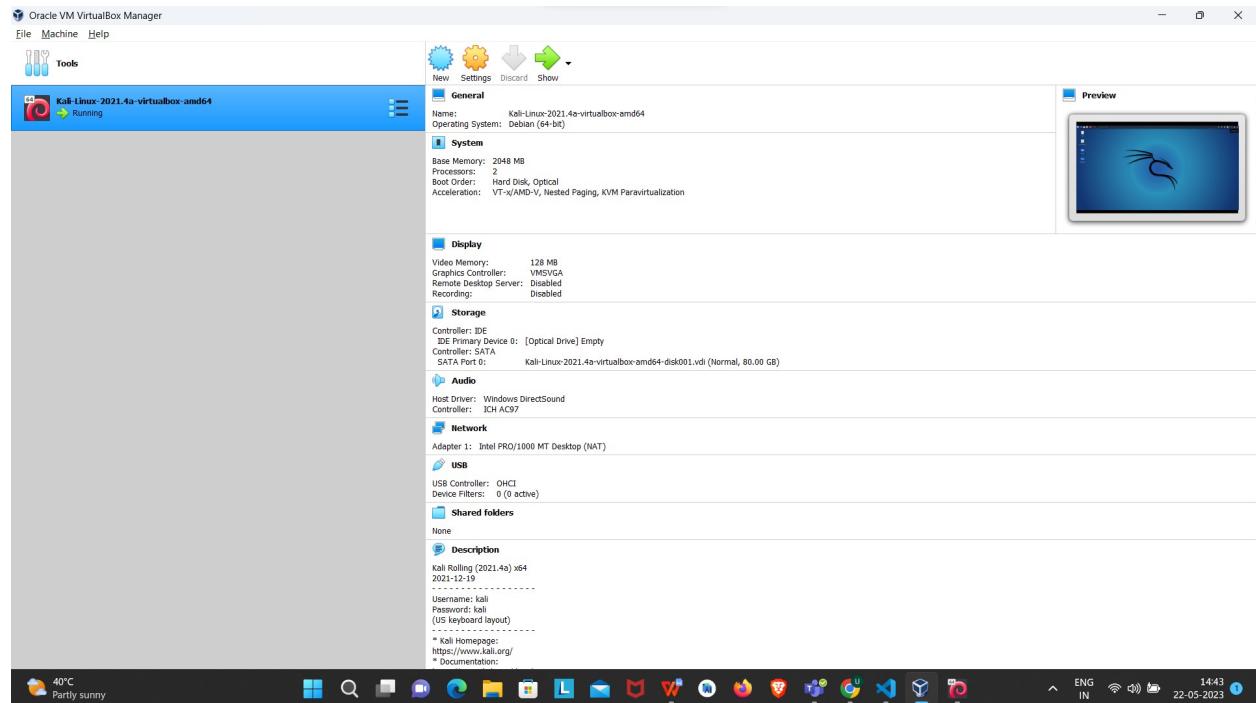
## Title: Linux Command List Assessment

### Instructions:-

The following assessment aims to test your understanding and practical knowledge of various Linux commands. Perform the tasks given below using the appropriate commands. Write down the command(s) used to complete each task. You can use any Linux distribution or command-line interface of your choice. Ensure that you provide the correct output or results for each task.

Note: It is recommended to perform this assessment on a Linux machine or virtual environment.

### PLATFORM USED

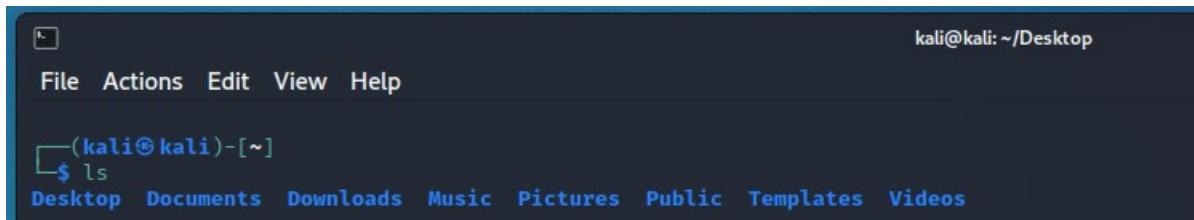


## **File and Directory Operations:**

### **Commands, Output, Screenshots::**

#### ***A) ls: List files and directories***

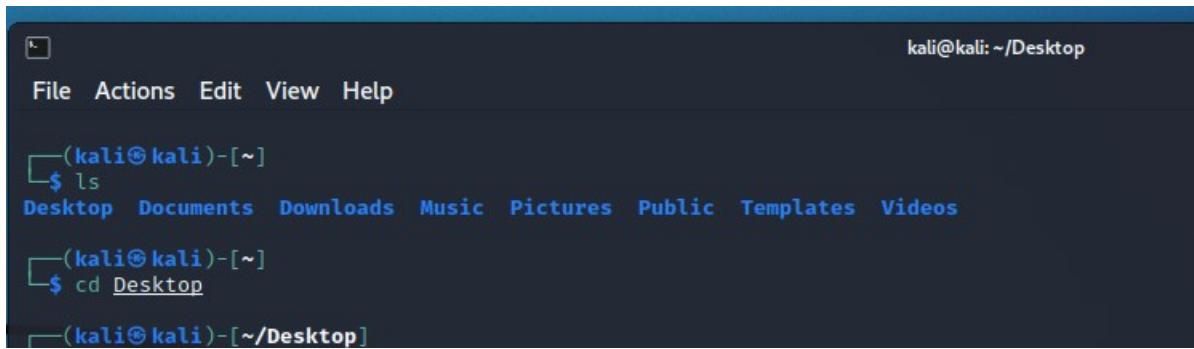
```
└──(kali㉿ kali)-[~]
    └─$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
```



A screenshot of a terminal window titled 'kali@kali: ~/Desktop'. The window has a dark theme. The title bar shows the session name 'kali@kali: ~/Desktop'. The menu bar includes 'File', 'Actions', 'Edit', 'View', 'Help'. The main area displays the command '\$ ls' and its output: 'Desktop Documents Downloads Music Pictures Public Templates Videos'.

#### ***B) cd: Change directory***

```
└──(kali㉿ kali)-[~]
    └─$ cd Desktop
```



A screenshot of a terminal window titled 'kali@kali: ~/Desktop'. The window has a dark theme. The title bar shows the session name 'kali@kali: ~/Desktop'. The menu bar includes 'File', 'Actions', 'Edit', 'View', 'Help'. The main area displays the command '\$ cd Desktop' and its output: 'Desktop Documents Downloads Music Pictures Public Templates Videos'. Below this, another command '\$ cd Desktop' is shown, followed by the prompt '└──(kali㉿ kali)-[~/Desktop]'.

### C) pwd: Print working directory

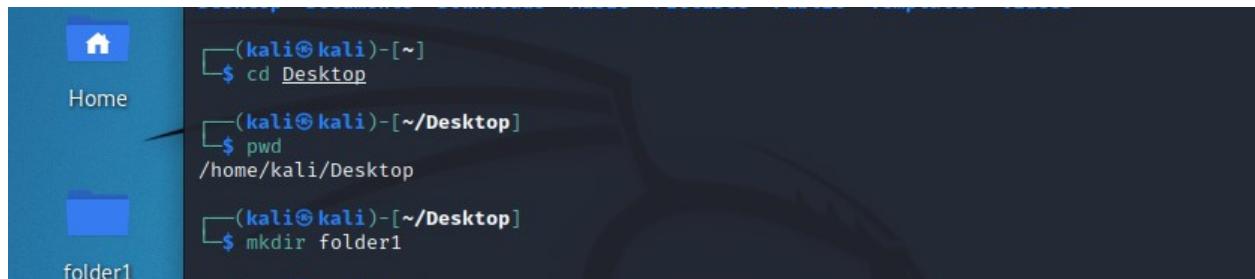
```
└─(kali㉿kali)-[~/Desktop]
└─$ pwd
/home/kali/Desktop
```



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

### D) mkdir: Make directory

```
└─(kali㉿kali)-[~/Desktop]
└─$ mkdir folder1
```



```
└─(kali㉿kali)-[~]
└─$ cd Desktop
└─(kali㉿kali)-[~/Desktop]
└─$ pwd
/home/kali/Desktop
└─(kali㉿kali)-[~/Desktop]
└─$ mkdir folder1
```

### E) touch: Create an empty file

```
└─(kali㉿kali)-[~/Desktop]
└─$ touch file1
```



```
└─(kali㉿kali)-[~/Desktop]
└─$ mkdir folder1
└─(kali㉿kali)-[~/Desktop]
└─$ touch file1
```

**F) cp: Copy files and directories**

└─(kali㉿ kali)-[~/Desktop]  
└─\$ cp file1 folder1

└─(kali㉿ kali)-[~/Desktop]  
└─\$ ls folder1  
file1

```
└─(kali㉿ kali)-[~/Desktop]
└─$ ls folder1

└─(kali㉿ kali)-[~/Desktop]
└─$ cp file1 folder1

└─(kali㉿ kali)-[~/Desktop]
└─$ ls folder1
file1
```

**G) mv: Move or rename files and directories**

└─(kali㉿ kali)-[~/Desktop]  
└─\$ touch file2.txt

└─(kali㉿ kali)-[~/Desktop]  
└─\$ ls  
file1 file2.txt folder1 newfolder

└─(kali㉿ kali)-[~/Desktop]  
└─\$ mv file2.txt newfile2.txt

└─(kali㉿ kali)-[~/Desktop]  
└─\$ ls  
file1 folder1 newfile2.txt newfolder

```
└──(kali㉿ kali)-[~/Desktop]
└─$ mv newfile2.txt folder1
```

```
└──(kali㉿ kali)-[~/Desktop]
└─$ cd folder1
```

```
└──(kali㉿ kali)-[~/Desktop/folder1]
└─$ ls
```

file1 newfile2.txt

```
└──(kali㉿ kali)-[~/Desktop]
└─$ touch file2.txt

└──(kali㉿ kali)-[~/Desktop]
└─$ ls
file1 file2.txt folder1 newfolder

└──(kali㉿ kali)-[~/Desktop]
└─$ mv file2.txt newfile2.txt

└──(kali㉿ kali)-[~/Desktop]
└─$ ls
file1 folder1 newfile2.txt newfolder

└──(kali㉿ kali)-[~/Desktop]
└─$ mv newfile2.txt folder1

└──(kali㉿ kali)-[~/Desktop]
└─$ cd folder1

└──(kali㉿ kali)-[~/Desktop/folder1]
└─$ ls
file1 newfile2.txt
```

#### ***H) rm: Remove files and directories***

```
└──(kali㉿ kali)-[~/Desktop]
└─$ rm file1
```

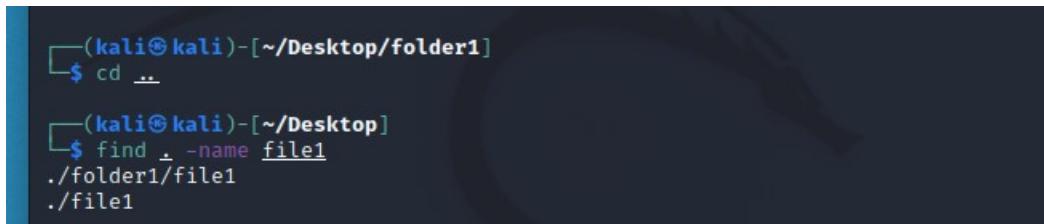
```
└──(kali㉿ kali)-[~/Desktop]
└─$ rm file1

└──(kali㉿ kali)-[~/Desktop]
└─$
```

## I) find: Search for files and directories

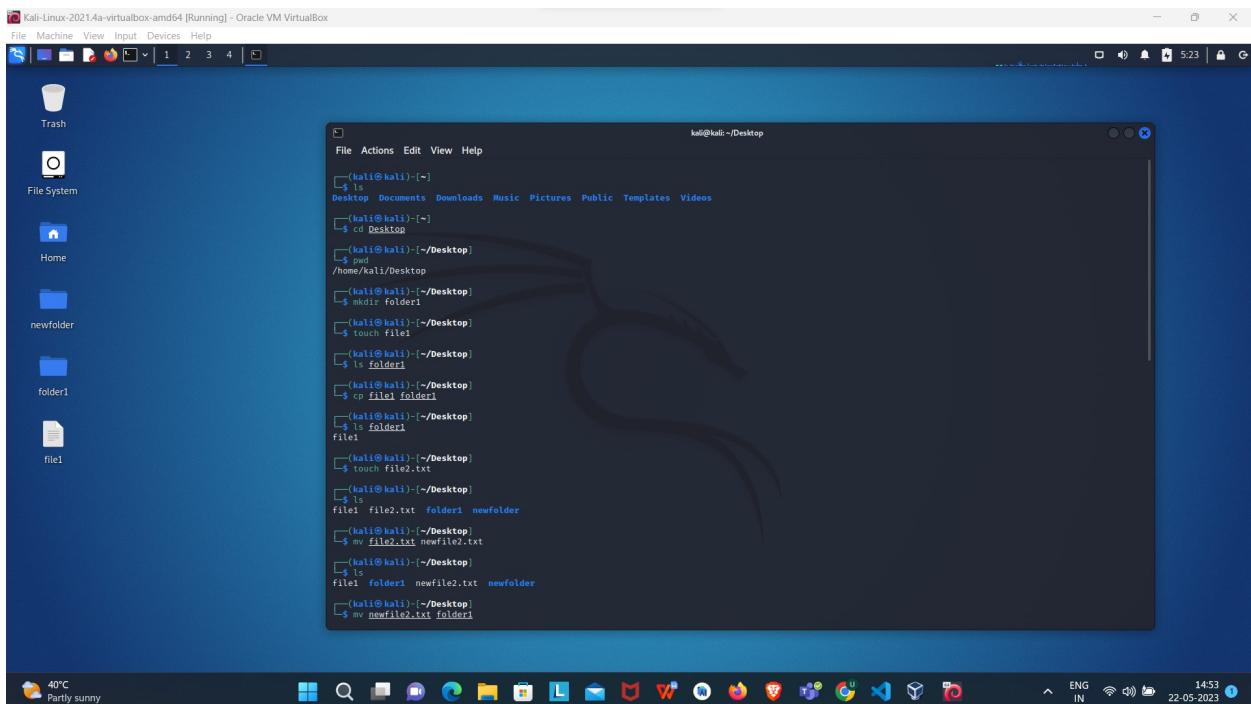
```
└──(kali㉿ kali)-[~/Desktop/folder1]
└─$ cd ..
```

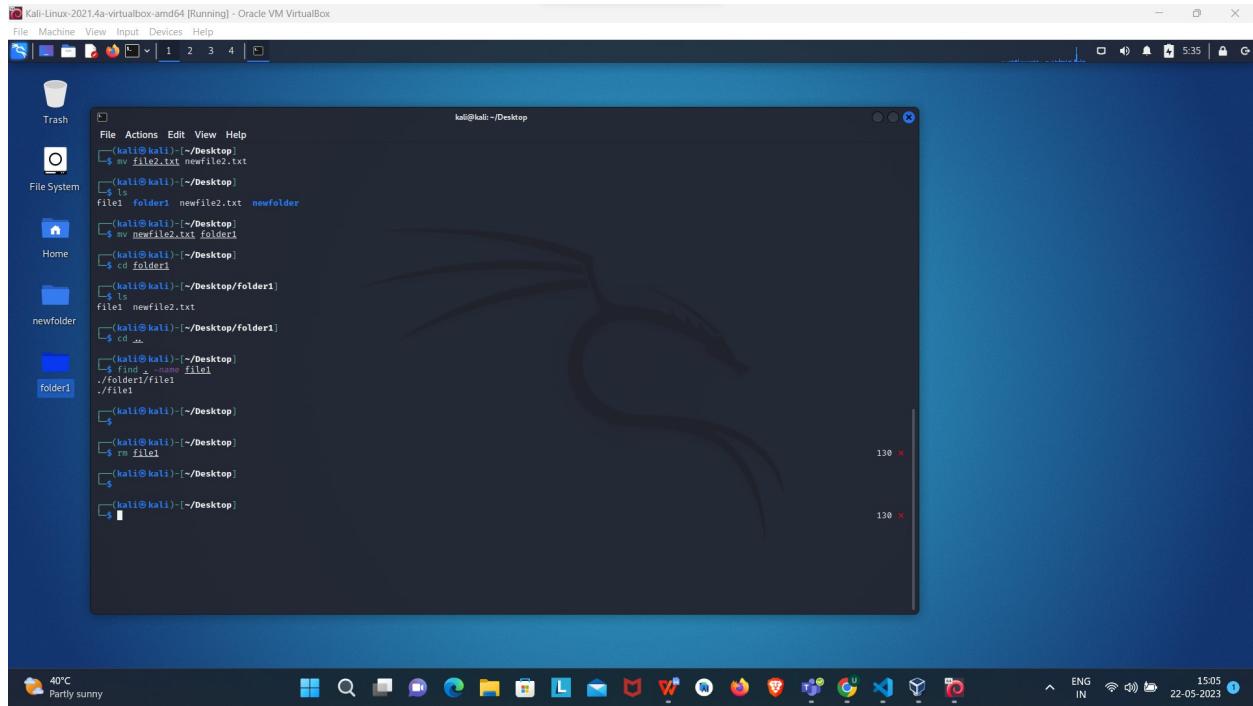
```
└──(kali㉿ kali)-[~/Desktop]
└─$ find . -name file1
./folder1/file1
./file1
```



```
(kali㉿ kali)-[~/Desktop/folder1]
└─$ cd ..
(kali㉿ kali)-[~/Desktop]
└─$ find . -name file1
./folder1/file1
./file1
```

## COMPLETE SNAPSHOT OF ALL COMMANDS TOGETHER





## File Viewing and Editing:

### Commands, Output, Screenshots::

#### *J) cat: Concatenate and display file content*

```

└──(kali㉿ kali)-[~/Desktop]
    └─$ cat >file1.txt
        hello world, file1 content!!

```

```

└──(kali㉿ kali)-[~/Desktop]
    └─$ cat >file2.txt
        file2 content starts!!

```

```
└──(kali㉿kali)-[~/Desktop]
└─$ cat file1.txt file2.txt
hello world, file1 content!!
file2 content starts!!
```

The screenshot shows a Kali Linux desktop environment. On the left, a file manager window titled 'File System' lists two files: 'file1.txt' and 'file2.txt'. On the right, a terminal window titled 'kali@kali: ~/Desktop' shows the command '\$ cat file1.txt file2.txt' being run, with the output 'hello world, file1 content!!' followed by 'file2 content starts!!'.

## K) less: View file content with pagination

```
──(kali㉿kali)-[~/Desktop]
└─$ less file2.txt
```

The screenshot shows a Kali Linux desktop environment with three windows. The top-left window is a terminal showing the history of the 'less' command, including the command 'less file2.txt'. The top-right window is another terminal showing the content of 'file2.txt', which is 'file2 content starts!!'. The bottom window is a file manager showing the contents of 'file2.txt'.

## L) head: Display the beginning of a file

```
└──(kali㉿kali)-[~/Desktop]  
    └─$ head file2.txt
```

```
kali@kali: ~/Desktop  
File Actions Edit View Help  
└──(kali㉿kali)-[~]  
    └─$ cd Desktop  
    └──(kali㉿kali)-[~/Desktop]  
        └─$ head file2.txt  
file2 content starts!!  
What is Lorem Ipsum?  
Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's stand  
since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book. It has  
live centuries, but also the leap into electronic typesetting, remaining essentially unchanged. It was popularised in  
release of Letraset sheets containing Lorem Ipsum passages, and more recently with desktop publishing software like  
uding versions of Lorem Ipsum.  
Why do we use it?  
It is a long established fact that a reader will be distracted by the readable content of a page when looking at its  
f using Lorem Ipsum is that it has a more-or-less normal distribution of letters, as opposed to using 'Content here,  
ng it look like readable English. Many desktop publishing packages and web page editors now use Lorem Ipsum as their  
and a search for 'lorem ipsum' will uncover many web sites still in their infancy. Various versions have evolved ov  
mes by accident, sometimes on purpose (injected humour and the like).  
Where does it come from?  
Contrary to popular belief, Lorem Ipsum is not simply random text. It has roots in a piece of classical Latin litera  
ing it over 2000 years old. Richard McClintock, a Latin professor at Hampden-Sydney College in Virginia, looked up o  
re Latin words, consectetur, from a Lorem Ipsum passage, and going through the cites of the word in classical litera
```

## M) tail: Display the end of a file

```
└──(kali㉿kali)-[~/Desktop]  
    └─$ tail file2.txt
```

```
(kali㉿kali)-[~/Desktop]
└─$ tail file2.txt
It is a long established fact that a reader will be distracted by the readable content of a page when looking at its layout. The point of using Lorem Ipsum is that it has a more-or-less normal distribution of letters, as opposed to using 'Content here, content here', making it look like readable English. Many desktop publishing packages and web page editors now use Lorem Ipsum as their default model text, and a search for 'lorem ipsum' will uncover many web sites still in their infancy. Various versions have evolved over the years, sometimes by accident, sometimes on purpose (injected humour and the like).

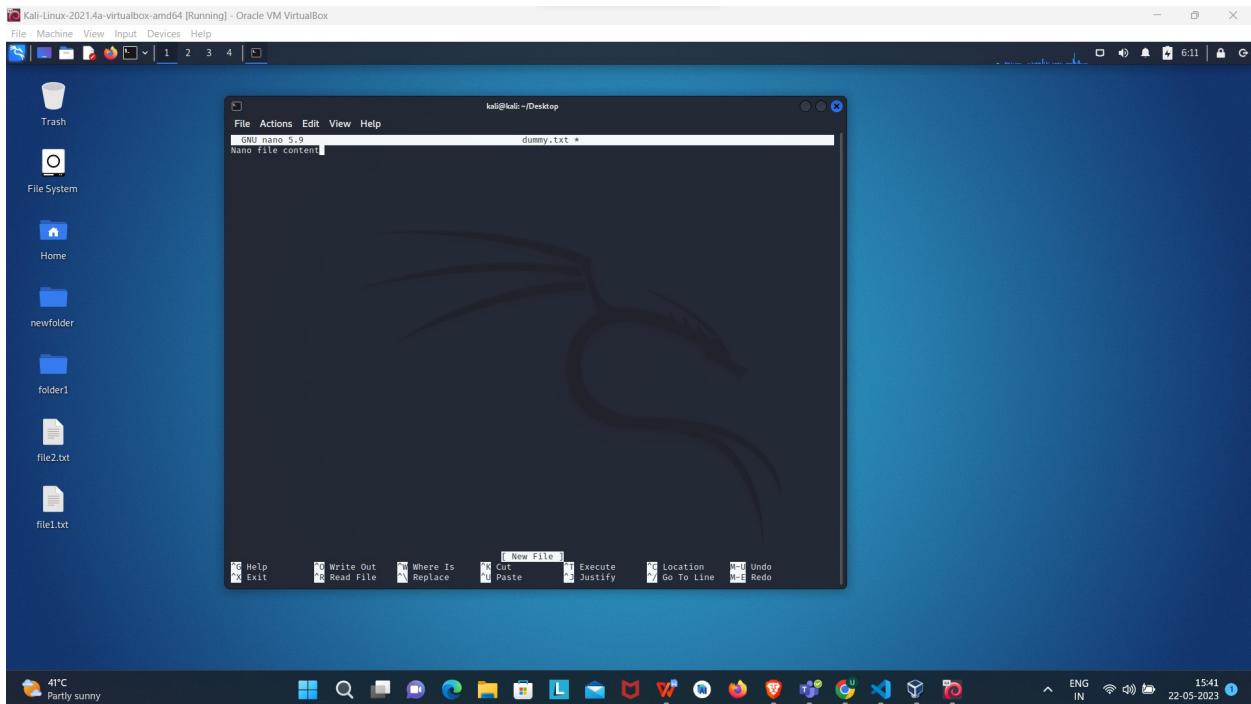
Where does it come from?
Contrary to popular belief, Lorem Ipsum is not simply random text. It has roots in a piece of classical Latin literature from 45 BC, making it over 2000 years old. Richard McClintock, a Latin professor at Hampden-Sydney College in Virginia, looked up one of the more obscure Latin words, consectetur, from a Lorem Ipsum passage, and going through the cites of the word in classical literature, discovered the undoubtable source. Lorem Ipsum comes from sections 1.10.32 and 1.10.33 of "de Finibus Bonorum et Malorum" (The Extremes of Good and Evil) by Cicero, written in 45 BC. This book is a treatise on the theory of ethics, very popular during the Renaissance. The first line of Lorem Ipsum, "Lorem ipsum dolor sit amet..", comes from a line in section 1.10.32.

The standard chunk of Lorem Ipsum used since the 1500s is reproduced below for those interested. Sections 1.10.32 and 1.10.33 from "de Finibus Bonorum et Malorum" by Cicero are also reproduced in their exact original form, accompanied by English versions from the 1914 translation by H. Rackham.

Where can I get some?
There are many variations of passages of Lorem Ipsum available, but the majority have suffered alteration in some form, by injected humour, or randomised words which don't look even slightly believable. If you are going to use a passage of Lorem Ipsum, you need to be sure there isn't anything embarrassing hidden in the middle of text. All the Lorem Ipsum generators on the Internet tend to repeat predefined chunks as necessary, making this the first true generator on the Internet. It uses a dictionary of over 200 Latin words, combined with a handful of model sentence structures, to generate Lorem Ipsum which looks reasonable. The generated Lorem Ipsum is therefore always free from repetition, injected humour, or non-characteristic words etc.
```

## N) **nano: Text editor for creating and editing files**

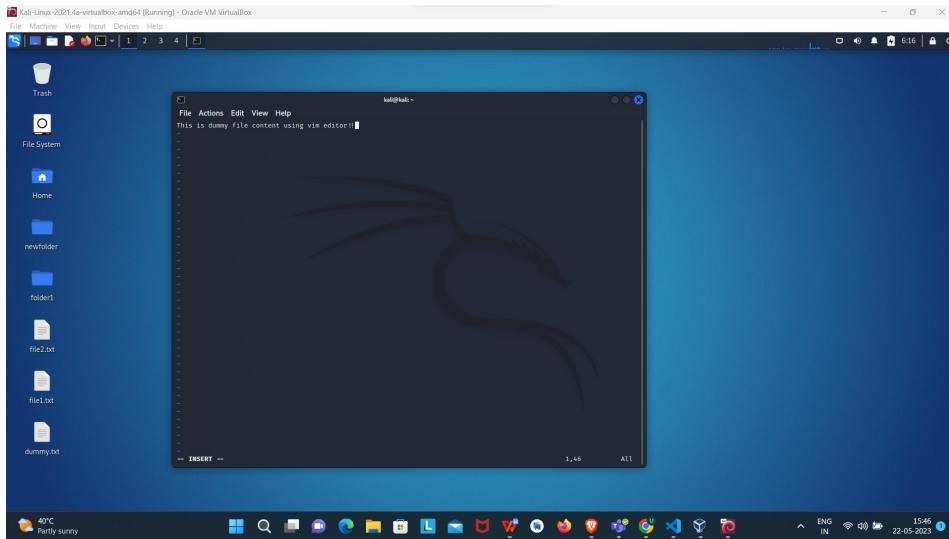
```
└──(kali㉿kali)-[~/Desktop]
└──$ nano dummy.txt
```



## O) **vi/vim: Powerful text editor for experienced users**

```
└──(kali㉿kali)-[~]
```

└─\$ vim dummy1.txt



## **File Permissions:**

### **Commands, Output, Screenshots::**

#### **P) chmod: Change file permissions**

└─(kali㉿ kali)-[~/Desktop]  
└─\$ chmod u=r file1.txt

```

file1.txt
file2.txt
folder1
dummy.txt
newfolder
dummy1.txt

File Actions Edit View Help
(kali㉿kali)-[~]
$ vim dummy1.txt
(kali㉿kali)-[~]
$ cd Desktop
(kali㉿kali)-[~/Desktop]
$ ls -lhra
total 32K
drwxr-xr-x  2 kali kali 4.0K May 21 15:44 newfolder
drwxr-xr-x  2 kali kali 4.0K May 22 05:19 folder1
-rw-r--r--  1 kali kali  29 May 22 05:44 file1.txt
-rw-r--r--  1 kali kali  3.1K May 22 05:44 file2.txt
-rw-r--r--  1 kali kali  18 May 22 06:11 dummy.txt
-rw-r--r--  1 kali kali  46 May 22 06:16 dummy1.txt
drwxr-xr-x 16 kali kali 4.0K May 22 06:17 ..
drwxr-xr-x  4 kali kali 4.0K May 22 06:17 .
(kali㉿kali)-[~/Desktop]
$ chmod u=r file1.txt
(kali㉿kali)-[~/Desktop]
$ ls -lhra
total 32K
drwxr-xr-x  2 kali kali 4.0K May 21 15:44 newfolder
drwxr-xr-x  2 kali kali 4.0K May 22 05:19 folder1
-rw-r--r--  1 kali kali  29 May 22 05:44 file1.txt
-rw-r--r--  1 kali kali  3.1K May 22 05:47 file2.txt
-rw-r--r--  1 kali kali  18 May 22 06:11 dummy.txt
-rw-r--r--  1 kali kali  46 May 22 06:16 dummy1.txt
drwxr-xr-x 16 kali kali 4.0K May 22 06:17 ..
drwxr-xr-x  4 kali kali 4.0K May 22 06:17 .
(kali㉿kali)-[~/Desktop]
$ 

```

The terminal window shows a user navigating through their home directory to the Desktop, listing files with detailed permissions (-lhra), changing file ownership with chmod, and then listing the files again to verify the changes. The desktop environment shows icons for various applications like a web browser, file manager, and terminal.

## Q) chown: Change file owner

```

(kali㉿kali)-[~/Desktop]
$ sudo su
root
1 □

```

We trust you have received the usual lecture from the local System Administrator. It usually boils down to these three things:

- #1) Respect the privacy of others.
- #2) Think before you type.
- #3) With great power comes great responsibility.

[sudo] password for kali:

```

(root㉿kali)-[/home/kali/Desktop]
# chown root file1.txt

```

```

(root㉿kali)-[/home/kali/Desktop]

```

└─# ls -l

```
[root@kali:~/Desktop] - Oracle VM VirtualBox
File Machine View Input Devices Help
File Actions Edit View Help
[~] (kali㉿kali)-[~/Desktop]
└─$ chmod 777 file1.txt
[~] (kali㉿kali)-[~/Desktop]
└─$ ls -l
total 24
-rw-r--r-- 1 kali kali 46 May 22 06:16 dummy1.txt
-rw-r--r-- 1 kali kali 18 May 22 06:11 dummy.txt
-rwxrwxrwx 1 kali kali 29 May 22 05:44 file1.txt
-rw-r--r-- 1 kali kali 3113 May 22 05:47 file2.txt
drwxr-xr-x 2 kali kali 4096 May 22 05:19 folder1
drwxr-xr-x 2 kali kali 4096 May 21 15:44 newfolder
[~] (kali㉿kali)-[~/Desktop]
└─$ sudo su root
We trust you have received the usual lecture from the local System Administrator. It usually boils down to these three things:
#1) Respect the privacy of others.
#2) Think before you type.
#3) With great power comes great responsibility.
[sudo] password for kali:
Sorry, try again.
[sudo] password for kali:
Sorry, try again.
[sudo] password for kali:
sudo: 3 incorrect password attempts
[~] (kali㉿kali)-[~/Desktop]
└─$ sudo su root
We trust you have received the usual lecture from the local System Administrator. It usually boils down to these three things:
#1) Respect the privacy of others.
#2) Think before you type.
#3) With great power comes great responsibility.
[sudo] password for kali:
[~] (root㉿kali)-[~/home/kali/Desktop]
└─$ chown root file1.txt
[~] (root㉿kali)-[~/home/kali/Desktop]
└─$ ls -l
total 24
-rw-r--r-- 1 kali kali 46 May 22 06:16 dummy1.txt
-rw-r--r-- 1 kali kali 18 May 22 06:11 dummy.txt
-rwxrwxrwx 1 root kali 29 May 22 05:44 file1.txt
-rw-r--r-- 1 kali kali 3113 May 22 05:47 file2.txt
drwxr-xr-x 2 kali kali 4096 May 22 05:19 folder1
drwxr-xr-x 2 kali kali 4096 May 21 15:44 newfolder
[~] (root㉿kali)-[~/home/kali/Desktop]
└─$ 40C Partly sunny
[~] (root㉿kali)-[~/home/kali/Desktop]
└─$ ENG IN 15:56 22-05-2023
```

## R) chgrp: Change file group

└─(root㉿kali)-[/home/kali/Desktop]  
└─# chgrp root file1.txt

└─(root㉿kali)-[/home/kali/Desktop]  
└─# ls -l

```
[sudo] password for kali:
[~] (root㉿kali)-[~/home/kali/Desktop]
└─$ chown root file1.txt
[~] (root㉿kali)-[~/home/kali/Desktop]
└─$ ls -l
total 24
-rw-r--r-- 1 kali kali 46 May 22 06:16 dummy1.txt
-rw-r--r-- 1 kali kali 18 May 22 06:11 dummy.txt
-rwxrwxrwx 1 root kali 29 May 22 05:44 file1.txt
-rw-r--r-- 1 kali kali 3113 May 22 05:47 file2.txt
drwxr-xr-x 2 kali kali 4096 May 22 05:19 folder1
drwxr-xr-x 2 kali kali 4096 May 21 15:44 newfolder
[~] (root㉿kali)-[~/home/kali/Desktop]
└─$ chgrp root file1.txt
[~] (root㉿kali)-[~/home/kali/Desktop]
└─$ ls -l
total 24
-rw-r--r-- 1 kali kali 46 May 22 06:16 dummy1.txt
-rw-r--r-- 1 kali kali 18 May 22 06:11 dummy.txt
-rwxrwxrwx 1 root root 29 May 22 05:44 file1.txt
-rw-r--r-- 1 kali kali 3113 May 22 05:47 file2.txt
drwxr-xr-x 2 kali kali 4096 May 22 05:19 folder1
drwxr-xr-x 2 kali kali 4096 May 21 15:44 newfolder
[~] (root㉿kali)-[~/home/kali/Desktop]
└─$ 40C Partly sunny
[~] (root㉿kali)-[~/home/kali/Desktop]
└─$ ENG IN 15:57 22-05-2023
```

## File Compression and Archiving:

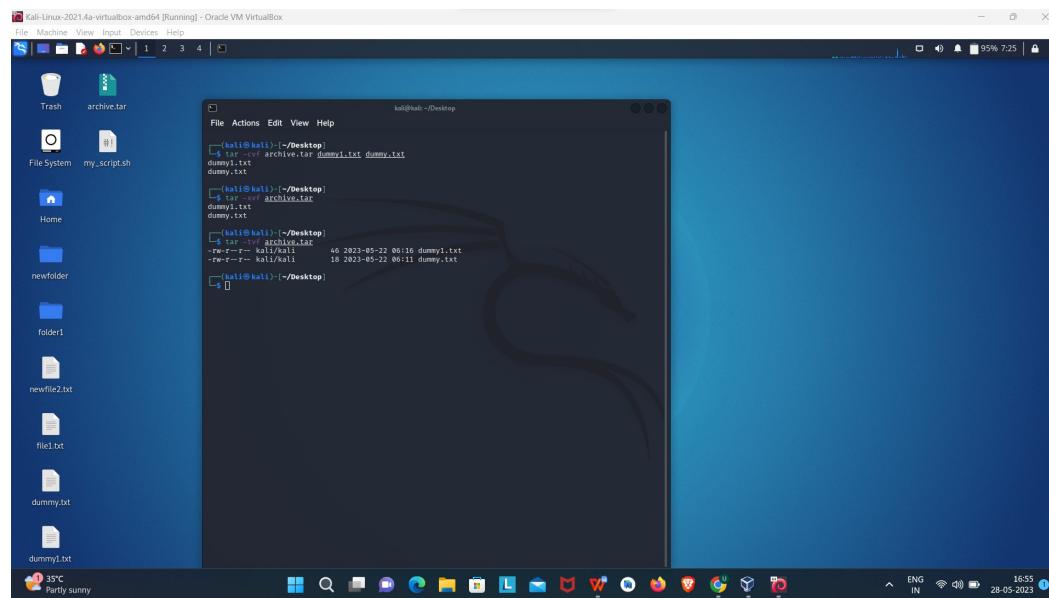
### Commands, Output, Screenshots::

#### *S) tar: Archive files*

└─(kali㉿ kali)-[~/Desktop]  
   └─\$ tar -cvf archive.tar dummy1.txt dummy.txt  
 dummy1.txt  
 dummy.txt

└─(kali㉿ kali)-[~/Desktop]  
   └─\$ tar -xvf archive.tar  
 dummy1.txt  
 dummy.txt

└─(kali㉿ kali)-[~/Desktop]  
   └─\$ tar -tvf archive.tar  
 -rw-r--r-- kali/kali 46 2023-05-22 06:16 dummy1.txt  
 -rw-r--r-- kali/kali 18 2023-05-22 06:11 dummy.txt



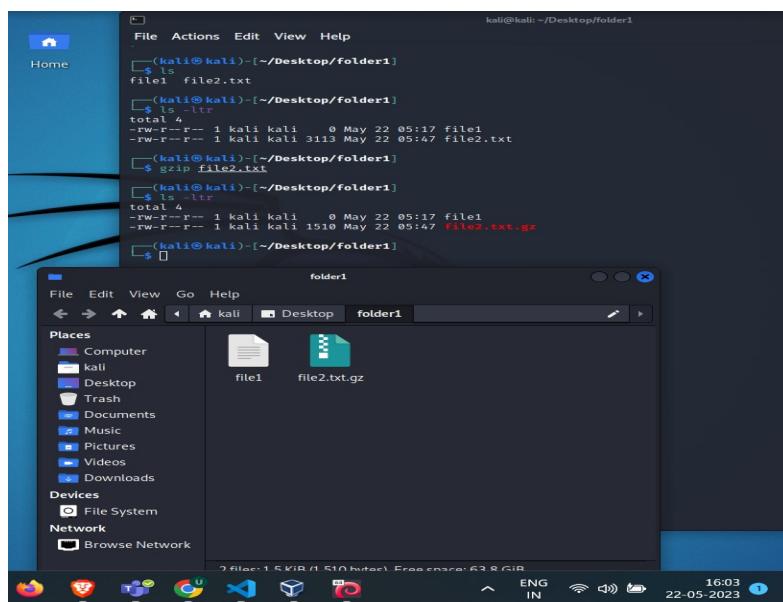
### **T) gzip: Compress files**

```
└─(kali㉿ kali)-[~/Desktop/folder1]
  └─$ ls
    file1  file2.txt
```

```
└─(kali㉿ kali)-[~/Desktop/folder1]
  └─$ ls -ltr
total 4
-rw-r--r-- 1 kali kali 0 May 22 05:17 file1
-rw-r--r-- 1 kali kali 3113 May 22 05:47 file2.txt
```

```
└─(kali㉿ kali)-[~/Desktop/folder1]
  └─$ gzip file2.txt
```

```
└─(kali㉿ kali)-[~/Desktop/folder1]
  └─$ ls -ltr
total 4
-rw-r--r-- 1 kali kali 0 May 22 05:17 file1
-rw-r--r-- 1 kali kali 1510 May 22 05:47 file2.txt.gz
```



### U) **unzip**: Extract files from a ZIP archive

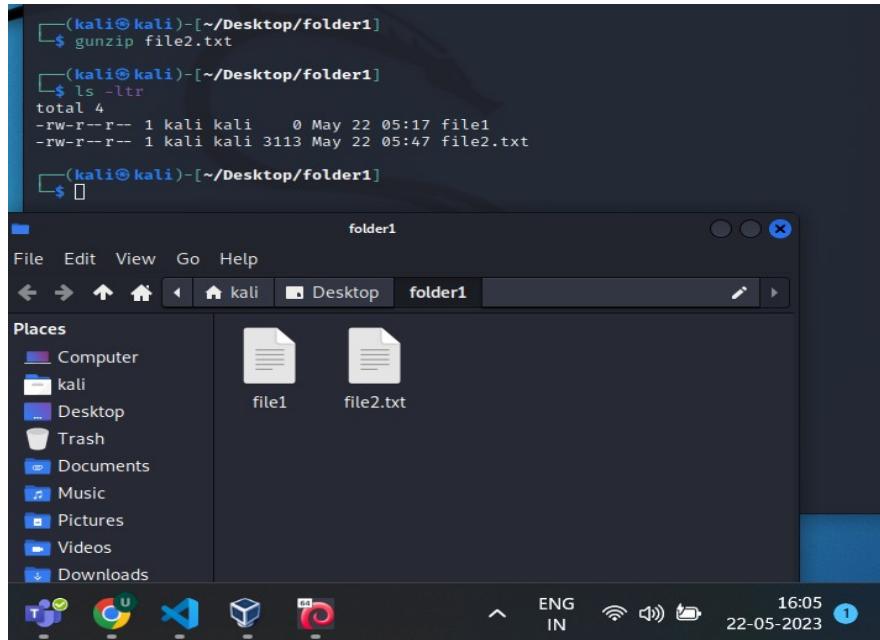
```
└──(kali㉿kali)-[~/Desktop/folder1]  
    └─$ gunzip file2.txt
```

```
└──(kali㉿kali)-[~/Desktop/folder1]  
    └─$ ls -ltr
```

total 4

```
-rw-r--r-- 1 kali kali 0 May 22 05:17 file1  
-rw-r--r-- 1 kali kali 3113 May 22 05:47 file2.txt
```

```
└──(kali㉿kali)-[~/Desktop/folder1]  
    └─$
```

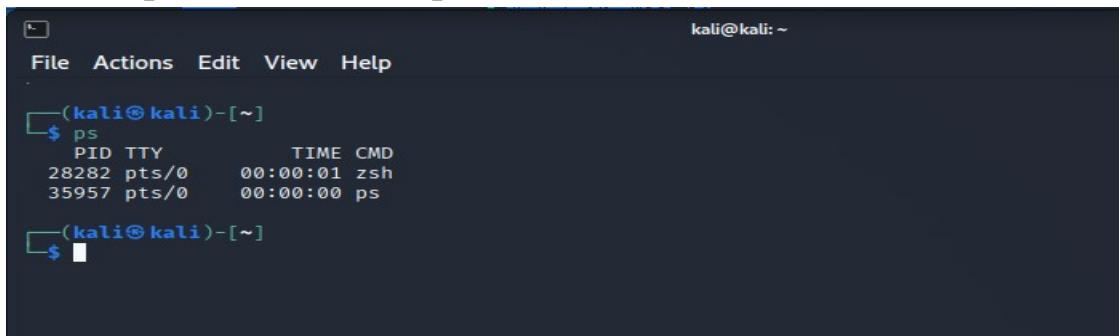


## Process Management:

Commands, Output, Screenshots::

### *V) ps: List running processes*

```
└──(kali㉿kali)-[~]
    └─$ ps
        PID TTY      TIME CMD
        28282 pts/0    00:00:01 zsh
        35957 pts/0    00:00:00 ps
```

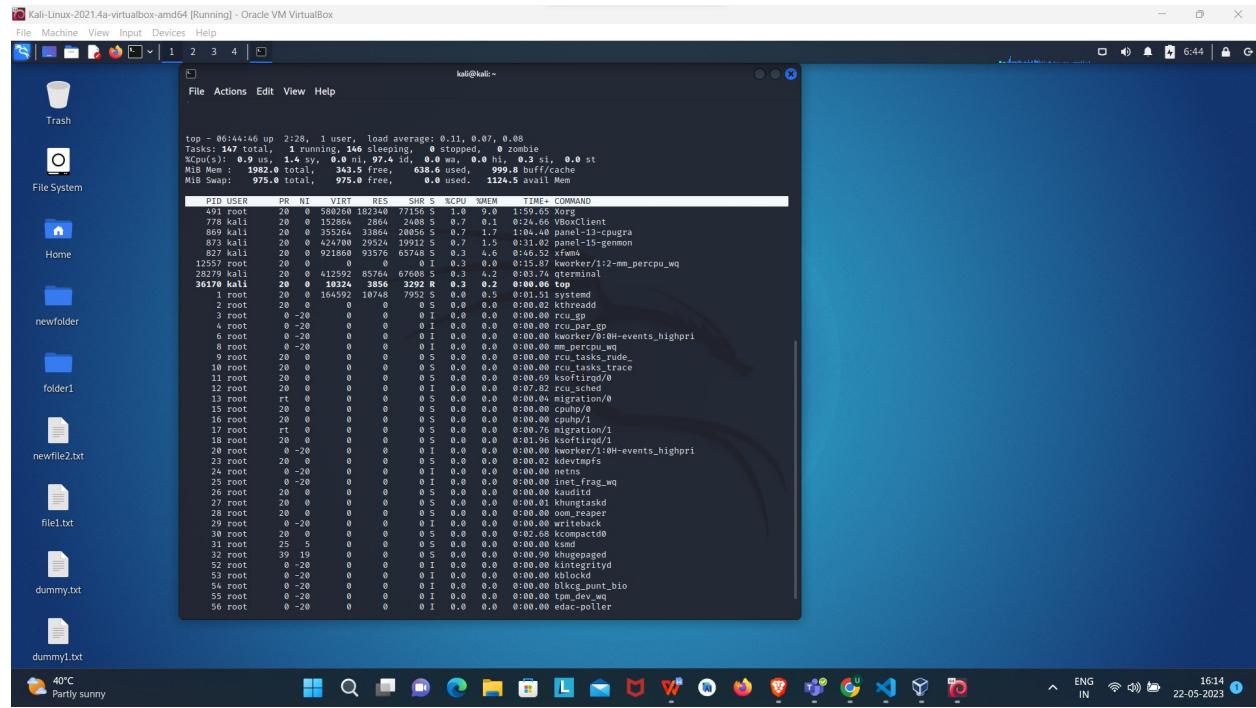


A screenshot of a terminal window titled '(kali㉿kali)-[~]'. The window shows the command '\$ ps' being run, followed by a list of processes. The output is as follows:

PID	TTY	TIME	CMD
28282	pts/0	00:00:01	zsh
35957	pts/0	00:00:00	ps

### *W) top: Display real-time system information and processes*

```
└──(kali㉿kali)-[~]
    └─$ top
```



## X) **kill: Terminate processes**

```
└──(kali㉿ kali)-[~]
└──$ kill 36513
```

## Y) **bg: Run processes in the background**

```
└──(kali㉿ kali)-[~]
└──$ 148 ┐ 1 ⚙
[1] + suspended ping www.piet.co.in
```

jobs

```
└──(kali㉿ kali)-[~]
└──$ bg %1
1 ⚙
[1] + continued ping www.piet.co.in
```

Kali-Linux-2021.4a-virtualbox-amd64 [Running] - Oracle VM VirtualBox

```
kali@kali: ~
File Actions Edit View Help
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=2 ttl=57 time=159 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=3 ttl=57 time=160 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=4 ttl=57 time=160 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=5 ttl=57 time=158 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=6 ttl=57 time=160 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=7 ttl=57 time=287 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=8 ttl=57 time=163 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=9 ttl=57 time=197 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=10 ttl=57 time=160 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=11 ttl=57 time=161 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=12 ttl=57 time=161 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=13 ttl=57 time=165 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=14 ttl=57 time=160 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=15 ttl=57 time=158 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=16 ttl=57 time=161 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=17 ttl=57 time=165 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=18 ttl=57 time=160 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=19 ttl=57 time=167 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=20 ttl=57 time=164 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=21 ttl=57 time=159 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=22 ttl=57 time=166 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=23 ttl=57 time=167 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=24 ttl=57 time=160 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=25 ttl=57 time=158 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=26 ttl=57 time=165 ms
^Z
zsh: suspended  ping www.piet.co.in
[~] (kali㉿kali)-[~]
$ jobs
[1] + suspended  ping www.piet.co.in                                         148 x 1 ◊
[~] (kali㉿kali)-[~]
$ bg %1
[1] + continued  ping www.piet.co.in                                         1 ◊
[~] (kali㉿kali)-[~]
$ 64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=27 ttl=57 time=158 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=28 ttl=57 time=160 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=29 ttl=57 time=160 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=30 ttl=57 time=402 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=31 ttl=57 time=159 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=32 ttl=57 time=164 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=33 ttl=57 time=160 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=34 ttl=57 time=159 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=35 ttl=57 time=161 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=36 ttl=57 time=160 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=37 ttl=57 time=162 ms
64 bytes from 104.21.0.160 (104.21.0.160): icmp_seq=38 ttl=57 time=169 ms
dummy1.txt
[~] (kali㉿kali)-[~]
$
```

17:23 22-05-2023

## Z) **fg:** Bring background processes to the foreground

zsh: suspended ping www.piet.co.in

```
└─(kali㉿kali)-[~]
  └─$ fg
  [~] 1 ⚙
[1] + continued  ping www.piet.co.in                                         148
```

```

ping www.piet.co.in
PING www.piet.co.in (172.67.151.69) 56(84) bytes of data.
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=1 ttl=57 time=161 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=2 ttl=57 time=162 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=3 ttl=57 time=161 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=4 ttl=57 time=160 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=5 ttl=57 time=160 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=6 ttl=57 time=162 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=7 ttl=57 time=161 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=8 ttl=57 time=162 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=9 ttl=57 time=162 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=10 ttl=57 time=161 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=11 ttl=57 time=163 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=12 ttl=57 time=162 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=13 ttl=57 time=161 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=14 ttl=57 time=162 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=15 ttl=57 time=161 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=16 ttl=57 time=161 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=17 ttl=57 time=161 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=18 ttl=57 time=170 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=19 ttl=57 time=161 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=20 ttl=57 time=161 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=21 ttl=57 time=159 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=22 ttl=57 time=173 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=23 ttl=57 time=160 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=24 ttl=57 time=160 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=25 ttl=57 time=168 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=26 ttl=57 time=163 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=27 ttl=57 time=161 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=28 ttl=57 time=162 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=29 ttl=57 time=159 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=30 ttl=57 time=160 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=31 ttl=57 time=160 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=32 ttl=57 time=164 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=33 ttl=57 time=161 ms
2sh: suspended ping www.piet.co.in
[~] kali@kali:~]
$ fg
[1]+  continued ping www.piet.co.in
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=34 ttl=57 time=175 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=35 ttl=57 time=171 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=36 ttl=57 time=161 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=37 ttl=57 time=160 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=38 ttl=57 time=240 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=39 ttl=57 time=190 ms
64 bytes from 172.67.151.69 (172.67.151.69): icmp_seq=40 ttl=57 time=160 ms
[~] kali@kali:~]

```

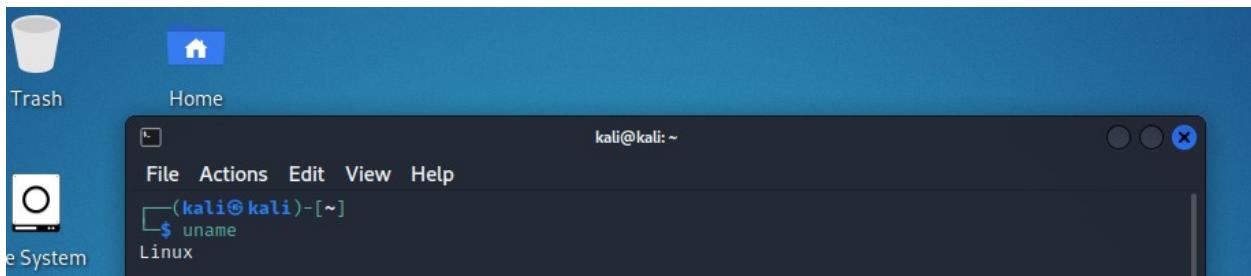
## System Information:

### Commands, Output, Screenshots::

#### AA) uname: Print system information

- └──(kali㉿kali)-[~]
- └──\$ uname

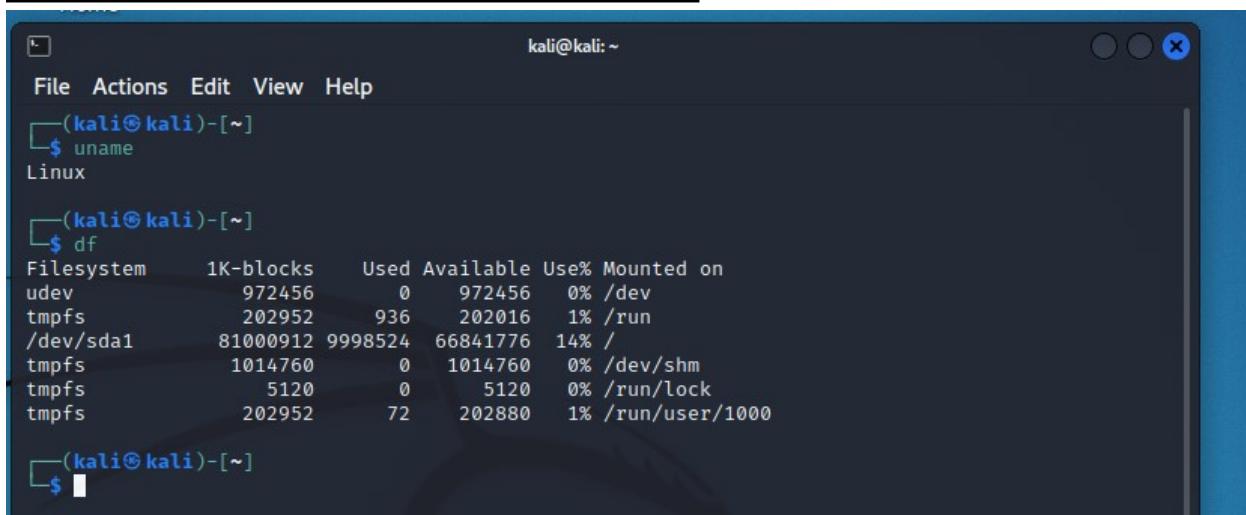
Linux



***AB) df: Display disk space usage***

```
└──(kali㉿kali)-[~]
  └─$ df
```

Filesystem	1K-blocks	Used	Available	Use%	Mounted on
udev	972456	0	972456	0%	/dev
tmpfs	202952	936	202016	1%	/run
/dev/sda1	81000912	9998524	66841776	14%	/
tmpfs	1014760	0	1014760	0%	/dev/shm
tmpfs	5120	0	5120	0%	/run/lock
tmpfs	202952	72	202880	1%	/run/user/1000



The screenshot shows a terminal window titled 'kali@kali: ~'. The window contains the following session:

```
File Actions Edit View Help
└──(kali㉿kali)-[~]
  $ uname
Linux
└──(kali㉿kali)-[~]
  $ df
Filesystem      1K-blocks      Used   Available  Use% Mounted on
udev              972456        0    972456     0% /dev
tmpfs             202952       936    202016     1% /run
/dev/sda1         81000912  9998524  66841776    14% /
tmpfs             1014760        0   1014760     0% /dev/shm
tmpfs               5120        0      5120     0% /run/lock
tmpfs             202952       72    202880     1% /run/user/1000
└──(kali㉿kali)-[~]
  $ █
```

***AC) free: Display memory usage***

```
└──(kali㉿kali)-[~]
  └─$ free
```

	total	used	free	shared	buff/cache	available
Mem:	2029520	593860	479212	36364	956448	1211564
Swap:	998396	5156	993240			

```
(kali㉿kali)-[~]
└─$ free
      total        used        free      shared  buff/cache   available
Mem:   2029520      593860     479212      36364      956448     1211564
Swap:  998396       5156    993240

(kali㉿kali)-[~]
└─$
```

***AD) uptime: Show system uptime***

```
(kali㉿kali)-[~]
└─$ uptime
08:00:37 up 3:44, 1 user, load average: 0.07, 0.11, 0.09
```

```
(kali㉿kali)-[~]
└─$ uptime
08:00:37 up 3:44, 1 user, load average: 0.07, 0.11, 0.09
```

***AE) who: Display logged-in users***

```
(kali㉿kali)-[~]
└─$ who
kali    tty7        2023-05-19 09:59 (:0)
```

```
(kali㉿kali)-[~]
└─$ who
kali    tty7        2023-05-19 09:59 (:0)
```

***AF) w: Display logged-in users and their activities***

```
(kali㉿kali)-[~]
└─$ w
08:00:44 up 3:44, 1 user, load average: 0.06, 0.11, 0.09
USER    TTY      FROM          LOGIN@  IDLE  JCPU   PCPU
WHAT
kali    tty7    :0           Fri09   2days 2:34  0.69s xfce4-session
```

```
(kali㉿kali)-[~]
└─$ w
08:00:44 up 3:44, 1 user, load average: 0.06, 0.11, 0.09
USER    TTY      FROM          LOGIN@  IDLE  JCPU   PCPU WHAT
kali    tty7    :0           Fri09   2days 2:34  0.69s xfce4-session
```

## **Networking:**

### **Commands, Output, Screenshots::**

#### ***A) ifconfig: Configure network interfaces***

```
└──(kali㉿ kali)-[~]
    └─$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.2.15  netmask 255.255.255.0  broadcast 10.0.2.255
        inet6 fe80::a00:27ff:fe50:4c14  prefixlen 64  scopeid 0x20<link>
            ether 08:00:27:50:4c:14  txqueuelen 1000  (Ethernet)
            RX packets 18001  bytes 22948183 (21.8 MiB)
            RX errors 0  dropped 0  overruns 0  frame 0
            TX packets 4867  bytes 542000 (529.2 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 20  bytes 1000 (1000.0 B)
            RX errors 0  dropped 0  overruns 0  frame 0
            TX packets 20  bytes 1000 (1000.0 B)
            TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0
```

```
(kali㉿kali)-[~]
$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255
        inet6 fe80::a00:27ff:fe50:4c14 prefixlen 64 scopeid 0x20<link>
            ether 08:00:27:50:4c:14 txqueuelen 1000 (Ethernet)
            RX packets 18001 bytes 22948183 (21.8 MiB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 4867 bytes 542000 (529.2 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 20 bytes 1000 (1000.0 B)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 20 bytes 1000 (1000.0 B)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

#### AH) **ping: Send ICMP echo requests to a network host**

```
(kali㉿kali)-[~]
$ ping 8.8.8.8
```

```
(kali㉿kali)-[~]
$ ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=117 time=85.4 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=117 time=45.4 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=117 time=87.6 ms
64 bytes from 8.8.8.8: icmp_seq=4 ttl=117 time=70.3 ms
```

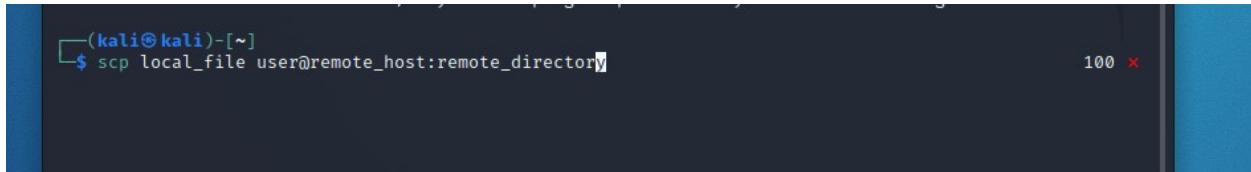
#### AI) **ssh: Securely connect to a remote system**

```
(kali㉿kali)-[~]
$ ssh user@remote_host
```

```
(kali㉿kali)-[~]
$ ssh user@remote_host
```

### *AJ) scp: Securely copy files between systems*

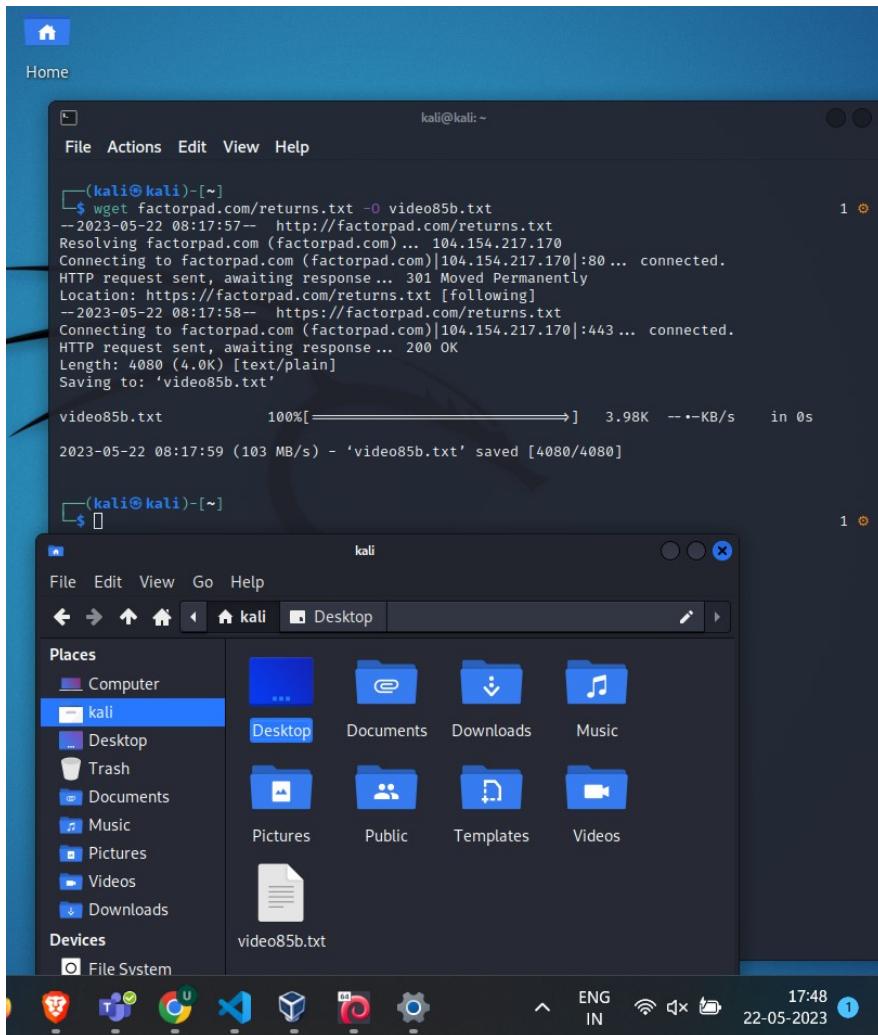
└──(kali㉿kali)-[~]  
└─\$ scp local\_file user@remote\_host:remote\_directory



```
(kali㉿kali)-[~]
$ scp local_file user@remote_host:remote_directory
```

### *AK) wget: Download files from the web*

└──(kali㉿kali)-[~]  
└─\$ wget factorpad.com/returns.txt -O video85b.txt



```
(kali㉿kali)-[~]
$ wget factorpad.com/returns.txt -O video85b.txt
--2023-05-22 08:17:57-- http://factorpad.com/returns.txt
Resolving factorpad.com (factorpad.com)... 104.154.217.170
Connecting to factorpad.com (factorpad.com)|104.154.217.170|:80... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: https://factorpad.com/returns.txt [following]
--2023-05-22 08:17:58-- https://factorpad.com/returns.txt
Connecting to factorpad.com (factorpad.com)|104.154.217.170|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 4080 (4.0K) [text/plain]
Saving to: 'video85b.txt'

video85b.txt      100%[=====]   3.98K --KB/s    in 0s

2023-05-22 08:17:59 (103 MB/s) - 'video85b.txt' saved [4080/4080]

(kali㉿kali)-[~]
```

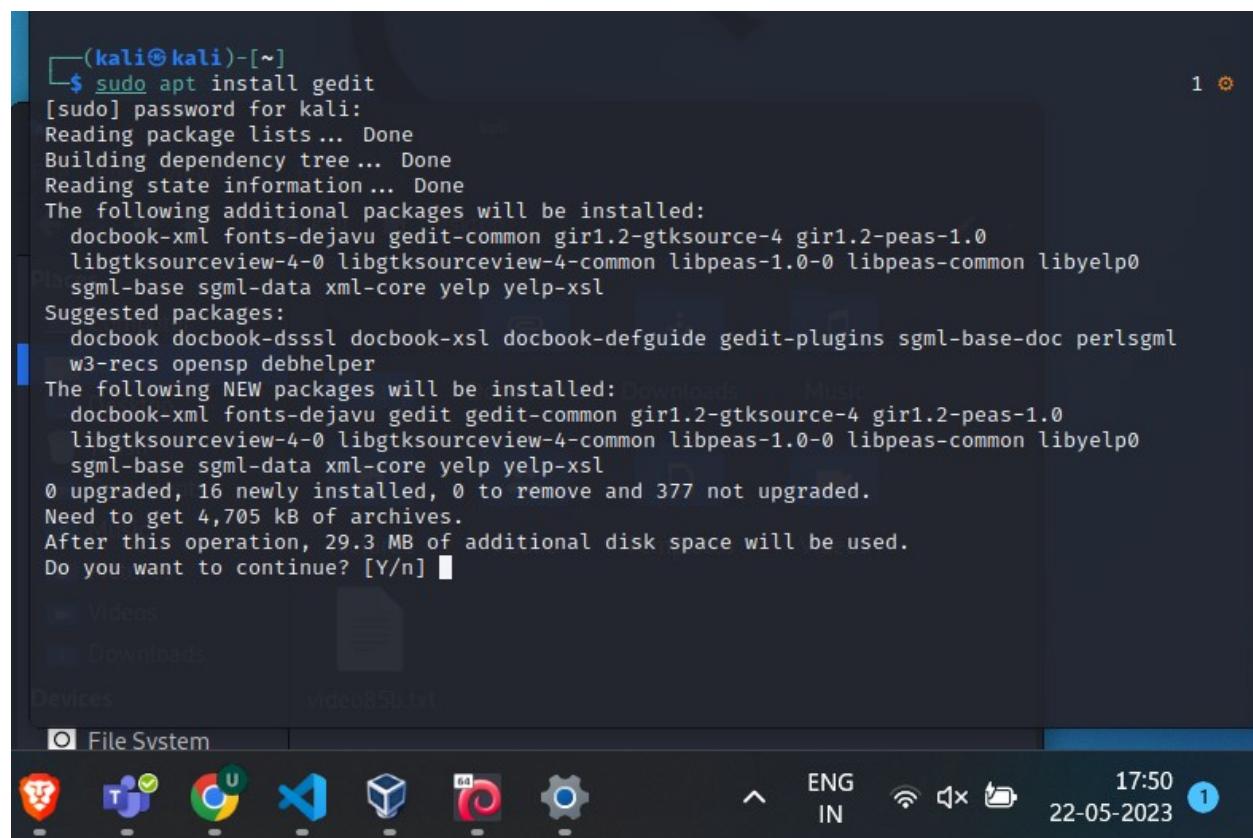
The desktop environment shows a file manager window with a sidebar labeled "Places" containing "Computer", "kali" (which is selected), "Desktop", "Trash", "Documents", "Music", "Pictures", "Public", "Templates", and "Videos". A file named "video85b.txt" is visible in the main pane.

## **System Administration:**

### **Commands, Output, Screenshots::**

#### **AL) sudo: Execute commands with superuser privileges**

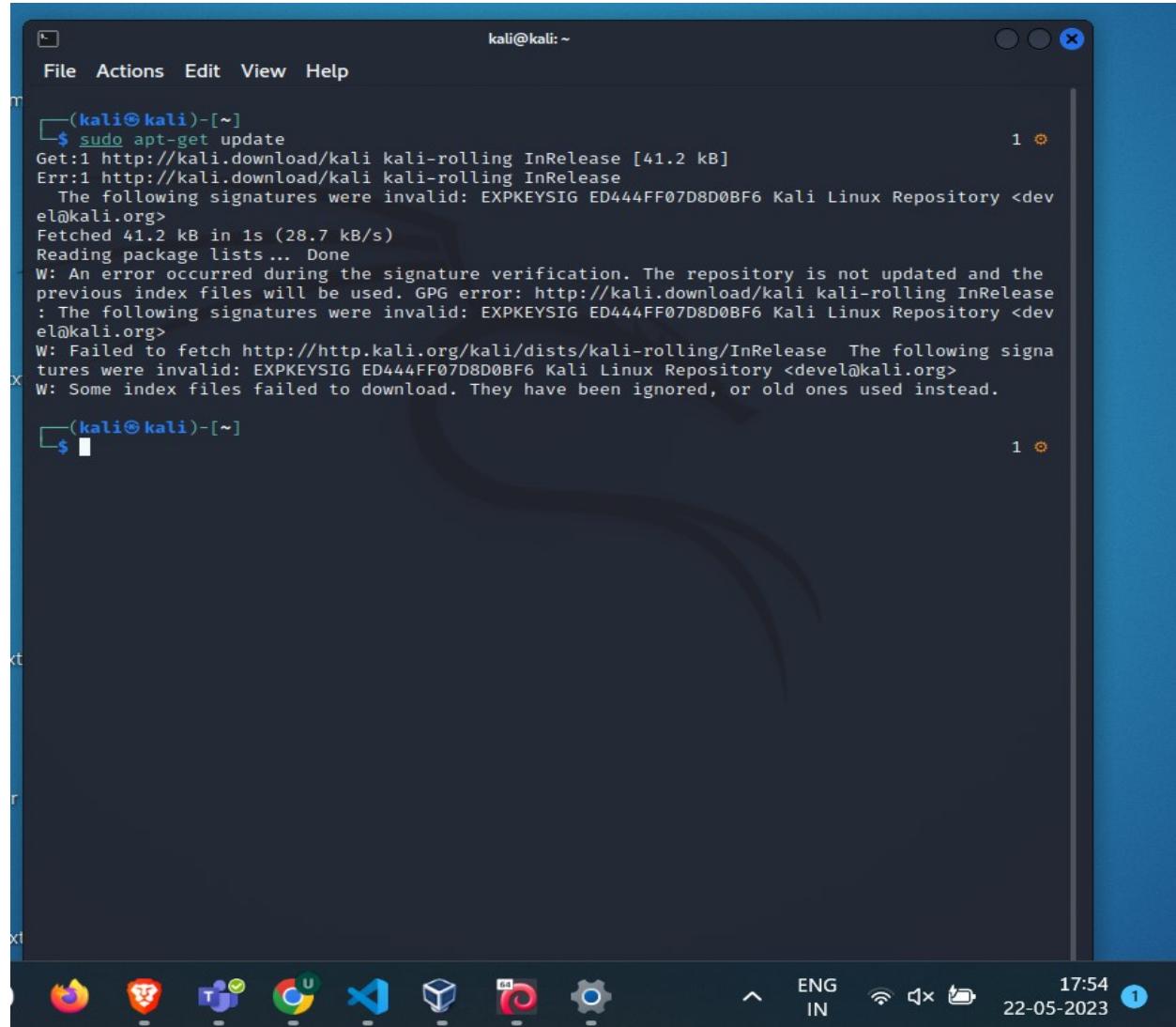
```
└─(kali㉿kali)-[~]
  $ sudo apt install gedit
[sudo] password for kali:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```



```
(kali㉿kali)-[~]
$ sudo apt install gedit
[sudo] password for kali:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  docbook-xml fonts-dejavu gedit-common gir1.2-gtksource-4 gir1.2-peas-1.0
  libgtksourceview-4-0 libgtksourceview-4-common libpeas-1.0-0 libpeas-common libyelp0
  sgml-base sgml-data xml-core yelp yelp-xsl
Suggested packages:
  docbook docbook-dsssl docbook-xsl docbook-defguide gedit-plugins sgml-base-doc perlsgml
  w3-recs opensp debhelper
The following NEW packages will be installed:
  docbook-xml fonts-dejavu gedit gedit-common gir1.2-gtksource-4 gir1.2-peas-1.0
  libgtksourceview-4-0 libgtksourceview-4-common libpeas-1.0-0 libpeas-common libyelp0
  sgml-base sgml-data xml-core yelp yelp-xsl
0 upgraded, 16 newly installed, 0 to remove and 377 not upgraded.
Need to get 4,705 kB of archives.
After this operation, 29.3 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

### ***AM) apt-get: Package management for Debian-based distributions***

└─(kali㉿kali)-[~]  
└─\$ sudo apt-get update



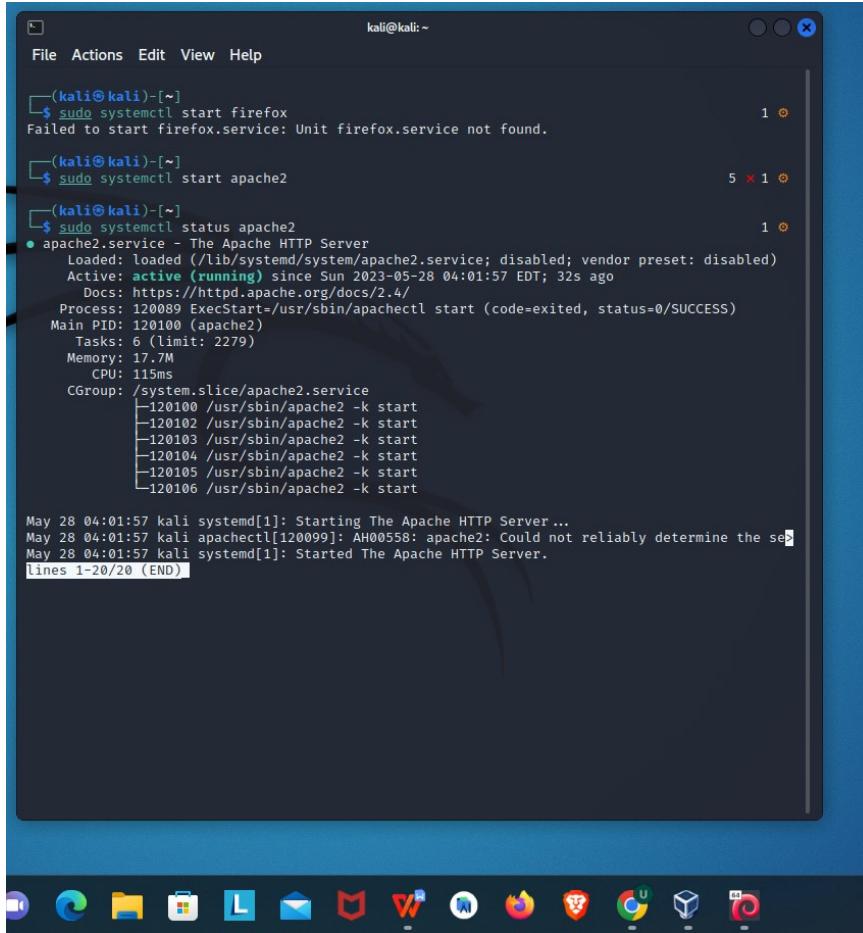
```
kali@kali: ~
File Actions Edit View Help
M
  └─(kali㉿kali)-[~]
    └─$ sudo apt-get update
      Get:1 http://kali.download/kali kali-rolling InRelease [41.2 kB]
      Err:1 http://kali.download/kali kali-rolling InRelease
          The following signatures were invalid: EXPKEYSIG ED444FF07D8D0BF6 Kali Linux Repository <dev
          el@kali.org>
      Fetched 41.2 kB in 1s (28.7 kB/s)
      Reading package lists... Done
      W: An error occurred during the signature verification. The repository is not updated and the
      previous index files will be used. GPG error: http://kali.download/kali kali-rolling InRelease
      : The following signatures were invalid: EXPKEYSIG ED444FF07D8D0BF6 Kali Linux Repository <dev
          el@kali.org>
      W: Failed to fetch http://http.kali.org/kali/dists/kali-rolling/InRelease  The following signa
      tures were invalid: EXPKEYSIG ED444FF07D8D0BF6 Kali Linux Repository <devel@kali.org>
      W: Some index files failed to download. They have been ignored, or old ones used instead.

  └─(kali㉿kali)-[~]
    └─$
```

### ***AN) yum: Package management for Red Hat-based distributions***

*sudo yum install httpd  
sudo yum remove httpd*  
└─(kali㉿kali)-[~]  
└─\$ sudo yum install httpd

## *A0) systemctl: Manage system services*



```

kali㉿kali:[~]
File Actions Edit View Help

--(kali㉿kali)-[~]
└─$ sudo systemctl start firefox
Failed to start firefox.service: Unit firefox.service not found.

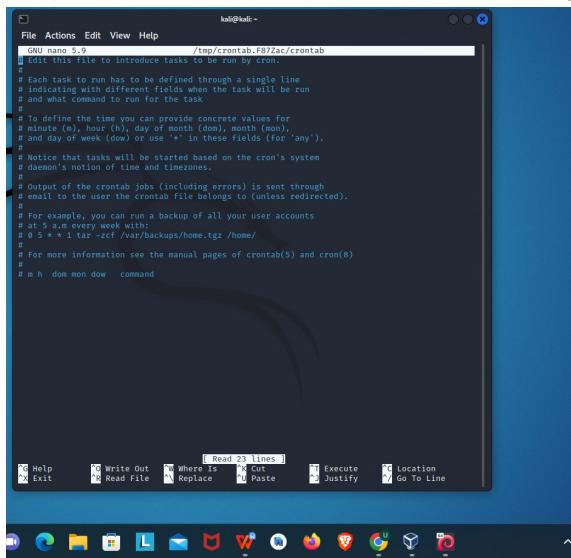
--(kali㉿kali)-[~]
└─$ sudo systemctl start apache2
--(kali㉿kali)-[~]
└─$ sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; disabled; vendor preset: disabled)
   Active: active (running) since Sun 2023-05-28 04:01:57 EDT; 32s ago
     Docs: https://httpd.apache.org/docs/2.4/
   Process: 120089 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
 Main PID: 120100 (apache2)
   Tasks: 6 (limit: 2279)
    Memory: 17.7M
      CPU: 115ms
     CGroup: /system.slice/apache2.service
             ├─120100 /usr/sbin/apache2 -k start
             ├─120102 /usr/sbin/apache2 -k start
             ├─120103 /usr/sbin/apache2 -k start
             ├─120104 /usr/sbin/apache2 -k start
             ├─120105 /usr/sbin/apache2 -k start
             └─120106 /usr/sbin/apache2 -k start

May 28 04:01:57 kali systemd[1]: Starting The Apache HTTP Server ...
May 28 04:01:57 kali apachectl[120089]: AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.0.1 for Port 80
May 28 04:01:57 kali systemd[1]: Started The Apache HTTP Server.
lines 1-20/20 (END)

```

The terminal window shows the user attempting to start the Firefox service with `sudo systemctl start firefox`, which fails because the unit file was not found. Then, the user successfully starts the Apache2 service with `sudo systemctl start apache2` and checks its status with `sudo systemctl status apache2`. The output indicates that the service is active and running, with a main PID of 120100 and several child processes (120102, 120103, 120104, 120105, 120106). The Apache server is listening on port 80. The desktop environment at the bottom has icons for various applications like a terminal, file manager, browser, and word processor.

## *AP) crontab: Schedule recurring tasks*



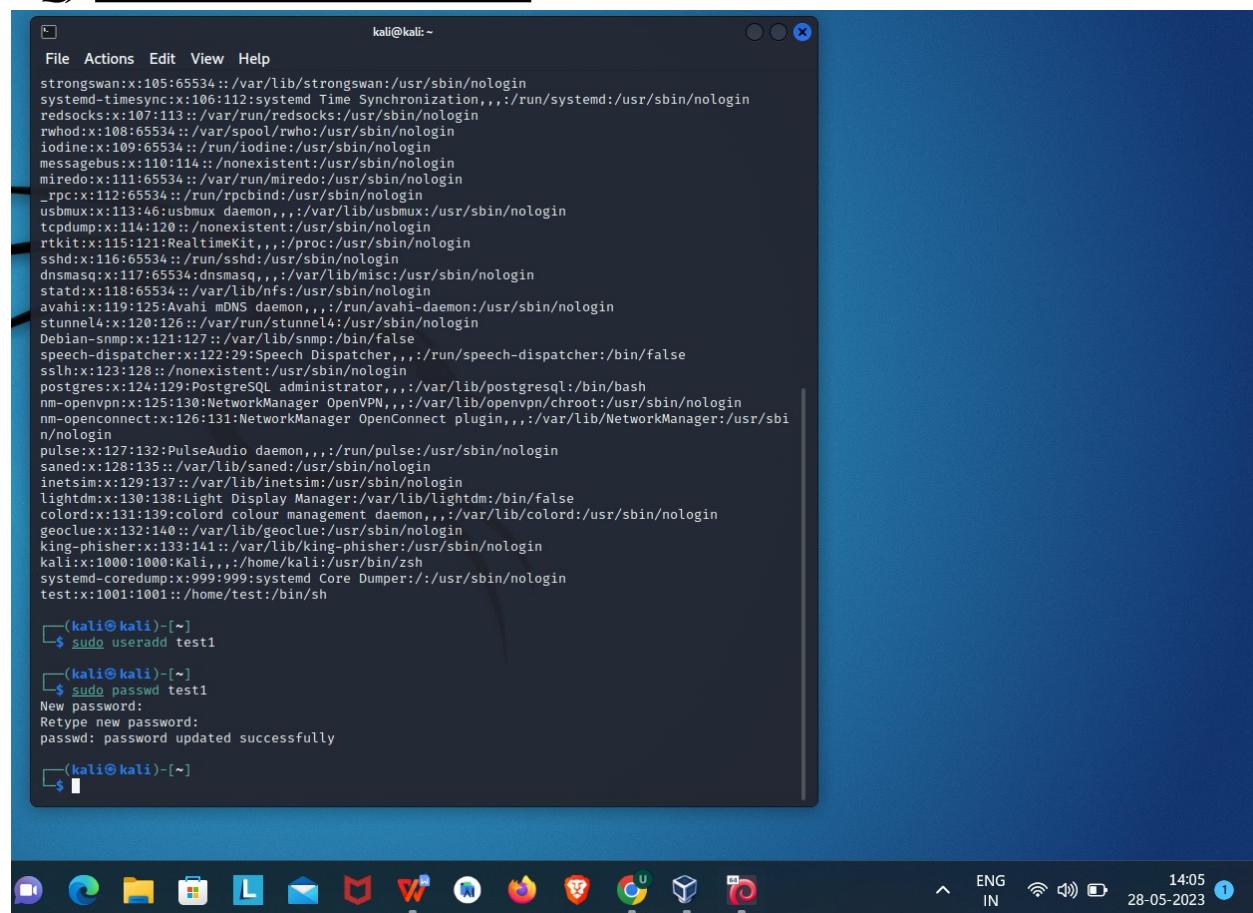
```

kali㉿kali:[~]
File Actions Edit View Help
GNU nano 3.9          /tmp/crontab.F87Zac/crontab
# This manual page is intended to introduce tasks that can be run by cron.
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (e), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezone.
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
# For example, you can run a backup of all your user accounts
# at 5 a.m. every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
# For more information see the manual pages of crontab(5) and cron(8)
# m h dom mon dow  command

```

The terminal window displays the man page for crontab(5) using the nano editor. The page explains how to define tasks using cron expressions for time and day. It includes examples of scheduling a backup job at 5 AM every Monday. The desktop environment at the bottom has icons for various applications like a terminal, file manager, browser, and word processor.

## *AQ) useradd: Add a new user*



```
kali㉿kali:~
```

```
File Actions Edit View Help
strongswan:x:105:65534::/var/lib/strongswan:/usr/sbin/nologin
systemd-timesync:x:106:112:system Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
redsocks:x:107:113::/var/run/redsocks:/usr/sbin/nologin
rwhod:x:108:65534::/var/spool/rwho:/usr/sbin/nologin
iodine:x:109:65534::/run/iodine:/usr/sbin/nologin
messagebus:x:110:114::/run/nexistent:/usr/sbin/nologin
miredo:x:111:65534::/var/run/miredo:/usr/sbin/nologin
_rpc:x:112:65534::/run/rpcbind:/usr/sbin/nologin
usbmux:x:113:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
tcpdump:x:114:120::/nonexistent:/usr/sbin/nologin
rtkit:x:115:121:RealtimeKit,,,:/proc:/usr/sbin/nologin
sshd:x:116:65534::/run/sshd:/usr/sbin/nologin
dnsmasq:x:117:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
statd:x:118:65534::/var/lib/nfs:/usr/sbin/nologin
avahi:x:119:125:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin
stunnel4:x:120:126::/var/run/stunnel4:/usr/sbin/nologin
Debian-snmp:x:121:127::/var/lib/snmp:/bin/false
speech-dispatcher:x:122:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
sshh:x:123:128::/nonexistent:/usr/sbin/nologin
postgres:x:124:129:PostgreSQL Administrator,,,:/var/lib/postgresql:/bin/bash
nm-openvpn:x:125:130:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
nm-openconnect:x:126:131:NetworkManager OpenConnect plugin,,,:/var/lib/NetworkManager:/usr/sbin/nologin
pulse:x:127:132:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
saned:x:128:135::/var/lib/saned:/usr/sbin/nologin
inetutils:x:129:137::/var/lib/inetutils:/usr/sbin/nologin
lightdm:x:130:138:Light Display Manager:/var/lib/lightdm:/bin/false
colord:x:131:139:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
geoclue:x:132:140::/var/lib/geoclue:/usr/sbin/nologin
king-phisher:x:133:141::/var/lib/king-phisher:/usr/sbin/nologin
kali:x:1000:kali,,,:/home/kali:/usr/bin/zsh
systemd-coredump:x:999:999:systemd Core Dumper:/:/usr/sbin/nologin
test:x:1001:1001::/home/test:/bin/sh

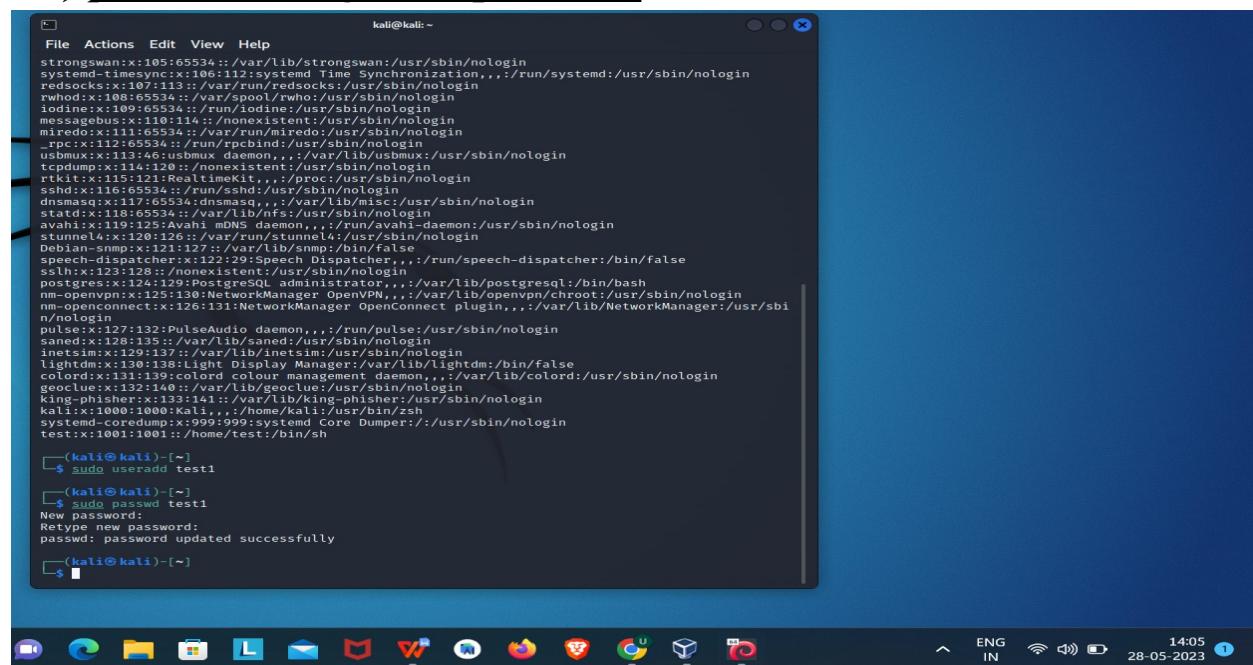
└──(kali㉿kali)-[~]
$ sudo useradd test1

└──(kali㉿kali)-[~]
$ sudo passwd test1
New password:
Retype new password:
passwd: password updated successfully

└──(kali㉿kali)-[~]
$
```

The terminal window shows the useradd command being run to add a new user named test1. It then prompts for a new password, which is successfully updated.

## *AR) passwd: Change user password*



```
kali㉿kali:~
```

```
File Actions Edit View Help
strongswan:x:105:65534::/var/lib/strongswan:/usr/sbin/nologin
systemd-timesync:x:106:112:system Time Synchronization,,,:/run/systemd:/usr/sbin/nologin
redsocks:x:107:113::/var/run/redsocks:/usr/sbin/nologin
rwhod:x:108:65534::/var/spool/rwho:/usr/sbin/nologin
iodine:x:109:65534::/run/iodine:/usr/sbin/nologin
messagebus:x:110:114::/run/nexistent:/usr/sbin/nologin
miredo:x:111:65534::/var/run/miredo:/usr/sbin/nologin
_rpc:x:112:65534::/run/rpcbind:/usr/sbin/nologin
usbmux:x:113:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
tcpdump:x:114:120::/nonexistent:/usr/sbin/nologin
rtkit:x:115:121:RealtimeKit,,,:/proc:/usr/sbin/nologin
sshd:x:116:65534::/run/sshd:/usr/sbin/nologin
dnsmasq:x:117:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
statd:x:118:65534::/var/lib/nfs:/usr/sbin/nologin
avahi:x:119:125:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin
stunnel4:x:120:126::/var/run/stunnel4:/usr/sbin/nologin
Debian-snmp:x:121:127::/var/lib/snmp:/bin/false
speech-dispatcher:x:122:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false
sshh:x:123:128::/nonexistent:/usr/sbin/nologin
postgres:x:124:129:PostgreSQL Administrator,,,:/var/lib/postgresql:/bin/bash
nm-openvpn:x:125:130:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
nm-openconnect:x:126:131:NetworkManager OpenConnect plugin,,,:/var/lib/NetworkManager:/usr/sbin/nologin
pulse:x:127:132:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin
saned:x:128:135::/var/lib/saned:/usr/sbin/nologin
inetutils:x:129:137::/var/lib/inetutils:/usr/sbin/nologin
lightdm:x:130:138:Light Display Manager:/var/lib/lightdm:/bin/false
colord:x:131:139:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin
geoclue:x:132:140::/var/lib/geoclue:/usr/sbin/nologin
king-phisher:x:133:141::/var/lib/king-phisher:/usr/sbin/nologin
kali:x:1000:kali,,,:/home/kali:/usr/bin/zsh
systemd-coredump:x:999:999:systemd Core Dumper:/:/usr/sbin/nologin
test:x:1001:1001::/home/test:/bin/sh

└──(kali㉿kali)-[~]
$ sudo useradd test1

└──(kali㉿kali)-[~]
$ sudo passwd test1
New password:
Retype new password:
passwd: password updated successfully

└──(kali㉿kali)-[~]
```

The terminal window shows the passwd command being run to change the password for the user test1. It prompts for a new password, which is successfully updated.

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