ASSESSMENT-1

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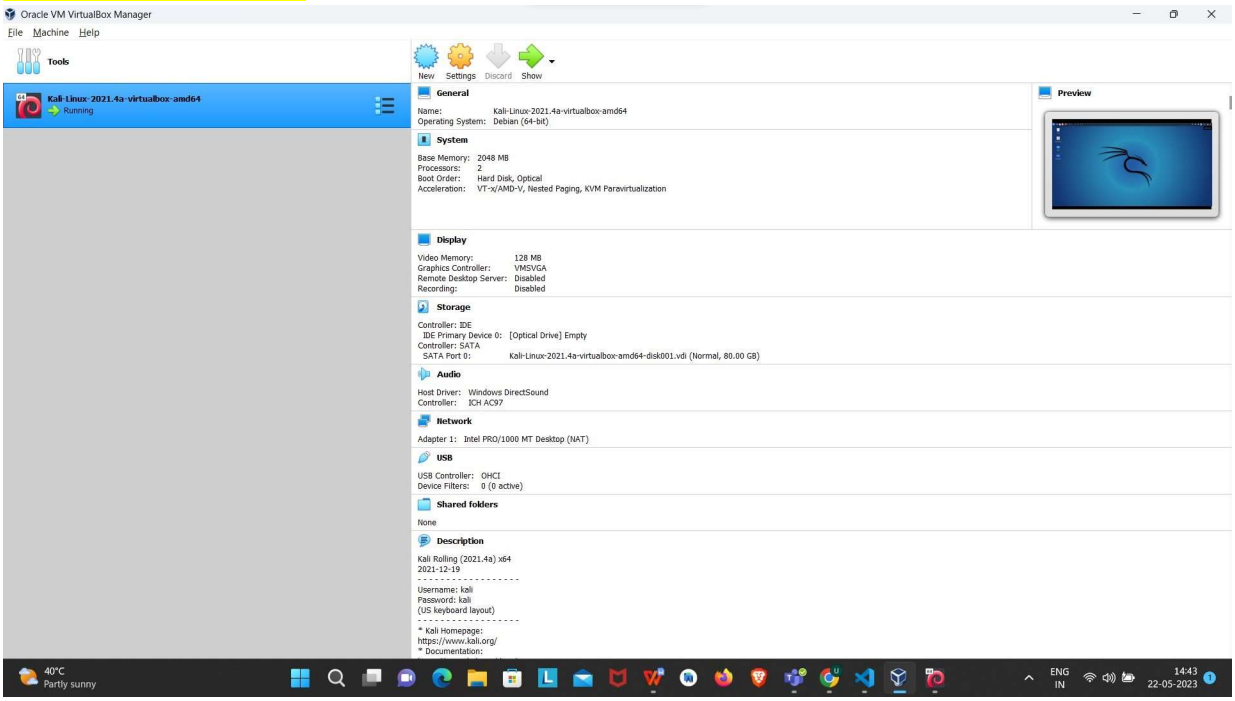
Title: Linux Command List Assessment

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 machineor virtual environment.

PLATFORM USED



File and Directory Operations:

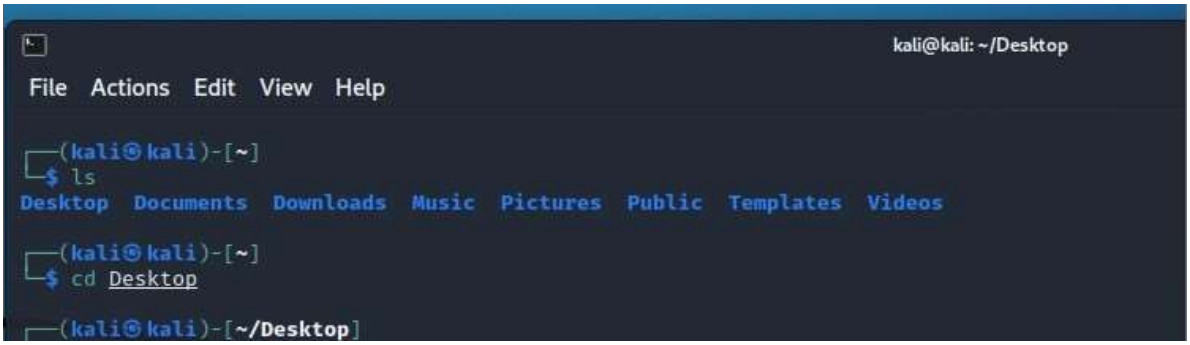
Commands, Output, Screenshots::

A) ls: List files and directories

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

B) cd: Change directory

┌──(kali㉿ kali)-[~]
└─$ cd Desktop

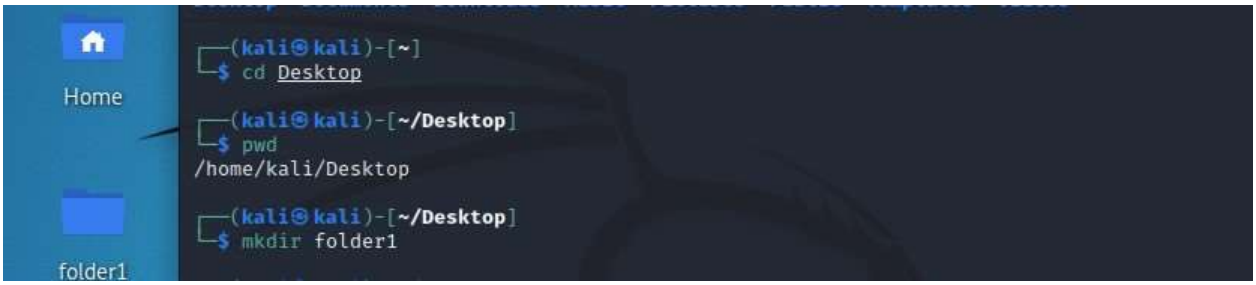


C) pwd: Print working directory

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

D) mkdir: Make directory

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



E) touch: Create an empty file

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

F) cp: Copy files and directories

```
┌──(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
```

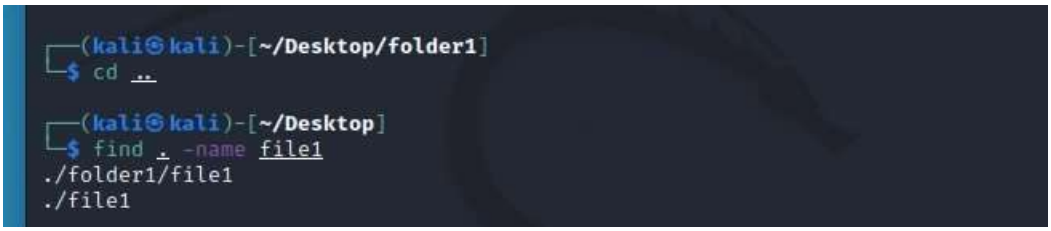
```
┌──(kali㉿ kali)-[~/Desktop/folder1]
└─$ ls
file1 newfile2.txt
```

H) rm: Remove files and directories

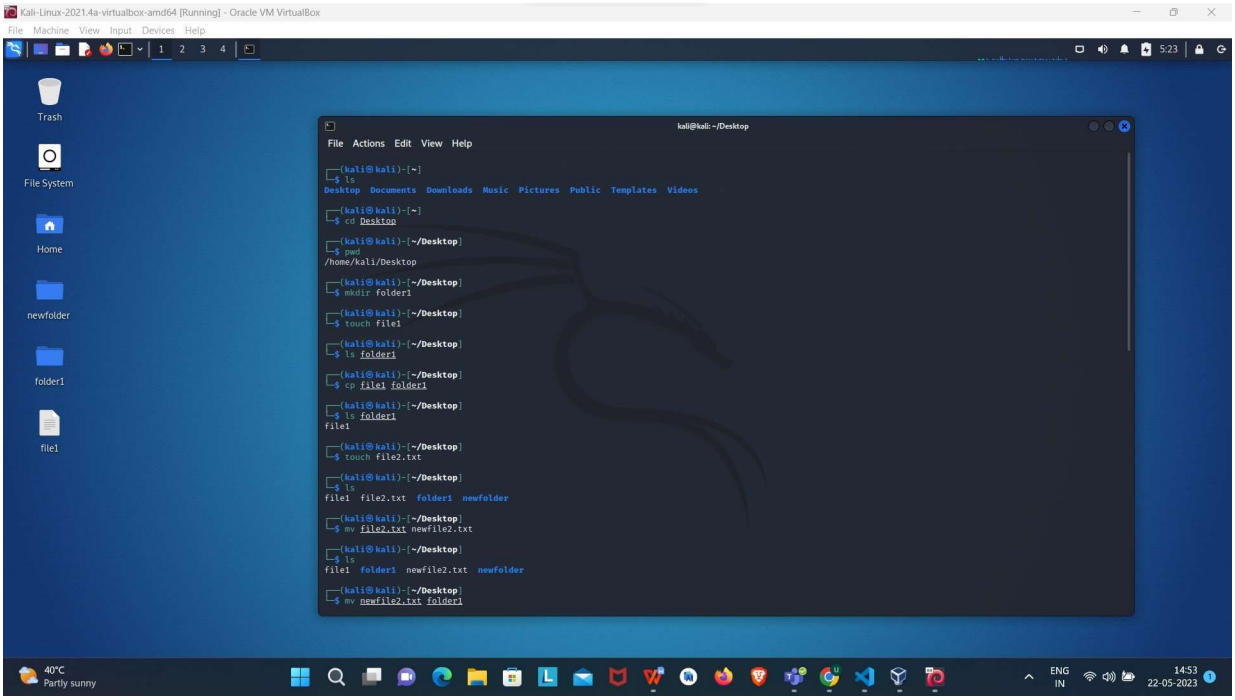
```
┌──(kali㉿ kali)-[~/Desktop]
└─$ rm file1
```

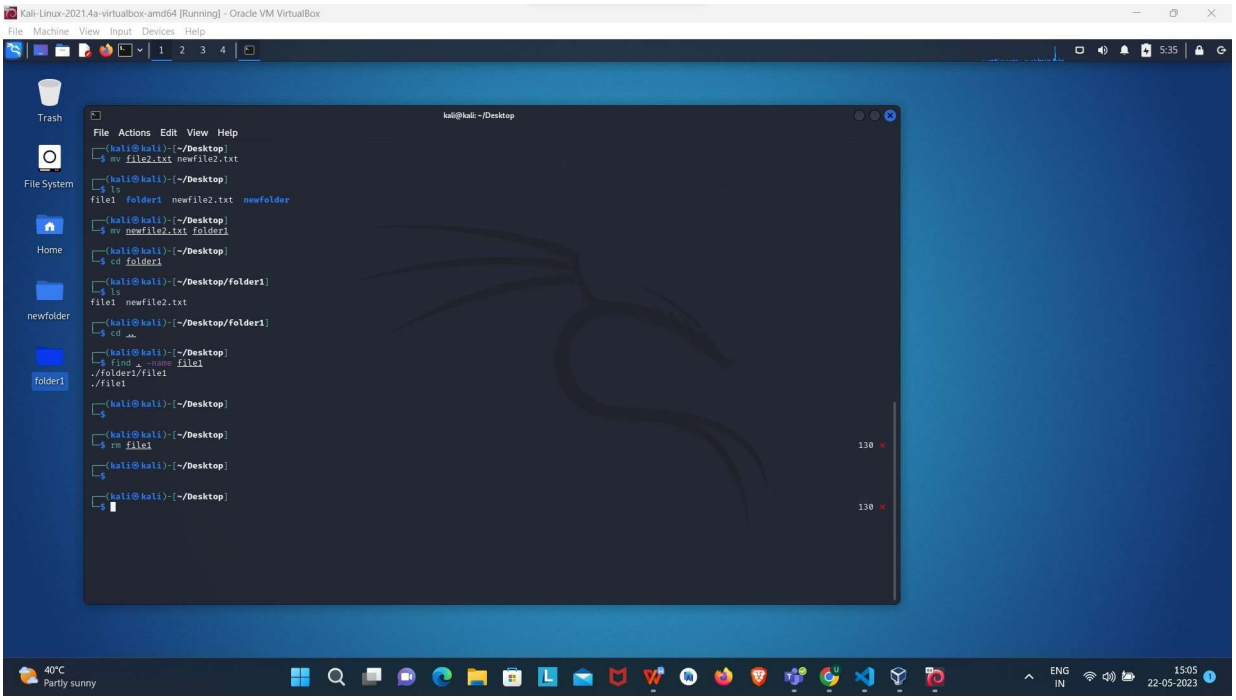
I) find: Search for files and directories

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

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



COMPLETE SNAPSHOT OF ALL COMMANDS TOGETHER





File Viewing and Editing:

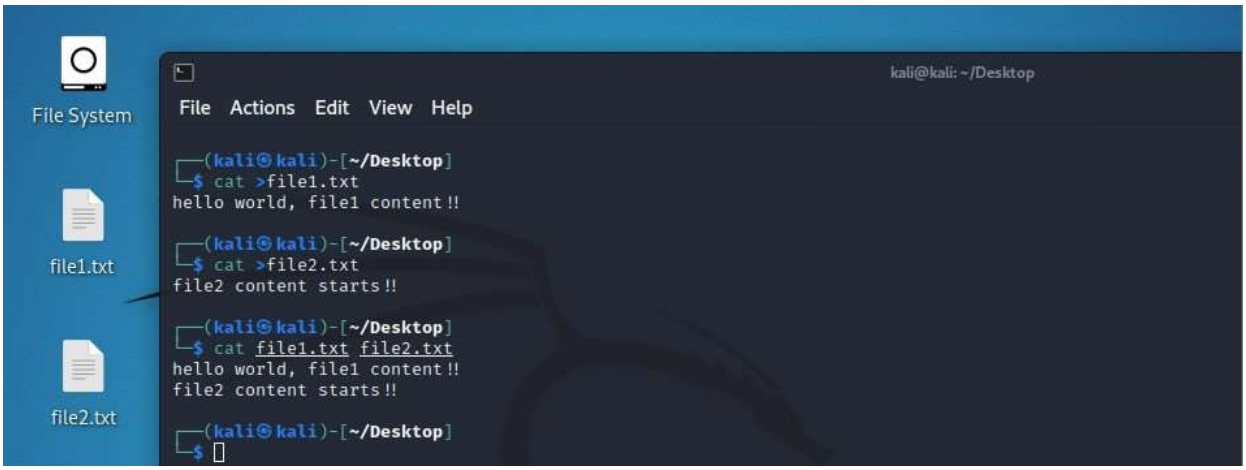
Commands, Output, Screenshots::

J) cat: Concatenate and display file content

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

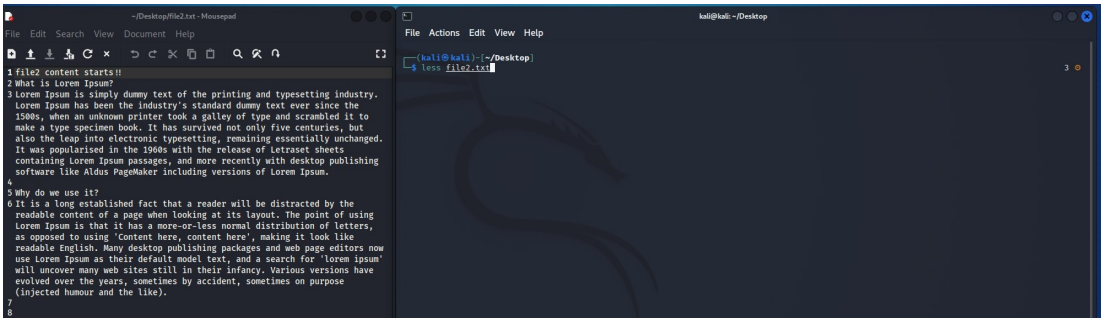
┌──(kali㉿ kali)-[~/Desktop]
└─$ cat >file2.txt
file2 content starts!!

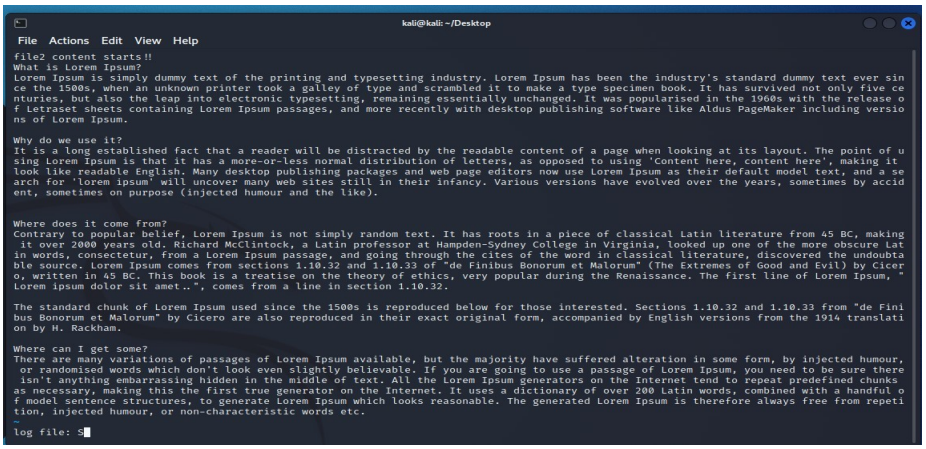
┌──(kali㉿ kali)-[~/Desktop]
└─$ cat file1.txt file2.txt
hello world, file1 content!!
file2 content starts!!



K) <u>less: View file content with pagination</u>

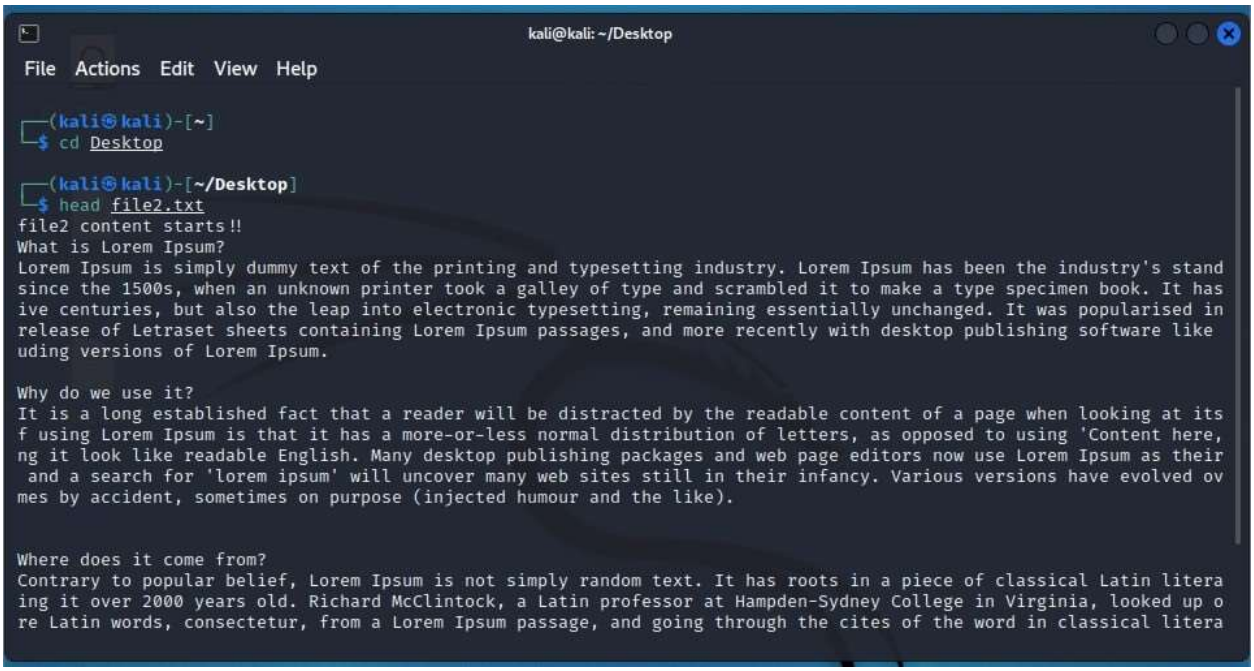
—(kali㉿ kali)-[~/Desktop]
└─$ less file2.txt





L) head: Display the beginning of a file

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



M) tail: Display the end of a file

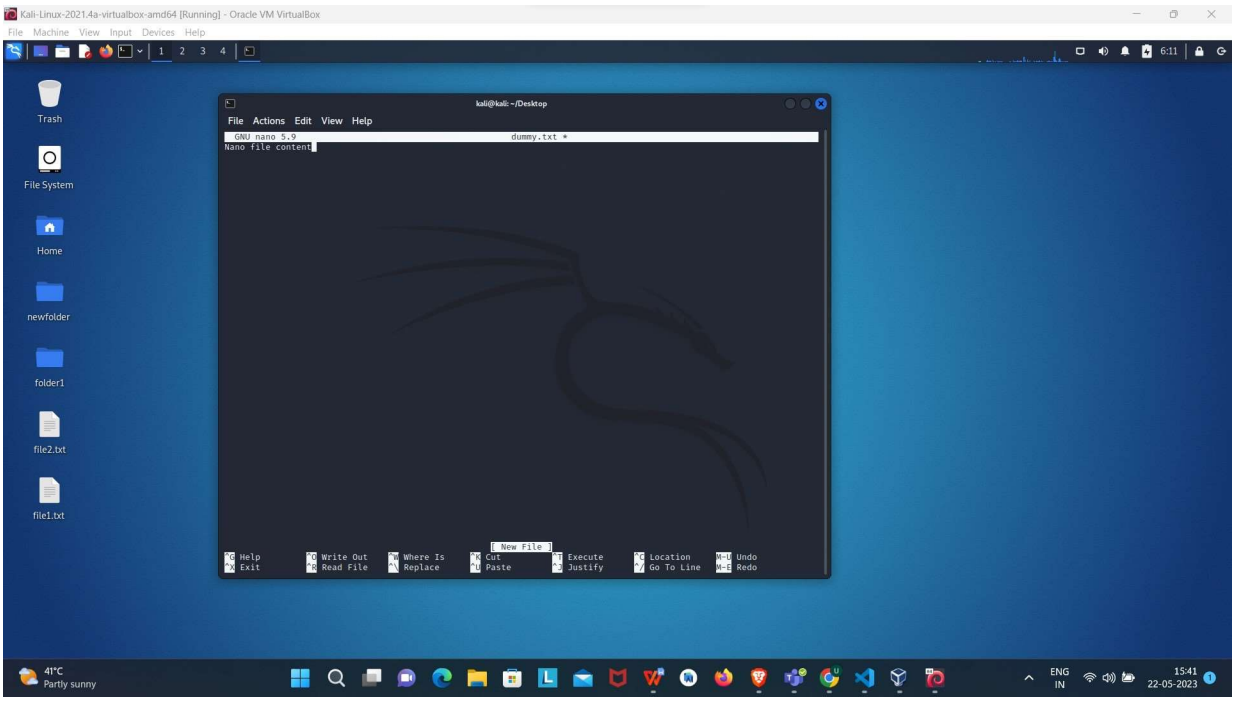
┌──(kali㉿ kali)-[~/Desktop]
└─$ tail file2.txt

```
┌──(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 p
age editors now use Lorem Ipsum as their default model text, and a search for 'lorem ipsum' will uncover many web si
tes still in their infancy. Various versions have evolved over the years, sometimes by accident, sometimes on purpos
e (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
ture from 45 BC, making it over 2000 years old. Richard McClintock, a Latin professor at Hampden-Sydney College in V
irginia, looked up one of the more obscure Latin words, consectetur, from a Lorem Ipsum passage, and going through t
he cites of the word in classical literature, discovered the undoubtable source. Lorem Ipsum comes from sections 1.1
0.32 and 1.10.33 of "de Finibus Bonorum et Malorum" (The Extremes of Good and Evil) by Cicero, written in 45 BC. Thi
s book is a treatise on the theory of ethics, very popular during the Renaissance. The first line of Lorem Ipsum, "L
orem 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 an
d 1.10.33 from "de Finibus Bonorum et Malorum" by Cicero are also reproduced in their exact original form, accompani
ed 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 fo
rm, by injected humour, or randomised words which don't look even slightly believable. If you are going to use a pas
sage of Lorem Ipsum, you need to be sure there isn't anything embarrassing hidden in the middle of text. All the Lor
em Ipsum generators on the Internet tend to repeat predefined chunks as necessary, making this the first true genera
tor on the Internet. It uses a dictionary of over 200 Latin words, combined with a handful of model sentence structu
res, to generate Lorem Ipsum which looks reasonable. The generated Lorem Ipsum is therefore always free from repetit
ion, injected humour, or non-characteristic words etc.

┌──(kali㉿kali)-[~/Desktop]
└─$
```

N) <u>nano: Text editor for creating and editing files</u>

┌──(kali㉿ kali)-[~/Desktop]

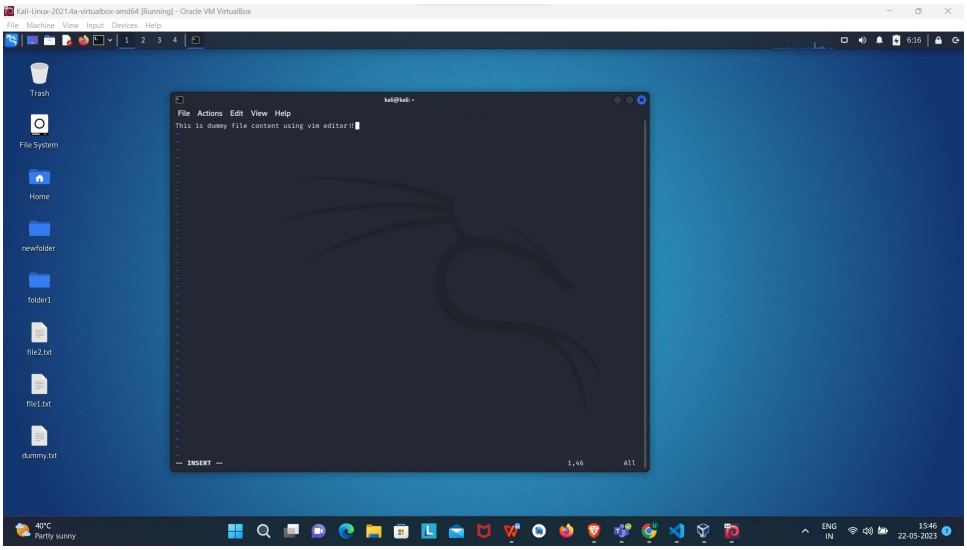
└─$ nano dummy.txt



O) <u>vi/vim: Powerful text editor for experienced users</u>

┌──(kali㉿ kali)-[~]

└─$ vim dummy1.txt

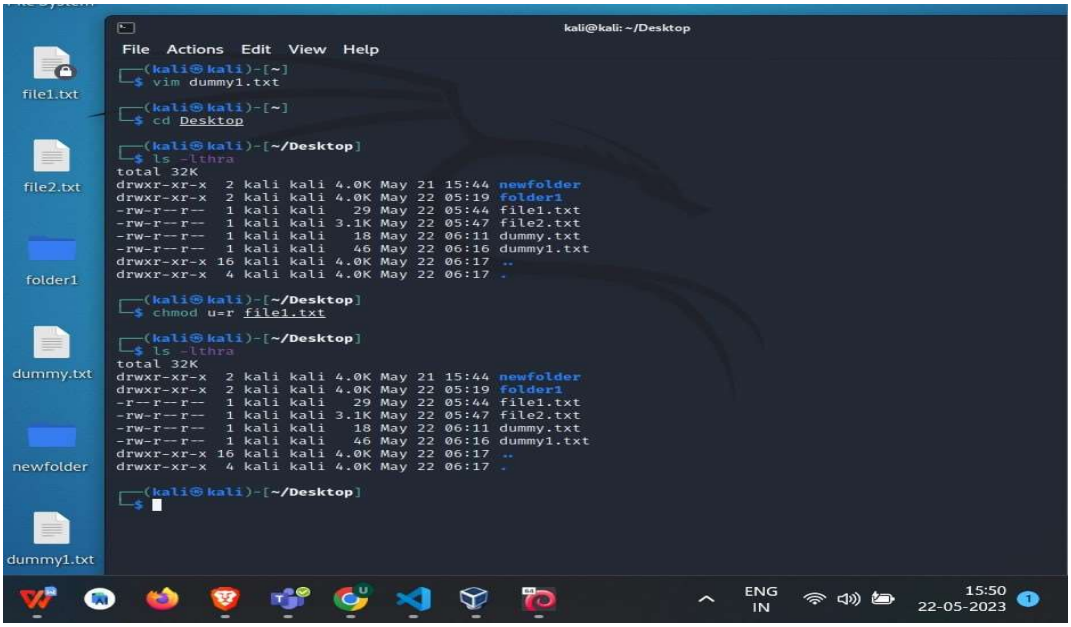


File Permissions:

Commands, Output, Screenshots::

P) chmod: Change file permissions

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



Q) chown: Change file owner

┌──(kali㉿ kali)-[~/Desktop]
└─$ sudo su root
1 ×

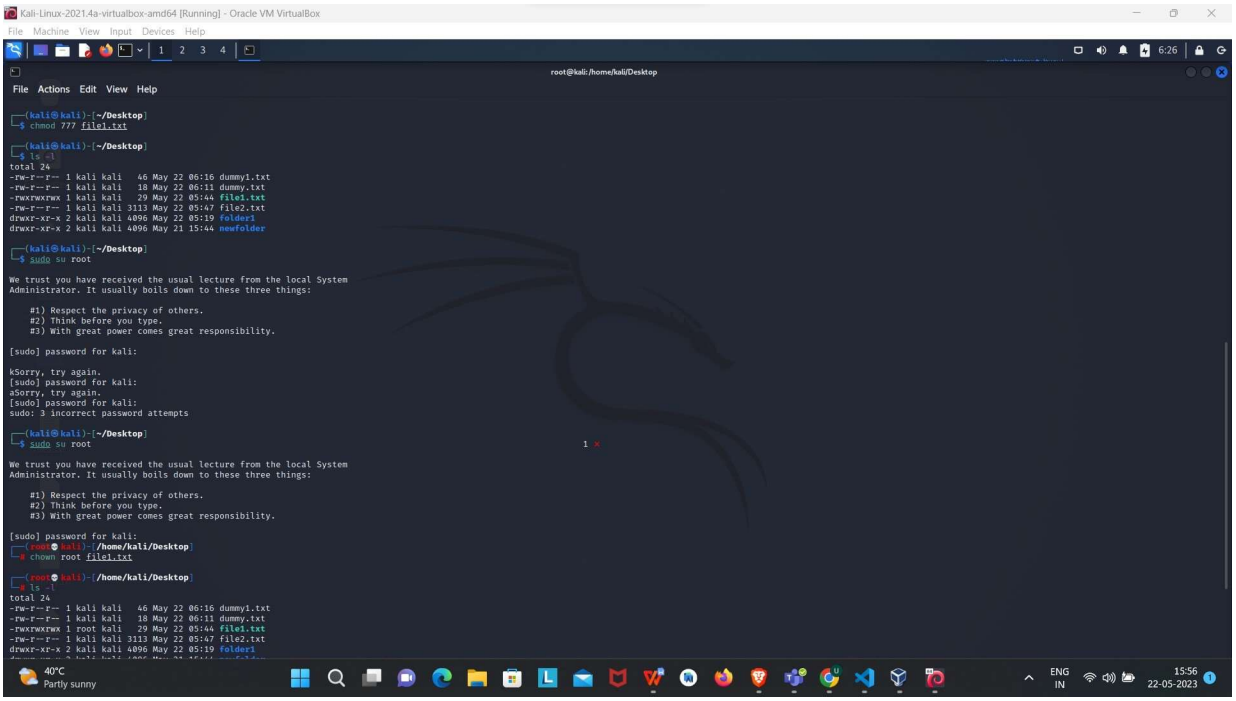
We trust you have received the usual lecture from the local System Administrator. It usually boils down to these three things:

#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]

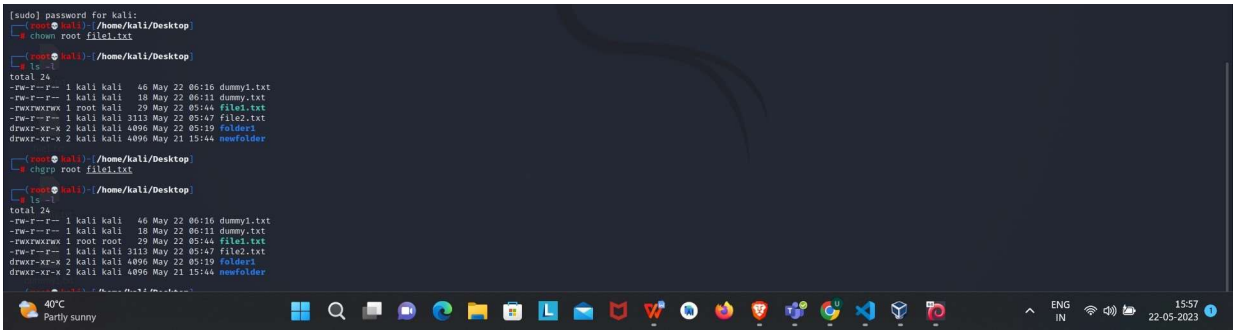
└─# ls -l



R) <u>chgrp: Change file group</u>

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

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

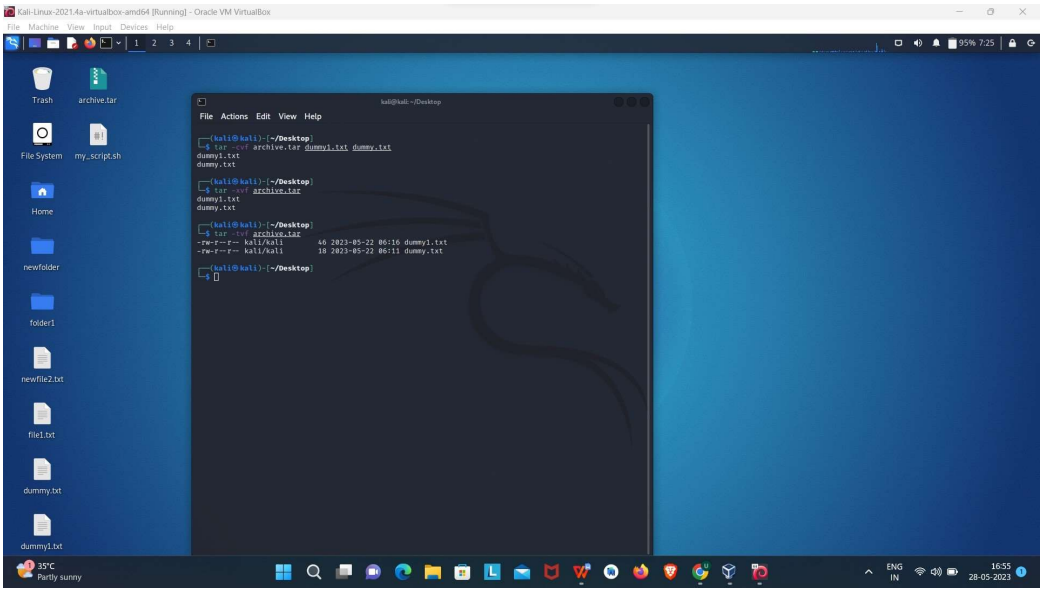


File Compression and Archiving:

Commands, Output, Screenshots::

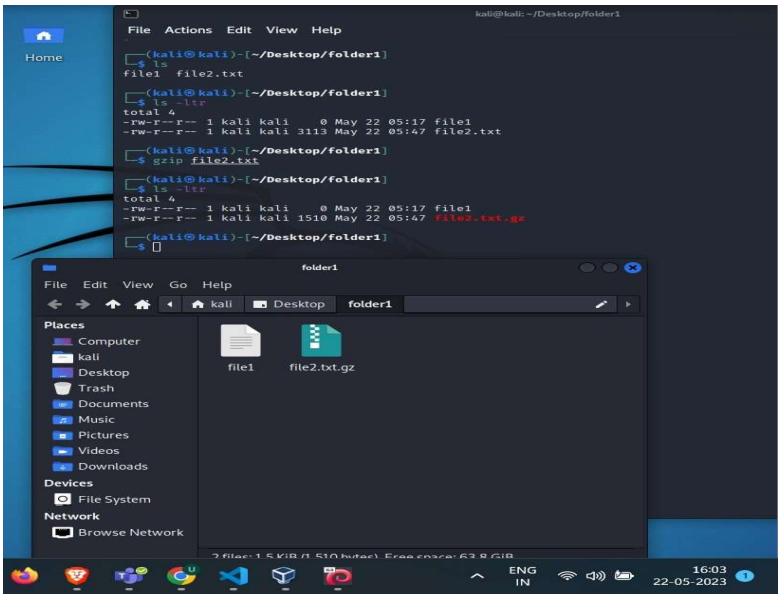
S) tar: Archive files

```
┌──(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
```



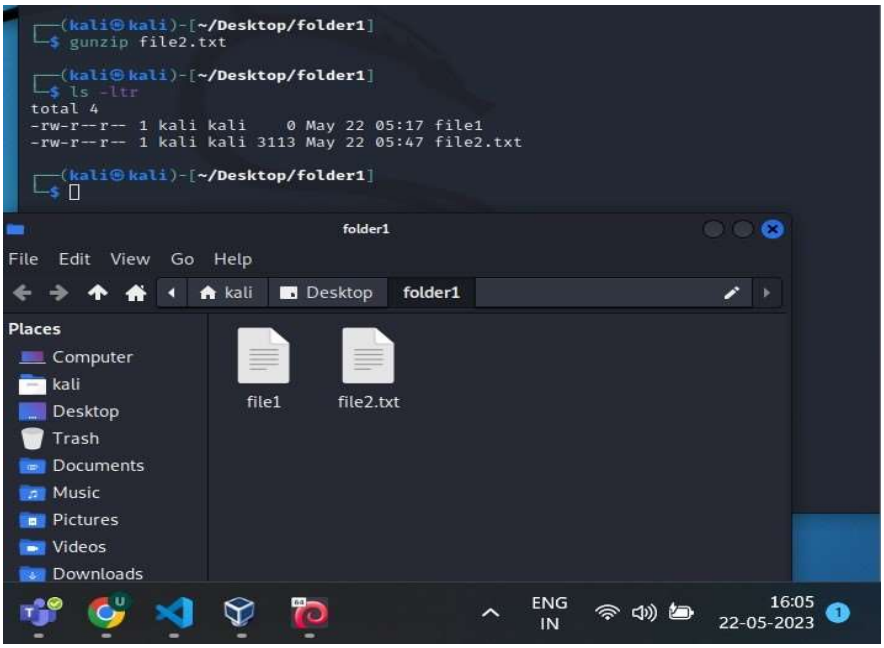
T) gzip: Compress files

```
┌──(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::

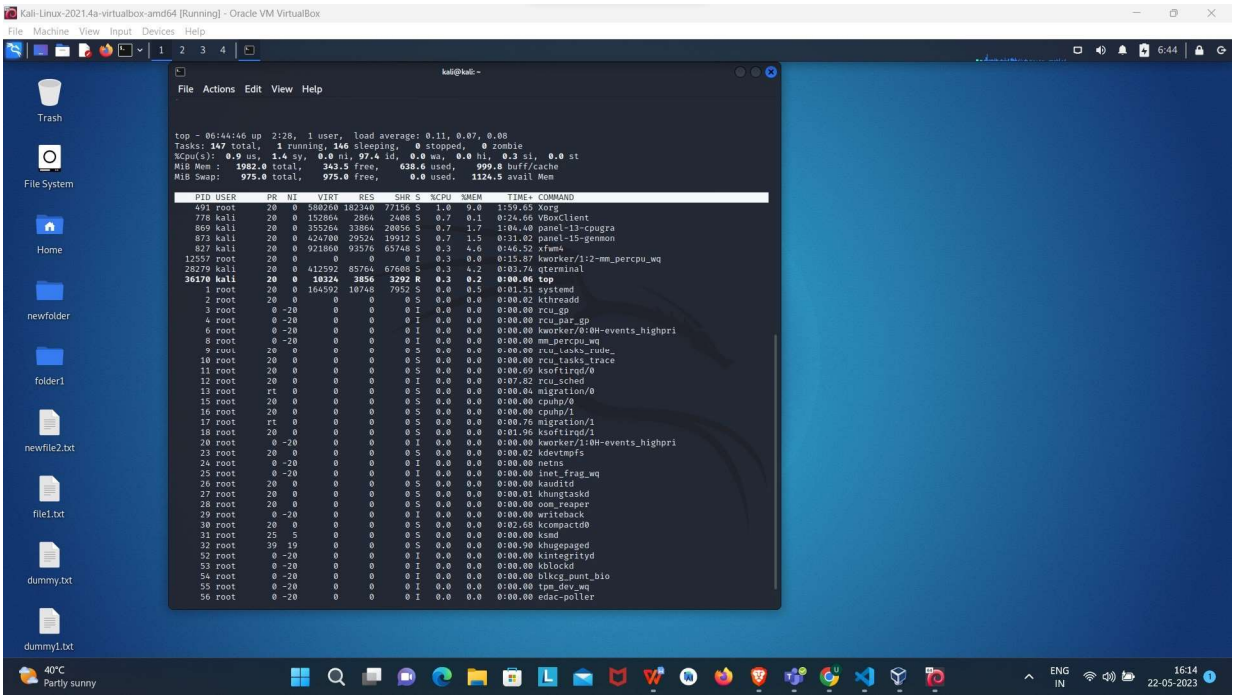
V) ps: List running processes

┌──(kali㉿ kali)-[~]
└─$ ps

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

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

┌──(kali㉿ kali)-[~]
└─$ top

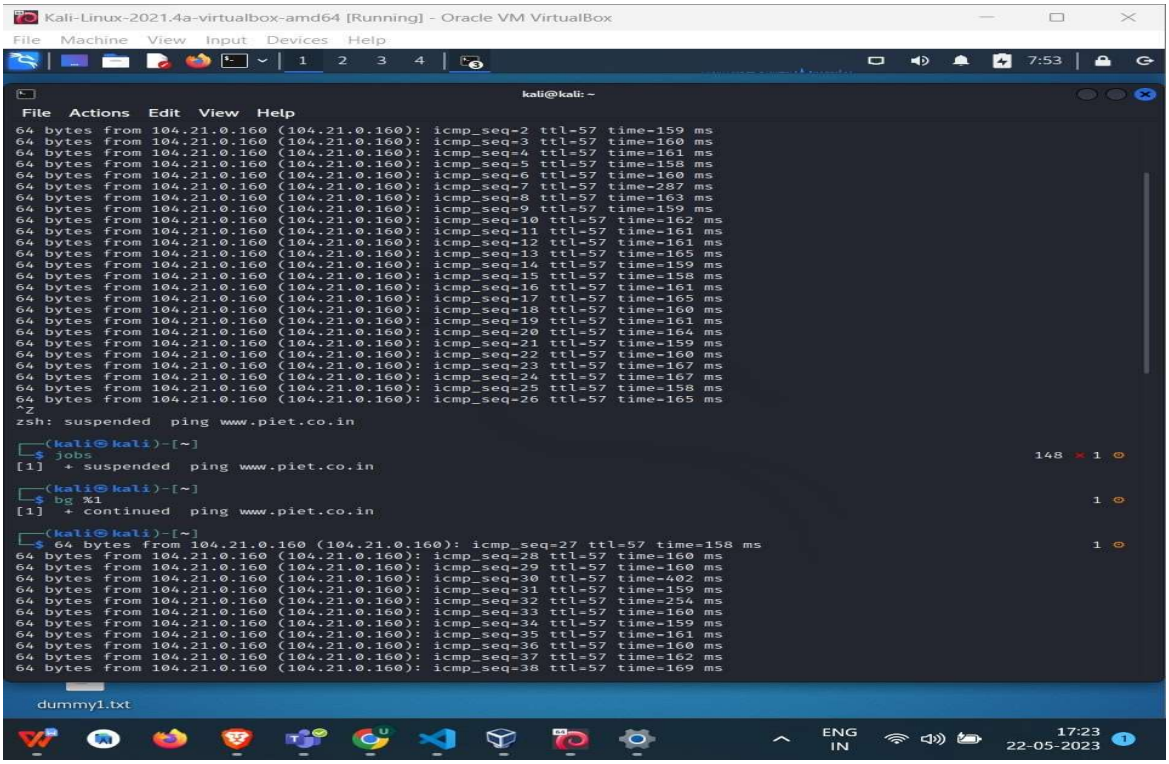


X) ***kill: Terminate processes***

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

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

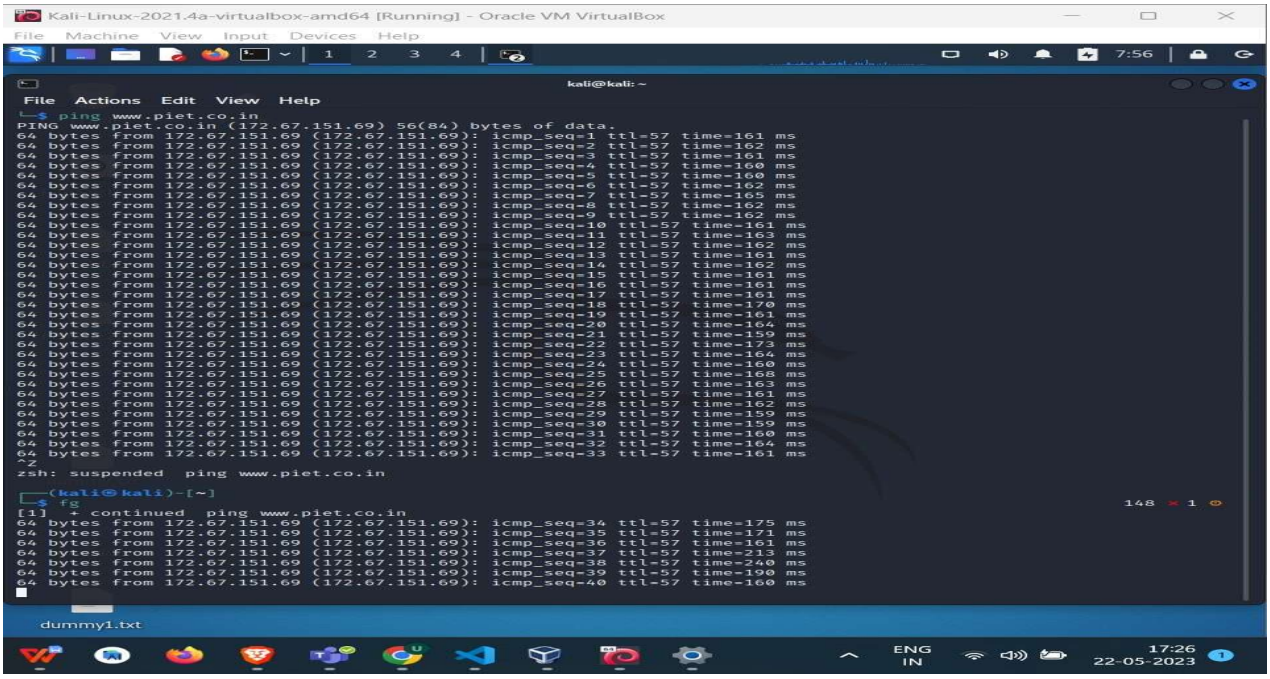
```
┌──(kali㉿ kali)-[~]
└─$ jobs
148 × 1 ⊙
[1] + suspended  ping www.piet.co.in

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



Z) fg: Bring background processes to the foreground

zsh: suspended ping www.piet.co.in

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



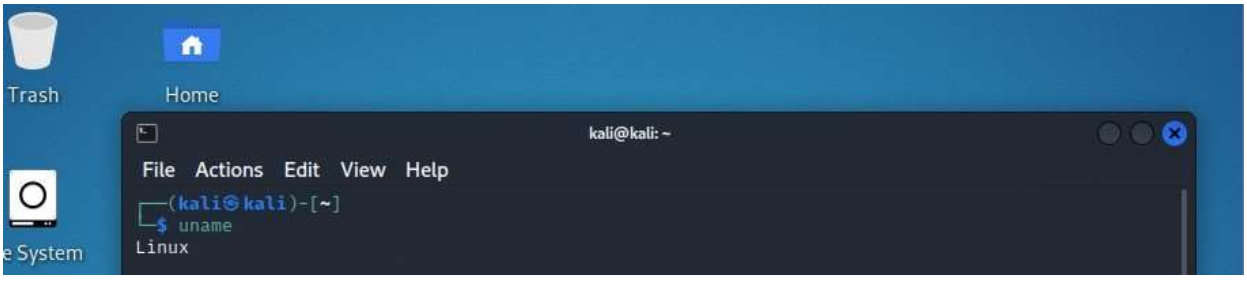
System Information:

Commands, Output, Screenshots::

AA) uname: Print system information

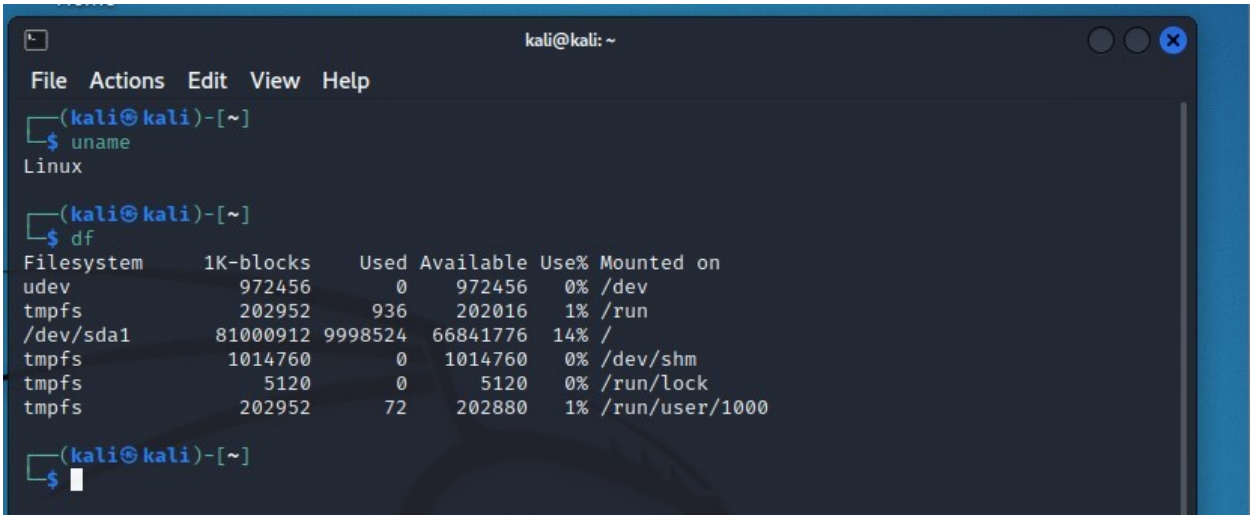
┌──(kali㉿ kali)-[~]
└─$ uname

Linux



AB) <u>df: Display disk space usage</u>

```
┌──(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
```



AC) <u>free: Display memory usage</u>

```
┌──(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) <u>uptime: Show system uptime</u>

┌──(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) <u>who: Display logged-in users</u>

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

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

AF) <u>w: Display logged-in users and their activities</u>

┌──(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

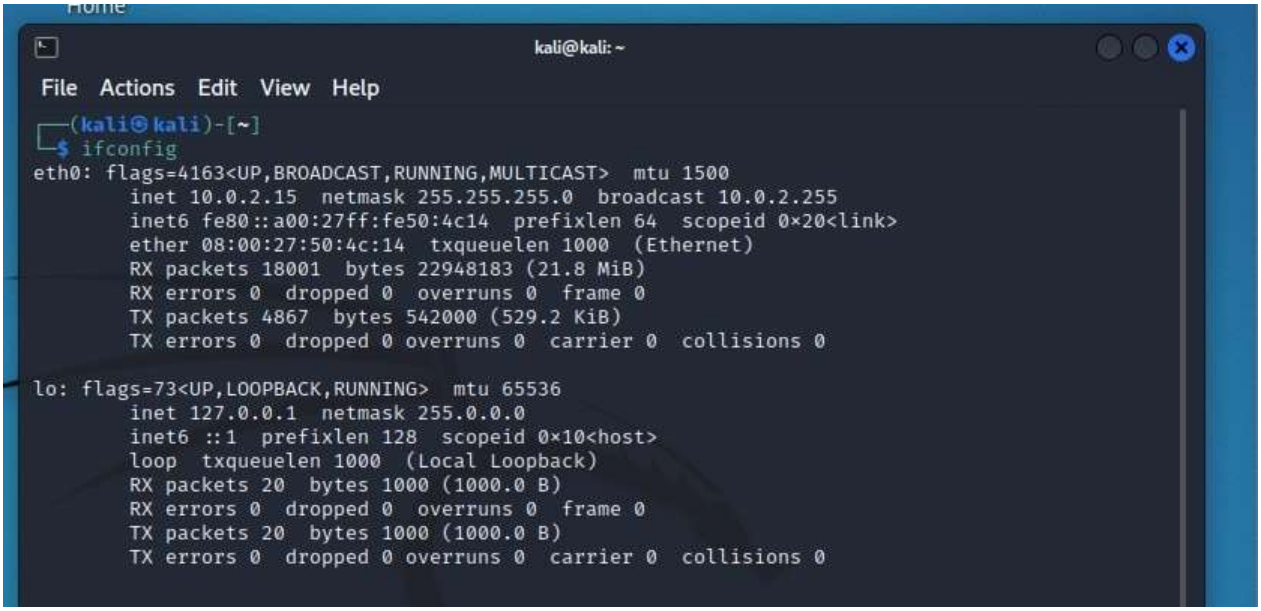
```
┌──(kali㉿kali)-[~]
└─$ w
 08:00:44 up  3:44,  1 user,  load average: 0.06, 0.11, 0.09
USER     TTY      FROM             LOGIN@   IDLE   JCPU   PCPU WHAT
kali     tty7     :0               Fri09    2days  2:34   0.69s xfce4-session
```

Networking:

Commands, Output, Screenshots::

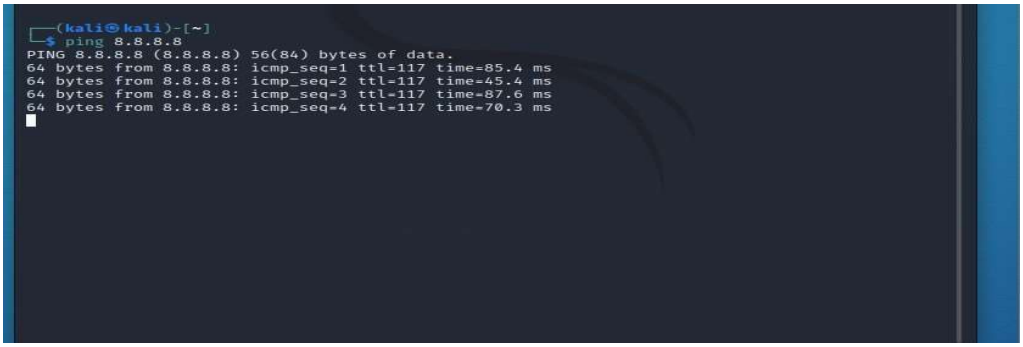
AG) ifconfig: Configure network interfaces

```
┌──(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
```



AH) ***<u>ping: Send ICMP echo requests to a network host</u>***

┌──(kali㉿ kali)-[~]
└─$ ping 8.8.8.8

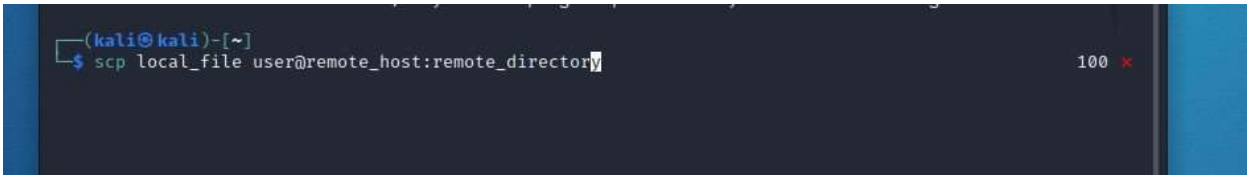


AI) <u>ssh: Securely connect to a remote system</u>

┌──(kali㉿kali)-[~]
└─$ ssh user@remote_host

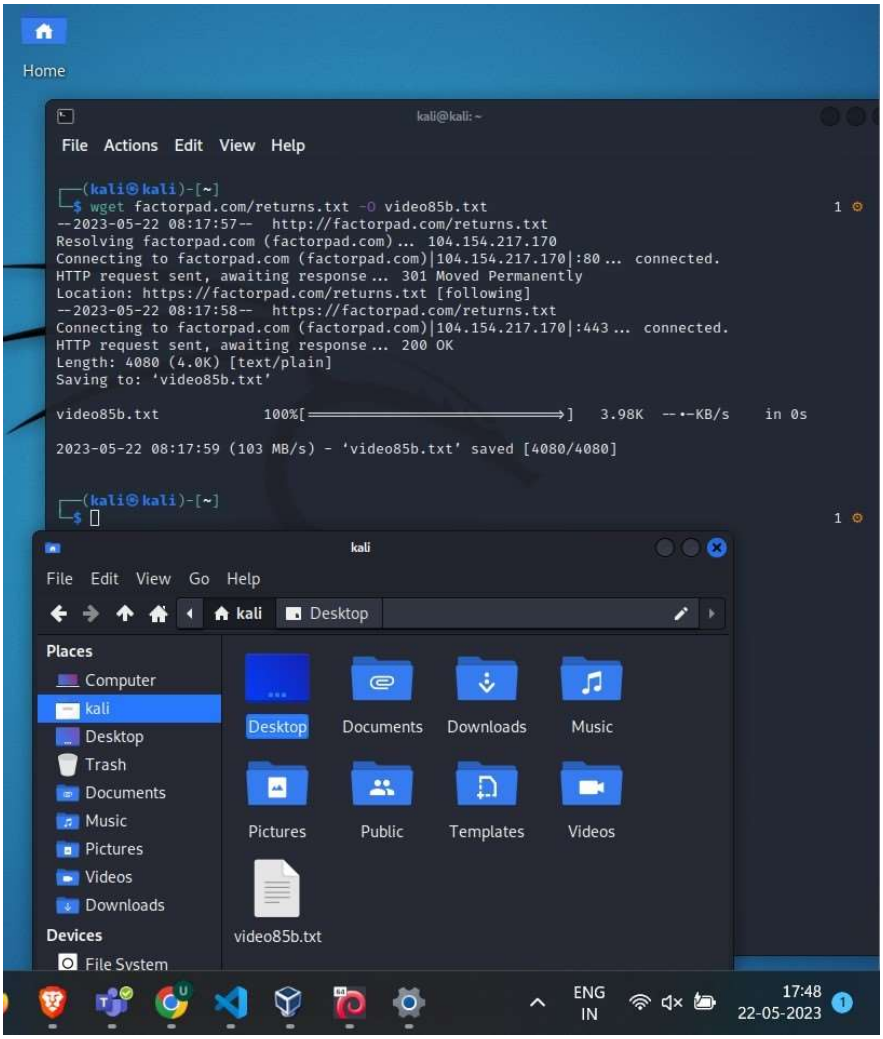
AJ) scp: Securely copy files between systems

┌──(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

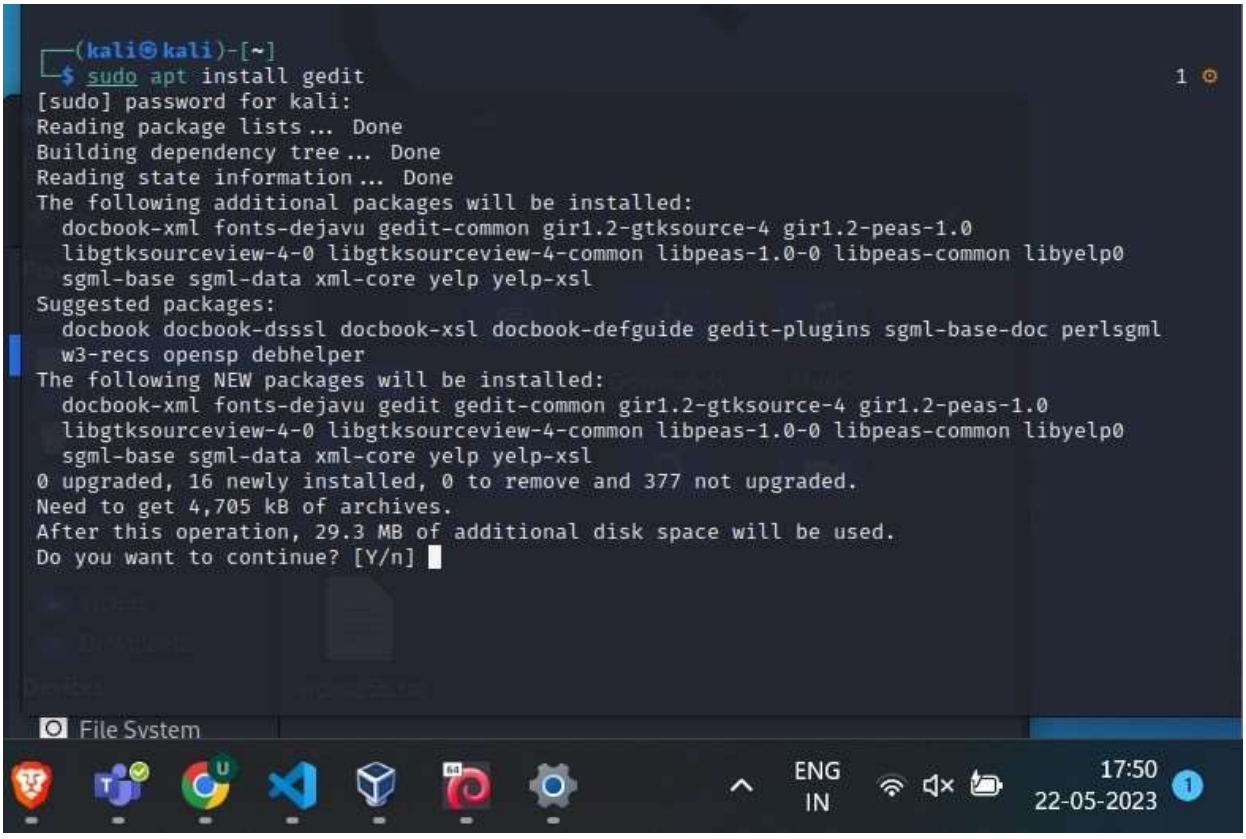


System Administration:

Commands, Output, Screenshots::

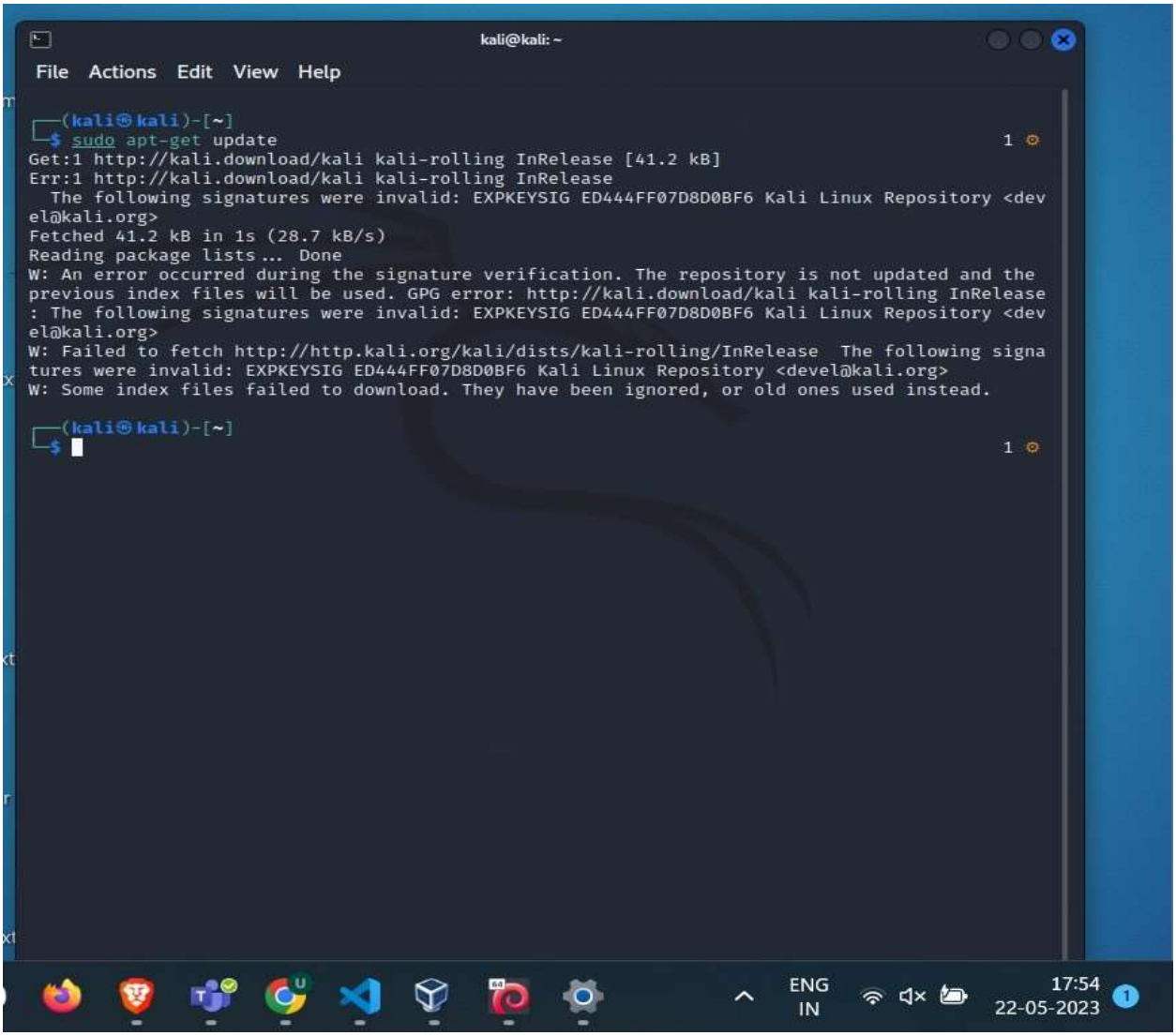
AL) sudo: Execute commands with superuser privileges

┌──(kali㉿ kali)-[~]
└─$ sudo apt install gedit 1 ⊙
[sudo] password for kali: Reading
package lists... Done Building
dependency tree... DoneReading
state information... Done



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

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



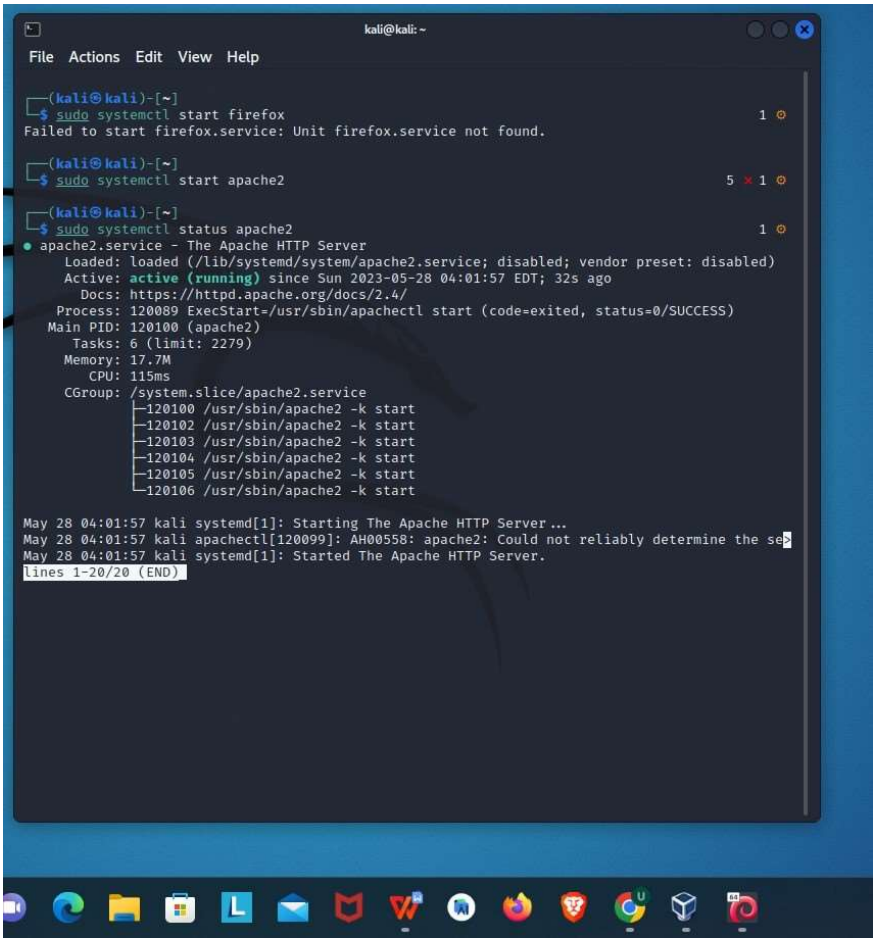
AN) yum: Package management for Red Hat-based distributions

sudo yum install httpd

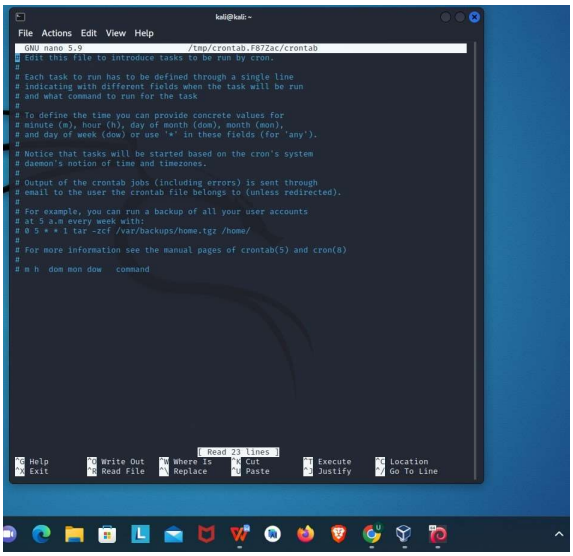
sudo yum remove httpd

┌──(kali㉿kali)-[~]
└─$ sudo yum install httpd

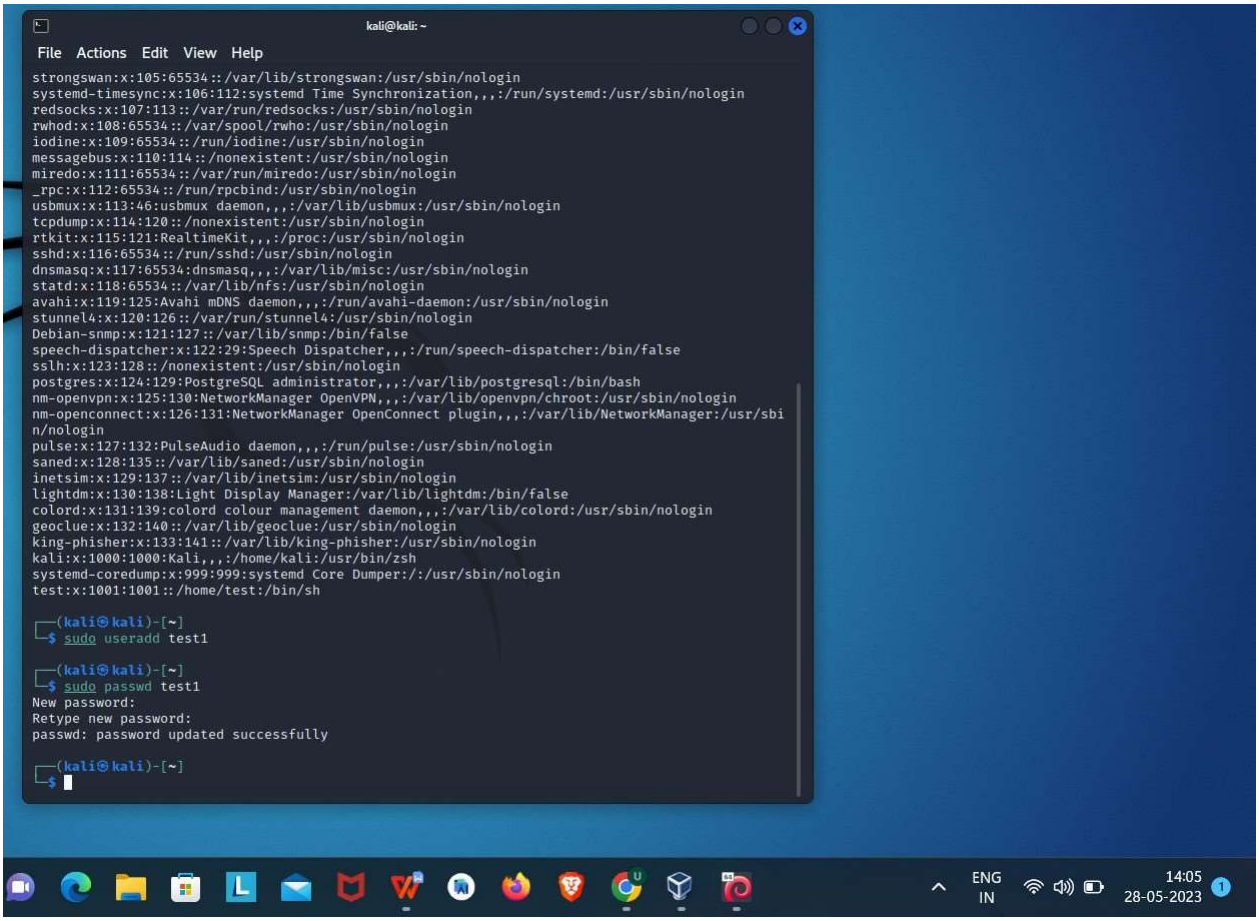
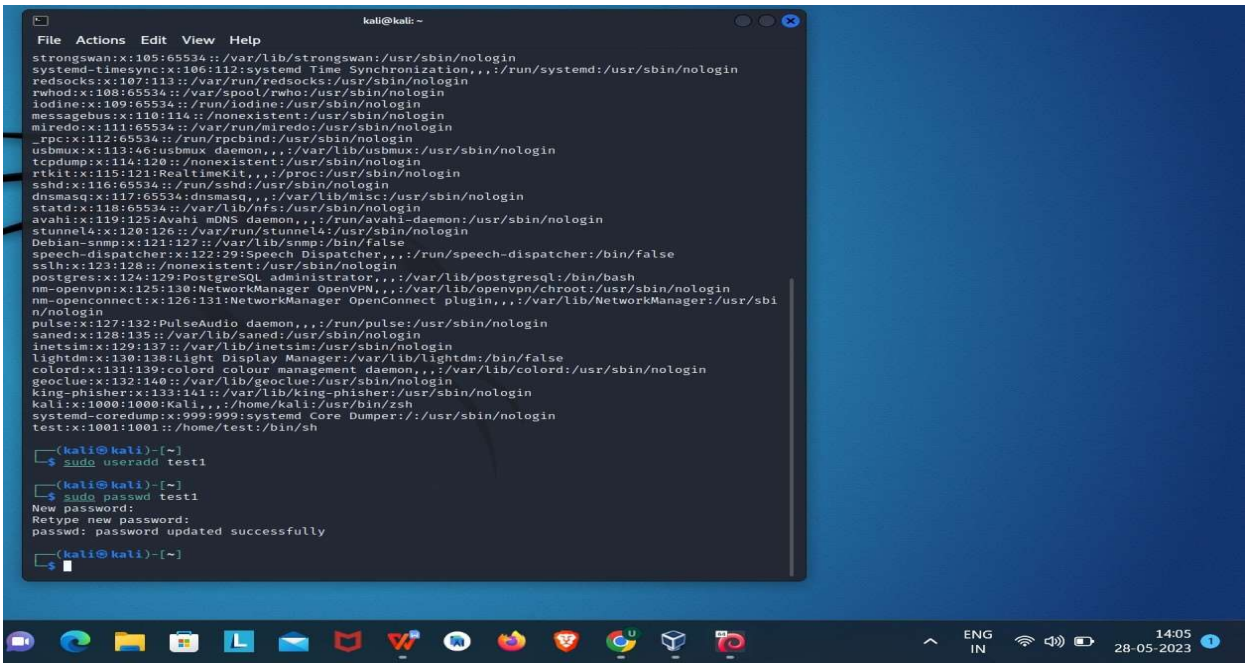
AO) systemctl: Manage system services



AP) crontab: Schedule recurring tasks



AQ) <u>useradd: Add a new user</u>



AR) <u>passwd: Change user password</u>