NAME:Kartik Sharma
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Title: Linux Command List Assessment

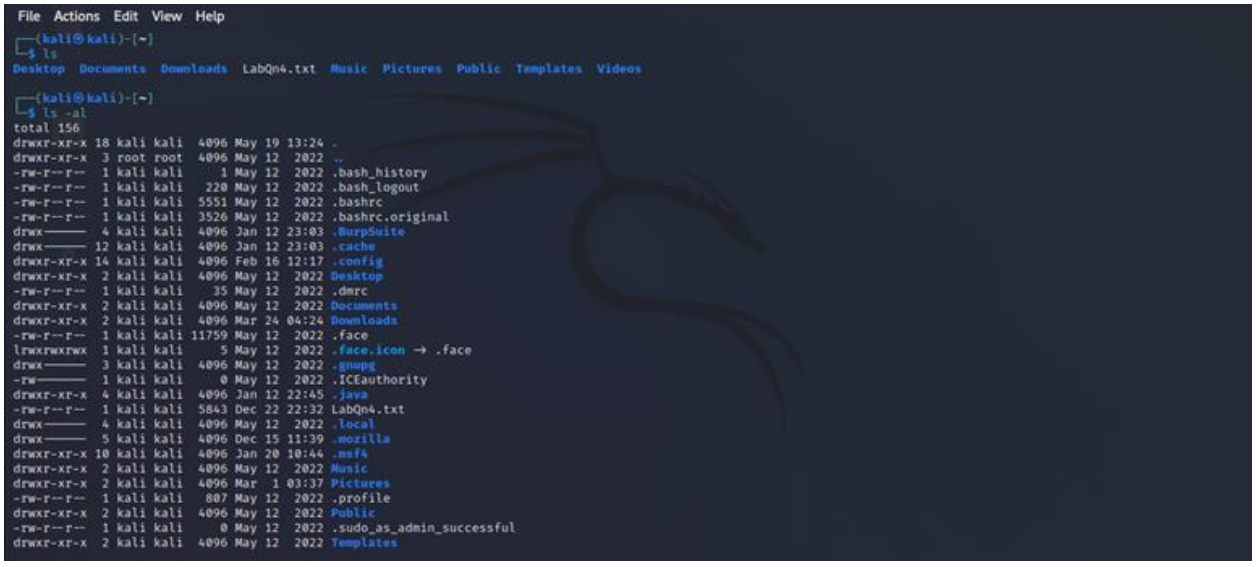
Instructions:-

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 machine or virtual environment.

File and Directory Operations:

ls: List files and directories



cd: Change directory

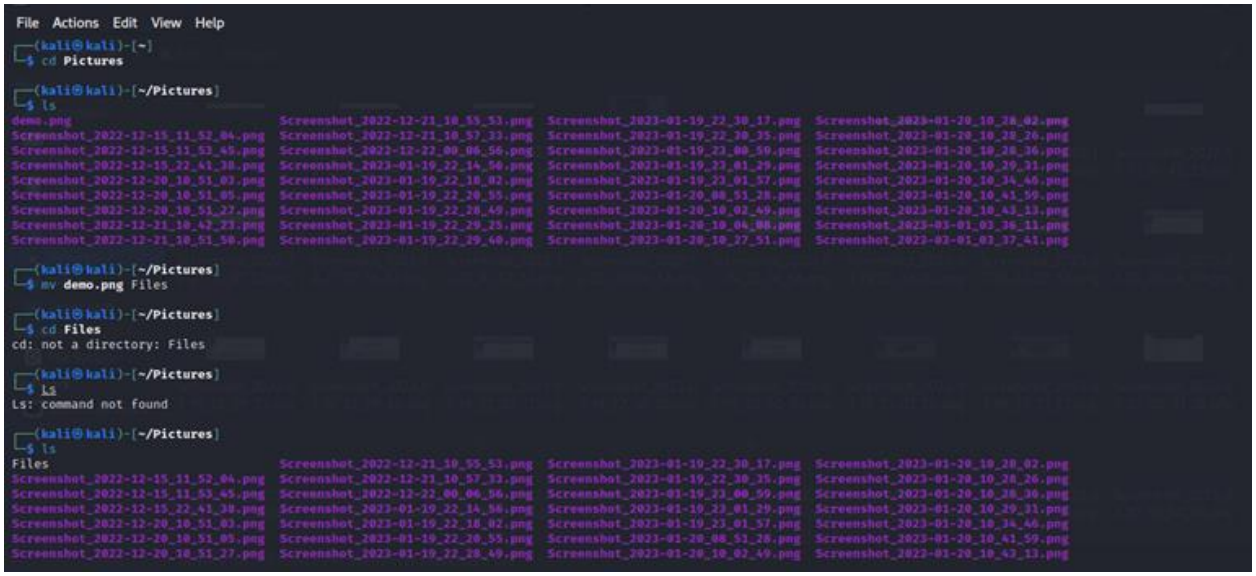
pwd: Print working directory

mkdir: Make directory

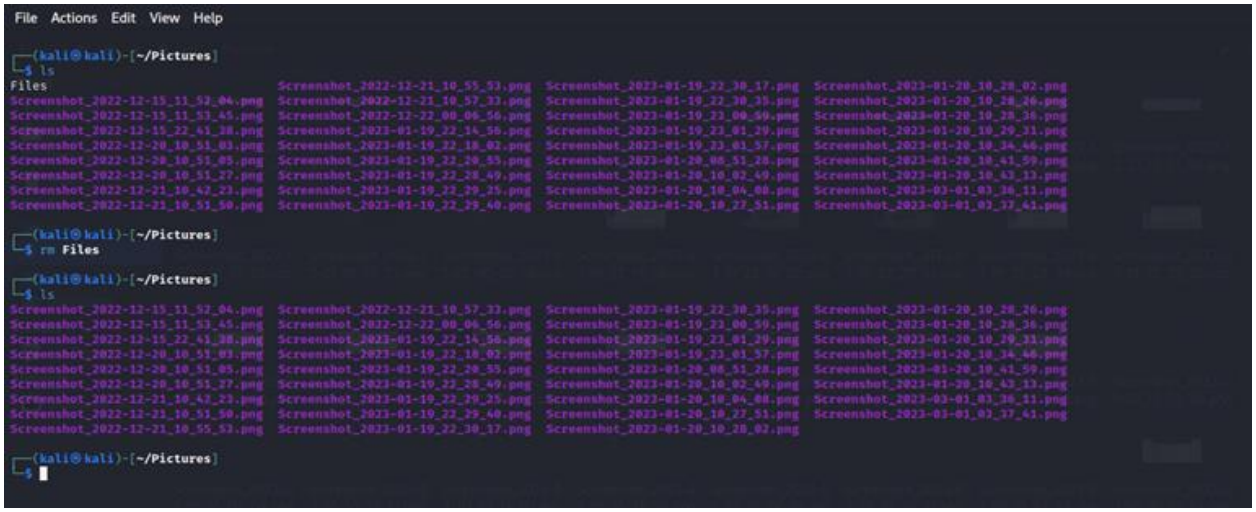
touch: Create an empty file

cp: Copy files and directories

mv: Move or rename files and directories



rm: Remove files and directories

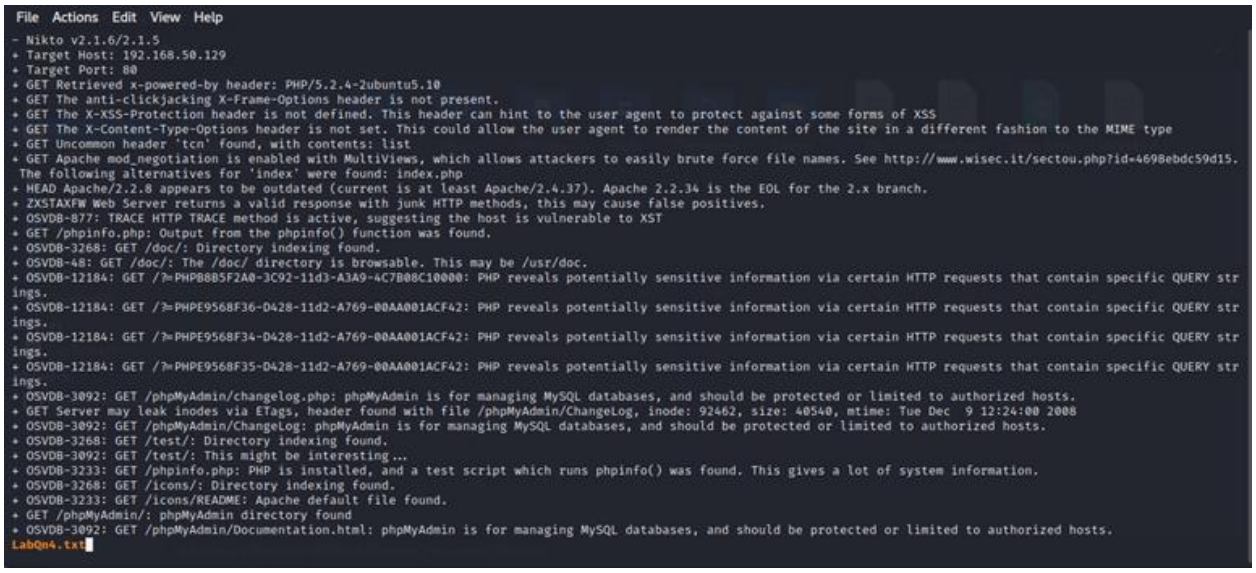


find: Search for files and directories

File Viewing and Editing:

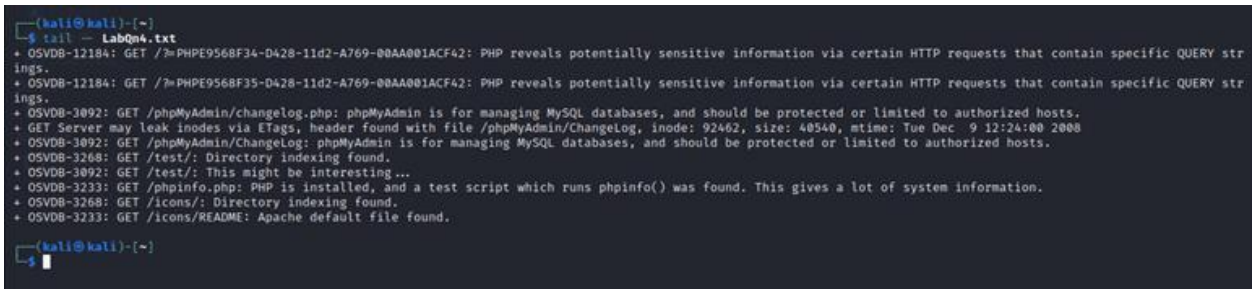
cat: Concatenate and display file content

less: View file content with pagination

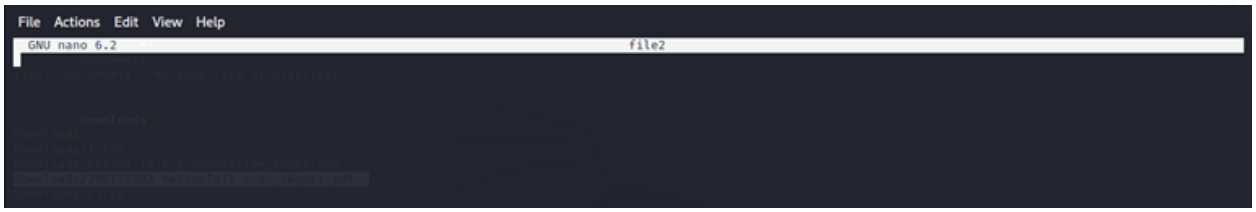


head: Display the beginning of a file

tail: Display the end of a file



nano: Text editor for creating and editing files



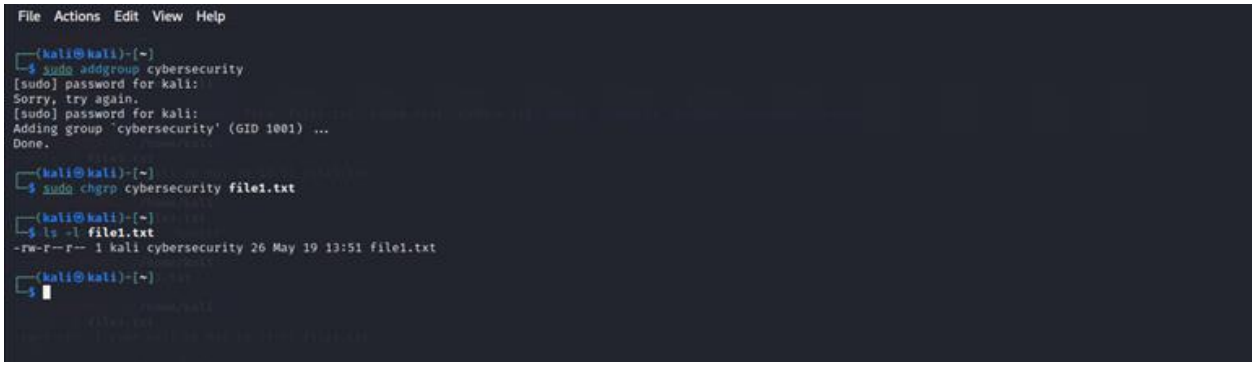
vi/vim: Powerful text editor for experienced users

File Permissions:

chmod: Change file permissions

chown: Change file owner

chgrp: Change file group



D

File Compression and Archiving:

tar: Archive files

Commands:

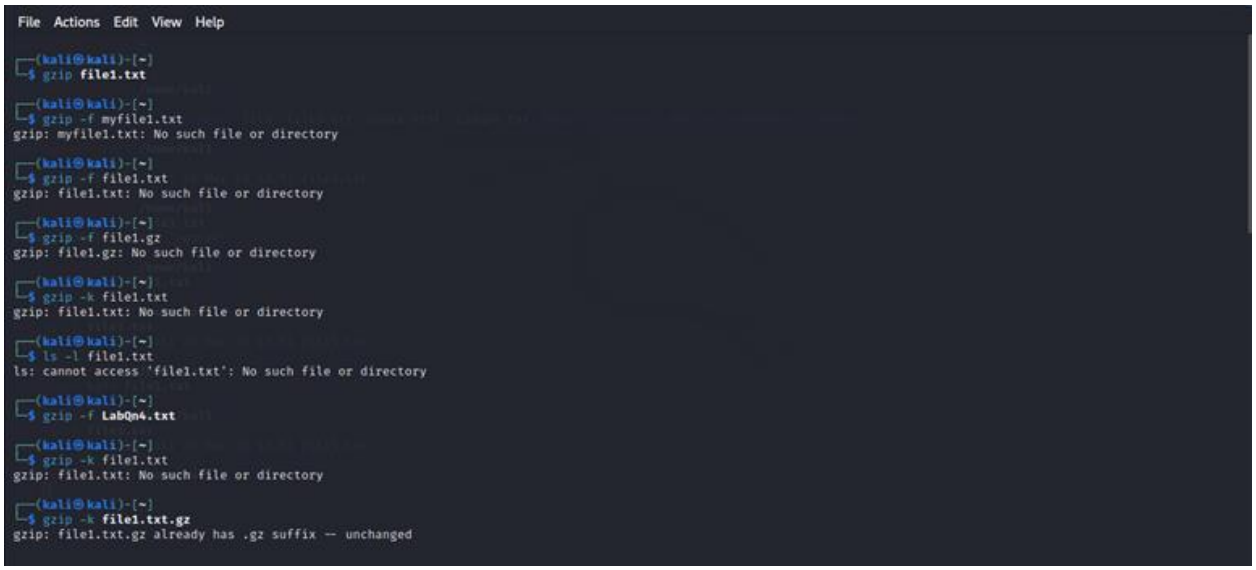
- tar cvf f.tar*
- tar xvf f.tar
- tar tvf f.tar

```
File  Actions  Edit  View  Help
┌──(kali㉿kali)-[~]
└─$ tar xvf f.tar
Desktop/
Documents/
Documents/Penetration/
Documents/testing/
Downloads/
Downloads/files
Downloads/Nessus-10.4.2-ubuntu1404_amd64.deb
Downloads/20BIT0302 .pdf
Downloads/Files
file
file1.txt
index.html
LabQn4.txt
Music/
Pictures/
Pictures/Screenshot_2022-12-21_10_51_50.png
Pictures/Screenshot_2023-01-20_10_04_08.png
Pictures/Screenshot_2023-01-20_10_28_02.png
Pictures/Screenshot_2022-12-21_10_55_53.png
Pictures/Screenshot_2023-01-20_10_02_49.png
Pictures/Screenshot_2023-01-19_22_14_56.png
Pictures/Screenshot_2023-03-01_03_36_11.png
Pictures/Screenshot_2023-01-20_10_28_26.png
Pictures/Screenshot_2022-12-15_11_52_04.png
Pictures/Screenshot_2022-12-21_10_42_23.png
Pictures/Screenshot_2023-01-20_10_34_46.png
Pictures/Screenshot_2023-01-20_08_51_28.png
Pictures/Screenshot_2023-01-20_10_43_13.png
Pictures/Screenshot_2023-01-19_22_18_02.png
Pictures/Screenshot_2023-01-20_10_41_59.png
Pictures/Screenshot_2023-01-19_22_28_49.png
Pictures/Screenshot_2022-12-20_10_51_05.png
Pictures/Screenshot_2023-01-20_10_27_51.png
```

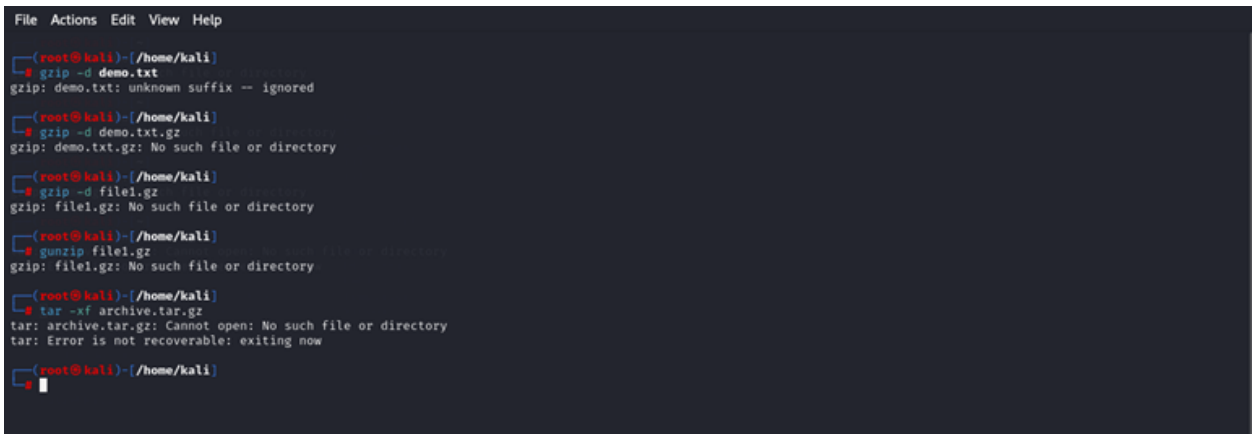
```
File  Actions  Edit  View  Help

┌──(kali㉿kali)-[~]
└─$ tar tvf f.tar
drwxr-xr-x kali/kali         0 2022-05-12 12:19 Desktop/
drwxr-xr-x kali/kali         0 2023-05-19 13:32 Documents/
drwxr-xr-x kali/kali         0 2023-05-19 13:32 Documents/Penetration/
drwxr-xr-x kali/kali         0 2023-05-19 13:32 Documents/testing/
drwxr-xr-x kali/kali         0 2023-05-19 13:57 Downloads/
-rw------- kali/kali   4079120 2023-05-19 13:39 Downloads/files
-rwxr-xr-x kali/kali  58913086 2023-02-16 11:52 Downloads/Nessus-10.4.2-ubuntu1404_amd64.deb
-rw-r--r-- kali/kali     74986 2023-03-24 04:23 Downloads/20BIT0302 .pdf
-rw------- kali/kali   4079120 2021-12-30 02:25 Downloads/Files
-rw-r--r-- kali/kali         2 2023-05-19 14:11 file
-rw-r--r-- kali/cybersecurity 26 2023-05-19 13:51 file1.txt
-rw-r--r-- kali/kali       50674 2023-05-19 14:51 index.html
-rw-r--r-- kali/kali        5843 2022-12-22 22:32 LabQn4.txt
drwxr-xr-x kali/kali           0 2022-05-12 12:19 Music/
drwxr-xr-x kali/kali           0 2023-05-19 13:47 Pictures/
-rw-r--r-- kali/kali      186553 2022-12-21 10:51 Pictures/Screenshot_2022-12-21_10_51_50.png
-rw-r--r-- kali/kali      164579 2023-01-20 10:04 Pictures/Screenshot_2023-01-20_10_04_08.png
-rw-r--r-- kali/kali      126538 2023-01-20 10:28 Pictures/Screenshot_2023-01-20_10_28_02.png
-rw-r--r-- kali/kali      203809 2022-12-21 10:56 Pictures/Screenshot_2022-12-21_10_55_53.png
-rw-r--r-- kali/kali      105780 2023-01-20 10:02 Pictures/Screenshot_2023-01-20_10_02_49.png
-rw-r--r-- kali/kali      148675 2023-01-19 22:15 Pictures/Screenshot_2023-01-19_22_14_56.png
-rw-r--r-- kali/kali      129243 2023-03-01 03:36 Pictures/Screenshot_2023-03-01_03_36_11.png
-rw-r--r-- kali/kali      132316 2023-01-20 10:28 Pictures/Screenshot_2023-01-20_10_28_26.png
-rw-r--r-- kali/kali      139293 2022-12-15 11:52 Pictures/Screenshot_2022-12-15_11_52_04.png
-rw-r--r-- kali/kali      184916 2022-12-21 10:42 Pictures/Screenshot_2022-12-21_10_42_23.png
-rw-r--r-- kali/kali      178667 2023-01-20 10:34 Pictures/Screenshot_2023-01-20_10_34_46.png
-rw-r--r-- kali/kali      138635 2023-01-20 08:51 Pictures/Screenshot_2023-01-20_08_51_28.png
-rw-r--r-- kali/kali      124645 2023-01-20 10:43 Pictures/Screenshot_2023-01-20_10_43_13.png
-rw-r--r-- kali/kali      124916 2023-01-19 22:18 Pictures/Screenshot_2023-01-19_22_18_02.png
-rw-r--r-- kali/kali      137102 2023-01-20 10:42 Pictures/Screenshot_2023-01-20_10_41_59.png
-rw-r--r-- kali/kali      146222 2023-01-19 22:28 Pictures/Screenshot_2023-01-19_22_28_49.png
-rw-r--r-- kali/kali      154371 2022-12-20 10:51 Pictures/Screenshot_2022-12-20_10_51_05.png
```

gzip: Compress files



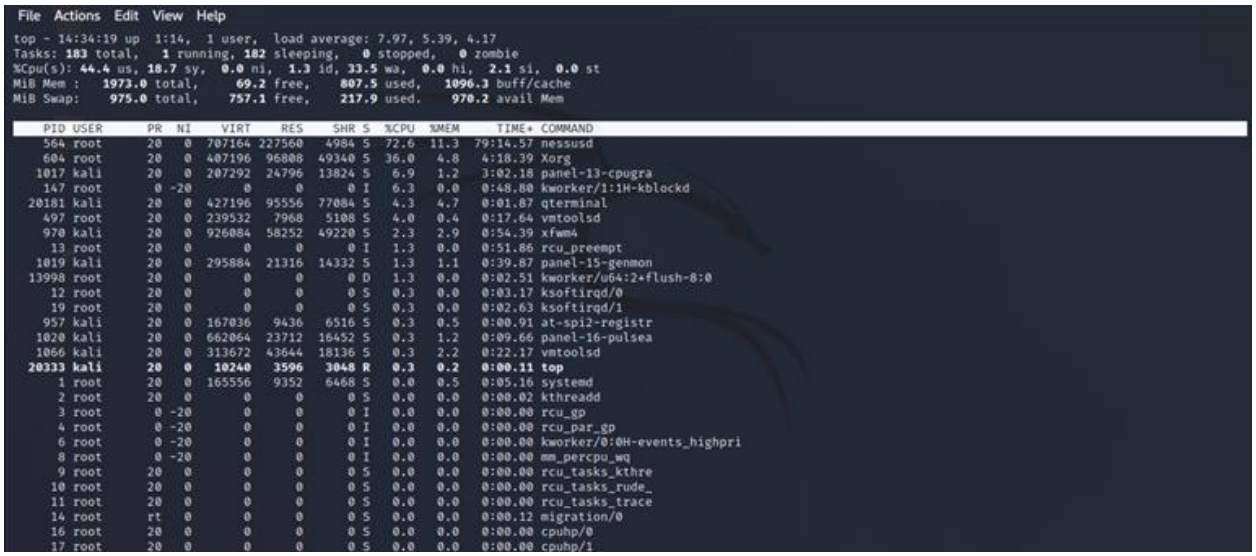
unzip: Extract files from a ZIP archive



Process Management:

ps: List running processes

top: Display real-time system information and processes



kill: Terminate processes

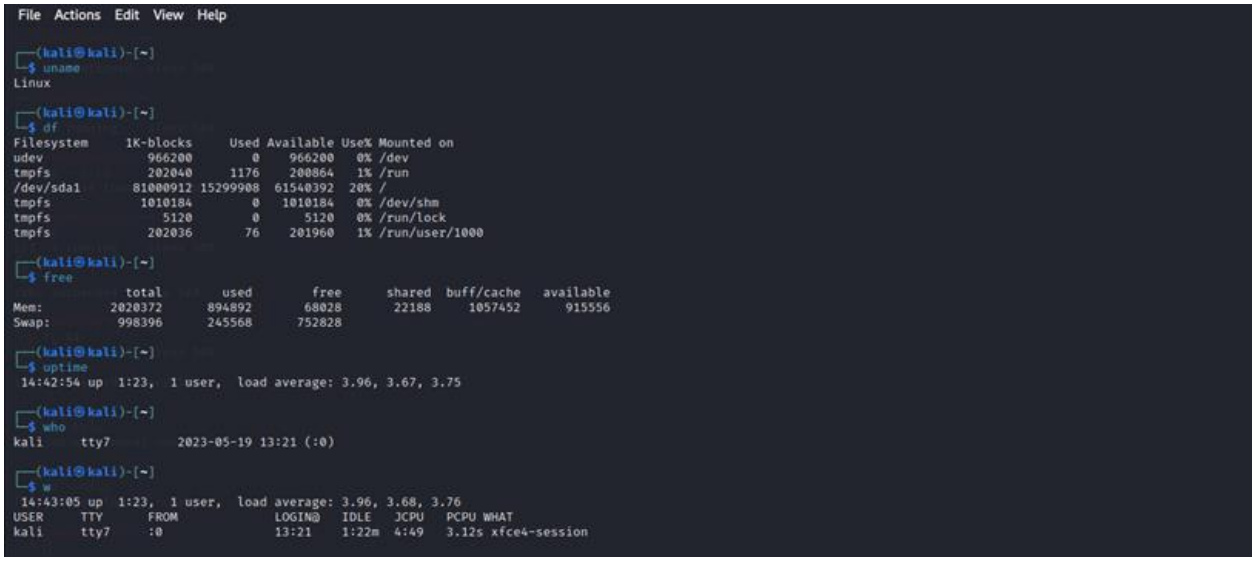
bg: Run processes in the background

fg: Bring background processes to the foreground

System Information:

uname: Print system information
df: Display disk space usage
free: Display memory usage

uptime: Show system uptime
who: Display logged-in users
w: Display logged-in users and their activities



Networking:

ifconfig: Configure network interfaces

```
File  Actions  Edit  View  Help

┌──(kali㉿kali)-[~]
└─$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.50.128  netmask 255.255.255.0  broadcast 192.168.50.255
        inet6 fe80::20c:29ff:feb1:d154  prefixlen 64  scopeid 0x20<link>
        ether 00:0c:29:b1:d1:54  txqueuelen 1000  (Ethernet)
        RX packets 177  bytes 12888 (12.5 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 2218  bytes 194314 (189.7 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 0  bytes 0 (0.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 0  bytes 0 (0.0 B)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0


┌──(kali㉿kali)-[~]
└─$
```

ping: Send ICMP echo requests to a network host

```
File  Actions  Edit  View  Help
┌──(kali㉿kali)-[~]
└─$ ping 192.168.50.129
PING 192.168.50.129 (192.168.50.129) 56(84) bytes of data.
64 bytes from 192.168.50.129: icmp_seq=1 ttl=64 time=3.49 ms
64 bytes from 192.168.50.129: icmp_seq=2 ttl=64 time=0.645 ms
64 bytes from 192.168.50.129: icmp_seq=3 ttl=64 time=0.898 ms
64 bytes from 192.168.50.129: icmp_seq=4 ttl=64 time=0.735 ms
64 bytes from 192.168.50.129: icmp_seq=5 ttl=64 time=0.732 ms
64 bytes from 192.168.50.129: icmp_seq=6 ttl=64 time=0.646 ms
64 bytes from 192.168.50.129: icmp_seq=7 ttl=64 time=0.660 ms
64 bytes from 192.168.50.129: icmp_seq=8 ttl=64 time=1.50 ms
64 bytes from 192.168.50.129: icmp_seq=9 ttl=64 time=1.81 ms
64 bytes from 192.168.50.129: icmp_seq=10 ttl=64 time=0.674 ms
64 bytes from 192.168.50.129: icmp_seq=11 ttl=64 time=0.759 ms
64 bytes from 192.168.50.129: icmp_seq=12 ttl=64 time=0.725 ms
64 bytes from 192.168.50.129: icmp_seq=13 ttl=64 time=0.735 ms
64 bytes from 192.168.50.129: icmp_seq=14 ttl=64 time=0.695 ms
64 bytes from 192.168.50.129: icmp_seq=15 ttl=64 time=0.691 ms
64 bytes from 192.168.50.129: icmp_seq=16 ttl=64 time=0.778 ms
64 bytes from 192.168.50.129: icmp_seq=17 ttl=64 time=1.80 ms
64 bytes from 192.168.50.129: icmp_seq=18 ttl=64 time=8.23 ms
64 bytes from 192.168.50.129: icmp_seq=19 ttl=64 time=0.743 ms
64 bytes from 192.168.50.129: icmp_seq=20 ttl=64 time=0.757 ms
64 bytes from 192.168.50.129: icmp_seq=21 ttl=64 time=0.725 ms
64 bytes from 192.168.50.129: icmp_seq=22 ttl=64 time=5.47 ms
64 bytes from 192.168.50.129: icmp_seq=23 ttl=64 time=1.02 ms
64 bytes from 192.168.50.129: icmp_seq=24 ttl=64 time=0.968 ms
64 bytes from 192.168.50.129: icmp_seq=25 ttl=64 time=0.672 ms
64 bytes from 192.168.50.129: icmp_seq=26 ttl=64 time=0.723 ms
64 bytes from 192.168.50.129: icmp_seq=27 ttl=64 time=1.40 ms
64 bytes from 192.168.50.129: icmp_seq=28 ttl=64 time=0.802 ms
64 bytes from 192.168.50.129: icmp_seq=29 ttl=64 time=1.19 ms
64 bytes from 192.168.50.129: icmp_seq=30 ttl=64 time=0.697 ms
64 bytes from 192.168.50.129: icmp_seq=31 ttl=64 time=0.722 ms
64 bytes from 192.168.50.129: icmp_seq=32 ttl=64 time=0.985 ms
```

ssh: Securely connect to a remote system

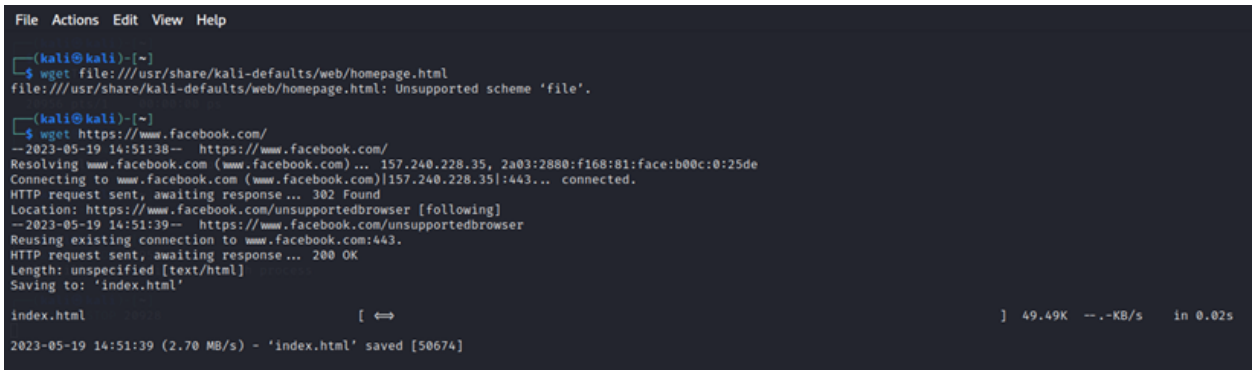
```
┌──(kali㉿kali)-[~]
└─$ ssh
usage: ssh [-46AaCfGgKkMNnqsTtVvXxYy] [-B bind_interface]
           [-b bind_address] [-c cipher_spec] [-D [bind_address:]port]
           [-E log_file] [-e escape_char] [-F configfile] [-I pkcs11]
           [-i identity_file] [-J [user@]host[:port]] [-L address]
   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

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

┌──(kali㉿kali)-[~]
└─$
```

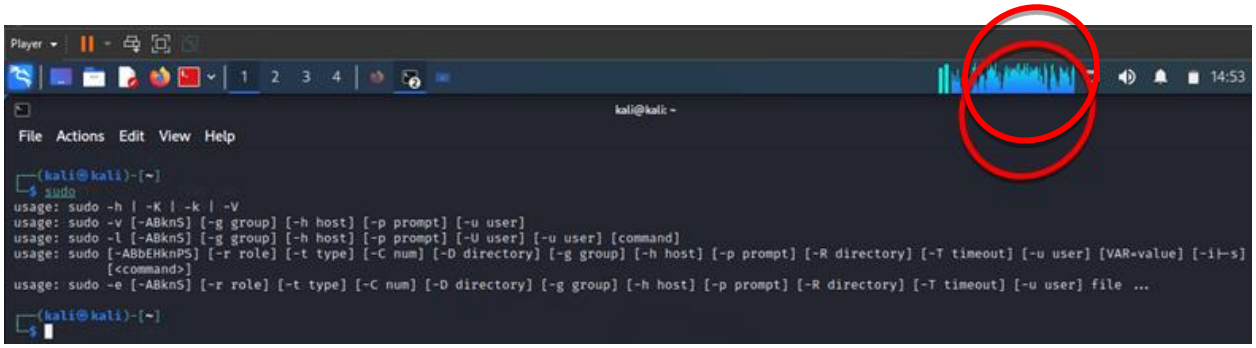
scp: Securely copy files between systems

wget: Download files from the web

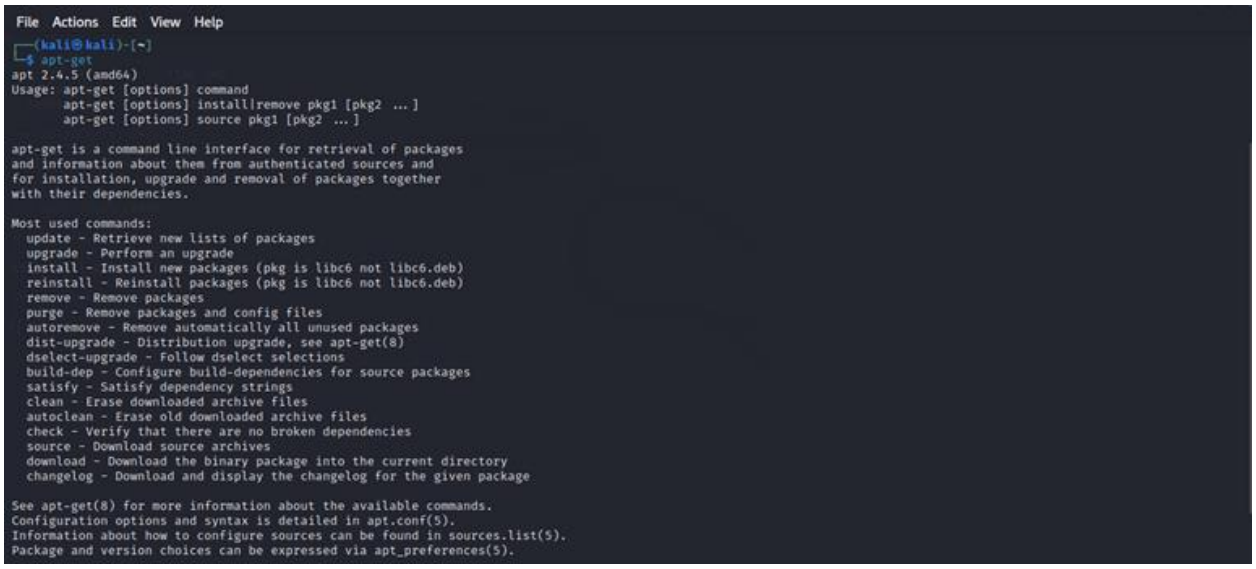


System Administration:

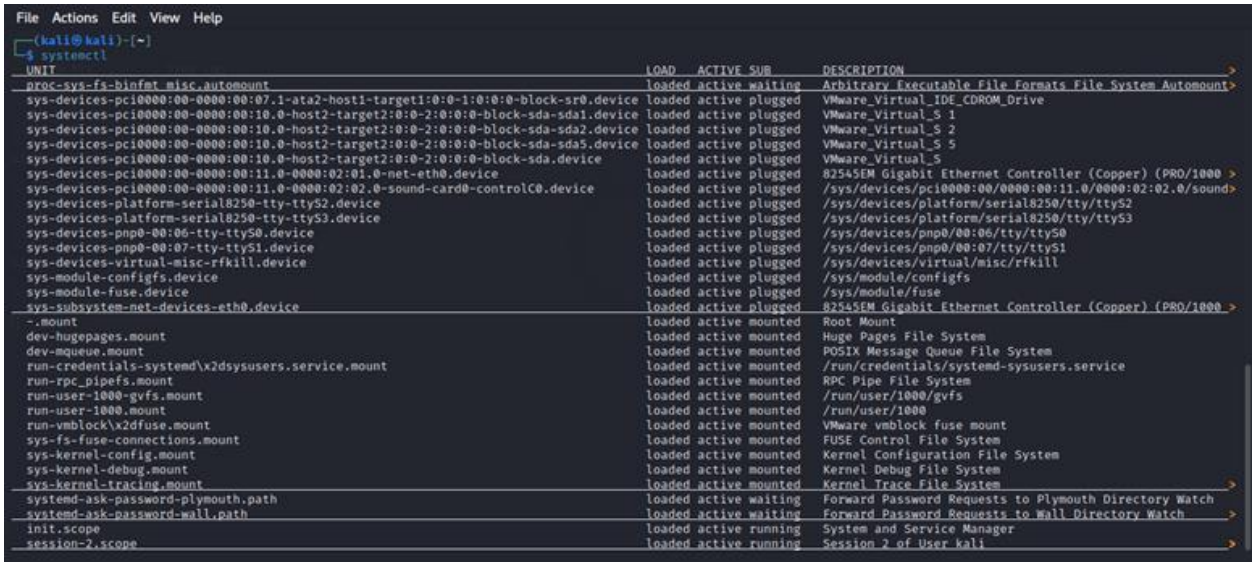
sudo: Execute commands with superuser privileges



apt-get: Package management for Debian-based distributions



systemctl: Manage system services



crontab: Schedule recurring tasks

```
File  Actions  Edit  View  Help

┌──(kali㉿kali)-[~]
└─$ crontab -e
no crontab for kali - using an empty one

Select an editor.  To change later, run 'select-editor'.
  1. /bin/nano        <---- easiest
  2. /usr/bin/vim.basic
  3. /usr/bin/vim.tiny

Choose 1-3 [1]: 1
No modification made

┌──(kali㉿kali)-[~]
└─$
```

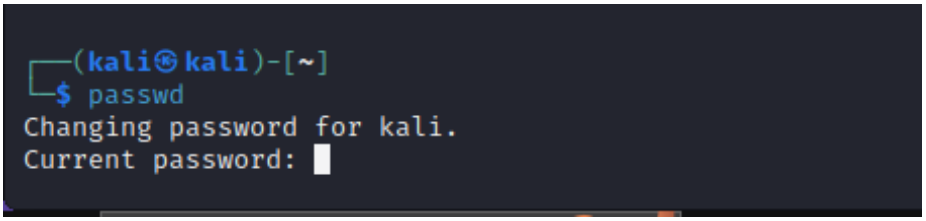
```
File  Actions  Edit  View  Help
  GNU nano 6.2                                  /tmp/crontab.wQLR0u/crontab
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), 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 timezones.
#
# 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
```

useradd: Add a new user

```
File  Actions  Edit  View  Help
└─$ useradd
Usage: useradd [options] LOGIN
       useradd -D
       useradd -D [options]

Options:
      --badnames                do not check for bad names
  -b, --base-dir BASE_DIR       base directory for the home directory of the
                                new account
      --btrfs-subvolume-home    use BTRFS subvolume for home directory
  -c, --comment COMMENT         GECOS field of the new account
  -d, --home-dir HOME_DIR       home directory of the new account
  -D, --defaults                print or change default useradd configuration
  -e, --expiredate EXPIRE_DATE  expiration date of the new account
  -f, --inactive INACTIVE       password inactivity period of the new account
  -g, --gid GROUP               name or ID of the primary group of the new
                                account
  -G, --groups GROUPS           list of supplementary groups of the new
                                account
  -h, --help                    display this help message and exit
  -k, --skel SKEL_DIR           use this alternative skeleton directory
  -K, --key KEY=VALUE           override /etc/login.defs defaults
  -l, --no-log-init             do not add the user to the lastlog and
                                faillog databases
  -m, --create-home             create the user's home directory
  -M, --no-create-home          do not create the user's home directory
  -N, --no-user-group           do not create a group with the same name as
                                the user
  -o, --non-unique              allow to create users with duplicate
                                (non-unique) UID
  -p, --password PASSWORD       encrypted password of the new account
  -r, --system                  create a system account
  -R, --root CHROOT_DIR         directory to chroot into
  -P, --prefix PREFIX_DIR       prefix directory where are located the /etc/* files
  -s, --shell SHELL             login shell of the new account
```

passwd: Change user password



Ensure that you provide the correct command(s) used to accomplish each task. Write your answers below each task.

Once you have completed the assessment, review your answers and verify that the output or results are correct.

Make this in doucement format and send them with images