#### NAME:Mukundhan REG.NO:20BC10291

## 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

```
File Actions Edit View Help

[kali@kali]-[-]

[s] ts

Desktop Documents Doumloads LabQn4.txt Music Pictures Public Templates Videos

[kali@kali]-[-]

[s] ts = 1

total 158

Templates 18 kali kali 4096 May 19 13:24 .

Templates 18 kali kali kali 4096 May 12 2022 .

Templates 18 kali kali 1 May 12 2022 .

Templates 18 kali kali 1 May 12 2022 .

Templates 18 kali kali 1 May 12 2022 .

Templates 1 kali kali 1 May 12 2022 .

Templates 1 kali kali 220 May 12 2022 .

Dash Discourant 1 kali kali 2551 May 12 2022 .

Templates 1 kali kali 5551 May 12 2022 .

Dash Discourant 1 kali kali 4096 May 12 2022 .

Dash Discourant 1 kali kali 4096 May 12 2022 .

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Dash Discourant 1 kali kali 4096 May 12 2022 .

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Dash Discourant 1 kali kali 4096 May 12 2022 .

Dash Discourant 1 kali kali 4096 May 12 2022 .

Dash Discourant 1 kali kali 4096 May 12 2022 .

Dash Discourant 1 kali kali 4096 May 12 2022 .

Dash Discourant 1 kali kali 4096 May 12 2022 .

Dash Discourant 1 kali kali 4096 May 12 2022 .

Das
```

### cd: Change directory

```
kali@kali:-/Desktop

File Actions Edit View Help

[(kali@kali)-[~]

$ cd Desktop

[(kali@kali)-[~/Desktop]

[5]
```

### pwd: Print working directory

```
File Actions Edit View Help

___(kali@ kali)-[~]
//home/kali

____(kali@ kali)-[~]
```

### mkdir: Make directory

```
File Actions Edit View Help

(kali@kali)-[~]

(kali@kali)-[~/Documents]

mkdir Penetration testing

(kali@kali)-[~/Documents]

ls

Penetration testing

(kali@kali)-[~/Documents]
```

### touch: Create an empty file

## cp: Copy files and directories

```
File Actions Edit View Help

[kali@kali)-[~]

(kali@kali)-[~/Downloads]

[kali@kali)-[~/Downloads]

(kali@kali)-[~/Downloads]

(kali@kali)-[~/Downloads]

(p)

(kali@kali)-[~/Downloads]

(p)

(kali@kali)-[~/Downloads]

(p)

(kali@kali)-[~/Downloads]

(kali@kali)-[~/Downloads]

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

mv: Move or rename files and directories

```
File Actions Edit View Help

[(kali@ kali)-[-]

(kali@ kali)-[-/Pictures]

[s]

(kali@ kali)-[
```

#### rm: Remove files and directories

find: Search for files and directories

```
File Actions Edit View Help

(kali@ kali)-[~]
§ find Documents' No such file or directory

(kali@ kali)-[~]
§ find Downloads

Downloads' Files

Downloads' Files

Downloads' Files

Downloads' Files

(kali@ kali)-[~]
§ cd Downloads

(kali@ kali)-[~]
§ find files

files

(kali@ kali)-[~/Downloads]

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

## File Viewing and Editing:

cat: Concatenate and display file content

less: View file content with pagination

```
File Actions Edit View Help

[kali@kali)-[~]

[kali@kali)-[~]

[kali@kali)-[~]
```

```
File Actions Edit View Help

- Nikto v2.1.6/2.1.5

- Target Not: 192.16.65.90.229

- Target Not: 192.16.59.429

- GET The Anti-clickjacking x-Frame-Options header is not present.

- GET The X-SS-Protection header is not defined. This header can hint to the user agent to protect against some forms of XSS

- GET The X-SS-Protection header is not set. This could allow the user agent to render the content of the site in a different fashion to the MIME type

- GET Uncomon header 'ton' found, with contents: list

- GET Apache mod negotiation is enabled with Multiviews, which allows attackers to easily brute force file names. See http://www.wisec.it/sectou.php?id=4698ebdc59d15.

The following alternatives for 'index' were found 'index.php

- HEAD Apache/2.2.3 appears to be outdated (current is at least Apache/2.4.37). Apache 2.2.34 is the EOL for the 2.x branch.

- OSTARY Web Sever recruits a valid response with junk HTP methods, this may cause false positives.

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- OSTARY Web Sever recruits a valid res
```

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

```
File Actions Edit View Help

(kali@ kali)-[~]

5 head — LabQn4.txt

Nikto v2.1.6/2.1.5

1 arget Post: 80

6ET Retrieved x-powered-by header: PHP/5.2.4-2ubuntu5.10

6ET The anti-clickjacking X-Frame-Options header is not present.

6ET The anti-clickjacking X-Frame-Options header is not present.

6ET The X-Content-Type-Options header is not defined. This header can hint to the user agent to protect against some forms of XSS

6ET The X-Content-Type-Options header is not set. This could allow the user agent to render the content of the site in a different fashion to the MIME type

6ET Uncommon header 'tcn' found, with contents: list

6ET Apache mod.negotiation is enabled with Multiviews, which allows attackers to easily brute force file names. See http://www.wisec.it/sectou.php?id=4698ebdc59d15.

The following alternatives for 'index' were found: index.php

HEAD Apache/2.2.8 appears to be outdated (current is at least Apache/2.4.37). Apache 2.2.34 is the EOL for the 2.x branch.

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

### tail: Display the end of a file

```
(kali⊗ kali)-[~]
$ tail — LabQm4.txt

**OSVDB-12184: GET /≥ PHPE9568F34-0428-11d2-A769-00AA001ACF42: PHP reveals potentially sensitive information via certain HTTP requests that contain specific QUERY strings.

**OSVDB-12184: GET /≥ PHPE9568F35-0428-11d2-A769-00AA001ACF42: PHP reveals potentially sensitive information via certain HTTP requests that contain specific QUERY strings.

**OSVDB-12184: GET /⇒ PHPE9568F35-0428-11d2-A769-00AA001ACF42: PHP reveals potentially sensitive information via certain HTTP requests that contain specific QUERY strings.

**OSVDB-3092: GET /phpMyAdmin/changelog.php: phpMyAdmin is for managing MySQL databases, and should be protected or limited to authorized hosts.

**GET Server may leak inodes via ETags, header found with file /phpMyAdmin/Changelog, inode: 92462, size: 46940, mtime: Tue Dec 9 12:24:00 2008

**OSVDB-3092: GET /phpMyAdmin/Changelog: phpMyAdmin is for managing MySQL databases, and should be protected or limited to authorized hosts.

**OSVDB-3268: GET /test/: Directory indexing found.

**OSVDB-3233: GET /phpinfo.php: PHP is installed, and a test script which runs phpinfo() was found. This gives a lot of system information.

**OSVDB-3233: GET /phpinfo.php: PHP is installed, and a test script which runs phpinfo() was found. This gives a lot of system information.

**OSVDB-3233: GET /icons/: Directory indexing found.

**OSVDB-3233: GET
```

## nano: Text editor for creating and editing files

```
File Actions Edit View Help

[kali@kali)-[~]

$ nano -version

GNU nano, version 6.2

(c) 1999-2011, 2013-2022 Free Software Foundation, Inc.
(c) 2014-2022 the contributors to nano

Compiled options: -disable-libmagic --enable-utf8

[kali@kali)-[~]

$ nano file2

[kali@kali)-[~]
```

```
File Actions Edit View Help

GNU name 6.2

File2

File2

File3

File3

File3
```

# vi/vim: Powerful text editor for experienced users

```
File Actions Edit View Help

[kali@kali)-[~]

$ vi file1.txt
```



#### File Permissions:

chmod: Change file permissions

```
File Actions Edit View Help

(kali@kali)-[~]

S ls

(kali@kali)-[~]

-$ ls - l file1.txt

-rw-r-r- 1 kali kali 26 May 19 13:51 file1.txt

(kali@kali)-[~]

$ chmod w=rw,og=r file1.txt

(kali@kali)-[~]

$ ls - l file1.txt

(kali@kali)-[~]

$ kali@kali)-[~]

$ kali@kali)-[~]

$ kali@kali)-[~]

$ kali@kali)-[~]

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

chown: Change file owner

```
File Actions Edit View Help

[motional] -[motional] -[home/kali]

[stand | motional] -[home/kali]

[ctand | motional] -[home/kali]
```

### chgrp: Change file group

D

### File Compression and Archiving:

#### tar: Archive files

#### Commands:

- > tar cvf f.tar\*
- > tar xvf f.tar
- > tartvf f.tar

```
File Actions Edit View Help

(%ali@ Mall) [-]

$ tar xvf f.tar

Desktop/
Documents/Penetration/
Documents/Penetration/
Documents/Penetration/
Documents/Penetration/
Documents/Penetration/
Downloads/Files

Downloads/Files

Downloads/Files

File i.tat

index.htal

Lab@n4.txt

Music/
Pictures/Screenshot_2022-12-21_10_51_50.png

Pictures/Screenshot_2023-01-20_10_4_80.png

Pictures/Screenshot_2023-01-20_10_2_8_82.png

Pictures/Screenshot_2023-01-20_10_8_80.png

Pictures/Screenshot_2023-01-20_10_8_80.png

Pictures/Screenshot_2023-01-20_10_8_80.png

Pictures/Screenshot_2023-01-20_8_80.png

Pictures/Screenshot_2023-01-20_8_81.28.png

Pictures/Screenshot_2023-01-20_8_81.28.png

Pictures/Screenshot_2023-01-20_8_8.51.28.png

Pictures/Screenshot_2023-01-20_8_8.51.28.png
```

### gzip: Compress files

```
File Actions Edit View Help

(kali@kali):[-]

$ grip file1.txt

(kali@kali):[-]

$ grip: myfile1.txt: No such file or directory

(kali@kali):[-]

$ grip: file1.txt: No such file or directory

(kali@kali):[-]

$ grip: file1.txt: No such file or directory

(kali@kali):[-]

$ grip if lel.gr: No such file or directory

(kali@kali):[-]

$ grip if lel.txt: No such file or directory

(kali@kali):[-]

$ sip if lel.txt: No such file or directory

(kali@kali):[-]

$ sip if lel.txt: No such file or directory

(kali@kali):[-]

$ grip if Labdon.txt

[kali@kali]:[-]

$ grip if Labdon.txt

[kali@kali]:[-]

$ grip if Labdon.txt

[kali@kali]:[-]

$ grip if lel.txt.gr already has .gr suffix — unchanged
```

## unzip: Extract files from a ZIP archive

```
File Actions Edit View Help

(10010 kall)-[/home/kali]
gzip -d demo.txt
gzip: demo.txt: gz
gzip: demo.txt.gz
gzip: demo.txt.gz
gzip: demo.txt.gz
gzip: felo.txt.gz
gzip: file.gz: No such file or directory

(10010 kall)-[/home/kali]
g gzip -d file.gz: No such file or directory

(10010 kall)-[/home/kali]
g gunzip filel.gz
gzip: filel.gz: No such file or directory

(10010 kall)-[/home/kali]
g sunzip filel.gz: No such file or directory

(10010 kall)-[/home/kali]
g star -xf archive.tar.gz
tar: archive.tar.gz
tar: archive.tar.gz: Cannot open: No such file or directory
tar: Error is not recoverable: exiting now
```

### Process Management:

## ps: List running processes

```
File Actions Edit View Help

[kali@kali]-[~]

pro TIME CMD
15618 pts/1 @0:00:10 zsh
19970 pts/1 @0:00:00 ps

[kali@kali]-[~]
```

### top: Display real-time system information and processes

```
File Actions Edit View Help

[kali@kali)-[~]

$ top
```

```
File Actions Edit View Help

Tasks: 183 total, 1 running, 182 sleeping, 0 stopped, 0 zomble

XCDU(S): 44.4 us, 187-79, 0.0 ni, 1.3 ud, 31.5 us, 0.0 hi, 2.1 sl, 0.0 st

NIB Bem: 1971.0 total, 0-1.2 free, 11.3 ud, 31.5 us, 0.0 hi, 2.1 sl, 0.0 st

NIB Bem: 1971.0 total, 0-1.2 free, 11.3 ud, 31.5 us, 0.0 hi, 2.1 sl, 0.0 st

NIB Swap: 975.0 total, 0-1.2 free, 217.9 used, 1996.3 buff/cache

PID USER PR NI VIRT RES SHR S XCPU 1000 Till, 3 no.0 ud, 0.0 st. 0
```

#### kill: Terminate processes

### bg: Run processes in the background

```
File Actions Edit View Help

(mott@lail)-(m)
    bg -help
bg: job not found: --help

(mott@lail)-(m)
    sleep 500

7
2    zsh: suspended sleep 500

(mott@lail)-(m)
    jobs

(i) * running sleep 500

(mott@lail)-(m)
    jobs

(ii) * running sleep 500

(mott@lail)-(m)
    jobs

(ii) * running sleep 500

(mott@lail)-(m)
    jobs

(iii) * running sleep 500

(mott@lail)-(m)
    jobs

(iii) * running sleep 500

(mott@lail)-(m)
    jobs

(iii) * running sleep 500

(mott@lail)-(m)
    jobs

(mott@lail)-(m)
    job
```

# fg: Bring background processes to the foreground

```
bg: job not tound: --help

[root@kali]-[~]

[1] + running sleep 500

[5 X1

-2

2 zsh: suspended sleep 500

[root@kali]-[~]

[6 fg X1

[1] + continued sleep 500
```

## 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

```
File Actions Edit View Help

[kali@kali]-[-]
| sumane | linux | linux
```

### Networking:

ifconfig: Configure network interfaces

```
File Actions Edit View Help

[kali@kali]-[~]

$ ifconfig

ethe: flags-4163-UP,8ROADCAST,RUNNING,MULTICAST> mtu 1500

inet 192.168.50.128 netmask 255.255.255.0 broadcast 192.168.50.255

inet6 fe88::20:29ff:feb1:d154 prefixlen 64 scopeid 0*20clink>
ether 00:0c:29jb1: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-73cUP,LODPBACK,RUNNING> mtu 65536

inet 127.0.0.1 netmask 255.0.0.0

inet6 ::1 prefixlen 128 scopeid 0*10chost>
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 frame 0

TX packets 0 bytes 0 (0.0 B)

TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

### ping: Send ICMP echo requests to a network host

```
File Actions Edit View Help

-(utilis hall) |-[]
-| spins | 912-168-58-129

PIMG | 192-168-58-129

PIMG | 192-168-58-129

PIMG | 192-168-58-129| (ing. seq-) till-64 time-3-49 ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-898 ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-732 ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-732 ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-732 ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-898 ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-732 ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-868 ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-1-8-18 ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-1-8-18 ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-1-8-18 ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-2) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-2) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-2) till-64 time-8-18) ms
64 bytes from | 192-168-58-129| (ing. seq-2) till-64 time-8-180 ms
64 bytes from | 192-168-58-129| (ing. seq-2) till-64 time-8-180 ms
64 bytes from | 192-168-58-129| (ing. seq-2) till-64 time-8-180 ms
64 bytes fr
```

### ssh: Securely connect to a remote system

#### 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

```
File Actions Edit View Help

(**Lali@ bali)={-|
| $ spi=sk|
| $ sp
```

### systematl: 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 mano 6.2

Edit this file to introduce tasks to be run by cron.

Each task to run has to be defined through a single line
sindicating with different fields when the task will be run
sand what command to run for the task

To define the time you can provide concrete values for
sminute (m), hour (h), day of month (dom), month (mon),
s and day of week (dow) or use '*' in these fields (for 'any').

Notice that tasks will be started based on the cron's system
sdaemon's notion of time and timezones.

Substitute of the crontab jobs (including errors) is sent through
semail to the user the crontab file belongs to (unless redirected).

For example, you can run a backup of all your user accounts
sat 5 a.m every week with:
So to example, you can run a backup of all your user accounts
sat 5 a.m every week with
For more information see the manual pages of crontab(5) and cron(8)
san home mon dow command
```

useradd: Add a new user

#### passwd: Change user password

```
(kali⊕ kali)-[~]

$ passwd

Changing password for kali.

Current 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