

ASSIGNMENT - 1

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TITLE: LINUX COMMAND LIST ASSESSMENT

File and Directory Operations:

1. ls: List files and directories
2. cd: Change directory
3. pwd: Print working directory
4. mkdir: Make directory
5. touch: Create an empty file
6. cp: Copy files and directories
7. mv: Move or rename files and directories
8. rm: Remove files and directories
9. find: Search for files and directories

COMMANDS :

The image shows a Kali Linux terminal window on the left and a web browser window on the right.

Terminal Window:

```
chiranjibi@kali: ~  
File Actions Edit View Help  
$ cd  
(chiranjibi@kali)-[~]  
$ pwd  
/home/chiranjibi  
(chiranjibi@kali)-[~]  
$ mkdir  
mkdir: missing operand  
Try 'mkdir --help' for more information.  
(chiranjibi@kali)-[~]  
$ ls  
192.68.240.255 Desktop dir3 Documents mysql-apt-config_0.8.15-1_all.deb nmap.py py  
cybersec1.txt dir1 dir4 Downloads newcybersec2  
cyber.txt dir2 dir5 Music newcybersec.txt  
(chiranjibi@kali)-[~]  
$ mkdir example1  
(chiranjibi@kali)-[~]  
$ rmdir example1  
(chiranjibi@kali)-[~]  
$ touch hello1.txt  
(chiranjibi@kali)-[~]  
$ mv hello1.txt hi.txt  
(chiranjibi@kali)-[~]  
$ mkdir example1  
(chiranjibi@kali)-[~]  
$ cp hello1.txt hi.txt  
cp: cannot stat 'hello1.txt': No such file or directory  
(chiranjibi@kali)-[~]  
$ cp hello1.txt hii.txt  
cp: cannot stat 'hello1.txt': No such file or directory  
(chiranjibi@kali)-[~]  
$ cp hi.txt hii.txt  
(chiranjibi@kali)-[~]  
$ rm hii.txt  
(chiranjibi@kali)-[~]  
$ find example1  
example1  
(chiranjibi@kali)-[~]  
$
```

Web Browser Window:

The browser shows the 'dyclassroom' website. The sidebar menu includes: Grapes, Jackfruit, Imbe, Jackfruit, nmap.py, Pictures, Public, Templates, Videos. The main content area is titled 'tail filename' and contains the text: 'This command will print the last 10 lines of a' and 'In the following example we will get the last lines of the file fruits.txt.' Below this is a code block showing the output of the command 'tail fruits.txt'.

```
$ tail fruits.txt  
Quince  
Raspberries  
Strawberries  
Tangerine  
Ugni  
Voavanga  
Watermelon  
Xigua  
Yangmei  
Zuchinni
```

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

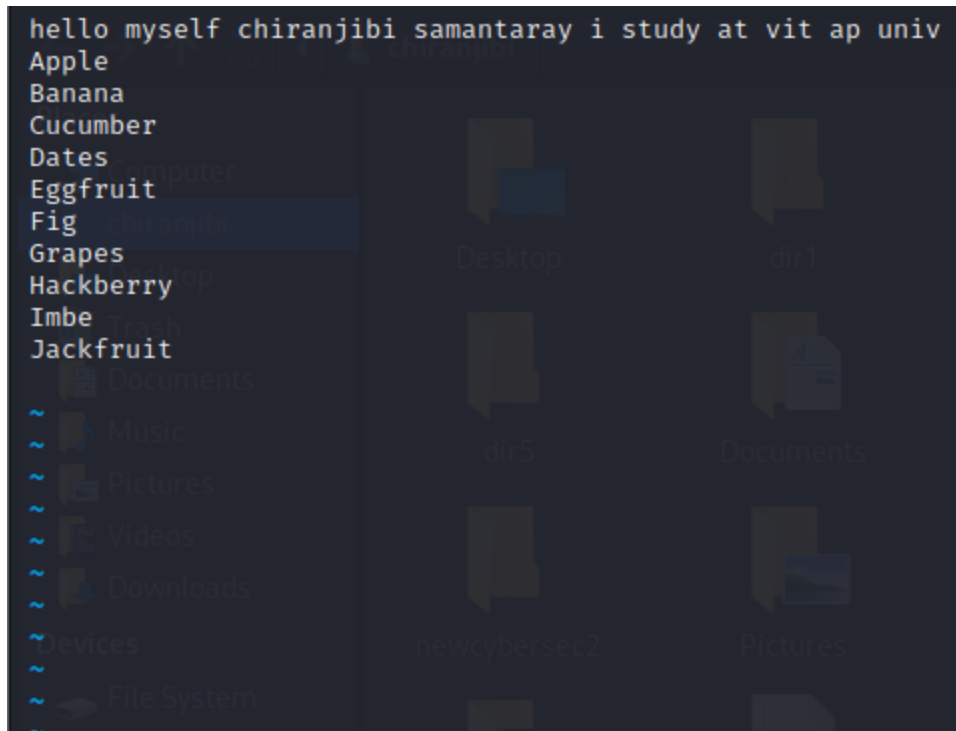
COMMANDS :

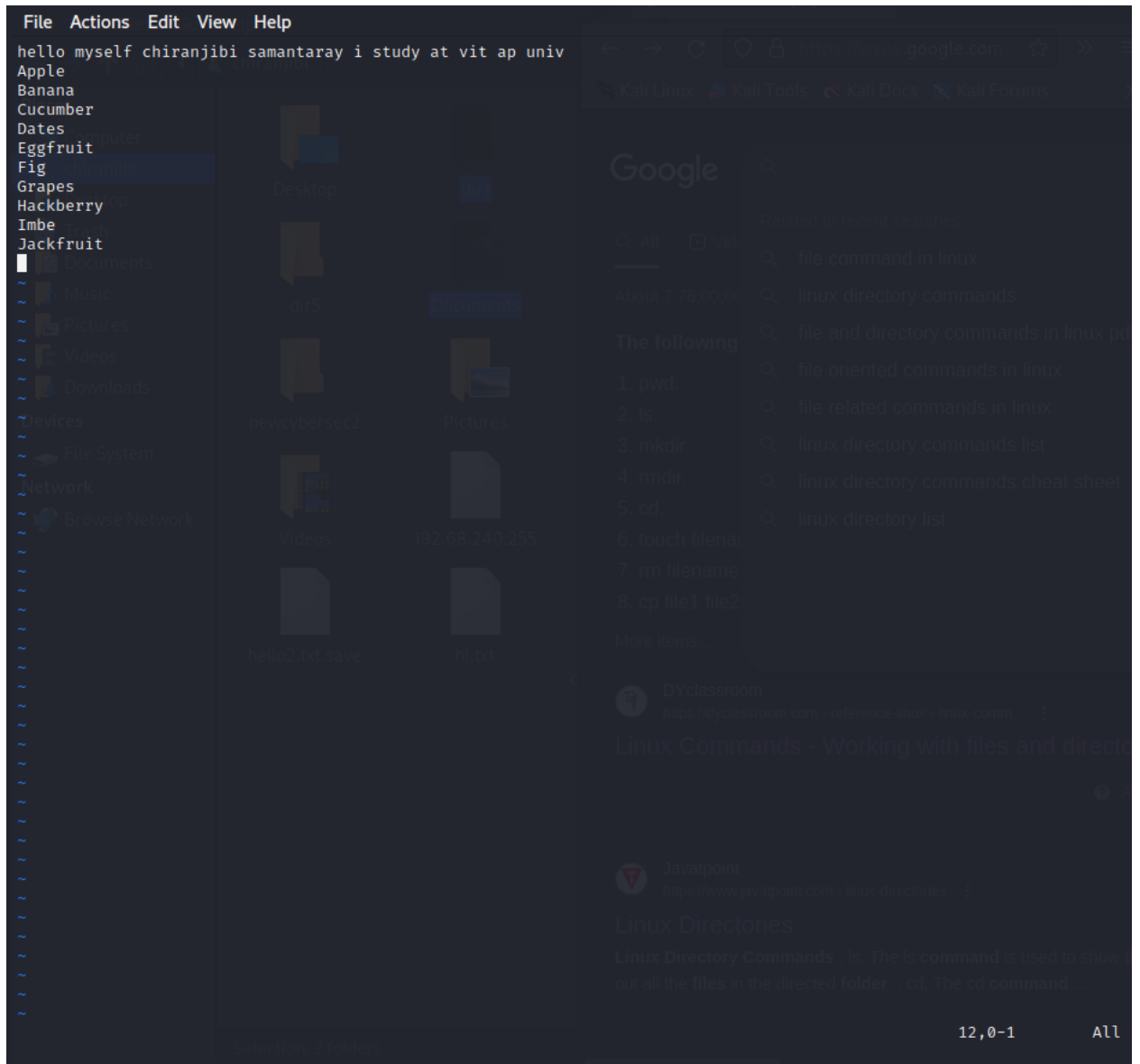
```
(chiranjibi@kali)-[~]
$ cat hello2.txt
hello myself chiranjibi samantaray i study at vit ap uni
Apple
Banana
Cucumber
Dates
Eggfruit
Fig
Grapes
Hackberry
Imbe
Jackfruit

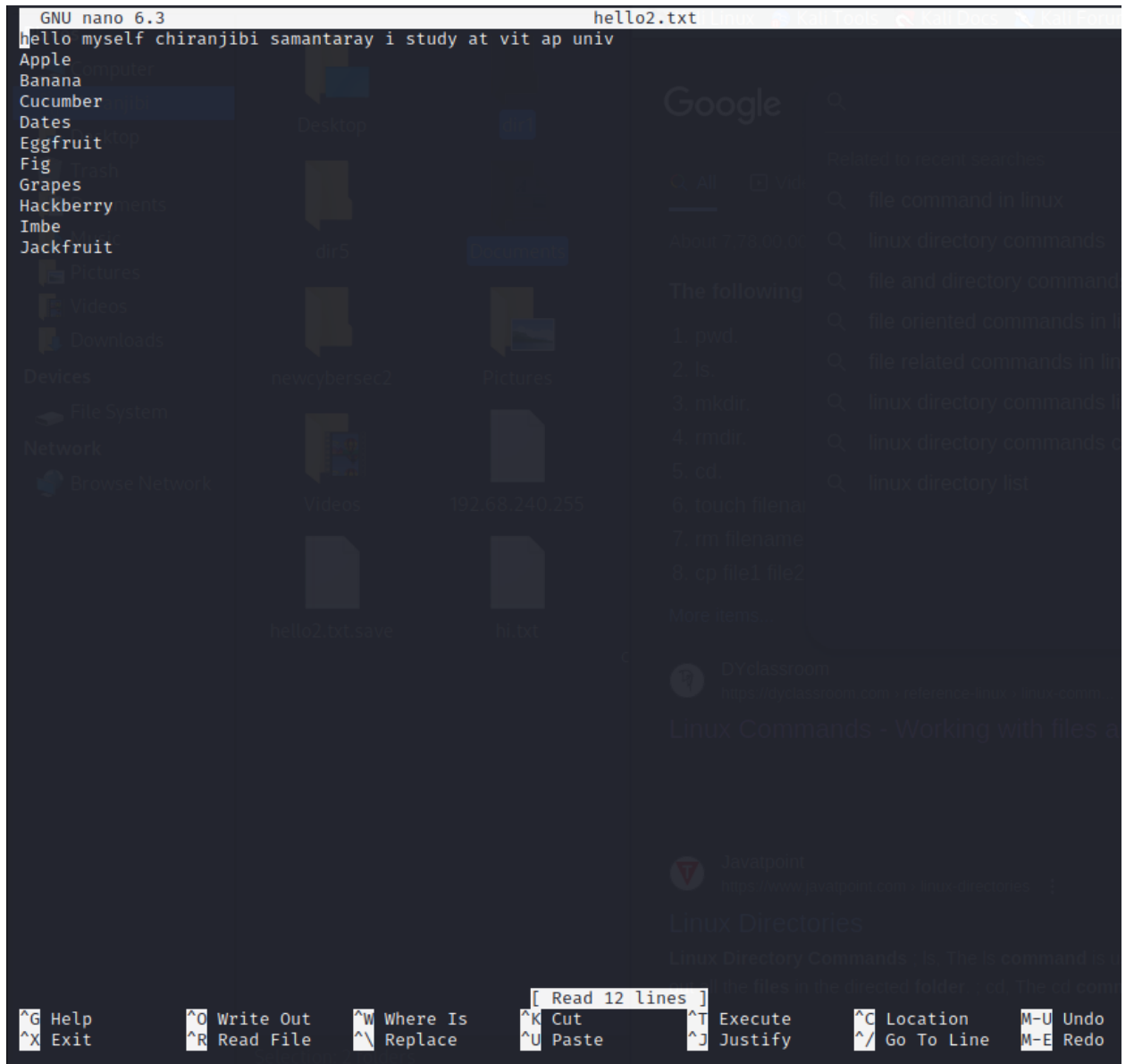
(chiranjibi@kali)-[~]
$ head hello2.txt
hello myself chiranjibi samantaray i study at vit ap uni
Apple
Banana
Cucumber
Dates
Eggfruit
Fig
Grapes
Hackberry
Imbe

(chiranjibi@kali)-[~]
$ tail hello2.txt
Banana
Cucumber
Dates
Eggfruit
Fig
Grapes
Hackberry
Imbe
Jackfruit

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







File Permissions:

chmod: Change file permissions

chown: Change file owner

chgrp: Change file group

COMMANDS :

```
(chiranjibi@kali)-[~]
$ ls -l hello2.txt
-rw-r--r-- 1 chiranjibi chiranjibi 133 May 28 05:21 hell

(chiranjibi@kali)-[~]
$ chmod 644 hello2.txt
File System

(chiranjibi@kali)-[~]
$ chmod hello2.txt
chmod: missing operand after 'hello2.txt'
Try 'chmod --help' for more information.

(chiranjibi@kali)-[~]
$ chmod u=rwx,g=rwx,o=rwx hello2.txt

(chiranjibi@kali)-[~]
$ chown chiranjibi hello2.txt

(chiranjibi@kali)-[~]
$ chmod ug+rwx hello2.txt
hulk-master

(chiranjibi@kali)-[~]
$ chmod ug+ hello2.txt

(chiranjibi@kali)-[~]
$ █
Telegram
```

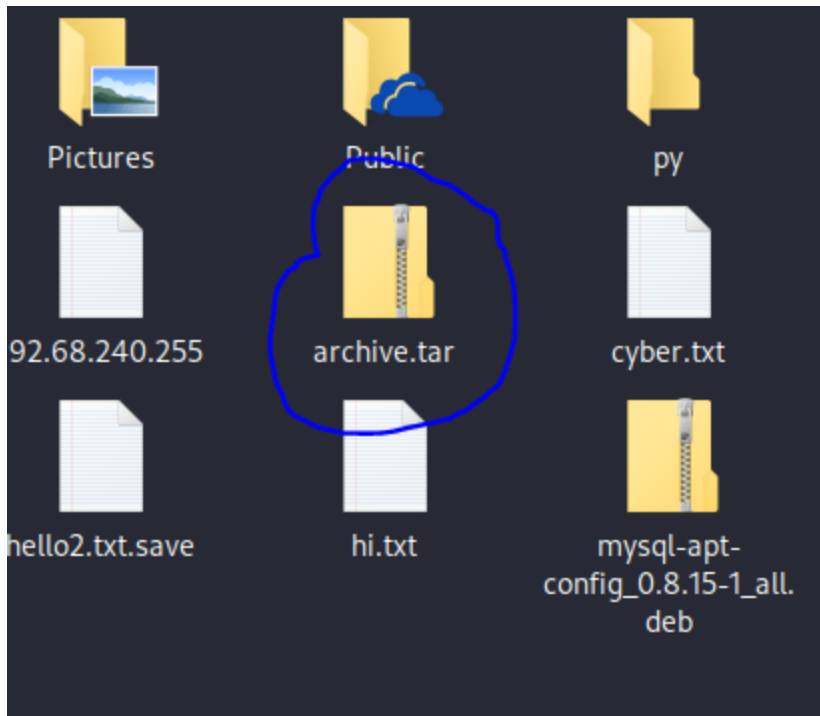
File Compression and Archiving:

tar: Archive files

gzip: Compress files

unzip: Extract files from a ZIP archive

COMMANDS :



```
(chiranjibi@kali)-[~]
$ tar -cvf archive.tar directory/
tar: directory: Cannot stat: No such file or directory
tar: Exiting with failure status due to previous errors

(chiranjibi@kali)-[~]
$ tar -cvf archive.tar
tar: Cowardly refusing to create an empty archive
Try 'tar --help' or 'tar --usage' for more information.

(chiranjibi@kali)-[~]
$ tar -xvf archive.tar

(chiranjibi@kali)-[~]
$ tar -tvf archive.tar

(chiranjibi@kali)-[~]
$ gzip hello2.txt

(chiranjibi@kali)-[~]
$ gzip -d hello2.txt.gz

(chiranjibi@kali)-[~]
$ unzip archive.zip hello2.txt
```

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

COMMANDS :

```
top - 05:59:52 up 1:12, 1 user, load average: 0.70, 1.43, 1.10
Tasks: 158 total, 1 running, 157 sleeping, 0 stopped, 0 zombie
%Cpu(s): 2.8 us, 1.4 sy, 0.0 ni, 95.9 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 4797.8 total, 2592.2 free, 1276.2 used, 929.3 buff/cache
MiB Swap: 975.0 total, 975.0 free, 0.0 used. 3261.2 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
965	chiranj+	20	0	201516	30736	19212	S	1.0	0.6	0:57.21	panel-13-cpugra
534	root	20	0	462500	143376	74664	S	0.7	2.9	2:22.02	Xorg
794	chiranj+	9	-11	1176132	36060	24228	S	0.7	0.7	0:25.76	pulseaudio
11092	chiranj+	20	0	435732	106348	85760	S	0.7	2.2	0:04.33	qterminal
873	chiranj+	20	0	153052	2712	2232	S	0.3	0.1	0:08.57	VBoxClient
923	chiranj+	20	0	637120	102396	76044	S	0.3	2.1	0:28.31	xfwm4
967	chiranj+	20	0	358696	30484	20676	S	0.3	0.6	0:14.30	panel-15-genmon
20347	chiranj+	20	0	10364	3720	3076	R	0.3	0.1	0:00.06	top
1	root	20	0	102104	12164	8972	S	0.0	0.2	0:01.01	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kthreadd
3	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_gp
4	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	rcu_par_gp
5	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	netns
7	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kworker/0:0H-events_highpri
9	root	0	-20	0	0	0	I	0.0	0.0	0:00.41	kworker/0:1H-events_highpri
10	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mm_percpu_wq
11	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_kthread
12	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_rude_kthread
13	root	20	0	0	0	0	I	0.0	0.0	0:00.00	rcu_tasks_trace_kthread
14	root	20	0	0	0	0	S	0.0	0.0	0:00.32	ksoftirqd/0
15	root	20	0	0	0	0	I	0.0	0.0	0:01.68	rcu_preempt
16	root	rt	0	0	0	0	S	0.0	0.0	0:00.04	migration/0
18	root	20	0	0	0	0	S	0.0	0.0	0:00.00	cpuhp/0
20	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kdevtmpfsd
21	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	inet_frag_wq
22	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kauditd
23	root	20	0	0	0	0	S	0.0	0.0	0:00.00	khungtaskd
24	root	20	0	0	0	0	S	0.0	0.0	0:00.00	oom_reaper
25	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	writeback
26	root	20	0	0	0	0	S	0.0	0.0	0:00.28	kcompactd0
27	root	25	5	0	0	0	S	0.0	0.0	0:00.00	ksmd
28	root	39	19	0	0	0	S	0.0	0.0	0:00.32	khugepaged
29	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kintegrityd
30	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kblockd
31	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	blkcg_punt_bio
32	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	tpm_dev_wq
33	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	edac-poller
34	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	devfreq_wq
36	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kswapd0
43	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	kthrotld
45	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	acpi_thermal_pm
46	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	mld
47	root	0	-20	0	0	0	I	0.0	0.0	0:00.00	ipv6_addrconf

```
(chiranjibi@kali)-[~]
$ ps
  PID TTY          TIME CMD
 20539 pts/3    00:00:00 zsh
 20556 pts/3    00:00:00 ps

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

```
(chiranjibi@kali)-[~]
$ kill -l
HUP INT QUIT ILL TRAP IOT BUS FPE KILL USR1 SEGV USR2 PI
PE ALRM TERM STKFLT CHLD CONT STOP TSTP TTIN TTOU URG XC
PU XFSZ VTALRM PROF WINCH POLL PWR SYS

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

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

COMMANDS :

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

(chiranjibi@kali)-[~]
$ df
Filesystem      1K-blocks    Used Available Use% Mounted on
udev            2420420         0   2420420   0% /dev
tmpfs           491292         944   490348   1% /run
/dev/sda1      128256204 13020980 108673996 11% /
tmpfs          2456448         0   2456448   0% /dev/shm
tmpfs           5120          0      5120   0% /run/lock
tmpfs           491288         96   491192   1% /run/user/1000

(chiranjibi@kali)-[~]
$ free
              total        used        free      shared  buff/cache
Mem:        4912900    1274920    2693820         29124
           944160      3380456
Swap:      998396          0      998396

(chiranjibi@kali)-[~]
$ uptime
06:06:03 up 1:18, 1 user, load average: 0.18, 0.53, 0.78

(chiranjibi@kali)-[~]
$ who
chiranjibi tty7          2023-05-28 04:47 (:0)

(chiranjibi@kali)-[~]
$ w
06:06:14 up 1:18, 1 user, load average: 0.15, 0.51, 0.77
USER      TTY      FROM          LOGIN@   IDLE   JCPU   PCPU WHAT
chiranjibi tty7      :0            04:47    1:18m  2:28  0.89s xfce4-s
```

Networking:

ifconfig: Configure network interfaces

ping: Send ICMP echo requests to a network host

ssh: Securely connect to a remote system

scp: Securely copy files between systems

wget: Download files from the web

COMMANDS :

```
(chiranjibi@kali)-[~]
$ ssh
usage: ssh [-46AaCfGgKkMMNqsTtVvXxYy] [-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 [comm
and [argument ...]]

(chiranjibi@kali)-[~]
$ ssh 172.18.114.59
ssh: connect to host 172.18.114.59 port 22: Connection r
efused

(chiranjibi@kali)-[~]
$ ssh chiranjibi@172.18.114.59
ssh: connect to host 172.18.114.59 port 22: Connection r
efused

(chiranjibi@kali)-[~]
$ ssh chiranjibi@172.18.112.10
```

```
eth0: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    ether 08:00:27:ed:2e:92 txqueuelen 1000 (Ethernet)
    RX packets 89363 bytes 99063895 (94.4 MiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 36540 bytes 6392359 (6.0 MiB)
    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 86 bytes 7436 (7.2 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 86 bytes 7436 (7.2 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

(chiranjibi@kali)-[~]
$ ping 173.18.114.59
PING 173.18.114.59 (173.18.114.59) 56(84) bytes of data.
```

System Administration:

- sudo: Execute commands with superuser privileges
- apt-get: Package management for Debian-based distributions
- yum: Package management for Red Hat-based distributions
- systemctl: Manage system services
- crontab: Schedule recurring tasks
- useradd: Add a new user
- passwd: Change user password

COMMANDS :


```
(chiranjibi@kali)-[~]  
$ passwd  
Changing password for chiranjibi.  
Current password:  
New password: 
```