AYUSH SHARMA 20BCY10174

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:

Is: List files and directories

```
kali@kali: ~
File Actions Edit View Help
zsh: corrupt history file /home/kali/.zsh_history
__(kali⊛ kali)-[~]
$ ls
           free_money.exe nikto
Desktop
                                     Templates
                                                   webpwn3r
Documents
                           Pictures
                                     theHarvester xeus.json
Downloads newfolder2
                           Public
                                     Videos
                                                   xeus.xml
  -(kali⊕kali)-[~]
```

cd: Change directory

```
kali@kali: ~/Desktop
File Actions Edit View Help
zsh: corrupt history file /home/kali/.zsh_history
__(kali⊛ kali)-[~]

$ ls
           free_money.exe nikto
Desktop
                                     Templates webpwn3r
Documents
                           Pictures theHarvester xeus.json
Downloads newfolder2
                           Public
                                     Videos
                                                    xeus.xml
  —(kali⊛kali)-[~]
cd <u>Desktop/</u>
___(kali⊛kali)-[~/Desktop]
```

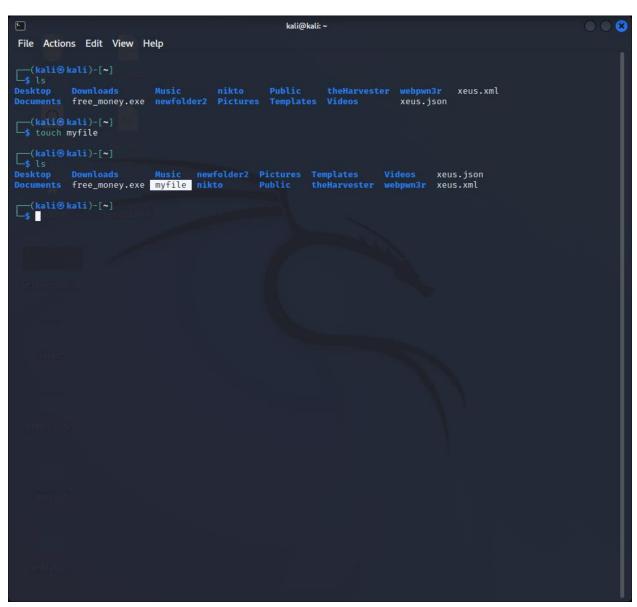
pwd: Print working directory

```
kali@kali: ~/Desktop
File Actions Edit View Help
zsh: corrupt history file /home/kali/.zsh_history
[ (kali⊛ kali)-[~]
Desktop
           free_money.exe nikto
                                     Templates webpwn3r
          Music
Documents
                           Pictures theHarvester xeus.json
Downloads newfolder2
                           Public
                                     Videos
                                                   xeus.xml
 —(kali⊕kali)-[~]
scd <u>Desktop/</u>
___(kali⊛ kali)-[~/Desktop]
pwd
/home/kali/Desktop
___(kali⊛ kali)-[~/Desktop]
```

mkdir: Make directory

```
kali@kali: ~/Desktop
File Actions Edit View Help
(kali⊕ kali)-[~/Desktop]
s mkdir newfolder4
[kali⊛kali]-[~/Desktop]
encrypt
                newfolder3
                                                         xeus.json
              newfolder4
naspro
                                                         xeus.xml
'New Folder' Screenshot_2022-02-05_11-05-05.png
___(kali⊛ kali)-[~/Desktop]
```

touch: Create an empty file



cp: Copy files and directories

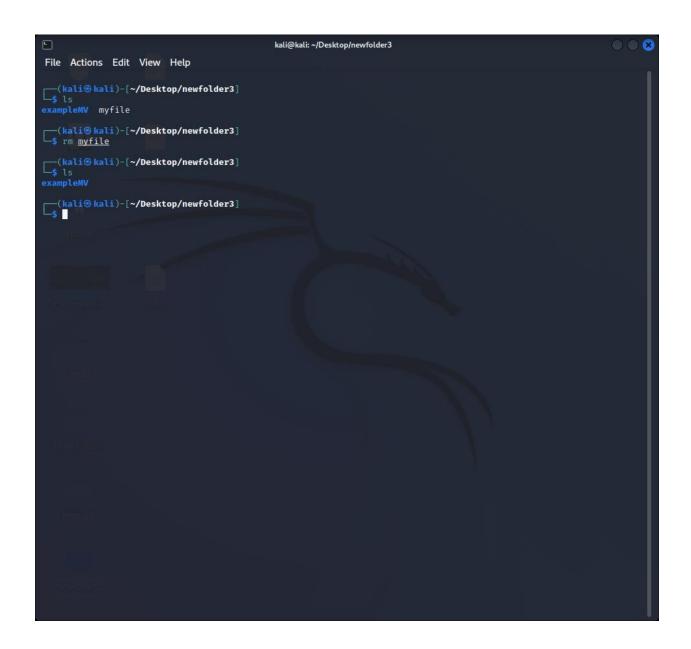
```
kali@kali: ~/Desktop/newfolder3
 File Actions Edit View Help
(kali@kali)-[~/Desktop]
style="font-size: large;">(kali@kali)-[~/Desktop]
style="font-size: large;">(kali@kali)-[~/Desktop]
(kali@kali)-[~/Desktop]
style="font-size: large;">(kali@kali)-[~/Desktop]
(kali@ kali)-[~/Desktop/newfolder3]
myfile
[ (kali⊛ kali)-[~/Desktop/newfolder3]
```

mv: Move or rename files and directories

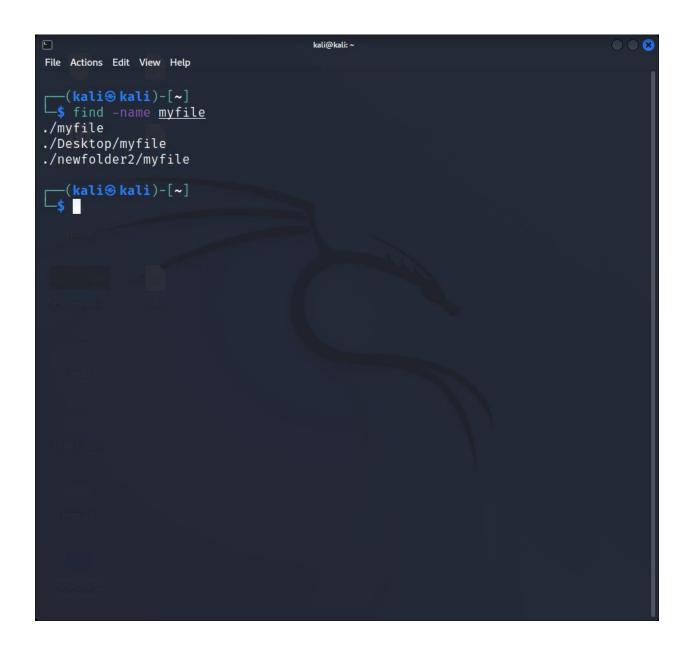
```
kali@kali: ~/Desktop
 File Actions Edit View Help
(kali@ kali)-[~/Desktop]
$ | 15
encrypt naspro newfolder3 screenshot_2022-02-05_11-05-05.png xeus.xml
myfile 'New Folder' newfolder4 xeus.json
(kali@kali)-[~/Desktop]
state no newfolder4 exampleMV
(kali% kali)-[~/Desktop]

$\frac{1}{5}\text{ ls} & \text{myfile 'New Folder' Screenshot_2022-02-05_11-05-05.png xeus.xml} \text{exampleMV xeus.json} \text{xeus.json}
(kali@kali)-[~/Desktop]
smv exampleMV newfolder3
[ (kali⊕ kali)-[~/Desktop]
 encrypt myfile maspro 'New Folder' newfolder3 Screenshot_2022-02-05_11-05-05.png xeus.json xeus.xml
[ (kali⊕ kali)-[~/Desktop]
```

rm: Remove files and directories



find: Search for files and directories



File Viewing and Editing:

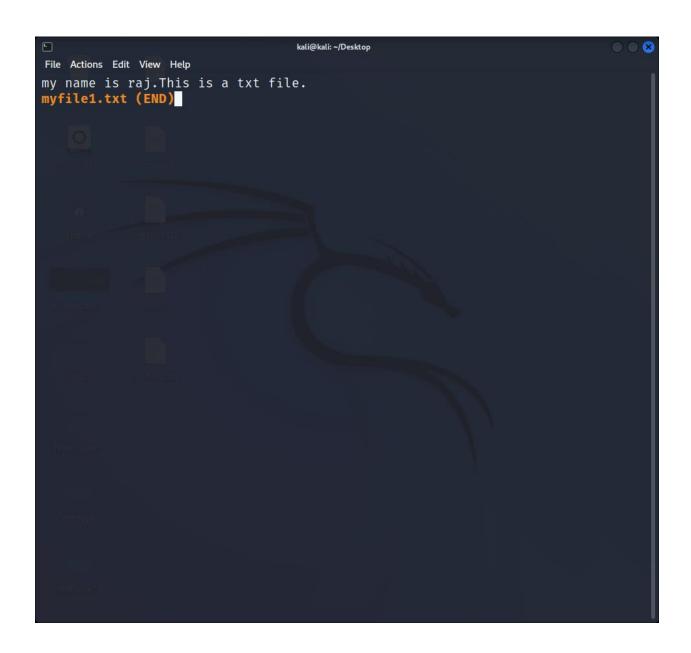
cat: Concatenate and display file content

```
kali@kali: ~/Desktop
File Actions Edit View Help
(kali@ kali)-[~/Desktop]
$ ls
encrypt
myfile
myfile
naspro
                                   newfolder3
                 myfile2.txt
                                                                                xeus.xml
 myfile1.txt 'New Folder'
                                   xeus.json
(kali⊗ kali)-[~/Desktop]

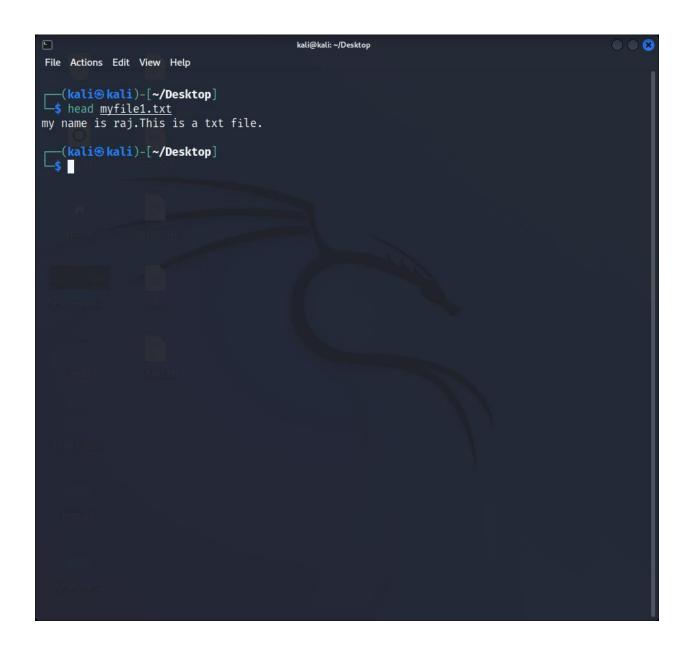
state myfile1.txt
my name is raj. This is a txt file.
(kali@ kali)-[~/Desktop]
stat myfile2.txt
This is txt file2
(kali⊛ kali)-[~/Desktop]

$ cat myfile2.txt myfile1.txt
This is txt file2
my name is raj. This is a txt file.
__(kali⊕ kali)-[~/Desktop]
```

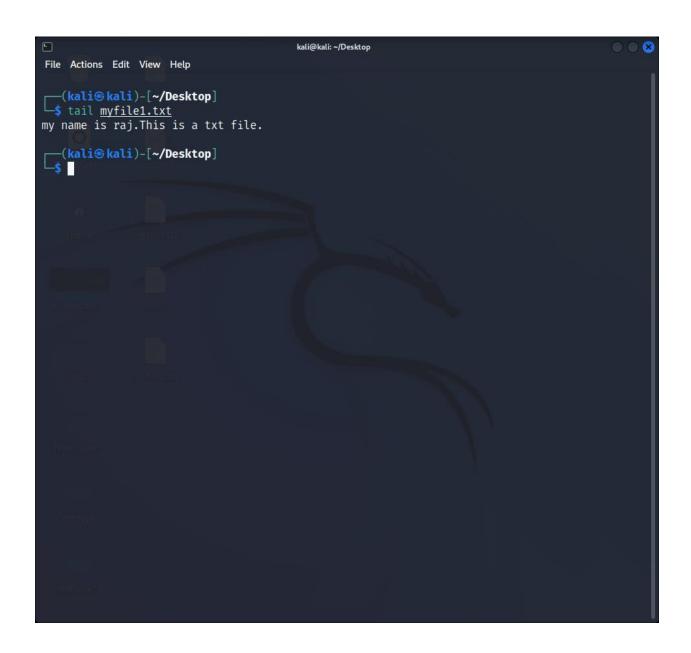
less: View file content with pagination



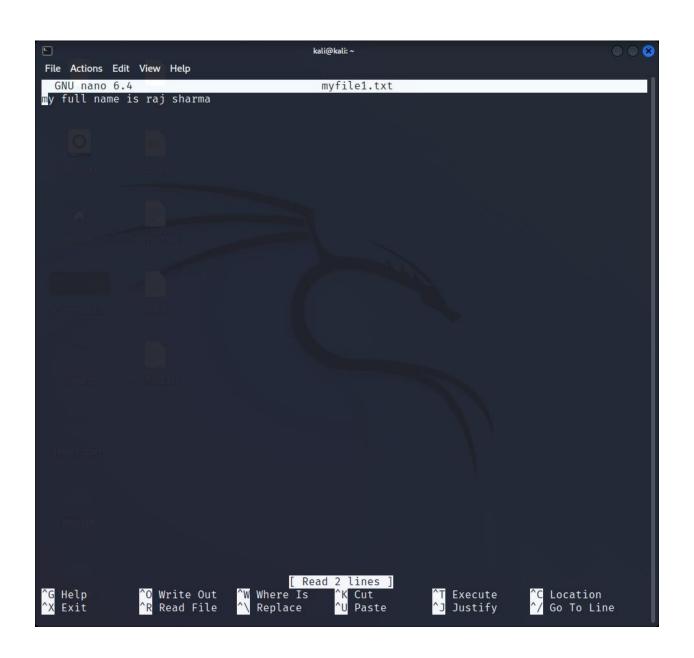
head: Display the beginning of a file

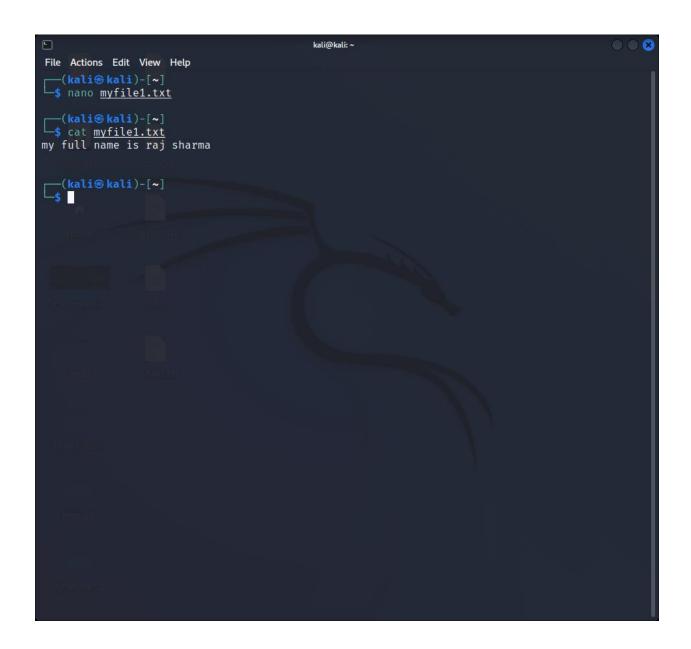


tail: Display the end of a file



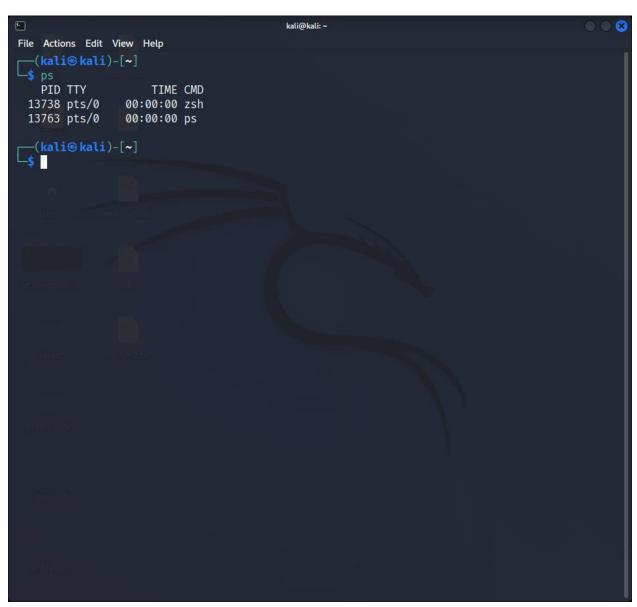
nano: Text editor for creating and editing files





Process Management:

ps: List running processes



top: Display real-time system information and processes

N.						kali@kal	i: ~				○ ○ ⊗	
File Actio	ons Edit V	iew H	łelp									
top - 02	2:35:38 u	p 49	min,	1 use	r, load	averag	ge:	0.03,	0.09.	0.13		
	Tasks: 152 total, 1 running, 151 sleeping, 0 stopped, 0 zombie											
%Cpu(s):	4.1 us			, 0.0	ni, 82.3	id, 5				1.5 si	, 0.0 st	
MiB Mem		.3 to			.9 free,		9.4	used,	466	.9 buff/d	cache	
MiB Swap	: 975	.0 to	otal,	975	.0 free,	(0.0	used.	1207	.0 avail	Mem	
	USER	PR	NI	VIRT	RES	SHR		%CPU	%MEM		COMMAND	
	root	20	0		111568	61752		10.3	5.5	1:05.37		
13735		20	0	413924	96640	77188		3.3	4.8	0:00.48	qterminal	
	root		-20	021152	106202		Ι	2.3	0.0		kworker/1:1H-events_+	
11	kali	20	0		106292	76412		2.3	5.2	0:25.44		
	kali	20	0	559276	51640	37852		2.3	2.5		nm-applet	
	kali	20	0	340620	26928	17668		1.3	1.3		panel-14-systra	
	kali	20	0	352896	37604	21808		1.0	1.9		panel-13-cpugra	
14-1-1	kali	20	0	152916	2676	2184		0.7	0.1		VBoxClient	
Caroonaha	kali	20	0	164976	10188	7284		0.7	0.5		at-spi2-registr	
	kali	20	0	246236	45064	19416		0.7	2.2		xfsettingsd	
	root		-20	0	0		I	0.3	0.0		kworker/0:1H-kblockd	
	root	20	0	0	0	0		0.3	0.0		ksoftirqd/1	
	kali	20	0	349204	29888	20148		0.3	1.5		panel-15-genmon	
13768		20	0	0	0		Ι	0.3	0.0		kworker/1:3-events	
13828		20	0	10248	3680	3132		0.3	0.2	0:00.03		
_	root	20	0	167616	12104	9004		0.0	0.6		systemd	
	root	20	0	0	0	0		0.0	0.0		kthreadd	
	root		-20	0	0		I	0.0	0.0	0:00.00		
New Fold	root		-20	0	0		Ι	0.0	0.0		rcu_par_gp	
_	root		-20	0	0		Ι	0.0	0.0	0:00.00		
	root		-20	0	0		Ι	0.0	0.0		kworker/0:0H-events_+	
	root		-20	0	0		Ι	0.0	0.0		mm_percpu_wq	
	root	20	0	0	0		Ι	0.0	0.0		rcu_tasks_kthread	
enci yp	root	20	0	0	0		Ι	0.0	0.0		rcu_tasks_rude_kthre+	
	root	20	0	0	0	0		0.0	0.0		rcu_tasks_trace_kthr+	
	root	20	0	0	0	0		0.0	0.0		ksoftirqd/0	
	root	20	0	0	0		Ι	0.0	0.0		rcu_preempt	
	root	rt	0	0	0		S	0.0	0.0		migration/0	
TIE WIOLU	root	20	0	0	0	0		0.0	0.0		cpuhp/0	
19	root	20	0	0	0	0	2	0.0	0.0	0:00.00	cpuhp/1	
											ı	

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

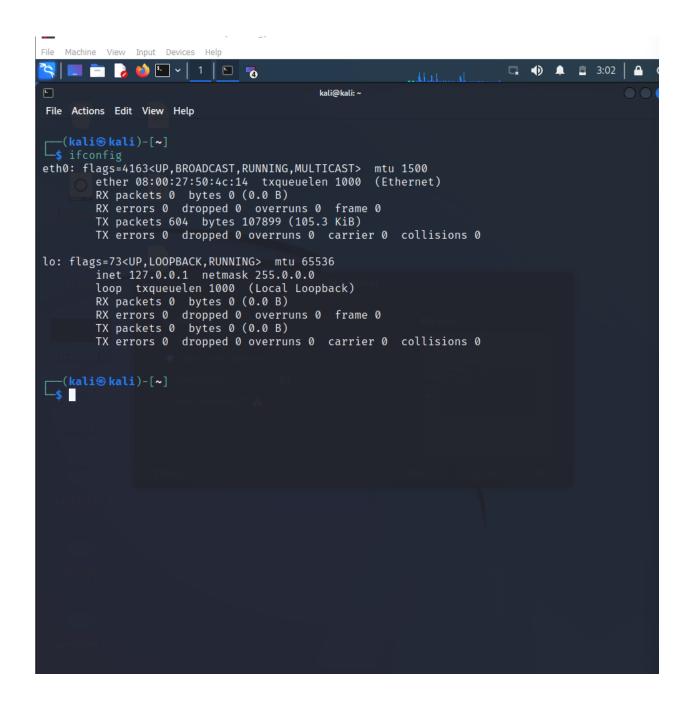
```
kali@kali: ~
 File Actions Edit View Help
Linux
               1K-blocks Used Available Use% Mounted on 978228 0% /dev 202884 932 201952 1% /run 81000912 16626608 60213692 22% / 1014404 0 1014404 0% /dev/shm 5120 0 5120 0% /run/lock 202880 80 202800 1% /run/user/1000
Filesystem 1K-blocks
udev
tmpfs
/dev/sda1
tmpfs
tmpfs
tmpfs
total used
2028812 649652
                                                               shared buff/cache available
11240 480656 1220536
                                                   998396
Swap:
 03:01:18 up 1:15, 1 user, load average: 0.02, 0.02, 0.05
03:01:24 up 1:15, 1 user, load average: 0.01, 0.02, 0.05

USER TTY FROM LOGIN@ IDLE JCPU PCPU WHAT

kali tty7 :0 01:49 1:14m 1:27 0.46s xfce4-session
___(kali⊕kali)-[~]
```

Networking:

ifconfig: Configure network interfaces



ping: Send ICMP echo requests to a network host

```
-(kali⊛kali)-[~]
____s ping 20.207.73.82
PING 20.207.73.82 (20.207.73.82) 56(84) bytes of data.
64 bytes from 20.207.73.82: icmp_seq=1 ttl=111 time=33.5 ms
64 bytes from 20.207.73.82: icmp_seq=2 ttl=111 time=34.0 ms
64 bytes from 20.207.73.82: icmp_seq=3 ttl=111 time=37.8 ms
64 bytes from 20.207.73.82: icmp_seq=4 ttl=111 time=34.9 ms
64 bytes from 20.207.73.82: icmp_seq=5 ttl=111 time=34.6 ms
64 bytes from 20.207.73.82: icmp_seq=6 ttl=111 time=34.3 ms
64 bytes from 20.207.73.82: icmp_seq=7 ttl=111 time=32.8 ms
64 bytes from 20.207.73.82: icmp_seq=8 ttl=111 time=33.5 ms
64 bytes from 20.207.73.82: icmp_seq=9 ttl=111 time=35.0 ms
64 bytes from 20.207.73.82: icmp_seq=10 ttl=111 time=37.8 ms
64 bytes from 20.207.73.82: icmp_seq=11 ttl=111 time=34.7 ms
64 bytes from 20.207.73.82: icmp_seq=12 ttl=111 time=34.0 ms
64 bytes from 20.207.73.82: icmp_seq=13 ttl=111 time=34.6 ms
64 bytes from 20.207.73.82: icmp seq=14 ttl=111 time=33.1 ms
64 bytes from 20.207.73.82: icmp_seq=15 ttl=111 time=33.1 ms
64 bytes from 20.207.73.82: icmp_seq=16 ttl=111 time=33.5 ms
64 bytes from 20.207.73.82: icmp_seq=17 ttl=111 time=39.0 ms
64 bytes from 20.207.73.82: icmp_seq=18 ttl=111 time=34.8 ms
64 bytes from 20.207.73.82: icmp_seq=19 ttl=111 time=36.0 ms
64 bytes from 20.207.73.82: icmp_seq=20 ttl=111 time=34.3 ms
64 bytes from 20.207.73.82: icmp_seq=21 ttl=111 time=32.6 ms
64 bytes from 20.207.73.82: icmp_seq=22 ttl=111 time=33.6 ms
64 bytes from 20.207.73.82: icmp_seq=23 ttl=111 time=33.1 ms
64 bytes from 20.207.73.82: icmp_seq=24 ttl=111 time=38.0 ms
64 bytes from 20.207.73.82: icmp_seq=25 ttl=111 time=32.5 ms
```

ssh: Securely connect to a remote system

```
jayesh@10.143.90.2's password:
Welcome to Ubuntu 22.04.2 LTS (GNU/Linux 5.19.0-38-generic x86_64)

* Documentation: https://help.ubuntu.com
    * Management: https://landscape.canonical.com
    * Support: https://ubuntu.com/advantage

* Introducing Expanded Security Maintenance for Applications.
    Receive updates to over 25,000 software packages with your
    Ubuntu Pro subscription. Free for personal use.
    https://ubuntu.com/pro

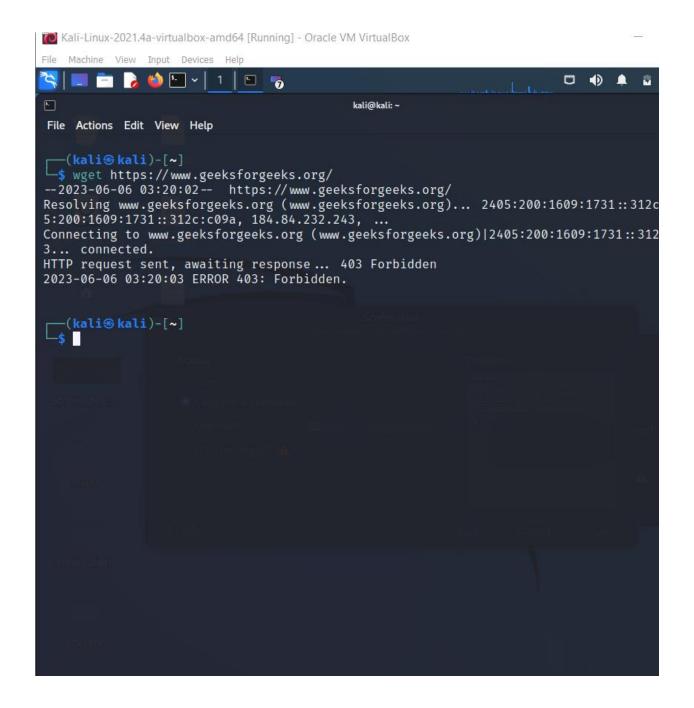
Expanded Security Maintenance for Applications is not enabled.

9 updates can be applied immediately.
To see these additional updates run: apt list --upgradable

7 additional security updates can be applied with ESM Apps.
Learn more about enabling ESM Apps service at https://ubuntu.com/esm

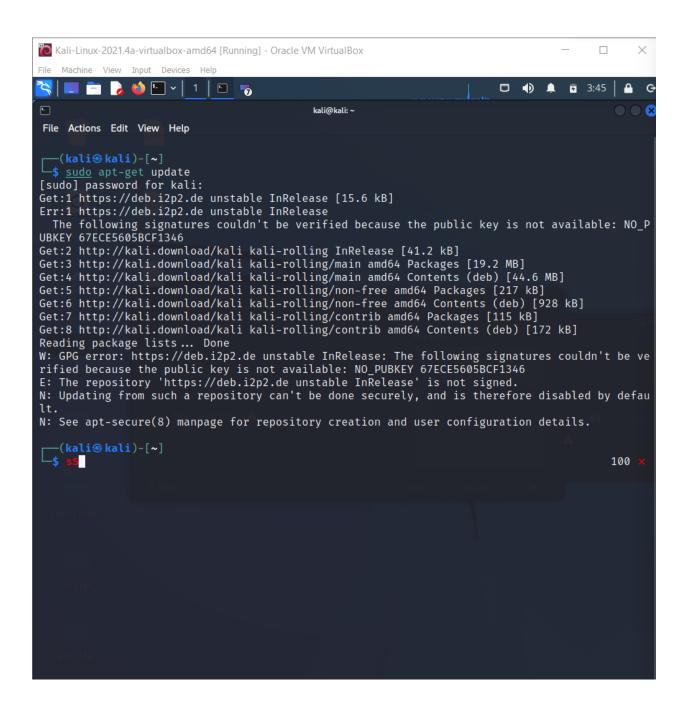
*** System restart required ***
```

wget: Download files from the web



System Administration:

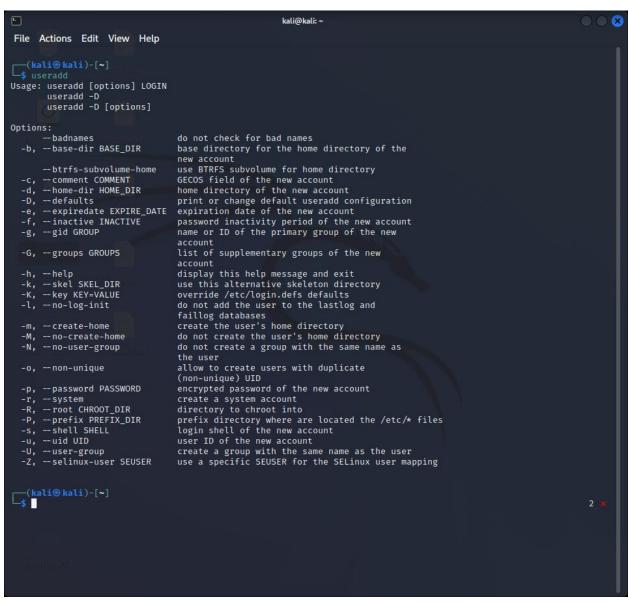
sudo: Execute commands with superuser privileges apt-get: Package management for Debian-based distributions



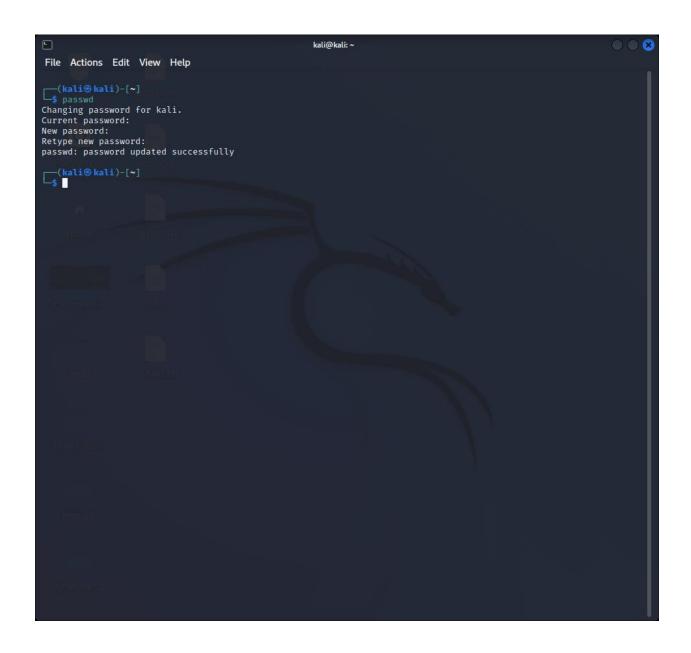
systemctl: Manage system services

```
kali@kali: ~
File Actions Edit View Help
systemctl
                                                                                            LOAD
 UNIT
                                                                                                  ACTIVE SUB
                                                                                            loaded active running
 proc-sys-fs-binfmt misc.automount
  sys-devices-pci0000:00-0000:00:01.1-ata2-host1-target1:0:0-1:0:0:0-block-sr0.device
                                                                                             loaded active plugged
  sys-devices-pci0000:00-0000:00:03.0-net-eth0.device
                                                                                            loaded active plugged
 sys-devices-pci0000:00-0000:00:05.0-sound-card0-controlC0.device
                                                                                            loaded active plugged
  sys-devices-pci0000:00-0000:00:0d.0-ata1-host0-target0:0:0-0:0:0:0-block-sda-sda1.device
                                                                                            loaded active plugged
  sys-devices-pci0000:00-0000:00:0d.0-ata1-host0-target0:0:0-0:0:0-block-sda-sda2.device
                                                                                            loaded active plugged
  sys-devices-pci0000:00-0000:00:0d.0-ata1-host0-target0:0:0-0:0:0-block-sda-sda5.device
                                                                                            loaded active plugged
  sys-devices-pci0000:00-0000:00:0d.0-ata1-host0-target0:0:0-0:0:0:0-block-sda.device
                                                                                            loaded active plugged
  sys-devices-platform-serial8250-ttv-ttvS0.device
                                                                                            loaded active plugged
  sys-devices-platform-serial8250-tty-ttyS1.device
                                                                                            loaded active plugged
  sys-devices-platform-serial8250-tty-ttyS2.device
                                                                                            loaded active plugged
 sys-devices-platform-serial8250-tty-ttyS3.device
                                                                                            loaded active plugged
  sys-devices-virtual-misc-rfkill.device
                                                                                             loaded active plugged
  sys-module-configfs.device
                                                                                            loaded active plugged
 sys-module-fuse.device
                                                                                             loaded active plugged
 sys-subsystem-net-devices-eth0.device
                                                                                            loaded active plugged
                                                                                             loaded active mounted
  dev-hugepages.mount
                                                                                            loaded active mounted
 dev-mqueue.mount
                                                                                             loaded active mounted
 proc-sys-fs-binfmt_misc.mount
                                                                                            loaded active mounted
  run-credentials-systemd\x2dsysusers.service.mount
                                                                                            loaded active mounted
  run-rpc_pipefs.mount
                                                                                            loaded active mounted
  run-user-1000-gvfs.mount
                                                                                            loaded active mounted
  run-user-1000.mount
                                                                                            loaded active mounted
  sys-fs-fuse-connections.mount
                                                                                            loaded active mounted
  sys-kernel-config.mount
                                                                                            loaded active mounted
  sys-kernel-debug.mount
                                                                                            loaded active mounted
  sys-kernel-tracing.mount
                                                                                            loaded active mounted
  systemd-ask-password-plymouth.path
                                                                                            loaded active waiting
  systemd-ask-password-wall.path
                                                                                            loaded active waiting
                                                                                            loaded active running
  init.scope
  session-2.scope
                                                                                            loaded active running
 binfmt-support.service
                                                                                            loaded active exited
 colord.service
                                                                                            loaded active running
 console-setup.service
                                                                                            loaded active exited
                                                                                            loaded active running
 cron.service
                                                                                            loaded active running
 dbus.service
  getty@tty1.service
                                                                                            loaded active running
  haveged.service
                                                                                            loaded active running
  ifupdown-pre.service
                                                                                            loaded active exited
  keyboard-setup.service
                                                                                            loaded active exited
  kmod-static-nodes.service
                                                                                            loaded active exited
  lightdm.service
                                                                                            loaded active running
 ModemManager.service
                                                                                            loaded active running
 networking.service
                                                                                            loaded active exited
  NetworkManager-wait-online.service
                                                                                            loaded active exited
  NetworkManager.service
                                                                                            loaded active running
  plymouth-quit-wait.service
                                                                                            loaded active exited
```

useradd: Add a new user



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