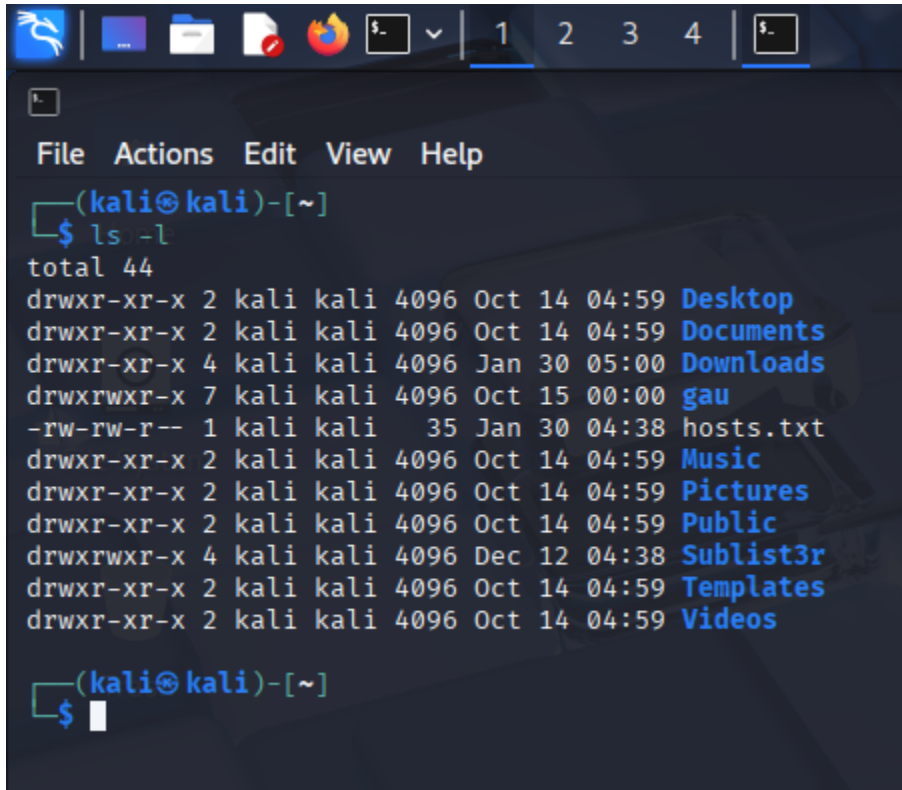


TASK 2

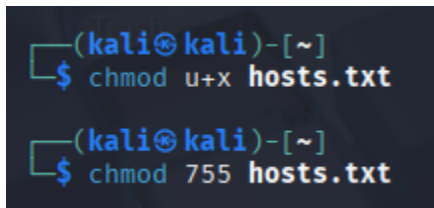
1. View Permissions



A terminal window in Kali Linux showing the output of the `ls -l` command. The window has a dark theme and a menu bar with 'File', 'Actions', 'Edit', 'View', and 'Help'. The terminal output lists the permissions, owner, group, size, date, and name for various files and directories in the home directory. The permissions are shown in a long format, including the file type (e.g., directory, regular file) and the permissions for owner, group, and others.

```
(kali㉿kali)-[~]  
$ ls -l  
total 44  
drwxr-xr-x 2 kali kali 4096 Oct 14 04:59 Desktop  
drwxr-xr-x 2 kali kali 4096 Oct 14 04:59 Documents  
drwxr-xr-x 4 kali kali 4096 Jan 30 05:00 Downloads  
drwxrwxr-x 7 kali kali 4096 Oct 15 00:00 gau  
-rw-rw-r-- 1 kali kali 35 Jan 30 04:38 hosts.txt  
drwxr-xr-x 2 kali kali 4096 Oct 14 04:59 Music  
drwxr-xr-x 2 kali kali 4096 Oct 14 04:59 Pictures  
drwxr-xr-x 2 kali kali 4096 Oct 14 04:59 Public  
drwxrwxr-x 4 kali kali 4096 Dec 12 04:38 Sublist3r  
drwxr-xr-x 2 kali kali 4096 Oct 14 04:59 Templates  
drwxr-xr-x 2 kali kali 4096 Oct 14 04:59 Videos  
  
(kali㉿kali)-[~]  
$
```

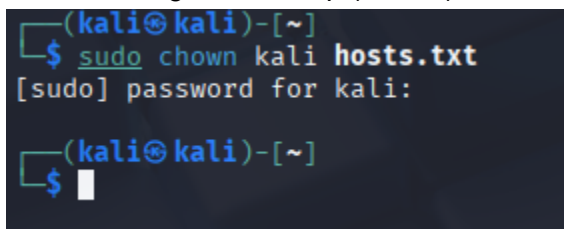
2. Change Permission (chmod):



A terminal window in Kali Linux showing two commands used to change permissions on the `hosts.txt` file. The first command uses the symbolic mode `u+x` to add execute permission for the user. The second command uses the octal mode `755` to set permissions to `drwxr-xr-x`.

```
(kali㉿kali)-[~]  
$ chmod u+x hosts.txt  
  
(kali㉿kali)-[~]  
$ chmod 755 hosts.txt
```

3. Change ownership (chown)



A terminal window in Kali Linux showing the use of the `chown` command to change the ownership of the `hosts.txt` file to the user `kali`. The command is run with `sudo` because the user is not root. The terminal prompts for the password for `kali`.

```
(kali㉿kali)-[~]  
$ sudo chown kali hosts.txt  
[sudo] password for kali:  
  
(kali㉿kali)-[~]  
$
```

4. Firewall Configuration

```
(kali㉿kali)-[~]  
$ sudo apt update  
Get:1 http://kali.download/kali kali-rolling InRelease [34.0 kB]  
Get:2 http://kali.download/kali kali-rolling/main amd64 Packages [20.7 MB]  
Get:3 http://kali.download/kali kali-rolling/main amd64 Contents (deb) [52.0 MB]  
Get:4 http://kali.download/kali kali-rolling/contrib amd64 Packages [117 kB]  
Get:5 http://kali.download/kali kali-rolling/non-free amd64 Packages [190 kB]  
Get:6 http://kali.download/kali kali-rolling/non-free amd64 Contents (deb) [905 kB]  
Fetched 73.9 MB in 23s (3,261 kB/s)
```

2039 packages can be upgraded. Run 'apt list --upgradable' to see them.

```
(kali㉿kali)-[~]  
$ sudo apt install ufw  
The following packages were automatically installed and are no longer required:  
libwireshark18 libwiretap15 libwsutil16  
Use 'sudo apt autoremove' to remove them.
```

Installing:
ufw

Suggested packages:
rsyslog

Summary:
Upgrading: 0, Installing: 1, Removing: 0, Not Upgrading: 2039
Download size: 169 kB
Space needed: 880 kB / 63.3 GB available

```
Get:1 http://kali.download/kali kali-rolling/main amd64 ufw all 0.36.2-9 [169 kB]  
Fetched 169 kB in 1s (253 kB/s)  
Preconfiguring packages ...  
Selecting previously unselected package ufw.  
(Reading database ... 412740 files and directories currently installed.)  
Preparing to unpack .../archives/ufw_0.36.2-9_all.deb ...  
Unpacking ufw (0.36.2-9) ...  
Setting up ufw (0.36.2-9) ...  
Creating config file /etc/ufw/before.rules with new version  
Creating config file /etc/ufw/before6.rules with new version  
Creating config file /etc/ufw/after.rules with new version  
Creating config file /etc/ufw/after6.rules with new version  
update-rc.d: We have no instructions for the ufw init script.  
update-rc.d: It looks like a non-network service, we enable it.  
Created symlink '/etc/systemd/system/multi-user.target.wants/ufw.service' → '/usr/lib/systemd/system/ufw.service'.  
Processing triggers for kali-menu (2025.2.7) ...  
Processing triggers for man-db (2.13.1-1) ...
```

```
(kali㉿kali)-[~]  
$ sudo ufw status  
Status: inactive
```

5. Hardening

```
(kali㉿kali)-[~]  
$ sudo ufw default deny incoming  
Default incoming policy changed to 'deny'  
(be sure to update your rules accordingly)  
  
(kali㉿kali)-[~]  
$ sudo ufw default allow outgoing  
Default outgoing policy changed to 'allow'  
(be sure to update your rules accordingly)  
  
(kali㉿kali)-[~]  
$ sudo ufw allow ssh  
Rules updated  
Rules updated (v6)  
  
(kali㉿kali)-[~]  
$ sudo ufw enable  
Firewall is active and enabled on system startup  
  
(kali㉿kali)-[~]  
$
```

6. Identify and disable unnecessary services

```
(kali㉿kali)-[~]
$ systemctl list-units --type=service --state=running
```

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
accounts-daemon.service	loaded	active	running	Accounts Service
colord.service	loaded	active	running	Manage, Install and Ge>
cron.service	loaded	active	running	Regular background pro>
dbus.service	loaded	active	running	D-Bus System Message B>
getty@tty1.service	loaded	active	running	Getty on tty1
haveged.service	loaded	active	running	Entropy Daemon based o>
lightdm.service	loaded	active	running	Light Display Manager
ModemManager.service	loaded	active	running	Modem Manager
NetworkManager.service	loaded	active	running	Network Manager
polkit.service	loaded	active	running	Authorization Manager
rtkit-daemon.service	loaded	active	running	RealtimeKit Scheduling>
systemd-journald.service	loaded	active	running	Journal Service
systemd-logind.service	loaded	active	running	User Login Management
systemd-udevd.service	loaded	active	running	Rule-based Manager for>
udisks2.service	loaded	active	running	Disk Manager
upower.service	loaded	active	running	Daemon for power manag>
user@1000.service	loaded	active	running	User Manager for UID 1>
virtualbox-guest-utils.service	loaded	active	running	Virtualbox guest utils

Legend: LOAD → Reflects whether the unit definition was properly loaded.
ACTIVE → The high-level unit activation state, i.e. generalization of>

lines 1-22 ... skipping ...

UNIT	LOAD	ACTIVE	SUB	DESCRIPTION
accounts-daemon.service	loaded	active	running	Accounts Service
colord.service	loaded	active	running	Manage, Install and Generate Color Profiles
cron.service	loaded	active	running	Regular background program processing daemon
dbus.service	loaded	active	running	D-Bus System Message Bus
getty@tty1.service	loaded	active	running	Getty on tty1
haveged.service	loaded	active	running	Entropy Daemon based on the HAVEGE algorithm
lightdm.service	loaded	active	running	Light Display Manager
ModemManager.service	loaded	active	running	Modem Manager
NetworkManager.service	loaded	active	running	Network Manager
polkit.service	loaded	active	running	Authorization Manager
rtkit-daemon.service	loaded	active	running	RealtimeKit Scheduling Policy Service
systemd-journald.service	loaded	active	running	Journal Service
systemd-logind.service	loaded	active	running	User Login Management
systemd-udevd.service	loaded	active	running	Rule-based Manager for Device Events and Files
udisks2.service	loaded	active	running	Disk Manager
upower.service	loaded	active	running	Daemon for power management
user@1000.service	loaded	active	running	User Manager for UID 1000
virtualbox-guest-utils.service	loaded	active	running	Virtualbox guest utils

Legend: LOAD → Reflects whether the unit definition was properly loaded.
ACTIVE → The high-level unit activation state, i.e. generalization of SUB.
SUB → The low-level unit activation state, values depend on unit type.

18 loaded units listed.

```
(kali㉿kali)-[~]
$ sudo systemctl stop colord.service
```

	UNIT	STATE	SUB	DESCRIPTION
colord.service	colord.service	loaded active running		Accounts Service
colord.service	colord.service	loaded active running		Manage, Install and Configure Color Management

```
(kali㉿kali)-[~]
$ sudo systemctl disable colord.service
```

The unit files have no installation config (WantedBy=, RequiredBy=, UpheldBy=, Also=, or Alias= settings in the [Install] section, and DefaultInstance= for template units). This means they are not meant to be enabled or disabled using systemctl.

Possible reasons for having these kinds of units are:

- A unit may be statically enabled by being symlinked from another unit's .wants/, .requires/, or .upholds/ directory.
- A unit's purpose may be to act as a helper for some other unit which has a requirement dependency on it.
- A unit may be started when needed via activation (socket, path, timer, D-Bus, udev, scripted systemctl call, ...).
- In case of template units, the unit is meant to be enabled with some instance name specified.