

Linux Assignment 1:

User creation:

To create a new user with our name we use the following commands :

First of All, check which user I am by typing **whoami**

```
(kali㉿kali)-[~/Desktop]
$ whoami
kali
(kali㉿kali)-[~/Desktop]
$
```

After that we will create a new user by our name & will login it for creating a new user we will use **Sudo adduser** “username” as shown in this image.

```
(kali㉿kali)-[~/Desktop]
$ sudo adduser muhsinalishah
info: Adding user `muhsinalishah' ...
info: Selecting UID/GID from range 1000 to 59999 ...
info: Adding new group `muhsinalishah' (1002) ...
info: Adding new user `muhsinalishah' (1002) with group `muhsinalishah (1002)' .
..
info: Creating home directory `/home/muhsinalishah' ...
info: Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for muhsinalishah
Enter the new value, or press ENTER for the default
  Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n] y
info: Adding new user `muhsinalishah' to supplemental / extra groups `users' ...
info: Adding user `muhsinalishah' to group `users' ...
```

After that we will use **su** ‘username’ to login that user and then enter the password.

```
(kali㉿kali)-[/home/muhsinalishah]
$ su muhsinalishah
Password:
(muhsinalishah㉿kali)-[~]
$
```

Directory creation:

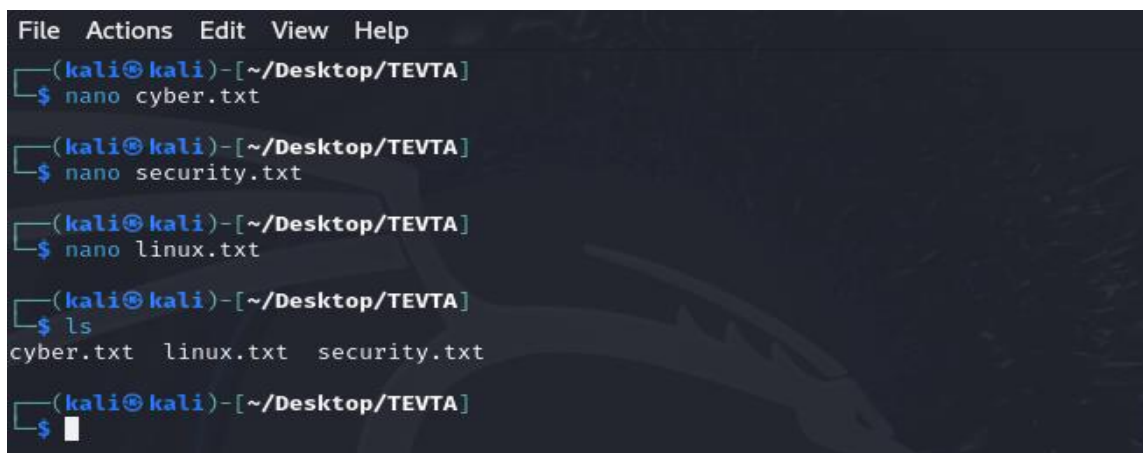
We use simply **mkdir** “filename” as default command to create a directory. And we will use **cd** command to open that directory

A terminal window titled 'kali@kali: ~/Desktop/TEVTA' with a menu bar (File, Actions, Edit, View, Help). The prompt is '(kali@kali)-[~/Desktop]'. The user enters '\$ mkdir TEVTA' and then '\$ cd TEVTA'.

```
kali@kali: ~/Desktop/TEVTA
File Actions Edit View Help
(kali@kali)-[~/Desktop]
$ mkdir TEVTA
(kali@kali)-[~/Desktop]
$ cd TEVTA
```

File creation:

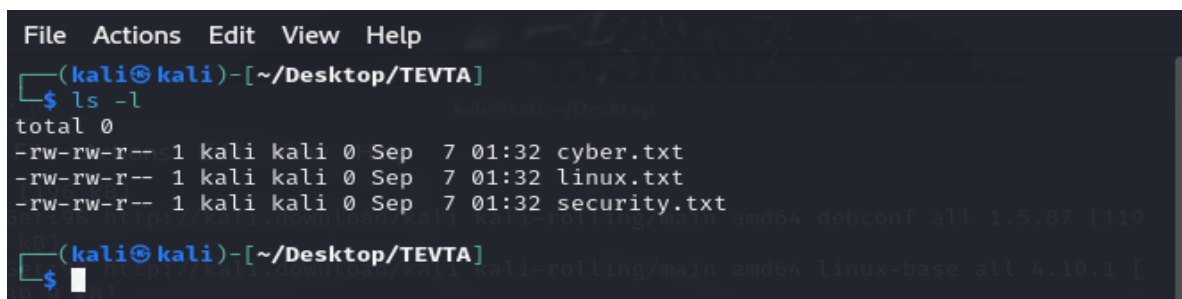
To create some text files in it we will use **nano** “filename” as shown in this image :

A terminal window titled 'kali@kali: ~/Desktop/TEVTA' with a menu bar (File, Actions, Edit, View, Help). The prompt is '(kali@kali)-[~/Desktop/TEVTA]'. The user enters '\$ nano cyber.txt', '\$ nano security.txt', and '\$ nano linux.txt'. Then the user enters '\$ ls' and the output shows 'cyber.txt linux.txt security.txt'.

```
kali@kali: ~/Desktop/TEVTA
File Actions Edit View Help
(kali@kali)-[~/Desktop/TEVTA]
$ nano cyber.txt
(kali@kali)-[~/Desktop/TEVTA]
$ nano security.txt
(kali@kali)-[~/Desktop/TEVTA]
$ nano linux.txt
(kali@kali)-[~/Desktop/TEVTA]
$ ls
cyber.txt  linux.txt  security.txt
(kali@kali)-[~/Desktop/TEVTA]
$
```

Permission Setting for Files:

We will use **ls -l** to long list Format to change the permissions for the file. The default permission are :

A terminal window titled 'kali@kali: ~/Desktop/TEVTA' with a menu bar (File, Actions, Edit, View, Help). The prompt is '(kali@kali)-[~/Desktop/TEVTA]'. The user enters '\$ ls -l' and the output shows the long list format for the three files.

```
kali@kali: ~/Desktop/TEVTA
File Actions Edit View Help
(kali@kali)-[~/Desktop/TEVTA]
$ ls -l
total 0
-rw-rw-r-- 1 kali kali 0 Sep  7 01:32 cyber.txt
-rw-rw-r-- 1 kali kali 0 Sep  7 01:32 linux.txt
-rw-rw-r-- 1 kali kali 0 Sep  7 01:32 security.txt
(kali@kali)-[~/Desktop/TEVTA]
$
```

Note: r means read, w means write, x means execute. Read value is 4, write value is 2 while value of execute is 1 and no permission value is 0. There are 3 Groups for permissions *Owner(have all permissions(r, w, x)), Group & Others*. Now we will change permissions for all these as shown in this image. if it starts with **d** it means it's a directory and if it shows ----- it means all permissions are denied.

Owner	Group	Other
r w x	r - x	r - x
$4+2+1$	$4+0+1$	$4+0+1$
7	5	5

Changing Permission Setting for Files:

If we grant all permissions to **Owner** so sum of values will be **7** (*read =4 , write =2, execute =1*). We will have to grant permission for all 3 groups (owner, group, other).

We use **chmod** (*sum of values*) "*filename*".

```
(kali㉿kali)-[~/Desktop/TEVTA]
$ chmod 760 cyber.txt
(kali㉿kali)-[~/Desktop/TEVTA]
$ chmod 501 security.txt
(kali㉿kali)-[~/Desktop/TEVTA]
$ chmod 750 linux.txt
```

After Changing Permissions Setting for Files:

We can clearly see the difference of permissions as compare to the old.

```
(kali㉿kali)-[~/Desktop/TEVTA]
$ ls -l
total 0
-rwxrw--- 1 kali kali 0 Sep  7 01:32 cyber.txt
-rwxr-x-- 1 kali kali 0 Sep  7 01:32 linux.txt
-r-x----- 1 kali kali 0 Sep  7 01:32 security.txt
```

Verifications of File Permissions:

Permissions set for cyber.txt are:

- Owner: **-rwx**
- Group: **rw-**
- Others: **---**

Permissions For security.txt:

- Owner: **-r-x**
- Group: **---**
- Others: **--x**

Permissions For linux.txt:

- Owner: **-rwx**
- Group: **r-x**
- Others: **---**