

```
mkdir -p mfs/admin{1..3}/day{1..5}
touch mfs/admin{1..3}/day{1..5}/lab{1..5}
cd
ls -lR
```

[illegible]

```

./mfs/admin3:
total 0
drwxr-xr-x 1 mahmoud_kamal mahmoud_kamal 512 Jan 31 16:54 day1
drwxr-xr-x 1 mahmoud_kamal mahmoud_kamal 512 Jan 31 16:54 day2
drwxr-xr-x 1 mahmoud_kamal mahmoud_kamal 512 Jan 31 16:54 day3
drwxr-xr-x 1 mahmoud_kamal mahmoud_kamal 512 Jan 31 16:54 day4
drwxr-xr-x 1 mahmoud_kamal mahmoud_kamal 512 Jan 31 16:54 day5

./mfs/admin3/day1:
total 0
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab1
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab2
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab3
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab4
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab5

./mfs/admin3/day2:
total 0
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab1
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab2
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab3
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab4
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab5

./mfs/admin3/day3:
total 0
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab1
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab2
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab3
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab4
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab5

./mfs/admin3/day4:
total 0
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab1
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab2
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab3
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab4
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab5

./mfs/admin3/day5:
total 0
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab1
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab2
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab3
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab4
-rw-r--r-- 1 mahmoud_kamal mahmoud_kamal 0 Jan 31 16:54 lab5
mahmoud_kamal@DESKTOP-MBJF1N6:~$ ls -lR

```

2-Chanege shell prompt to permanent:

LoginNAME@HOSTNAME-MM-DD-Current Directory\$

```

PS1="\[ \e]0;\u@\h:
\w\`a\]${debian_chroot:+($debian_chroot)}\[\033[01;32m\]\u@\h\[\033[00m\]-\D{%m-
%d}:\[\033[01;34m\]\w\[\033[00m\]\$"

```

Or PS1="\e[0;36m\u@\h-\D{%m-%d}-\w\$ \e[m"

```

mahmoud_kamal@DESKTOP-MBJF1N6:~$ PS1="
mahmoud_kamal@DESKTOP-MBJF1N6-01-31:~$
mahmoud_kamal@DESKTOP-MBJF1N6-01-31:~$
mahmoud_kamal@DESKTOP-MBJF1N6-01-31:~$

```

3-Any user has W on a directory can remove any file under this directory even if he/she has no write perm on this file and not owner ?? What is the solution.

Create new user:

```
sudo useradd -c "MK" -m -s /bin/bash mk
```

```
sudo su - mk
```

```
mkdir Directory
```

```
touch Directory/file
```

```
$ chmod 1777 Directory/ or $ chmod +t Directory/
```

[If you set the sticky bit to a directory, other users cannot delete or rename the files (or subdirectories) within that directory.]

When the sticky bit is set on a directory, only the owner and the root user can delete / rename the files or directories within that directory.]

```
mahmoud_kamal@DESKTOP-MBJF1N6-01-31:~$ls -lR /home/mk
/home/mk:
total 0
drwxrwxrwt 1 mk mk 512 Jan 31 17:34 Directory

/home/mk/Directory:
total 0
-rw-rw-r-- 1 mk mk 0 Jan 31 17:34 file
mahmoud_kamal@DESKTOP-MBJF1N6-01-31:~$rm /home/mk/Directory/file
rm: remove write-protected regular empty file '/home/mk/Directory/file'? y
rm: cannot remove '/home/mk/Directory/file': Operation not permitted
mahmoud_kamal@DESKTOP-MBJF1N6-01-31:~$
```

4-How normal user change is password while has no W on /etc/shadow? How? how to do it?

```
mahmoud_kamal@DESKTOP-MBJF1N6-01-31:~$ls -alh $(which passwd)
-rwsr-xr-x 1 root root 67K Jul 15 2021 /usr/bin/passwd
```

The 's' in the 4th position indicates that the setuid flag is set. This allows any user to run the executable as the file's owner (root) without having to actually be root (and with no need to use sudo either)