

Assignment – User Management

- 1) Create user "nikhil" with home directory set as "/home/nikhil"
 - a) nikhil user should have "/bin/sh" shell for his environment
 - b) His password should expire in 9 days and 2 days before password expiry, he should get warning. User account must expire in 1 month from creation date
 - c) Give him root privileges to start/stop cron daemon.
- 2) Inside folder "/", create new home directory as "nikhil" (/nikhil) and setup this folder as a home directory for user "nikhil"

Question: 1

(a.)

```
Last login: Wed Apr  2 05:45:12 2025 from 223.187.121.103
ubuntu@ip-172-31-32-198:~$ sudo useradd nikhil
ubuntu@ip-172-31-32-198:~$ sudo mkdir /home/nikhil
ubuntu@ip-172-31-32-198:~$ getent passwd nikhil
nikhil:x:1018:1018::/home/nikhil:/bin/sh
ubuntu@ip-172-31-32-198:~$ sudo usermod -s /bin/sh nikhil
usermod: no changes
ubuntu@ip-172-31-32-198:~$ ls -ld /home/nikhil
drwxr-xr-x 2 root root 4096 Apr  2 05:56 /home/nikhil
```

Created a new user "nikhil".

Created a home directory named "/home/nikhil" using "mkdir"

check for default shell: already bin/sh

However to make any shell by default, used "usermod -s /bin/sh" and checked using "getent passwd nikhil" showing /bin/sh at the last.

Finally check for home directory path as well using ls -ld and returning the required correct path.

(b.)

```
ubuntu@ip-172-31-32-198:~$ sudo passwd nikhil
New password:
Retype new password:
passwd: password updated successfully
ubuntu@ip-172-31-32-198:~$ sudo passwd -S nikhil
nikhil P 2025-04-02 0 99999 7 -1
ubuntu@ip-172-31-32-198:~$ ^C
ubuntu@ip-172-31-32-198:~$ sudo chage -M 9 nikhil
ubuntu@ip-172-31-32-198:~$ sudo chage -l nikhil
Last password change           : Apr 02, 2025
Password expires                : Apr 11, 2025
Password inactive               : never
Account expires                 : never
Minimum number of days between password change : 0
Maximum number of days between password change : 9
Number of days of warning before password expires : 7
```

Changed password for Nikhil using "sudo passwd" and check whether password is set or not using

“passwd -S” showing the details such as username, whether acc is protected or not (P) password changed date, etc.

now using “sudo chage -M 9” change the expiration days of password to 9 days and verified using “sudo chage -l nikhil” showing the correct modification.

```
ubuntu@ip-172-31-32-198:~$ sudo chage -W 2 nikhil
ubuntu@ip-172-31-32-198:~$ sudo passwd -l nikhil
passwd: password changed.
ubuntu@ip-172-31-32-198:~$ sudo chage -l nikhil
Last password change           : Apr 02, 2025
Password expires                : Apr 11, 2025
Password inactive               : never
Account expires                 : never
Minimum number of days between password change : 0
Maximum number of days between password change : 9
Number of days of warning before password expires : 2
```

similarly changed the warning before password expires using “sudo chage -W 2” which will give warning 2 days before the passwd expires and verified the same using “sudo chage -l”

```
ubuntu@ip-172-31-32-198:~$ sudo chage -E 2025-05-02 nikhil
ubuntu@ip-172-31-32-198:~$ sudo chage -l nikhil
Last password change           : Apr 02, 2025
Password expires                : Apr 11, 2025
Password inactive               : never
Account expires                 : May 02, 2025
Minimum number of days between password change : 0
Maximum number of days between password change : 9
Number of days of warning before password expires : 2
```

Account will be expired after one month, so expire date would be 02/05/2025

changed acc expire info using “sudo chage -E” and set it to one month later and verified the same using “sudo chage -l”.

(c.)

```
ubuntu@ip-172-31-32-198:~$ sudo visudo
ubuntu@ip-172-31-32-198:~$ sudo -l -U nikhil

# See sudoers(5) for more information on "@include" directives:

@includedir /etc/sudoers.d
nikhil ALL=(root) NOPASSWD: /bin/systemctl start cron, /bin/systemctl stop cron

User nikhil may run the following commands on ip-172-31-32-198:
(ALL) NOPASSWD: /bin/systemctl start cron, /bin/systemctl stop cron
```

visudo opens the etc/sudoers file for commands management for all users.

Set limited privileges for user Nikhil as a root to start and stop cron daemon.

ALL: rules apply on all the hosts

(root) = can run as root user only

NOPASSWD: it will require no password to run the respective given cmd

and lastly verified the privileges given to Nikhil user using “sudo -l -U nikhil” (-u -> user).

Question 2.

```
ubuntu@ip-172-31-32-198:~$ getent passwd nikhil
nikhil:x:1018:1018:./home/nikhil:/bin/sh
ubuntu@ip-172-31-32-198:~$ sudo mkdir /nikhil
ubuntu@ip-172-31-32-198:~$ getent passwd nikhil
nikhil:x:1018:1018:./home/nikhil:/bin/sh
ubuntu@ip-172-31-32-198:~$ sudo usermod -d /nikhil nikhil
ubuntu@ip-172-31-32-198:~$ getent passwd nikhil
nikhil:x:1018:1018:./nikhil:/bin/sh
ubuntu@ip-172-31-32-198:~$
```

Earlier home directory for nikhil was “/home/nikhil” as shown in the above picture.

Made a new directory as “/nikhil” and modified the directory path as “/nikhil” (-d).

Verified using “getent passwd nikhil” and successfully got the the expected home directory of nikhil as “/nikhil”.