Users:

```
[root@naggar-Inspiron:~]# useradd --help
[root@naggar-Inspiron:~]# useradd ahmed
[root@naggar-Inspiron:~]# passwd ahmed
[root@naggar-Inspiron:~]# tail -1 /etc/passwd
username:password:UID:GID:G ECOS(comment/full name/job):/home/dir:shell
(x is the old place for the password)

[root@naggar-Inspiron:~]# tail -1 /etc/shadow

[root@naggar-Inspiron:~]# useradd testuser
[root@naggar-Inspiron:~]# tail -1 /etc/passwd
[root@naggar-Inspiron:~]# tail -1 /etc/shadow                         (! indicates
that the user has no password)


[root@naggar-Inspiron:~]# useradd -G admin -u 1005 -s /usr/sbin/nologin ahmed
[root@naggar-Inspiron:~]# useradd -c "ahmed hosni" -u 1005 -m -s /bin/bash ahmed

To verify:
[root@naggar-Inspiron:~]# id
[root@naggar-Inspiron:~]# id ahmed
[root@naggar-Inspiron:~]# id -u ahmed        (UID for ahmed)
[root@naggar-Inspiron:~]# tail -n 1 /etc/passwd
==========================================================
Create a default file or directoy in the user's home directory:
[root@naggar-Inspiron:~]# touch /etc/skel/new_file


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Modify users:
[root@naggar-Inspiron:~]# usermod -L ahmed     (lock the user)
[root@naggar-Inspiron:~]# usermod -U ahmed     (unlock the user)
[root@naggar-Inspiron:~]# usermod -G sales ahmed     (overwrite secondary group)
[root@naggar-Inspiron:~]# usermod -aG admin ahmed    (append to secondary group)
or:
[root@naggar-Inspiron:~]# vim /etc/group
To verify:
[root@naggar-Inspiron:~]# id ahmed


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Groups:
-Primary group is the user Private Group (UPG).
[root@naggar-Inspiron:~]# groupadd sales
[root@naggar-Inspiron:~]# groupadd -g 1005 admin                (-g modifies the
group ID)

To verify:
[root@naggar-Inspiron:~]# id
[root@naggar-Inspiron:~]# id ahmed
[root@naggar-Inspiron:~]# grep sales /etc/group
groupname:password:GID:list  of users in this group

[root@naggar-Inspiron:~]# groupmod -g 2000 admin
[root@naggar-Inspiron:~]# groupadd old
[root@naggar-Inspiron:~]# groupmod -n new old        (rename a group)


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Delete users:

[root@naggar-Inspiron:~]# userdel ahmed
[root@naggar-Inspiron:~]# userdel -r test        (removes home directory)
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Delete groups:
[root@naggar-Inspiron:~]# groupdel admin

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Switching users with su:

[root@naggar-Inspiron:~]# su ahmed
[ahmed@master root]$ exit
exit
[root@naggar-Inspiron:~]# su - ahmed
[ahmed@naggar-Inspiron:~]$ su
============================================================
Running commands as root with sudo:

[root@naggar-Inspiron:~]# vim /etc/sudoers
    ahmed   ALL=(ALL)       ALL
    %admins ALL=(ALL)       ALL

[ahmed@master ~]$ sudo passwd mostafa
[ahmed@master ~]$ sudo passwd -l mostafa

To verify:
[root@naggar-Inspiron:~]# tail -f /var/log/auth.log

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Password aging:
[root@naggar-Inspiron:~]# chage -l ahmed              (list info about the user)
[root@naggar-Inspiron:~]# chage -E 2020-10-1 ahmed    (expire the user on the
specified date)
[root@naggar-Inspiron:~]# chage -M 120 ahmed          (set maximim number of days
before password change)
[root@naggar-Inspiron:~]# passwd -x 90 ahmed          (the password will expire after
90 days)

=======================================================================================================
Changing file/directory user or group ownership:

[root@naggar-Inspiron:~]# chown abeer file1
[root@naggar-Inspiron:~]# chown abeer dir1
[root@naggar-Inspiron:~]# chown -R abeer dir1
[root@naggar-Inspiron:~]# chown :sales file1              (change the group
ownership)
[root@naggar-Inspiron:~]# chgrp sales file1              (change the group
ownership)
[root@naggar-Inspiron:~]# chown abeer:sales file1        (change the owner and
group)
[root@naggar-Inspiron:~]# chown -R abeer:sales dir1

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Changing file/directory permissions:

[root@naggar-Inspiron:~]# chmod g+w file1
[root@naggar-Inspiron:~]# chmod o+w file1
[root@naggar-Inspiron:~]# chmod u-w file1
[root@naggar-Inspiron:~]# chmod u+w,g+wx,o+r file1
[root@naggar-Inspiron:~]# chmod go-rw file1
[root@naggar-Inspiron:~]# chmod u=rw,g=r,o=r file1
[root@naggar-Inspiron:~]# chmod a+x file1          or  chmod ugo+x file1
[root@naggar-Inspiron:~]# chmod a=rw file1         or  chmod ugo=rw file1
[root@naggar-Inspiron:~]# chmod u= file1                 (reomves all permissions from
```

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owner)
[root@naggar-Inspiron:~]# chmod +rw file1              or   chmod u+rw file1
[root@naggar-Inspiron:~]# chmod =rw file1              or   chmod u=rw file1
[root@naggar-Inspiron:~]# chmod -R g+rwx dir1

[root@naggar-Inspiron:~]# chmod 754 file1              (rwx,r-x,r--)
[root@naggar-Inspiron:~]# chmod 400 file1              (r--,---,---)
[root@naggar-Inspiron:~]# chmod -R 755 dir1
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```