User Administration:
1. Create user account xyz with comment testing

2. Change the min number of days to change password to be 3 days
3. Change the maximum number of days to change the password after 90 day
4. Change the warning before the account disabled

```
Password:
[root@centos8srv ~]# useradd -c "testing" xyz
[root@centos8srv ~]# chage -m 3 xyz
[root@centos8srv ~]# chage -M 90 xyz
[root@centos8srv ~]#  chage -W 7 xyz
[root@centos8srv ~]#
```

5. Create a directory called /depts with a sales, hr, and web directory within the
/depts directory.

```
[root@centos8srv /]# mkdir /depts
[root@centos8srv /]# cd /depts
[root@centos8srv depts]# mkdir sales hr web
[root@centos8srv depts]# ls
hr   sales   web
[root@centos8srv depts]#
```

6. Using the chgrp and chown command, set the group ownership of each directory to the group with the matching name.

```
[root@centos8srv /]# groupadd hr
[root@centos8srv /]# groupadd sales web
Usage: groupadd [options] GROUP

Options:
  -f, --force                   exit successfully if the group already exists,
                                and cancel -g if the GID is already used
  -g, --gid GID                 use GID for the new group
  -h, --help                    display this help message and exit
  -K, --key KEY=VALUE           override /etc/login.defs defaults
  -o, --non-unique              allow to create groups with duplicate
                                (non-unique) GID
  -p, --password PASSWORD       use this encrypted password for the new group
  -r, --system                  create a system account
  -R, --root CHROOT_DIR         directory to chroot into
  -P, --prefix PREFIX_DI        directory prefix
  -U, --users USERS             list of user members of this group

[root@centos8srv /]# groupadd web
[root@centos8srv /]# groupadd sales
```

```
chgrp: cannot access  sales : No such file or directory
[root@centos8srv /]# chgrp web /depts/web
[root@centos8srv /]# chgrp hr /depts/hr
[root@centos8srv /]# chgrp sales /depts/sales
[root@centos8srv /]# chown sales sales && chown hr hr && chown web web
```

```
Try chmod --help for more information.
[root@centos8srv /]# chmod 770 /depts/sales/ && chmod 770 /depts/hr/ && chmod 770 /depts/web/
[root@centos8srv /]#
```

7. Create 6 users 2 in each group sales, hr and web and give them password

```
useradd: user 'user1' already exists
[root@centos8srv /]# useradd user2
[root@centos8srv /]# useradd user3
[root@centos8srv /]# useradd user4
[root@centos8srv /]# useradd user5
[root@centos8srv /]# useradd user6
[root@centos8srv /]# useradd user7
[root@centos8srv /]# passwd user2
Changing password for user user2.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@centos8srv /]#
```

8. Let the newly created files for each user with the group name and protect it

```
passwd: all authentication tokens updated successfully.
[root@centos8srv /]# chmod g+s+t /depts8
chmod: cannot access '/depts8': No such file or directory
[root@centos8srv /]# chmod g+s+t /depts
[root@centos8srv /]# su -user2
Try 'su --help' for more information.
[root@centos8srv /]# su - user2
[user2@centos8srv ~]$ nano /depts/hr/user2.txt
[user2@centos8srv ~]$
```

```
  GNU nano 5.6.1                              /depts/hr/user2.txt                              Modified
xxxxxxxxxxxxxxxxxxxxxxxxxxxxx



[ Error writing /depts/hr/user2.txt: Permission denied ]
```

9. Create a directory with permissions rwxrwx---, grant a second group (sales)
r-x permissions
10. create a file on that directory and grant read and write to a second group
(sales)

```
[user2@centos8srv ~]$    mkdir sales
[user2@centos8srv ~]$    chmod 770 sales
[user2@centos8srv ~]$ _  chgrp -R sales sales/
```

11.set the the owning group as the owning group of **any newly created** file in
that directory.
12.Grant your colleagues a collective directory called /opt/research, where they
can store generated research results. Only members of group profs and grads
should be able to create new files in the directory, and new file should have
the following properties:
a. the directory should be owned by root
b. new files should be group owned by group grads
c. group profs should automatically have read/write access to new files
d. group interns should automatically have read only access to new files
e. other users should not be able to access the directory and its contents
at all.

```
[root@centos8srv ~]# groupadd profs
[root@centos8srv ~]# groupadd grads
[root@centos8srv ~]# mkdir /opt/research
[root@centos8srv ~]# chown root:root /opt/research
[root@centos8srv ~]# chmod 770 /opt/research
[root@centos8srv ~]# chgrp grads /opt/research
```

13.Configure sudoers file to allow user3 and user4 to use /usr/sbin/useradd and
/usr/sbin/usermod commands, while allowing user5 only to use fdisk command.

14.Create user account hhh using user3

```
adduser: cannot lock /etc/passwd; try again later.
[user3@centos8srv /]$ adduser hhh
```

15.Try to view the partitions of the system using the account of user5

```
     Boot      Start        End   Sectors  Size  Id  Type
1    *           2048  54527999  54525952   26G  83  Linux
2            54528000  62916607   8388608    4G  82  Linux swap / Solaris
3            62916608  83886079  20969472   10G  83  Linux
```

16.use at to execute command tar cvf /home.tar tar five minutes from now

17.use cron command to create backup from /etc directory and compress it with
gzip tool every day at mid night and store it in user root's home dir

tar -czvf /root/etc_backup.tar.gz /etc