

Assignment -2

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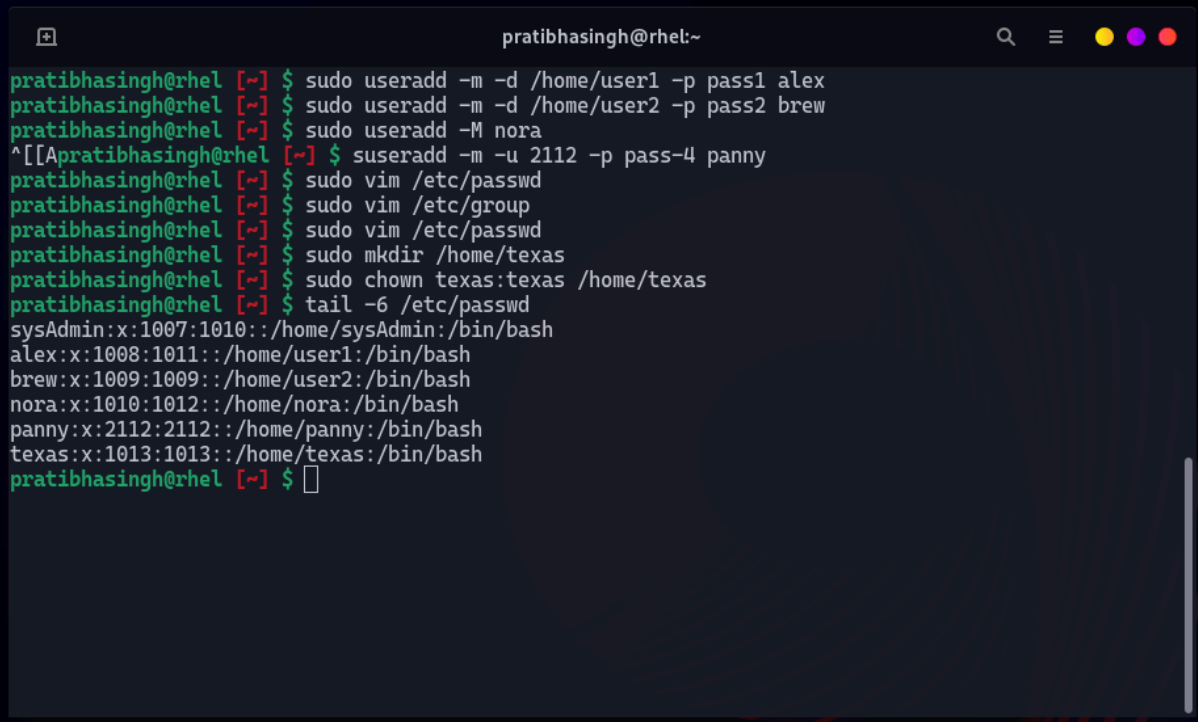
Roll No. - 22ETCCS121

1. Create some users:

- Named “alex” with its home directory at /home/user1 and give password “pass1”.
- Named “brew” with its home directory at /mnt/user2 and give password “pass2”.
- Named “nora” without its home directory o Named “panny” with custom UID 2112, and assign password “pass-4”
- Named 'texas' without using the useradd or adduser commands.

*(Hint: Make changes in the 7 user configuration files)

Ans.



```
pratibhasingh@rhel:~  
pratibhasingh@rhel [~] $ sudo useradd -m -d /home/user1 -p pass1 alex  
pratibhasingh@rhel [~] $ sudo useradd -m -d /home/user2 -p pass2 brew  
pratibhasingh@rhel [~] $ sudo useradd -M nora  
^[[Apratibhasingh@rhel [~] $ suseradd -m -u 2112 -p pass-4 panny  
pratibhasingh@rhel [~] $ sudo vim /etc/passwd  
pratibhasingh@rhel [~] $ sudo vim /etc/group  
pratibhasingh@rhel [~] $ sudo vim /etc/passwd  
pratibhasingh@rhel [~] $ sudo mkdir /home/texas  
pratibhasingh@rhel [~] $ sudo chown texas:texas /home/texas  
pratibhasingh@rhel [~] $ tail -6 /etc/passwd  
sysAdmin:x:1007:1010::/home/sysAdmin:/bin/bash  
alex:x:1008:1011::/home/user1:/bin/bash  
brew:x:1009:1009::/home/user2:/bin/bash  
nora:x:1010:1012::/home/nora:/bin/bash  
panny:x:2112:2112::/home/panny:/bin/bash  
texas:x:1013:1013::/home/texas:/bin/bash  
pratibhasingh@rhel [~] $
```

2. Log in as user alex using the su and su - commands, and explain their differences.

Ans. **su alex** switches to the user but retains the current shell and environment variables.

su - alex switches to the user and loads the user's login shell with their environment variables.

3. Set a password policy for all above users with the following requirements:

- The maximum password age should be 30 days, and the minimum password age should be 10 days.
- Set the password expiry date for all users to December 31, 2025.

Ans.

```
pratibhasingh@rhel [~] $ sudo chage -M 30 -m 10 brew
pratibhasingh@rhel [~] $ sudo chage -M 30 -m 10 nora
pratibhasingh@rhel [~] $ sudo chage -M 30 -m 10 panny
pratibhasingh@rhel [~] $ sudo chage -M 30 -m 10 texas
pratibhasingh@rhel [~] $
pratibhasingh@rhel [~] $ sudo chage -E 2025-12-31 alex
pratibhasingh@rhel [~] $ sudo chage -E 2025-12-31 brew
pratibhasingh@rhel [~] $ sudo chage -E 2025-12-31 nora
pratibhasingh@rhel [~] $ sudo chage -E 2025-12-31 panny
pratibhasingh@rhel [~] $ sudo chage -E 2025-12-31 texas
pratibhasingh@rhel [~] $
```

4. Modify the user "alex":

- Add a comment: "I am alex"
- Change the UID to 2581
- Change the shell to "nologin"

Ans.

```
pratibhasingh@rhel:~
pratibhasingh@rhel [~] $ sudo usermod -c "I am alex" alex
pratibhasingh@rhel [~] $ cat /etc/passwd | grep alex
alex:x:1008:1011:I am alex:/home/user1:/bin/bash
pratibhasingh@rhel [~] $ sudo usermod -u 2581 alex
pratibhasingh@rhel [~] $ cat /etc/passwd | grep alex
alex:x:2581:1011:I am alex:/home/user1:/bin/bash
pratibhasingh@rhel [~] $ sudo usermod -s /sbin/nologin alex
pratibhasingh@rhel [~] $ cat /etc/passwd | grep alex
alex:x:2581:1011:I am alex:/home/user1:/sbin/nologin
pratibhasingh@rhel [~] $
```

5. Create group with following configuration:

- Named “north” with secondary group members “alex” & “texas”.
- Named “south” with GID “2222”.

Ans.

```
pratibhasingh@rhel:~  
pratibhasingh@rhel [~] $ sudo groupadd north  
pratibhasingh@rhel [~] $ sudo usermod -aG north alex  
pratibhasingh@rhel [~] $ cat /etc/passwd | grep alex  
alex:x:2581:1011:I am alex:/home/user1:/sbin/nologin  
pratibhasingh@rhel [~] $ sudo usermod -aG north texas  
pratibhasingh@rhel [~] $ sudo groupadd -g 2222 south  
pratibhasingh@rhel [~] $ tail -10 /etc/group  
sysAdmin:x:1008:  
prem:x:1010:  
alex:x:1011:  
brew:x:1009:  
nora:x:1012:  
panny:x:2112:  
texas:x:1013:  
  
north:x:2113:alex,texas  
south:x:2222:  
pratibhasingh@rhel [~] $
```

6. Grant user Alex administrative privileges through the wheel group so that Alex can add Panny to the admin group without requiring root access.

Ans.

```
pratibhasingh@rhel:~  
pratibhasingh@rhel [~] $ sudo usermod -aG wheel alex  
pratibhasingh@rhel [~] $ vim /etc/group  
pratibhasingh@rhel [~] $ vim /etc/group  
pratibhasingh@rhel [~] $ cat /etc/group | grep wheel  
wheel:x:10:alex  
pratibhasingh@rhel [~] $
```

7. Change the group name from “south” to “dakshin”.

Ans.

```
pratibhasingh@rhel [~] $ sudo groupmod -n dakshin south
pratibhasingh@rhel [~] $ cat /etc/group | grep dakshin
dakshin:x:2222:
pratibhasingh@rhel [~] $
```

8. Create a system user named “ping” and check its UID.

Ans.

```
pratibhasingh@rhel [~] $ sudo useradd -r ping
pratibhasingh@rhel [~] $ id ping
uid=972(ping) gid=972(ping) groups=972(ping)
pratibhasingh@rhel [~] $
```

9. Create a group named goa with GID 11000. Set this group as the supplementary group for “brew”

Ans.

```
pratibhasingh@rhel [~] $ sudo groupadd -g 11000 goa
pratibhasingh@rhel [~] $ sudo usermod -aG goa brew
pratibhasingh@rhel [~] $ cat /etc/group | grep goa
goa:x:11000:brew
pratibhasingh@rhel [~] $
```

10. Create a group named “prod”. Then, create two users, user2 and user1, and set both the user’s primary group to prod.

Ans.

```
pratibhasingh@rhel:~  
pratibhasingh@rhel [~] $ sudo groupadd prod  
pratibhasingh@rhel [~] $ sudo useradd -g prod user2  
pratibhasingh@rhel [~] $ sudo useradd -g prod user1  
pratibhasingh@rhel [~] $ cat /etc/passwd | grep user1  
alex:x:2581:1011:I am alex:/home/user1:/sbin/nologin  
user1:x:2583:11001::/home/user1:/bin/bash  
pratibhasingh@rhel [~] $ cat /etc/passwd | grep user2  
brew:x:1009:1009::/home/user2:/bin/bash  
user2:x:2582:11001::/home/user2:/bin/bash  
pratibhasingh@rhel [~] $
```

11. Change the password policy for the USER3 and USER4 accounts to expire on 2026-01-15.

Ans.

```
pratibhasingh@rhel:~  
pratibhasingh@rhel [~] $ sudo useradd USER3  
pratibhasingh@rhel [~] $ sudo useradd USER4  
pratibhasingh@rhel [~] $ sudo chage -E 2026-01-15 USER3  
pratibhasingh@rhel [~] $ sudo chage -E 2026-01-15 USER4  
pratibhasingh@rhel [~] $ sudo chage -l USER3 ;sudo chage -l USER4  
Last password change : Jan 28, 2025  
Password expires : never  
Password inactive : never  
Account expires : Jan 15, 2026  
Minimum number of days between password change : 0  
Maximum number of days between password change : 99999  
Number of days of warning before password expires : 7  
Last password change : Jan 28, 2025  
Password expires : never  
Password inactive : never  
Account expires : Jan 15, 2026  
Minimum number of days between password change : 0  
Maximum number of days between password change : 99999  
Number of days of warning before password expires : 7  
pratibhasingh@rhel [~] $
```

12. Configure administrative rights for all members of the Goa group to execute any command as any user.

Ans.

```
pratibhasingh@rhel [~] $ sudo visudo
pratibhasingh@rhel [~] $ sudo visudo
pratibhasingh@rhel [~] $ sudo visudo
pratibhasingh@rhel [~] $ sudo cat /etc/sudoers | grep goa
%goa ALL=(ALL) ALL
pratibhasingh@rhel [~] $
```

13. How would you check all failed login attempts on the system from the last 10 days? Write the command and display the output.

Ans. `sudo journalctl --since "10 days ago" | grep "Failed Password"`

14. How would you determine how many users are currently logged into the system? Write the command to achieve this.

Ans.

```
pratibhasingh@rhel [~] $ who
pratibhasingh seat0      2025-01-28 13:02 (login screen)
pratibhasingh tty2      2025-01-28 13:02 (tty2)
foo47    tty3      2025-01-28 14:49
pratibhasingh@rhel [~] $
```

15. Add the user "sara" to the "wheel" group and create a collaborative directory /collaborative/infodir.

Ans.

```
pratibhasingh@rhel:~  
pratibhasingh@rhel [~] $ sudo useradd sara  
pratibhasingh@rhel [~] $ sudo usermod -aG wheel sara  
pratibhasingh@rhel [~] $ sudo mkdir -p /collaborative/infodir  
pratibhasingh@rhel [~] $ sudo chown :wheel /collaborative/infodir  
pratibhasingh@rhel [~] $ sudo chmod 770 /collaborative/infodir  
pratibhasingh@rhel [~] $ sudo chmod 2770 /collaborative/infodir  
pratibhasingh@rhel [~] $ ls -ld /collaborative/infodir/  
drwxrws---. 2 root wheel 6 Jan 28 15:20 /collaborative/infodir/  
pratibhasingh@rhel [~] $ cat /etc/group | grep wheel  
wheel:x:10:alex,sara  
pratibhasingh@rhel [~] $
```

16. Configure login/logout messages:

- When you log in with a new user, display a message: "Hello, you are logged in as USER" (where USER is replaced with the logged-in username).
- When you log out, display: "You are logged out now".

Ans.

```
pratibhasingh@rhel:~  
pratibhasingh@rhel [~] $ sudo su - foo47  
Hello, you are logged in as foo47  
[foo47@rhel ~]$ exit  
logout  
You are logged out now  
pratibhasingh@rhel [~] $
```

17. Configure system parameters for newly created users:

- Warning period for password expiry: 5 days

- Minimum user UID: 2000
- Maximum user UID: 70000

Ans.

```

pratibhasingh@rhel:~ — sudo vim /etc/login.defs
#      PASS_WARN_AGE      Number of days warning given before a password expires.
#
PASS_MAX_DAYS   99999
PASS_MIN_DAYS   0
PASS_WARN_AGE   5

# Currently PASS_MIN_LEN is not supported
# Currently SU_WHEEL_ONLY is not supported
# Currently CRACKLIB_DICTPATH is not supported
#
# Min/max values for automatic uid selection in useradd(8)
#
UID_MIN          2000
UID_MAX          70000
# System accounts
SYS_UID_MIN      201
SYS_UID_MAX      999

```

18. Create a directory /data and configure the system so that all newly created users get /data as their home directory by default.

Ans.

```

pratibhasingh@rhel:~
pratibhasingh@rhel [~] $ sudo useradd testuser
pratibhasingh@rhel [~] $ ls -ld /data/testuser/
drwx-----. 3 testuser testuser 92 Jan 28 15:27 /data/testuser/
pratibhasingh@rhel [~] $ ls /data
testuser
pratibhasingh@rhel [~] $ 

```

19. Name a file where we can set a file size limit upto 200 MB for a single file.

Ans. `/etc/security/limits.conf`

20. Check the last three users who logged into your system.

Ans.

```
pratibhasingh@rhel [~] $ last | head -n 3
pratibha tty2          tty2          Tue Jan 28 15:36    still logged in
pratibha seat0         login screen   Tue Jan 28 15:36    still logged in
reboot   system boot     5.14.0-503.21.1. Tue Jan 28 15:35    still running
pratibhasingh@rhel [~] $
```

21. As a system administrator, how would you configure the system to ensure that:

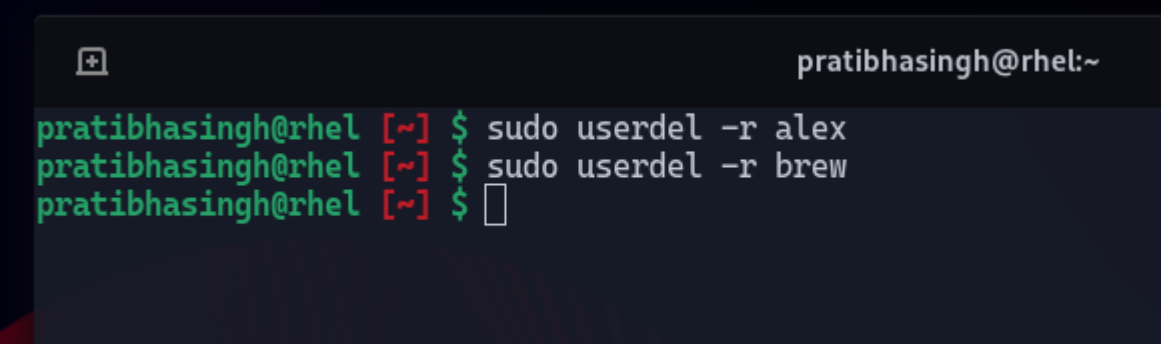
- Automatically create an instructions.txt file in the home directory of every new user upon account creation.
- Ensure that the mail directory for every newly created user is set to /home/spool/mail/ by default?"

Ans.

```
root@rhel:/etc/skel
[root@rhel skel]# echo "Instructions for new users" > instruction.txt
[root@rhel skel]# ls -a
. . . .bash_logout .bash_profile .bashrc instruction.txt .mozilla .zshrc
[root@rhel skel]# vim /etc/default/useradd
[root@rhel skel]# cat /etc/default/useradd
# useradd defaults file
GROUP=100
HOME=/home
INACTIVE=-1
EXPIRE=
SHELL=/bin/bash
SKEL=/etc/skel
CREATE_MAIL_SPOOL=yes
MAIL_DIR=/home/spool/mail/
[root@rhel skel]#
```

22. Delete some users o Named 'alex' and 'brew' with its all data contents including mail data

Ans.

A terminal window with a dark background. The title bar shows a window icon and the text 'pratibhasingh@rhel:~'. The terminal contains three lines of text: the first line is 'pratibhasingh@rhel [~] \$ sudo userdel -r alex', the second line is 'pratibhasingh@rhel [~] \$ sudo userdel -r brew', and the third line is 'pratibhasingh@rhel [~] \$' followed by a white cursor box.

```
pratibhasingh@rhel [~] $ sudo userdel -r alex
pratibhasingh@rhel [~] $ sudo userdel -r brew
pratibhasingh@rhel [~] $
```