

Ganpat University
Faculty of Engineering & Technology
Computer Science & Engineering
(2CSE204) Basics of Operating System and Shell Scripting
Institute of Computer And Technology

B.Tech – CSE(BDA)

Name:- Dwij Vatsal Desai

Sem:- 2

Sub: - BOSS

Enrollment No.:- 23162121027

Prac:- 1

Date:- 15/2/2024

Practical 1

1.From student user, change the user to root and identify which user is currently logged in?

Commands:-

```
[ddesai@localhost ~]$ whoami
```

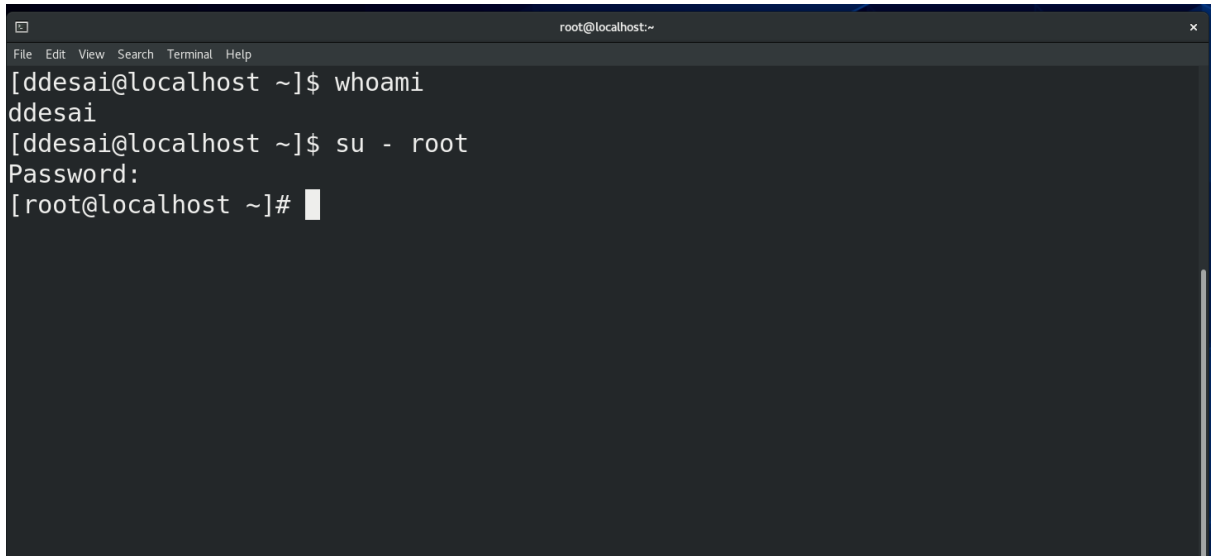
```
ddesai
```

```
[ddesai@localhost ~]$ su - root
```

```
Password:
```

```
[root@localhost ~]#
```

Screenshots:-

A terminal window titled 'root@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The output shows a user 'ddesai' running 'whoami' and then 'su - root' to become root, prompted for a password.

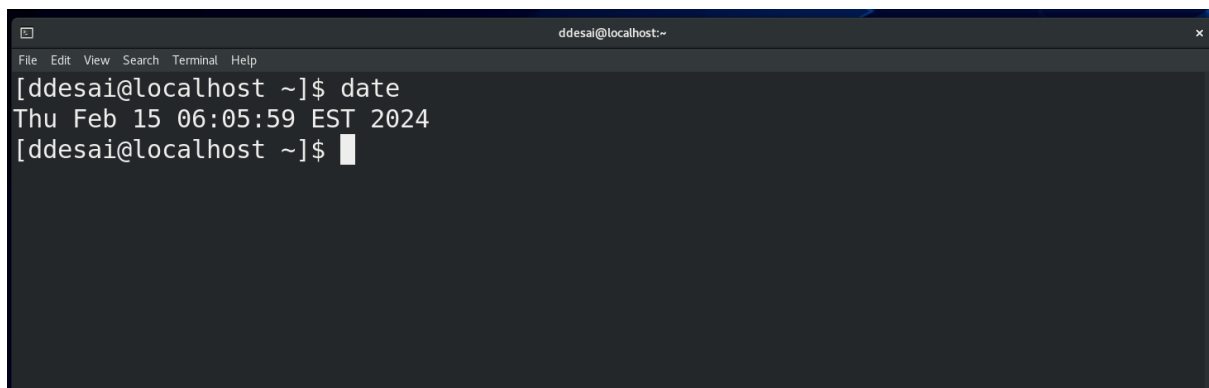
```
[ddesai@localhost ~]$ whoami
ddesai
[ddesai@localhost ~]$ su - root
Password:
[root@localhost ~]#
```

2. Display current date and time in following format:
dd/mm/yyyy-hh:mm:ss

Commands:-

```
[ddesai@localhost ~]$ date
Thu Feb 15 05:57:27 EST 2024
[ddesai@localhost ~]$
```

Screenshots:-

A terminal window titled 'ddesai@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The output shows the user 'ddesai' running the 'date' command, which displays the current date and time in full.

```
[ddesai@localhost ~]$ date
Thu Feb 15 06:05:59 EST 2024
[ddesai@localhost ~]$
```

3. Using multiple commands in one line only, display current month name in full and day in abbreviated format.

Commands:-

```
[ddesai@localhost ~]$ echo -e "\e[34m$(date "+%B") \e[0m\e[32m$(date "+%a")\e[0m"
```

February Thu

```
[ddesai@localhost ~]$
```

Screenshots:-

```
ddesai@localhost:~$ echo -e "\e[34m$(date "+%B") \e[0m\e[32m$(date "+%a")\e[0m"
February Thu
[ddesai@localhost ~]$
```

4. Display first 4 lines of /etc/yum.repos.d/rhel_dvd.repo file

Commands:-

head -n 4 /etc/yum.repos.d/rhel_dvd.repo

Screenshots:-

```
[root@workstation ~]# head -n 4 /etc/yum.repos.d/rhel_dvd.repo
[rhel-8.2-for-x86_64-baseos-rpms]
baseurl = http://content.example.com/rhel8.2/x86_64/dvd/BaseOS
enabled = true
gpgcheck = false
[root@workstation ~]#
```

5. Display last 5 lines of /etc/yum.repos.d/rhel_dvd.repo file

Commands:-

tail -n 5 /etc/yum.repos.d/rhel_dvd.repo

Screenshots:-

```
[root@workstation ~]# tail -n 5 /etc/yum.repos.d/rhel_dvd.repo
[rhel-8.2-for-x86_64-appstream-rpms]
baseurl = http://content.example.com/rhel8.2/x86_64/dvd/AppStream
enabled = true
gpgcheck = false
name = Red Hat Enterprise Linux 8.2 AppStream (dvd)
[root@workstation ~]#
```

6. How many bytes are occupied by /var/log/secure file?

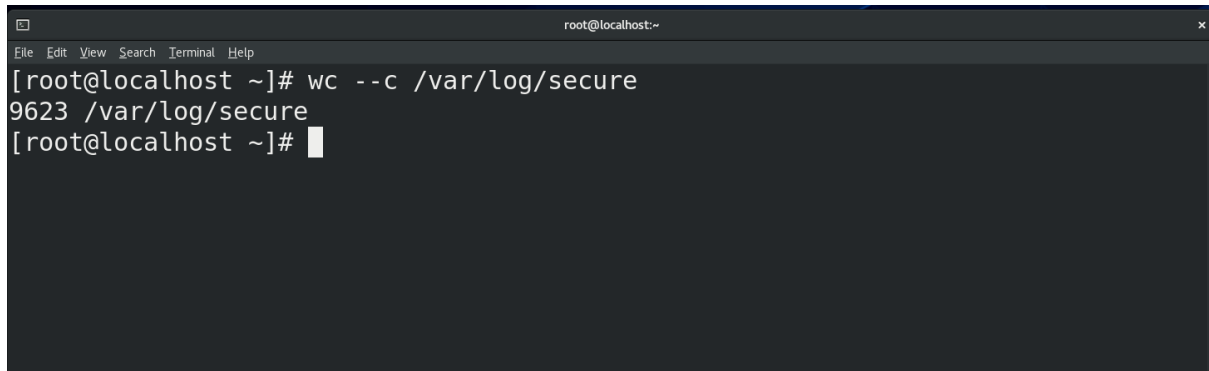
Commands:-

[root@localhost ~]# wc -c /var/log/secure

9623 /var/log/secure

[root@localhost ~]#

Screenshots:-

A terminal window titled 'root@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command '[root@localhost ~]# wc -c /var/log/secure' is entered, and the output '9623 /var/log/secure' is displayed. The prompt '[root@localhost ~]#' is shown again with a cursor.

7. How many lines of content is present in /etc/shadow file?

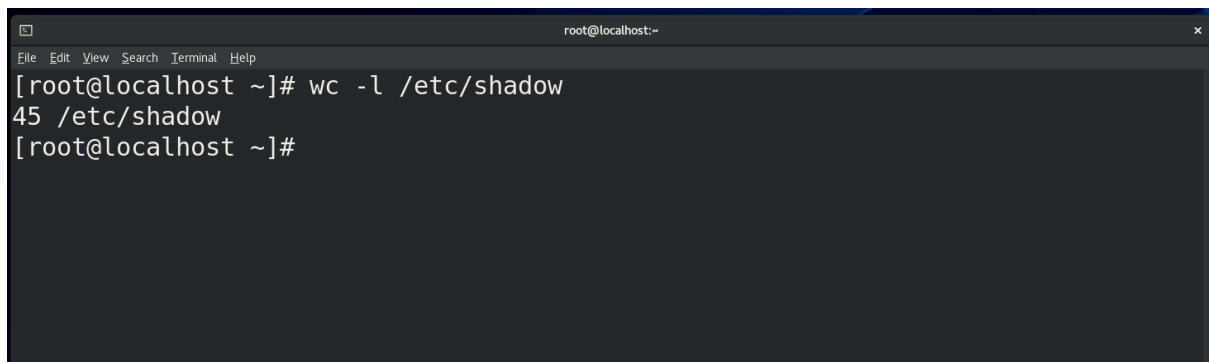
Commands:-

[root@localhost ~]# wc -l /etc/shadow

45 /etc/shadow

[root@localhost ~]#

Screenshots:-

A terminal window titled 'root@localhost:~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command '[root@localhost ~]# wc -l /etc/shadow' is entered, and the output '45 /etc/shadow' is displayed. The prompt '[root@localhost ~]#' is shown again with a cursor.

8. List all the commands executed by you so far and execute the 10th command.

Commands:-

1 whoami

2 date

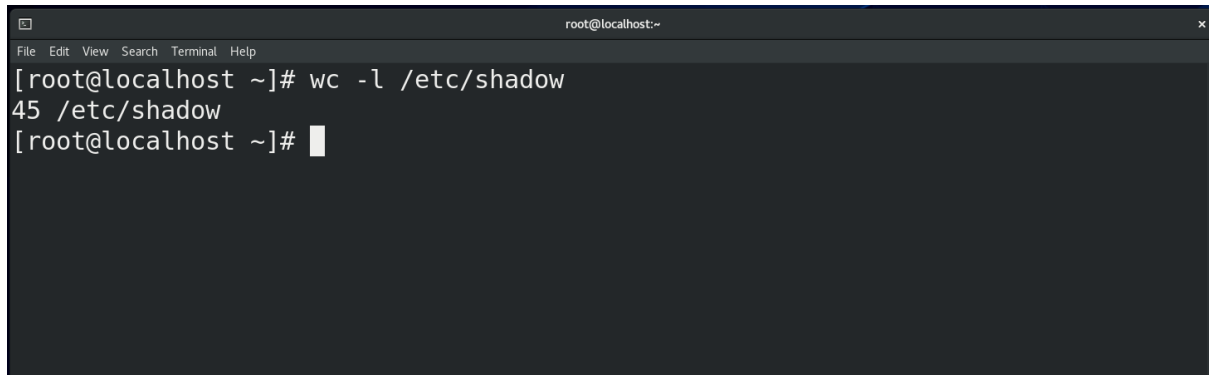
3 su – student

4 su - ddesai

5 head -n 4 /etc/yum.repos.d/rehel_dvd.repo

- 6 ls -l /var/log/secure
- 7 wc --c /var/log/secure
- 8 wc --c /var/log/secure
- 9 wc -l /var/shadow
- 10 wc -l /etc/shadow

Screenshots:-



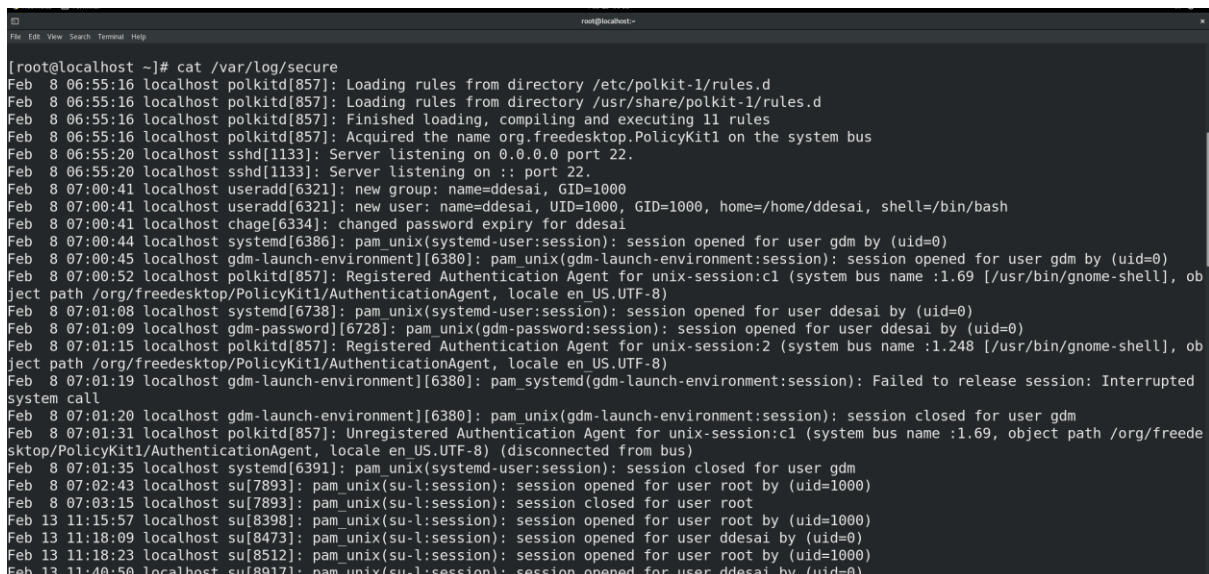
```
root@localhost:~  
File Edit View Search Terminal Help  
[root@localhost ~]# wc -l /etc/shadow  
45 /etc/shadow  
[root@localhost ~]#
```

9. Display the contents of /var/log/secure file.

Commands:-

```
[root@localhost ~]# cat /var/log/secure
```

Screenshots:-



```
root@localhost:~  
File Edit View Search Terminal Help  
[root@localhost ~]# cat /var/log/secure  
Feb  8 06:55:16 localhost polkitd[857]: Loading rules from directory /etc/polkit-1/rules.d  
Feb  8 06:55:16 localhost polkitd[857]: Loading rules from directory /usr/share/polkit-1/rules.d  
Feb  8 06:55:16 localhost polkitd[857]: Finished loading, compiling and executing 11 rules  
Feb  8 06:55:16 localhost polkitd[857]: Acquired the name org.freedesktop.PolicyKit1 on the system bus  
Feb  8 06:55:20 localhost sshd[1133]: Server listening on 0.0.0.0 port 22.  
Feb  8 06:55:20 localhost sshd[1133]: Server listening on :: port 22.  
Feb  8 07:00:41 localhost useradd[6321]: new group: name=ddesai, GID=1000  
Feb  8 07:00:41 localhost useradd[6321]: new user: name=ddesai, UID=1000, GID=1000, home=/home/ddesai, shell=/bin/bash  
Feb  8 07:00:41 localhost chage[6334]: changed password expiry for ddesai  
Feb  8 07:00:44 localhost systemd[6386]: pam_unix(systemd-user:session): session opened for user gdm by (uid=0)  
Feb  8 07:00:45 localhost gdm-launch-environment[6380]: pam_unix(gdm-launch-environment:session): session opened for user gdm by (uid=0)  
Feb  8 07:00:52 localhost polkitd[857]: Registered Authentication Agent for unix-session:c1 (system bus name :1.69 [/usr/bin/gnome-shell], ob  
ject path /org/freedesktop/PolicyKit1/AuthenticationAgent, locale en_US.UTF-8)  
Feb  8 07:01:08 localhost systemd[6738]: pam_unix(systemd-user:session): session opened for user ddesai by (uid=0)  
Feb  8 07:01:09 localhost gdm-password[6728]: pam_unix(gdm-password:session): session opened for user ddesai by (uid=0)  
Feb  8 07:01:15 localhost polkitd[857]: Registered Authentication Agent for unix-session:2 (system bus name :1.248 [/usr/bin/gnome-shell], ob  
ject path /org/freedesktop/PolicyKit1/AuthenticationAgent, locale en_US.UTF-8)  
Feb  8 07:01:19 localhost gdm-launch-environment[6380]: pam_systemd(gdm-launch-environment:session): Failed to release session: Interrupted  
system call  
Feb  8 07:01:20 localhost gdm-launch-environment[6380]: pam_unix(gdm-launch-environment:session): session closed for user gdm  
Feb  8 07:01:31 localhost polkitd[857]: Unregistered Authentication Agent for unix-session:c1 (system bus name :1.69, object path /org/freede  
sktop/PolicyKit1/AuthenticationAgent, locale en_US.UTF-8) (disconnected from bus)  
Feb  8 07:01:35 localhost systemd[6391]: pam_unix(systemd-user:session): session closed for user gdm  
Feb  8 07:02:43 localhost su[7893]: pam_unix(su-l:session): session opened for user root by (uid=1000)  
Feb  8 07:03:15 localhost su[7893]: pam_unix(su-l:session): session closed for user root  
Feb 13 11:15:57 localhost su[8398]: pam_unix(su-l:session): session opened for user root by (uid=1000)  
Feb 13 11:18:09 localhost su[8473]: pam_unix(su-l:session): session opened for user ddesai by (uid=0)  
Feb 13 11:18:23 localhost su[8512]: pam_unix(su-l:session): session opened for user root by (uid=1000)  
Feb 13 11:40:50 localhost su[8917]: pam_unix(su-l:session): session opened for user ddesai by (uid=0)
```

```
root@localhost:~#
Feb 13 12:02:40 localhost su[8917]: pam_unix(su-l:session): session closed for user ddesai
Feb 13 12:02:40 localhost su[8512]: pam_unix(su-l:session): session closed for user root
Feb 13 12:02:40 localhost su[8473]: pam_unix(su-l:session): session closed for user ddesai
Feb 13 12:02:40 localhost su[8398]: pam_unix(su-l:session): session closed for user root
Feb 14 06:39:45 localhost polkitd[857]: Loading rules from directory /etc/polkit-1/rules.d
Feb 14 06:39:45 localhost polkitd[857]: Loading rules from directory /usr/share/polkit-1/rules.d
Feb 14 06:39:45 localhost polkitd[857]: Finished loading, compiling and executing 11 rules
Feb 14 06:39:45 localhost polkitd[857]: Acquired the name org.freedesktop.PolicyKit1 on the system bus
Feb 14 06:39:48 localhost sshd[1080]: Server listening on 0.0.0.0 port 22.
Feb 14 06:39:48 localhost sshd[1080]: Server listening on :: port 22.
Feb 14 06:39:52 localhost systemd[1212]: pam_unix(systemd-user:session): session opened for user gdm by (uid=0)
Feb 14 06:39:53 localhost gdm-launch-environment[[1151]: pam_unix(gdm-launch-environment:session): session opened for user gdm by (uid=0)
Feb 14 06:40:12 localhost polkitd[857]: Registered Authentication Agent for unix-session:c1 (system bus name :1.56 [/usr/bin/gnome-shell], ob
ject path /org/freedesktop/PolicyKit1/AuthenticationAgent, locale en_US.UTF-8)
Feb 14 06:40:42 localhost unix_chkpwd[2288]: password check failed for user (ddesai)
Feb 14 06:40:42 localhost gdm-password[2279]: pam_unix(gdm-password:auth): authentication failure; logname= uid=0 euid=0 tty=/dev/ttyl ruser
= rhost= user=ddesai
Feb 14 06:40:49 localhost unix_chkpwd[2317]: password check failed for user (ddesai)
Feb 14 06:40:49 localhost gdm-password[2308]: pam_unix(gdm-password:auth): authentication failure; logname= uid=0 euid=0 tty=/dev/ttyl ruser
= rhost= user=ddesai
Feb 14 06:40:58 localhost systemd[2329]: pam_unix(systemd-user:session): session opened for user ddesai by (uid=0)
Feb 14 06:40:59 localhost gdm-password[2318]: pam_unix(gdm-password:session): session opened for user ddesai by (uid=0)
Feb 14 06:41:07 localhost polkitd[857]: Registered Authentication Agent for unix-session:2 (system bus name :1.227 [/usr/bin/gnome-shell], ob
ject path /org/freedesktop/PolicyKit1/AuthenticationAgent, locale en_US.UTF-8)
Feb 14 06:41:10 localhost gdm-launch-environment[[1151]: pam_systemd(gdm-launch-environment:session): Failed to release session: Interrupted
system call
Feb 14 06:41:10 localhost gdm-launch-environment[[1151]: pam_unix(gdm-launch-environment:session): session closed for user gdm
Feb 14 06:41:10 localhost polkitd[857]: Unregistered Authentication Agent for unix-session:c1 (system bus name :1.56, object path /org/freede
sktop/PolicyKit1/AuthenticationAgent, locale en_US.UTF-8) (disconnected from bus)
Feb 14 06:41:21 localhost systemd[1236]: pam_unix(systemd-user:session): session closed for user gdm
```

```
root@localhost:~#
Feb 14 06:49:13 localhost polkitd[857]: Operator of unix-session:2 successfully authenticated as unix-user:root to gain TEMPORARY authorizati
on for action org.gtk.vfs.file-operations-helper for unix-process:2444:18533 [/usr/libexec/gvfsd] (owned by unix-user:ddesai)
Feb 14 06:49:13 localhost pkexec[3535]: pam_unix(polkit-1:session): session opened for user root by (uid=1000)
Feb 14 06:49:13 localhost pkexec[3535]: ddesai: Executing command [USER=root] [TTY=unknown] [CWD=/home/ddesai] [COMMAND=/usr/libexec/gvfsd-ad
min --spawner :1.16 /org/gtk/gvfs/exec_spaw/7 --address unix:path=/run/user/1000/bus]
Feb 14 06:49:19 localhost polkitd[857]: Operator of unix-session:2 successfully authenticated as unix-user:root to gain TEMPORARY authorizati
on for action org.gtk.vfs.file-operations for unix-process:3431:32616 [/usr/bin/nautilus --application-service] (owned by unix-user:ddesai)
Feb 14 07:39:59 localhost gdm-password[4433]: gkr-pam: unlocked login keyring
Feb 15 04:13:06 localhost polkitd[855]: Loading rules from directory /etc/polkit-1/rules.d
Feb 15 04:13:06 localhost polkitd[855]: Loading rules from directory /usr/share/polkit-1/rules.d
Feb 15 04:13:06 localhost polkitd[855]: Finished loading, compiling and executing 11 rules
Feb 15 04:13:06 localhost polkitd[855]: Acquired the name org.freedesktop.PolicyKit1 on the system bus
Feb 15 04:13:08 localhost sshd[1053]: Server listening on 0.0.0.0 port 22.
Feb 15 04:13:08 localhost sshd[1053]: Server listening on :: port 22.
Feb 15 04:13:12 localhost systemd[1183]: pam_unix(systemd-user:session): session opened for user gdm by (uid=0)
Feb 15 04:13:14 localhost gdm-launch-environment[[1146]: pam_unix(gdm-launch-environment:session): session opened for user gdm by (uid=0)
Feb 15 04:13:32 localhost polkitd[855]: Registered Authentication Agent for unix-session:c1 (system bus name :1.56 [/usr/bin/gnome-shell], ob
ject path /org/freedesktop/PolicyKit1/AuthenticationAgent, locale en_US.UTF-8)
Feb 15 04:14:39 localhost unix_chkpwd[2281]: password check failed for user (ddesai)
Feb 15 04:14:39 localhost gdm-password[2253]: pam_unix(gdm-password:auth): authentication failure; logname= uid=0 euid=0 tty=/dev/ttyl ruser
= rhost= user=ddesai
Feb 15 04:14:45 localhost systemd[2298]: pam_unix(systemd-user:session): session opened for user ddesai by (uid=0)
Feb 15 04:14:46 localhost gdm-password[2284]: pam_unix(gdm-password:session): session opened for user ddesai by (uid=0)
Feb 15 04:14:53 localhost polkitd[855]: Registered Authentication Agent for unix-session:2 (system bus name :1.225 [/usr/bin/gnome-shell], ob
ject path /org/freedesktop/PolicyKit1/AuthenticationAgent, locale en_US.UTF-8)
Feb 15 04:14:57 localhost gdm-launch-environment[[1146]: pam_systemd(gdm-launch-environment:session): Failed to release session: Interrupted
system call
Feb 15 04:14:57 localhost gdm-launch-environment[[1146]: pam_unix(gdm-launch-environment:session): session closed for user gdm
Feb 15 04:15:04 localhost polkitd[855]: Unregistered Authentication Agent for unix-session:c1 (system bus name :1.56, object path /org/freede
sktop/PolicyKit1/AuthenticationAgent, locale en_US.UTF-8) (disconnected from bus)
```

```
sktop/PolicyKit1/AuthenticationAgent, locale en_US.UTF-8) (disconnected from bus)
Feb 15 04:15:08 localhost systemd[1200]: pam_unix(systemd-user:session): session closed for user gdm
Feb 15 05:50:14 localhost su[5314]: pam_unix(su-l:session): session opened for user root by (uid=1000)
Feb 15 05:51:31 localhost su[5369]: pam_unix(su-l:session): session opened for user ddesai by (uid=0)
Feb 15 05:52:45 localhost su[5417]: pam_unix(su-l:session): session opened for user root by (uid=1000)
Feb 15 05:56:51 localhost su[5497]: pam_unix(su-l:session): session opened for user ddesai by (uid=0)
Feb 15 06:41:37 localhost su[6656]: pam_unix(su-l:session): session opened for user root by (uid=1000)
[root@localhost ~]#
```