

Institute of Computer Technology
B. Tech Computer Science and Engineering
Subject: BOSS (2CSE204)
PRACTICAL-EXAM

Question:

Mahir wants to create directory /home/exam and he wants to set permission as per his requirement for file and directory. Refer the below listed tasks and provide appropriate solution.

1. **Create one group exam and two users ex1 & user1.**

SOLUTION:

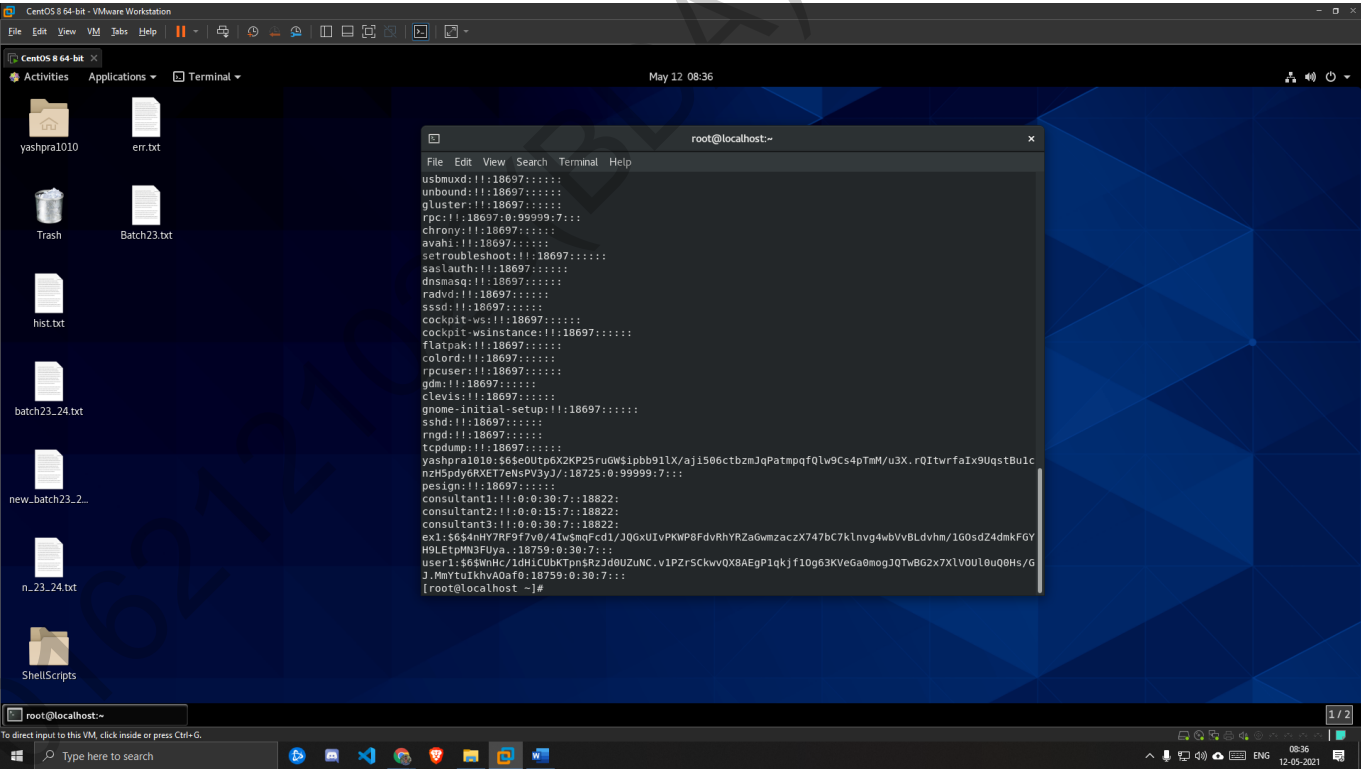
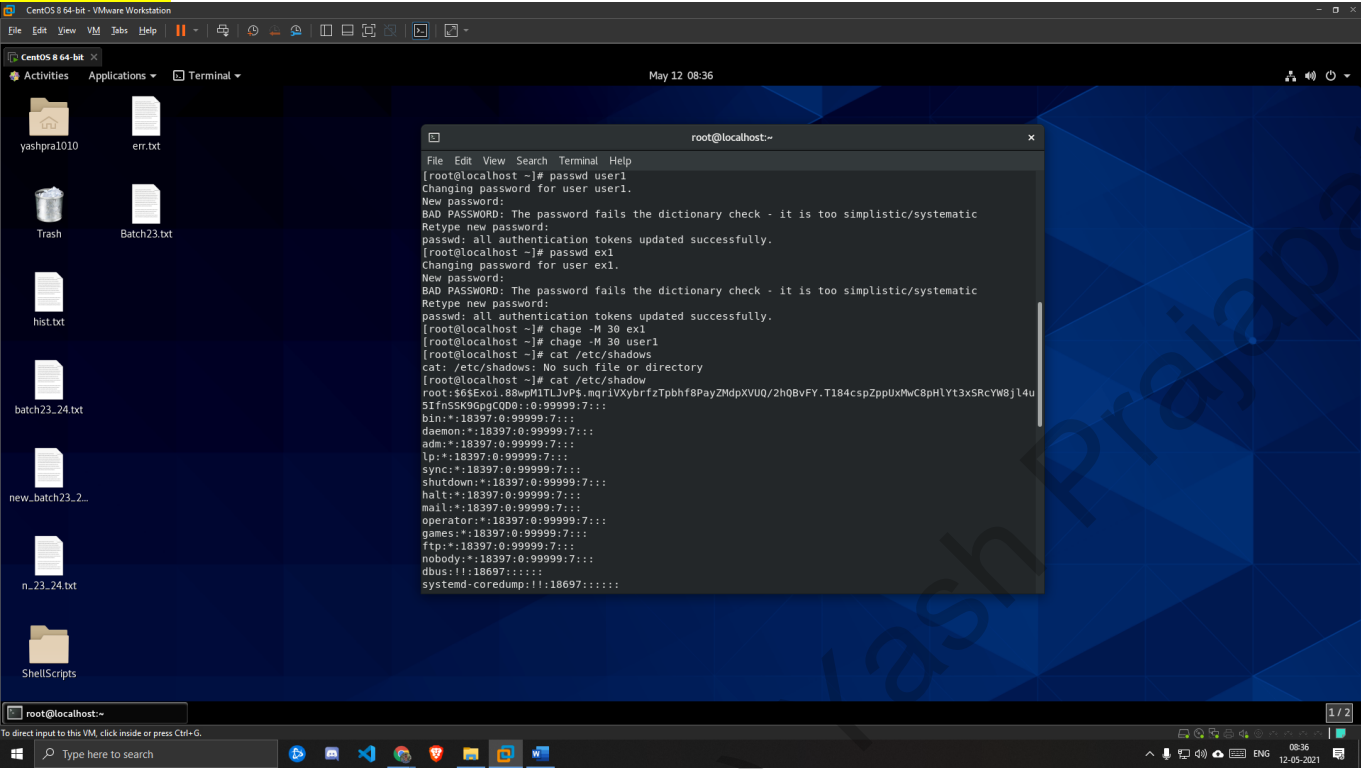
The screenshot shows a terminal window on a CentOS 8.64-bit VM. The user is root at localhost. The terminal output shows the following commands and their results:

```

root@localhost~# groupadd exam
root@localhost~# useradd ex1
root@localhost~# useradd user1
root@localhost~# cat /etc/passwd
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:12:12:mail:/var/spool/mail:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:65534:65534:Kernel Overflow User:/:/sbin/nologin
dbus:x:81:81:system message bus:/:/sbin/nologin
systemd-coredump:x:999:997:systemd Core Dumper:/:/sbin/nologin
systemd-resolve:x:193:193:systemd Resolver:/:/sbin/nologin
tss:x:59:59:Account used by the trousers package to sandbox the tcsd daemon:/dev/null:/sbin/nologin
polkitd:x:998:996:User for polkitd:/:/sbin/nologin
geoclue:x:997:995:User for geoclue:/var/lib/geoclue:/sbin/nologin
rtkit:x:172:172:RealtimeKit:/proc:/sbin/nologin
pipewire:x:996:992:PipeWire System Daemon:/var/run/pipewire:/sbin/nologin
pulse:x:171:171:PulseAudio System Daemon:/var/run/pulse:/sbin/nologin
libstoragemgmt:x:995:989:daemon account for libstoragemgmt:/var/run/lsm:/sbin/nologin
qemu:x:107:107:qemu user:/:/sbin/nologin
usbmuxd:x:113:113:usbmuxd user:/:/sbin/nologin
unbound:x:994:988:Unbound DNS resolver:/etc/unbound:/sbin/nologin
gluster:x:993:987:GlusterFS daemons:/run/gluster:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/lib/rpcbind:/sbin/nologin
chrony:x:992:986:/var/lib/chrony:/sbin/nologin
avahi:x:70:70:Avahi mDNS/DNS-SD Stack:/var/run/avahi-daemon:/sbin/nologin
setroubleshoot:x:991:984:/var/lib/setroubleshoot:/sbin/nologin
sasauthd:x:990:76:Sasauthd user:/run/sasauthd:/sbin/nologin
dnsmasq:x:983:983:Dnsmasq DHCP and DNS server:/var/lib/dnsmasq:/sbin/nologin
raddvd:x:75:75:raddvd user:/:/sbin/nologin
sssd:x:982:982:User for sssd:/:/sbin/nologin
cockpit-ws:x:901:980:User for cockpit web service:/nonexistent:/sbin/nologin
cockpit-ws-instance:x:980:979:User for cockpit-ws instances:/nonexistent:/sbin/nologin
flatpak:x:979:978:User for flatpak system helper:/:/sbin/nologin
colord:x:978:977:User for colord:/var/lib/colord:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
gdm:x:42:42:/var/lib/gdm:/sbin/nologin
clevis:x:977:976:clevis Decryption Framework unprivileged user:/var/cache/levis:/sbin/nologin
gnome-initial-setup:x:976:975:/run/gnome-initial-setup:/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/ssh:/sbin/nologin
rngd:x:975:974:Random Number Generator Daemon:/var/lib/rngd:/sbin/nologin
tcpdump:x:72:72:/:/sbin/nologin
yashpra1010:x:1000:1000:Yash Prajapati:/home/yashpra1010:/bin/bash
pesign:x:974:973:Group for the pesign signing daemon:/var/run/pesign:/sbin/nologin
consultant1:x:1002:35001:/home/consultant1:/bin/bash
consultant2:x:1003:35002:/home/consultant2:/bin/bash
consultant3:x:1004:1004:/home/consultant3:/bin/bash
ex1:x:1005:1005:/home/ex1:/bin/bash
user1:x:1006:1006:/home/user1:/bin/bash
root@localhost~#
  
```

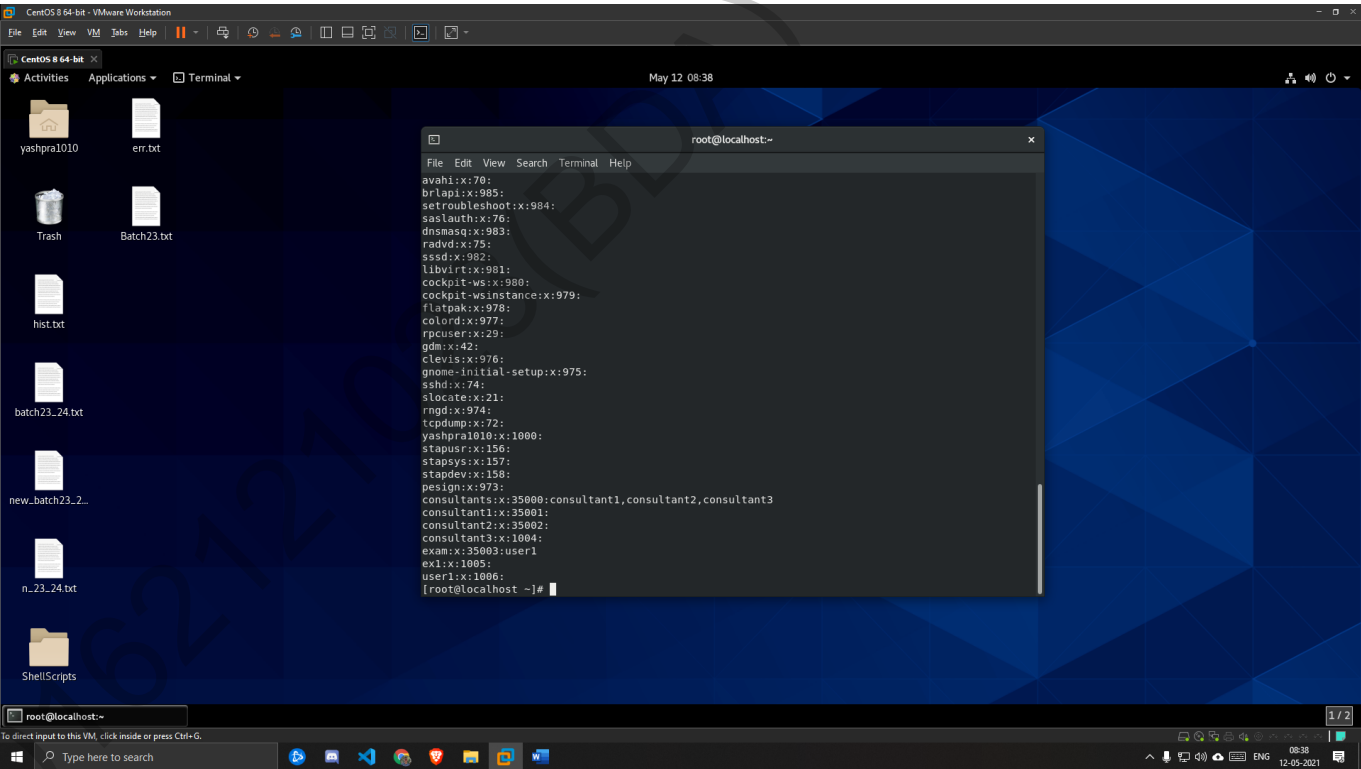
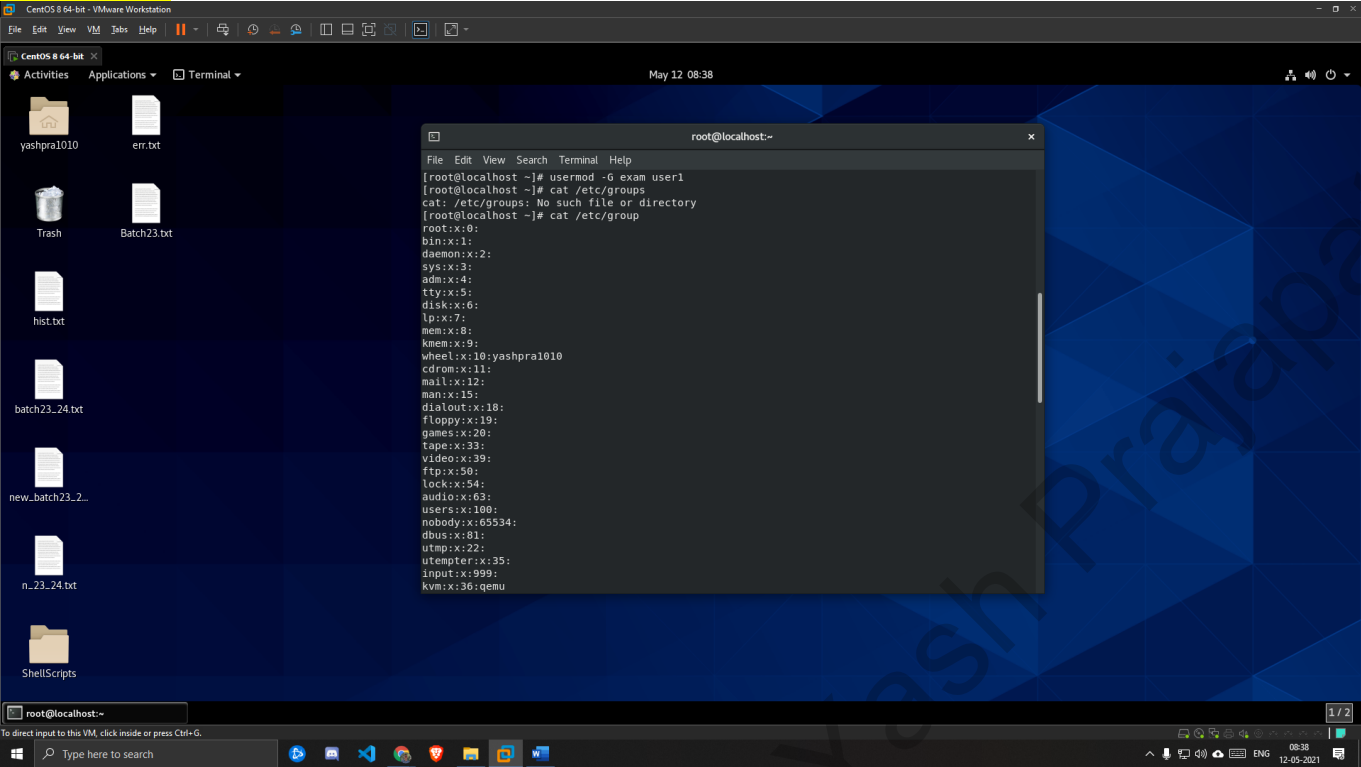
2. Set password “student123” for both the users. Also set password expiry date after 30 days of password creation for both the users.

SOLUTION:



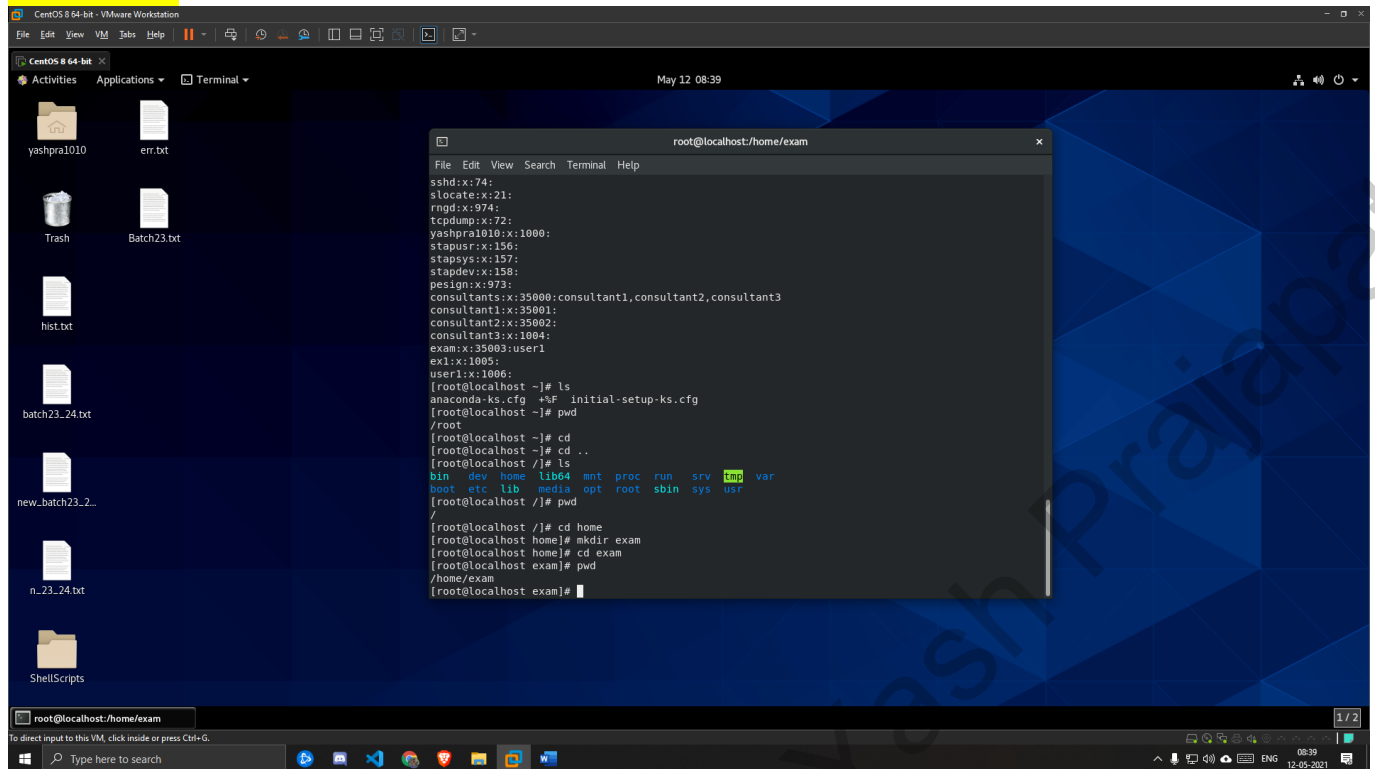
3. Add exam group as supplementary group for user user1.

SOLUTION:



4. He wants to create a directory called /home/exam.

SOLUTION:



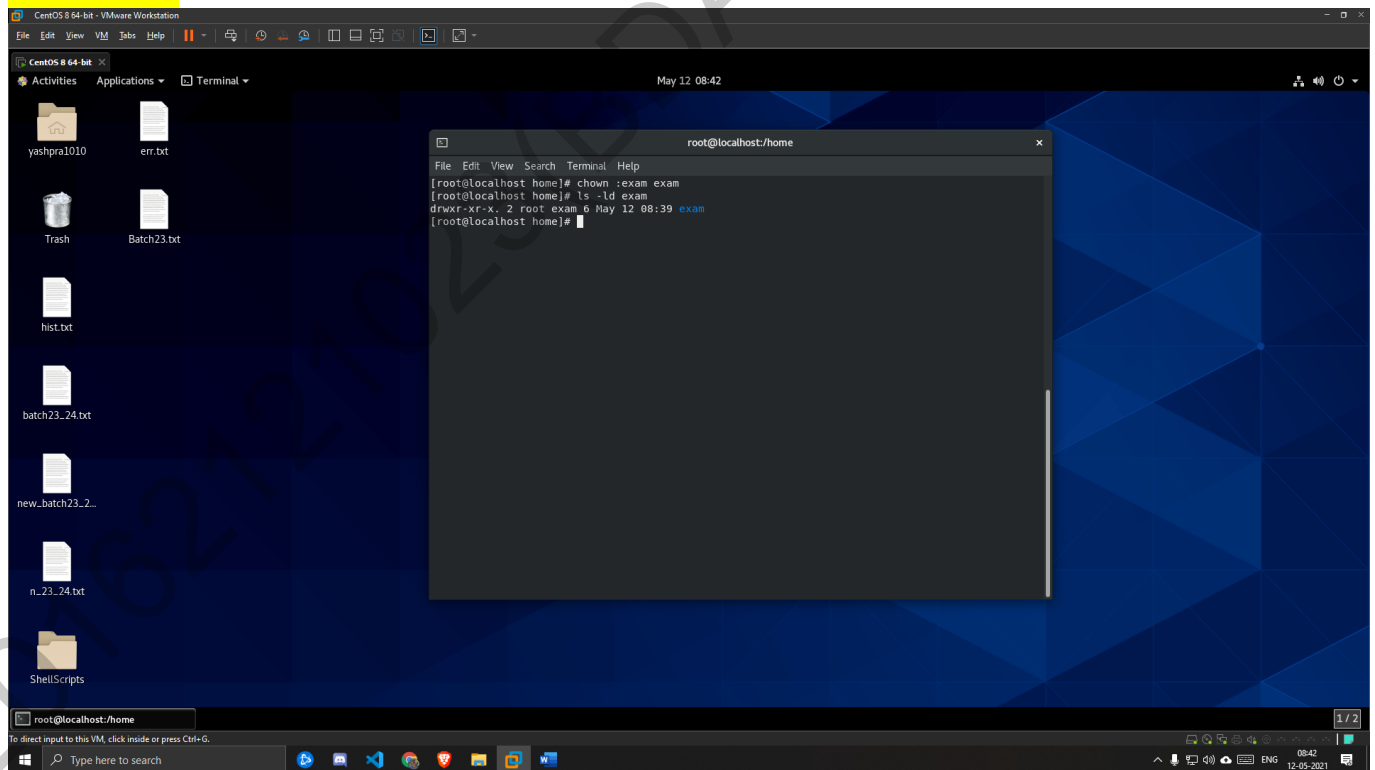
```

root@localhost:/home/exam
File Edit View Search Terminal Help
sshd:x:74:
slocate:x:21:
rngd:x:974:
tcpdump:x:72:
yashpra1010:x:1000:
stapusr:x:156:
stapdev:x:157:
stapdev:x:158:
design:x:973:
consultants:x:35000:consultant1,consultant2,consultant3
consultant1:x:35001:
consultant2:x:35002:
consultant3:x:1004:
exam:x:35003:user1
ex1:x:1005:
user1:x:1006:
[root@localhost ~]# ls
anaconda-ks.cfg +%F initial-setup-ks.cfg
[root@localhost ~]# pwd
~/root
[root@localhost ~]# cd
[root@localhost ~]# cd ..
[root@localhost /]# ls
bin dev home lib64 mnt proc run srv tmp var
boot etc lib media opt root sbin sys usr
[root@localhost /]# pwd
/
[root@localhost /]# cd home
[root@localhost home]# mkdir exam
[root@localhost home]# cd exam
[root@localhost exam]# pwd
/home/exam
[root@localhost exam]#

```

5. Now, Change the group ownership of the /home/exam directory to the exam group.

SOLUTION:



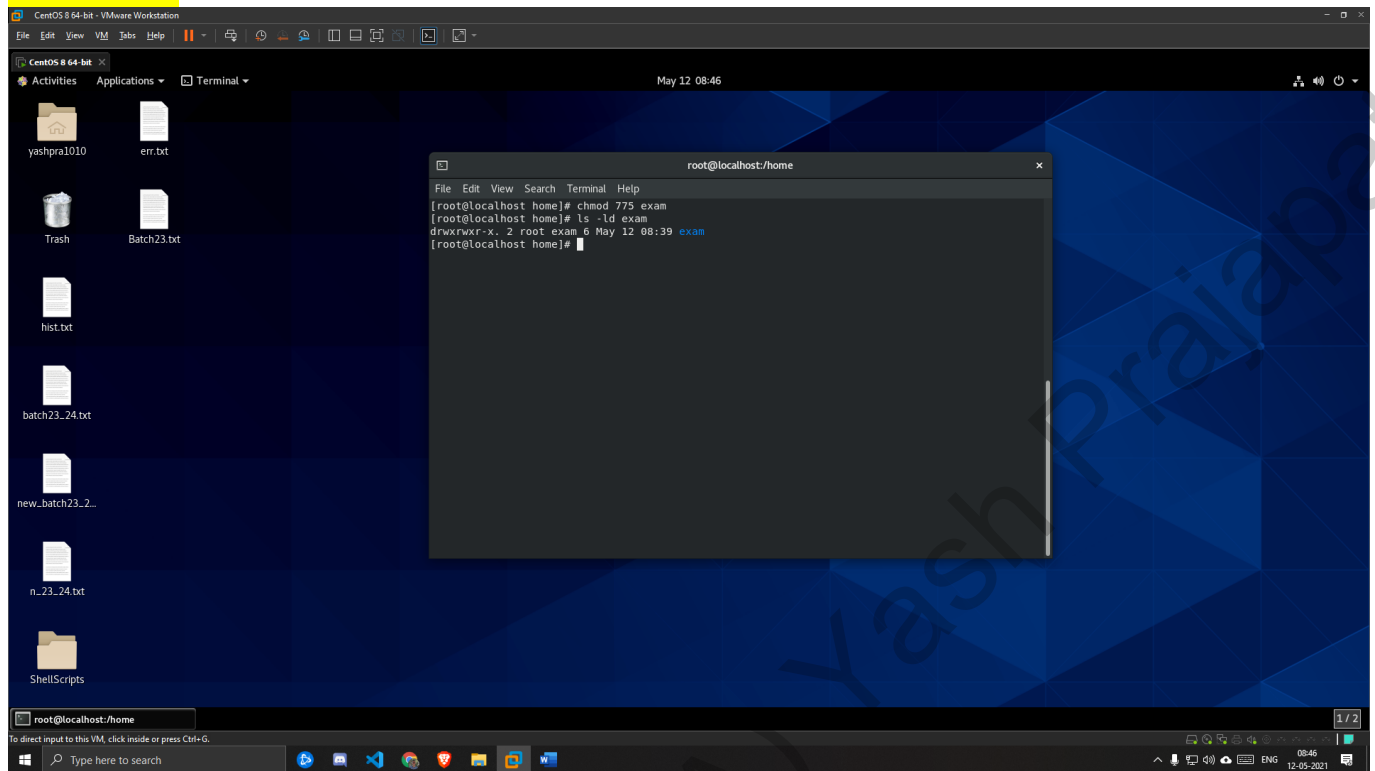
```

root@localhost:/home
File Edit View Search Terminal Help
[root@localhost home]# chown :exam exam
[root@localhost home]# ls -ld exam
drwxr-xr-x. 2 root exam 6 May 12 08:39 exam
[root@localhost home]#

```

6. Set permissions on the /home/exam directory. On the /home/exam directory, configure set gid, read+write+execute permissions for the user and group, and read+execute permissions for other users.

SOLUTION:



7. Confirm that users in the exam group can now create and edit files in the /home/exam directory. Users who are not the member of an exam group, they can access the /home/exam directory but cannot edit or create files in the /home/exam directory.

SOLUTION:

