

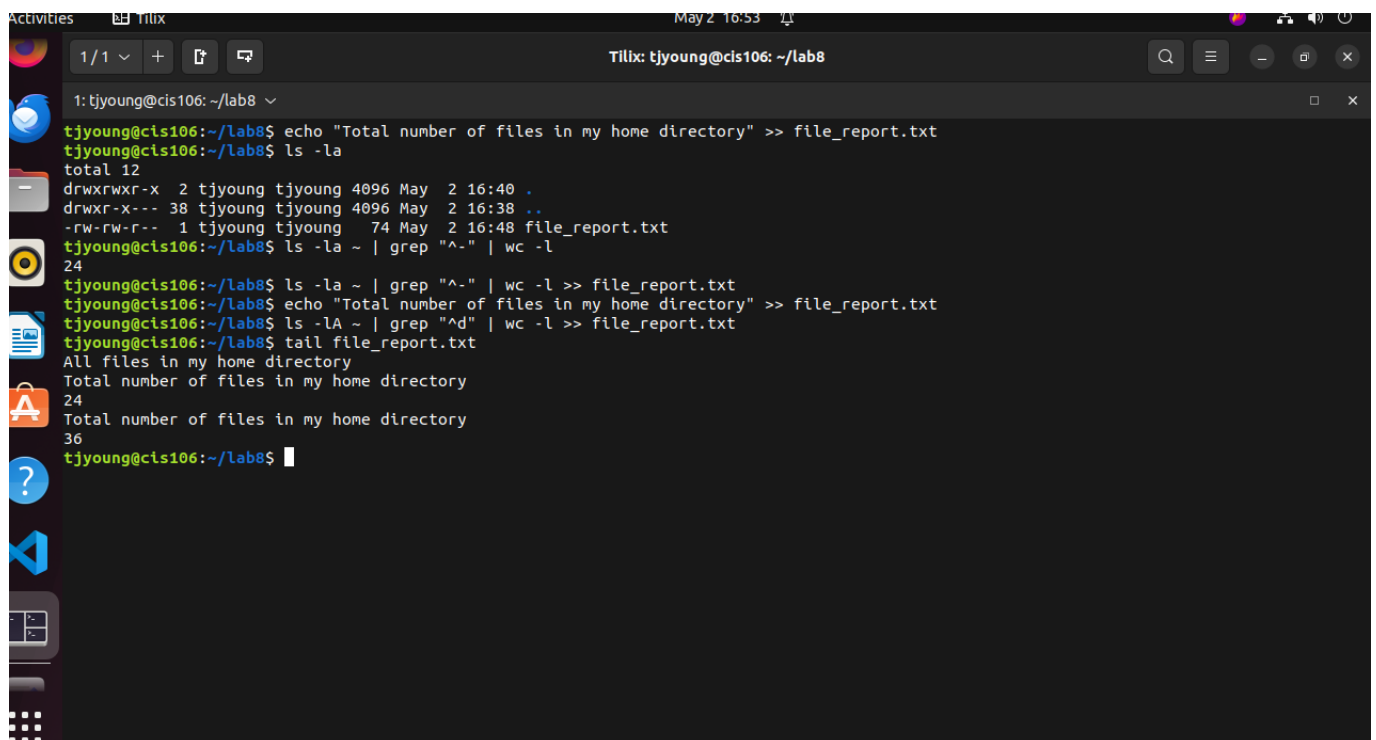
Question 1

```
1: tjyoung@cis106: ~/lab8
tjyoung@cis106:~$ mkdir lab8
tjyoung@cis106:~$ cd lab8
tjyoung@cis106:~/lab8$ echo "All files in my home directory" > file_report.txt
tjyoung@cis106:~/lab8$ ls -Am ~ .. file_report.txt
file_report.txt

...
.ansi_codes.sh, assets, .bash_aliases, .bash_history, .bash_logout, .bashrc, .cache, car123, cars, challenge-Lab6, cheats,
cis106, .config, Desktop, .dotnet, Downloads, .fontconfig, games, .gitconfig, github.commands.txt, .gnupg, home,
lab5ChallengeQuestion, lab5-docs, lab6, lab6-q5, lab8, .lessht, .local, .mozilla, Music, Pictures, .pki, potato,
practicels.tar.xz, .profile, Public, scripts, script.sh, snap, .ssh, .sudo_as_admin_successful, Templates, .textFiles.sh, tf
.thunderbird, TrevorYoungCS, tri.sh, .vboxclient-clipboard-tty2-control.pid, .vboxclient-clipboard-tty2-service.pid,
.vboxclient-draganddrop-tty2-control.pid, .vboxclient-draganddrop-tty2-service.pid, .vboxclient-hostversion-tty2-control.pid,
.vboxclient-seamless-tty2-control.pid, .vboxclient-seamless-tty2-service.pid, .vboxclient-vmvga-session-tty2-control.pid,
.vboxclient-vmvga-session-tty2-service.pid, Videos, .vscode, wallpapers

/home/tjyoung:
.ansi_codes.sh, assets, .bash_aliases, .bash_history, .bash_logout, .bashrc, .cache, car123, cars, challenge-Lab6, cheats,
cis106, .config, Desktop, .dotnet, Downloads, .fontconfig, games, .gitconfig, github.commands.txt, .gnupg, home,
lab5ChallengeQuestion, lab5-docs, lab6, lab6-q5, lab8, .lessht, .local, .mozilla, Music, Pictures, .pki, potato,
practicels.tar.xz, .profile, Public, scripts, script.sh, snap, .ssh, .sudo_as_admin_successful, Templates, .textFiles.sh, tf
.thunderbird, TrevorYoungCS, tri.sh, .vboxclient-clipboard-tty2-control.pid, .vboxclient-clipboard-tty2-service.pid,
.vboxclient-draganddrop-tty2-control.pid, .vboxclient-draganddrop-tty2-service.pid, .vboxclient-hostversion-tty2-control.pid,
.vboxclient-seamless-tty2-control.pid, .vboxclient-seamless-tty2-service.pid, .vboxclient-vmvga-session-tty2-control.pid,
.vboxclient-vmvga-session-tty2-service.pid, Videos, .vscode, wallpapers
tjyoung@cis106:~/lab8$ cat file_report.txt
```

Question 2



```
Activities  TiliX  May 2 16:53
1/1  +  TiliX: tjyoung@cis106: ~/lab8
1: tjyoung@cis106:~/lab8
tjyoung@cis106:~/lab8$ echo "Total number of files in my home directory" >> file_report.txt
tjyoung@cis106:~/lab8$ ls -la
total 12
drwxrwxr-x  2 tjyoung tjyoung 4096 May  2 16:40 .
drwxr-x--- 38 tjyoung tjyoung 4096 May  2 16:38 ..
-rw-rw-r--  1 tjyoung tjyoung  74 May  2 16:48 file_report.txt
tjyoung@cis106:~/lab8$ ls -la ~ | grep "^-" | wc -l
24
tjyoung@cis106:~/lab8$ ls -la ~ | grep "^d" | wc -l >> file_report.txt
tjyoung@cis106:~/lab8$ echo "Total number of files in my home directory" >> file_report.txt
tjyoung@cis106:~/lab8$ ls -la ~ | grep "^d" | wc -l >> file_report.txt
tjyoung@cis106:~/lab8$ tail file_report.txt
All files in my home directory
Total number of files in my home directory
24
Total number of files in my home directory
36
tjyoung@cis106:~/lab8$
```

Question 3

```

nme-initcat-setup:x:126:65534:/:run/gnome-initcat-setup:/bin/false
plip:x:127:7:HPLIP system user,,,:/run/hplip:/bin/false
dm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false
tjyoung:x:1000:1000:Tjyoung,,,:/home/tjyoung:/bin/bash
vboxadd:x:999:1:/:var/run/vboxadd:/bin/false
flatpak:x:129:138:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin
tjyoung@cis106:~/lab8$ awk -F";" '{print $1,$NF}' /etc/passwd
root:x:0:0:root:/root:/bin/bash root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin gnats:x:41:41:Gnats Bug-Reporting System (admin)
lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin systemd-network:x:100:102:systemd Network
ent,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin systemd-resolve:x:101:103:systemd Resolver,,,:/run/s
usr/sbin/nologin
messagebus:x:102:105:/:/nonexistent:/usr/sbin/nologin messagebus:x:102:105:/:/nonexistent:/usr/sbin/nologin
systemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin systemd-timesync:x:103:106:systemd Time
nization,,,:/run/systemd:/usr/sbin/nologin

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1/1 v + L L Titix: tjyoung@cis106: ~/lab8
1: tjyoung@cis106: ~/lab8 v AI
tjyoung@cis106:~/lab8$ awk -F";" '{print $1,$NF,$6}' /etc/passwd
root:x:0:0:root:/root:/bin/bash root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin gnats:x:41:41:Gnats Bug-Reporting System (admin)
lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin systemd-network:x:100:102:systemd Network
ent,,,:/run/systemd:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin systemd-resolve:x:101:103:systemd Resolver,,,:/run/s
usr/sbin/nologin
messagebus:x:102:105:/:/nonexistent:/usr/sbin/nologin messagebus:x:102:105:/:/nonexistent:/usr/sbin/nologin
systemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin systemd-timesync:x:103:106:systemd Time
onization,,,:/run/systemd:/usr/sbin/nologin
syslog:x:104:111:/:/home/syslog:/usr/sbin/nologin syslog:x:104:111:/:/home/syslog:/usr/sbin/nologin
_apt:x:105:65534:/:/nonexistent:/usr/sbin/nologin _apt:x:105:65534:/:/nonexistent:/usr/sbin/nologin
tss:x:106:113:TPM software stack,,,:/var/lib/tpm:/bin/false tss:x:106:113:TPM software stack,,,:/var/lib/tpm:/bin/false
uidd:x:107:116:/:/run/uidd:/usr/sbin/nologin uidd:x:107:116:/:/run/uidd:/usr/sbin/nologin
systemd-oom:x:108:117:systemd Userspace OOM Killer,,,:/run/systemd:/usr/sbin/nologin systemd-oom:x:108:117:systemd Userspace OOM
,,,:/run/systemd:/usr/sbin/nologin
tcmdump:x:109:118:/:/nonexistent:/usr/sbin/nologin tcmdump:x:109:118:/:/nonexistent:/usr/sbin/nologin

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Tilix: tjyoung@cis106: ~/lab8
1: tjyoung@cis106: ~/lab8
:usr/sbin/nologin and its home dir is:
The userdnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin logs in with:dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/s
in/nologin and its home dir is:
The userkernoops:x:113:65534:Kernel Oops Tracking Daemon,,,:/usr/sbin/nologin logs in with:kernoops:x:113:65534:Kernel Oops Tracking
aemon,,,:/usr/sbin/nologin and its home dir is:
The useravahi:x:114:121:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin logs in with:avahi:x:114:121:Avahi mDNS daemon,,,:/run
avahi-daemon:/usr/sbin/nologin and its home dir is:
The usercups-pk-helper:x:115:122:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/nologin logs in with:cups-pk-helper:
:115:122:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/nologin and its home dir is:
The userrtkit:x:116:123:RealtimeKit,,,:/proc:/usr/sbin/nologin logs in with:rtkit:x:116:123:RealtimeKit,,,:/proc:/usr/sbin/nologin and
ts home dir is:
The userwhoopsie:x:117:124::/nonexistent:/bin/false logs in with:whoopsie:x:117:124::/nonexistent:/bin/false and its home dir is:
The userssds:x:118:125:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin logs in with:sssd:x:118:125:SSSD system user,,,:/var/lib/sss:
usr/sbin/nologin and its home dir is:
The userspeech-dispatcher:x:119:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false logs in with:speech-dispatcher:x:119:29:Speec
Dispatcher,,,:/run/speech-dispatcher:/bin/false and its home dir is:
The userfwupd-refresh:x:120:126:fwupd-refresh user,,,:/run/systemd:/usr/sbin/nologin logs in with:fwupd-refresh:x:120:126:fwupd-refresh
user,,,:/run/systemd:/usr/sbin/nologin and its home dir is:
The usernm-openvpn:x:121:127:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin logs in with:nm-openvpn:x:121:127:Netw
rkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin and its home dir is:
The usersaned:x:122:129::/var/lib/saned:/usr/sbin/nologin logs in with:saned:x:122:129::/var/lib/saned:/usr/sbin/nologin and its home d
r is:
The usercolord:x:123:130:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin logs in with:colord:x:123:130:colord colo
r management daemon,,,:/var/lib/colord:/usr/sbin/nologin and its home dir is:
The usergeoclue:x:124:131::/var/lib/geoclue:/usr/sbin/nologin logs in with:geoclue:x:124:131::/var/lib/geoclue:/usr/sbin/nologin and it
home dir is:
The userpulse:x:125:132:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin logs in with:pulse:x:125:132:PulseAudio daemon,,,:/run/pulse:
usr/sbin/nologin and its home dir is:
The usergnome-initial-setup:x:126:65534::/run/gnome-initial-setup:/bin/false logs in with:gnome-initial-setup:x:126:65534::/run/gnome-
nitial-setup:/bin/false and its home dir is:
The userhplip:x:127:7:HPLIP system user,,,:/run/hplip:/bin/false logs in with:hplip:x:127:7:HPLIP system user,,,:/run/hplip:/bin/false
nd its home dir is:
The usergdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false logs in with:gdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bi
/false and its home dir is:
The usertjyoung:x:1000:1000:Tjyoung,,,:/home/tjyoung:/bin/bash logs in with:tjyoung:x:1000:1000:Tjyoung,,,:/home/tjyoung:/bin/bash and
ts home dir is:
The user vboxadd:x:999:1::/var/run/vboxadd:/bin/false logs in with:vboxadd:x:999:1::/var/run/vboxadd:/bin/false and its home dir is:
The user_flatpak:x:129:138:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin logs in with:_flatpak:x:129:138:Fl
tpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin and its home dir is:
tjyoung@cis106:~/lab8$ awk -F";" '{print "The user" $1,"logs in with:" $NF,"and its home dir is: "$6}' /etc/passwd

```

```

1: tjyoung@cis106: ~/lab8
tjyoung@cis106:~/lab8$ awk -F";" '{print "The user" $1,"logs in with:" $NF,"and its home dir is: "$6}' /etc/passwd | grep "/bin/bash"
The userroot:x:0:0:root:/root:/bin/bash logs in with:root:x:0:0:root:/root:/bin/bash and its home dir is:
The user tjyoung:x:1000:1000:Tjyoung,,,:/home/tjyoung:/bin/bash logs in with:tjyoung:x:1000:1000:Tjyoung,,,:/home/tjyoung:/bin/bash and its home dir is:
tjyoung@cis106:~/lab8$ awk -F";" '{print "The user" $1,"logs in with:" $NF,"and its home dir is: "$6}' /etc/passwd | grep "/bin/bash"
The userroot:x:0:0:root:/root:/bin/bash logs in with:root:x:0:0:root:/root:/bin/bash and its home dir is:
The user tjyoung:x:1000:1000:Tjyoung,,,:/home/tjyoung:/bin/bash logs in with:tjyoung:x:1000:1000:Tjyoung,,,:/home/tjyoung:/bin/bash and its home dir is:
tjyoung@cis106:~/lab8$ awk -F";" '{print "The user" $1,"logs in with:" $NF,"and its home dir is: "$6}' /etc/passwd
The userroot:x:0:0:root:/root:/bin/bash logs in with:root:x:0:0:root:/root:/bin/bash and its home dir is:
The userdaemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin logs in with:daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin and its home dir is:
The userbin:x:2:2:bin:/bin:/usr/sbin/nologin logs in with:bin:x:2:2:bin:/bin:/usr/sbin/nologin and its home dir is:
The usersys:x:3:3:sys:/dev:/usr/sbin/nologin logs in with:sys:x:3:3:sys:/dev:/usr/sbin/nologin and its home dir is:
The usersync:x:4:65534:sync:/bin:/bin/sync logs in with:sync:x:4:65534:sync:/bin:/bin/sync and its home dir is:
The usergames:x:5:60:games:/usr/games:/usr/sbin/nologin logs in with:games:x:5:60:games:/usr/games:/usr/sbin/nologin and its home dir is:
The userman:x:6:12:man:/var/cache/man:/usr/sbin/nologin logs in with:man:x:6:12:man:/var/cache/man:/usr/sbin/nologin and its home dir is:
The userlp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin logs in with:lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin and its home dir is:
The usermail:x:8:8:mail:/var/mail:/usr/sbin/nologin logs in with:mail:x:8:8:mail:/var/mail:/usr/sbin/nologin and its home dir is:
The usernews:x:9:9:news:/var/spool/news:/usr/sbin/nologin logs in with:news:x:9:9:news:/var/spool/news:/usr/sbin/nologin and its home dir is:
The useruucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin logs in with:uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin and its home dir is:
The userproxy:x:13:13:proxy:/bin:/usr/sbin/nologin logs in with:proxy:x:13:13:proxy:/bin:/usr/sbin/nologin and its home dir is:
The userwww-data:x:33:33:www-data:/var/www:/usr/sbin/nologin logs in with:www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin and its home dir is:
The userbackup:x:34:34:backup:/var/backups:/usr/sbin/nologin logs in with:backup:x:34:34:backup:/var/backups:/usr/sbin/nologin and its home dir is:
The userlist:x:38:38:MailList Manager:/var/list:/usr/sbin/nologin logs in with:list:x:38:38:MailList Manager:/var/list:/usr/sbin/nologin and its h
ome dir is:
The userirc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin logs in with:irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin and its home dir is:
The usergnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin logs in with:gnats:x:41:41:Gnats Bug-Reporting System (admin):/v
ar/lib/gnats:/usr/sbin/nologin and its home dir is:
The usernobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin logs in with:nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin and its home di
r is:
The usersystemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin logs in with:systemd-network:x:100:102:systemd Network Mana
gement,,,:/run/systemd:/usr/sbin/nologin and its home dir is:
The usersystemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin logs in with:systemd-resolve:x:101:103:systemd Resolver,,,:/run/syste
nd:/usr/sbin/nologin and its home dir is:
The usermessagebus:x:102:105::/nonexistent:/usr/sbin/nologin logs in with:messagebus:x:102:105::/nonexistent:/usr/sbin/nologin and its home dir is:
The usersystemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin logs in with:systemd-timesync:x:103:106:systemd Time Syn
chronization,,,:/run/systemd:/usr/sbin/nologin and its home dir is:
The usersyslog:x:104:111::/home/syslog:/usr/sbin/nologin logs in with:syslog:x:104:111::/home/syslog:/usr/sbin/nologin and its home dir is:
The user_apt:x:105:65534::/nonexistent:/usr/sbin/nologin logs in with:_apt:x:105:65534::/nonexistent:/usr/sbin/nologin and its home dir is:
The usertss:x:106:113:TPM software stack,,,:/var/lib/tpm:/bin/false logs in with:tss:x:106:113:TPM software stack,,,:/var/lib/tpm:/bin/false and its home
dir is:
The useruid:x:107:116::/run/uid:/usr/sbin/nologin logs in with:uid:x:107:116::/run/uid:/usr/sbin/nologin and its home dir is:
The usersystemd-oom:x:108:117:systemd Userspace OOM Killer,,,:/run/systemd:/usr/sbin/nologin logs in with:systemd-oom:x:108:117:systemd Userspace OOM Kill
er,,,:/run/systemd:/usr/sbin/nologin and its home dir is:

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Question 4



q4