Hands on Assignment

Task 1:
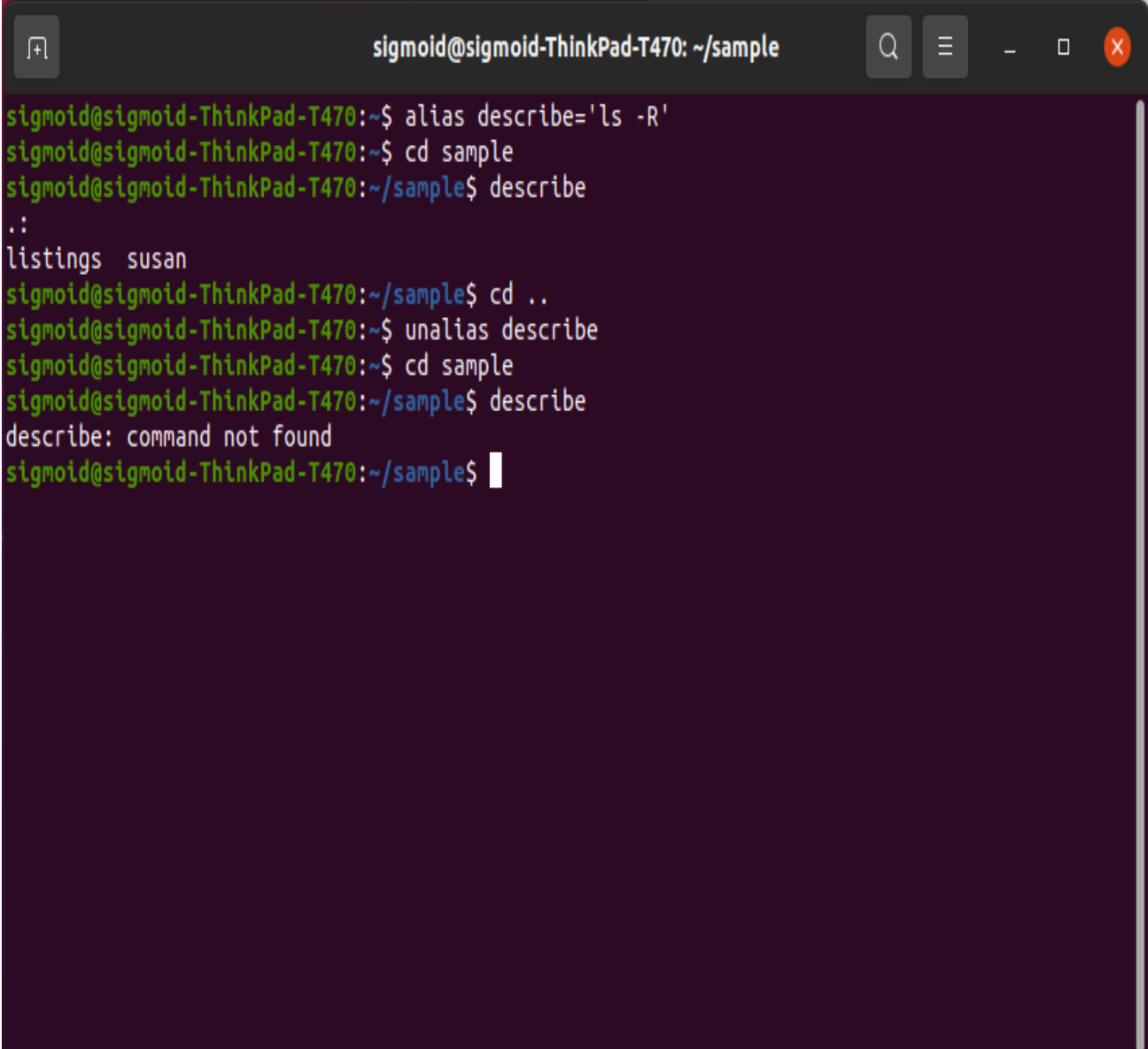


```
sigmoid@sigmoid-ThinkPad-T470:~$ sudo su -
root@sigmoid-ThinkPad-T470:~# systemctl status sendmail
● sendmail.service - LSB: powerful, efficient, and scalabl>
     Loaded: loaded (/etc/init.d/sendmail; generated)
     Active: active (running) since Fri 2024-10-11 12:18:3>
       Docs: man:systemd-sysv-generator(8)
      Tasks: 1 (limit: 9142)
     Memory: 3.0M
     CGroup: /system.slice/sendmail.service
             └─5154 sendmail: MTA: accepting connections

Oct 11 12:17:31 sigmoid-ThinkPad-T470 su[5001]: (to smmsp)>
Oct 11 12:17:31 sigmoid-ThinkPad-T470 su[5001]: pam_unix(s>
Oct 11 12:17:31 sigmoid-ThinkPad-T470 su[5001]: pam_unix(s>
Oct 11 12:17:31 sigmoid-ThinkPad-T470 sm-mta[5030]: My unq>
Oct 11 12:17:33 sigmoid-ThinkPad-T470 sm-msp-queue[5146]: >
Oct 11 12:18:31 sigmoid-ThinkPad-T470 sm-mta[5030]: unable>
Oct 11 12:18:31 sigmoid-ThinkPad-T470 sm-mta[5154]: starti>
Oct 11 12:18:33 sigmoid-ThinkPad-T470 sm-msp-queue[5146]: >
Oct 11 12:18:33 sigmoid-ThinkPad-T470 sendmail[4968]:    .>
Oct 11 12:18:33 sigmoid-ThinkPad-T470 systemd[1]: Started >
lines 1-19/19 (END)
```



```
root@sigmoid-ThinkPad-T470:~# nano email.txt
root@sigmoid-ThinkPad-T470:~# nano email.txt
root@sigmoid-ThinkPad-T470:~# sendmail -t < email.txt
root@sigmoid-ThinkPad-T470:~# cat email.txt
To:hemanth.kg@sigmoidanalytics.com

Subject: testing smtp mail.

configuring smtp localhost using sendmail.
root@sigmoid-ThinkPad-T470:~#
root@sigmoid-ThinkPad-T470:~# sudo tail -f /var/log/mail.log
Oct 11 12:41:01 sigmoid-ThinkPad-T470 sm-msp-queue[6561]: unable to qualify my own domain name (sigmoid-ThinkPad
-T470) -- using short name
Oct 11 12:42:25 sigmoid-ThinkPad-T470 sendmail[6587]: My unqualified host name (sigmoid-ThinkPad-T470) unknown;
sleeping for retry
Oct 11 12:43:25 sigmoid-ThinkPad-T470 sendmail[6587]: unable to qualify my own domain name (sigmoid-ThinkPad-T47
0) -- using short name
Oct 11 12:43:25 sigmoid-ThinkPad-T470 sendmail[6587]: 49B7DPsN006587: from=sigmoid, size=127, class=0, nrcpts=1,
 msgid=<202410110713.49B7DPsN006587@sigmoid-ThinkPad-T470>, relay=root@localhost
Oct 11 12:43:25 sigmoid-ThinkPad-T470 sm-mta[6590]: 49B7DPnN006590: from=<sigmoid@sigmoid-ThinkPad-T470>, size=4
08, class=0, nrcpts=1, msgid=<202410110713.49B7DPsN006587@sigmoid-ThinkPad-T470>, proto=ESMTP, daemon=MTA-v4, re
lay=localhost [127.0.0.1]
Oct 11 12:43:25 sigmoid-ThinkPad-T470 sendmail[6587]: 49B7DPsN006587: to=hemanth.kg@sigmoidanalytics.com, ctladd
r=sigmoid (1000/1000), delay=00:00:00, xdelay=00:00:00, mailer=relay, pri=30127, relay=[127.0.0.1] [127.0.0.1],
dsn=2.0.0, stat=Sent (49B7DPnN006590 Message accepted for delivery)
Oct 11 12:43:27 sigmoid-ThinkPad-T470 sm-mta[6592]: STARTTLS=client, relay=aspmx.l.google.com., version=TLSv1.3,
 verify=FAIL, cipher=TLS_AES_256_GCM_SHA384, bits=256/256
Oct 11 12:43:28 sigmoid-ThinkPad-T470 sm-mta[6592]: 49B7DPnN006590: to=<hemanth.kg@sigmoidanalytics.com>, ctladd
r=<sigmoid@sigmoid-ThinkPad-T470> (1000/1000), delay=00:00:03, xdelay=00:00:03, mailer=esmtp, pri=120408, relay=
aspmx.l.google.com. [74.125.200.26], dsn=5.0.0, stat=Service unavailable
Oct 11 12:43:28 sigmoid-ThinkPad-T470 sm-mta[6592]: 49B7DPnN006590: 49B7DSnN006592: DSN: Service unavailable
Oct 11 12:43:28 sigmoid-ThinkPad-T470 sm-mta[6592]: 49B7DSnN006592: to=<sigmoid@sigmoid-ThinkPad-T470>, delay=00
:00:00, xdelay=00:00:00, mailer=local, pri=30000, dsn=2.0.0, stat=Sent
^C
root@sigmoid-ThinkPad-T470:~#
```

Task 2:


```
root@sigmoid-ThinkPad-T470:~# adduser hemanth
Adding user `hemanth' ...
Adding new group `hemanth' (1001) ...
Adding new user `hemanth' (1001) with group `hemanth' ...
Creating home directory `/home/hemanth' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for hemanth
Enter the new value, or press ENTER for the default
        Full Name []: hemanth
        Room Number []: 288
        Work Phone []: 63600
        Home Phone []: 298
        Other []: 1
Is the information correct? [Y/n] y
root@sigmoid-ThinkPad-T470:~# su hemanth
hemanth@sigmoid-ThinkPad-T470:/root$ sudo ls
[sudo] password for hemanth:
hemanth is not in the sudoers file.  This incident will be reported.
hemanth@sigmoid-ThinkPad-T470:/root$ exit
exit
You have new mail in /var/mail/root
root@sigmoid-ThinkPad-T470:~# cd / | cat /etc/group | grep sudo
sudo:x:27:sigmoid
root@sigmoid-ThinkPad-T470:~#
```

Task 3:

```
sigmoid@sigmoid-ThinkPad-T470:~$ alias describe='ls -R'
sigmoid@sigmoid-ThinkPad-T470:~$ cd sample
sigmoid@sigmoid-ThinkPad-T470:~/sample$ describe
.:
listings  susan
sigmoid@sigmoid-ThinkPad-T470:~/sample$ cd ..
sigmoid@sigmoid-ThinkPad-T470:~$ unalias describe
sigmoid@sigmoid-ThinkPad-T470:~$ cd sample
sigmoid@sigmoid-ThinkPad-T470:~/sample$ describe
describe: command not found
sigmoid@sigmoid-ThinkPad-T470:~/sample$
```

Task 4:

```
root@sigmoid-ThinkPad-T470:/# ls -l > research
root@sigmoid-ThinkPad-T470:/# ls -l | grep research
-rw-r--r--   1 root root        1560 Oct  8 13:57 research
root@sigmoid-ThinkPad-T470:/# gzip research
root@sigmoid-ThinkPad-T470:/# ls -l | grep research.gz
-rw-r--r--   1 root root         418 Oct  8 13:57 research.gz
root@sigmoid-ThinkPad-T470:/# cat decompress
#!/bin/bash
research_file=$(find / -name "research.*" 2>/dev/null)

if [[ -z "$research_file" ]]; then
    echo "No file found with the name 'research'."
    exit 1
fi

echo "Found file: $research_file"

file_type=$(file -b "$research_file")

if [[ $file_type == *"gzip compressed data"* ]]; then
    echo "Decompressing gzip file..."
    gzip -d "$research_file"
else
    echo "Unknown compression type or not a compressed file."
fi
root@sigmoid-ThinkPad-T470:/# ./decompress
Found file: /research.gz
Decompressing gzip file...
root@sigmoid-ThinkPad-T470:/# ls -l | grep research
-rw-r--r--   1 root root        1560 Oct  8 13:57 research
root@sigmoid-ThinkPad-T470:/#
```
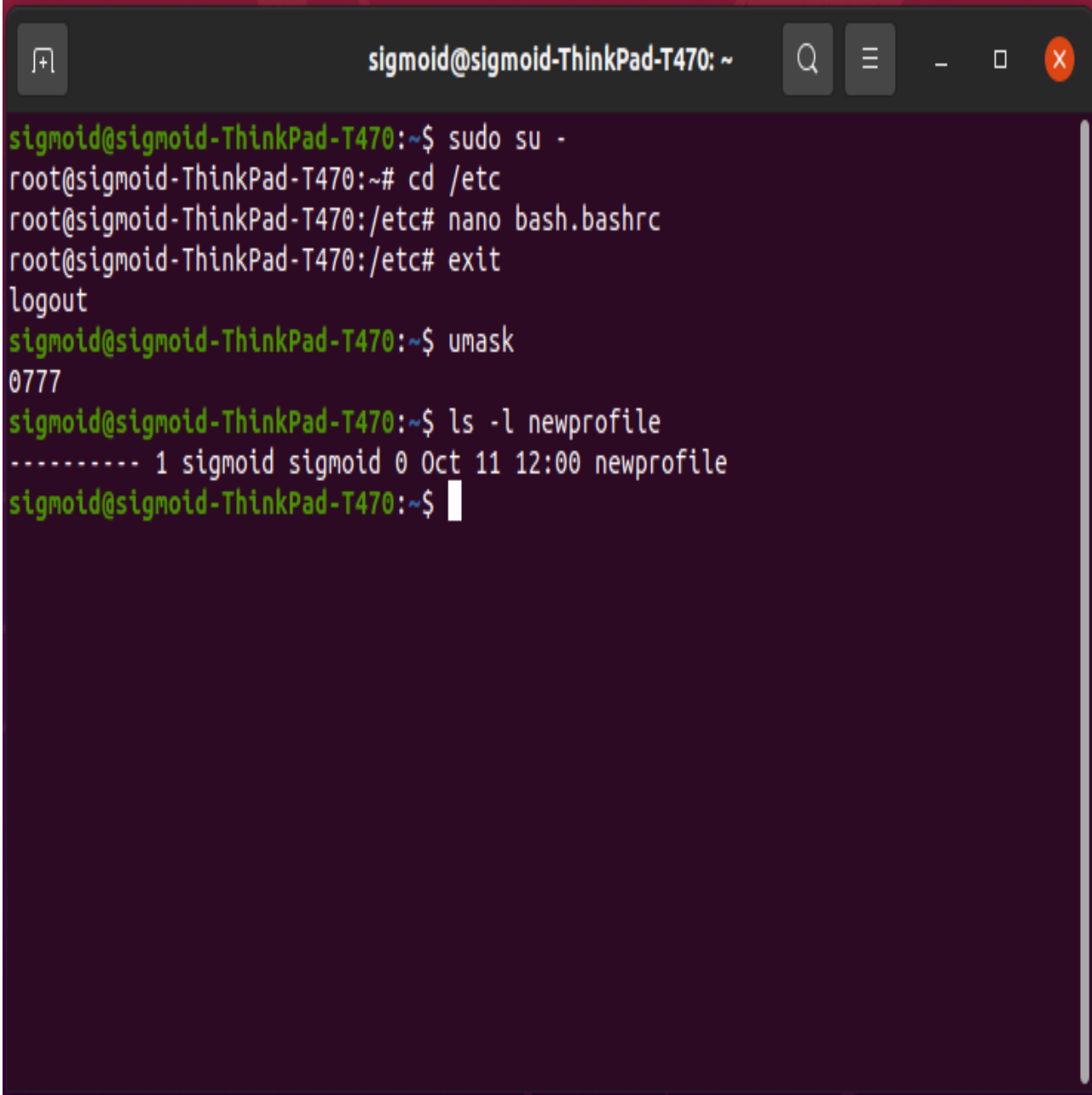
Task 5:

```
sigmoid@sigmoid-ThinkPad-T470:~$ sudo su -
root@sigmoid-ThinkPad-T470:~# cd /etc
root@sigmoid-ThinkPad-T470:/etc# nano bash.bashrc
root@sigmoid-ThinkPad-T470:/etc# exit
logout
sigmoid@sigmoid-ThinkPad-T470:~$ umask
0777
sigmoid@sigmoid-ThinkPad-T470:~$ ls -l newprofile
---------- 1 sigmoid sigmoid 0 Oct 11 12:00 newprofile
sigmoid@sigmoid-ThinkPad-T470:~$
```

Task 6:

```
root@sigmoid-ThinkPad-T470:~# nano /usr/local/bin/showtime.sh
root@sigmoid-ThinkPad-T470:~# chmod +x /usr/local/bin/showtime.sh
root@sigmoid-ThinkPad-T470:~# cat /usr/local/bin/showtime.sh
#!/bin/bash

# Creating a log file in the user's home directory
LOGFILE="showtime.log"

while true; do
    echo "$(date)" >> "$LOGFILE"
    sleep 60
done
root@sigmoid-ThinkPad-T470:~# nano /etc/systemd/system/showtime.service
root@sigmoid-ThinkPad-T470:~# cat /etc/systemd/system/showtime.service
[Unit]
Description=Showtime Service

[Service]
Type=simple
ExecStart=/usr/local/bin/showtime.sh
User=root
Restart=always

[Install]
WantedBy=multi-user.target
root@sigmoid-ThinkPad-T470:~# sudo systemctl daemon-reload
root@sigmoid-ThinkPad-T470:~# sudo systemctl start showtime.service
root@sigmoid-ThinkPad-T470:~# sudo systemctl status showtime.service
● showtime.service - Showtime Service
     Loaded: loaded (/etc/systemd/system/showtime.service; disabled; vendor>
     Active: active (running) since Tue 2024-10-08 19:06:26 IST; 1min 19s a>
   Main PID: 7306 (showtime.sh)
      Tasks: 2 (limit: 9142)
     Memory: 524.0K
     CGroup: /system.slice/showtime.service
             └─7306 /bin/bash /usr/local/bin/showtime.sh
```

```
root@sigmoid-ThinkPad-T470:~# cd /
root@sigmoid-ThinkPad-T470:/# cat showtime.log
Tuesday 08 October 2024 07:06:26 PM IST
Tuesday 08 October 2024 07:07:26 PM IST
Tuesday 08 October 2024 07:08:26 PM IST
Tuesday 08 October 2024 07:09:26 PM IST
Tuesday 08 October 2024 07:10:26 PM IST
Tuesday 08 October 2024 07:11:26 PM IST
Tuesday 08 October 2024 07:12:26 PM IST
Tuesday 08 October 2024 07:13:26 PM IST
Tuesday 08 October 2024 07:14:26 PM IST
Tuesday 08 October 2024 07:15:26 PM IST
Tuesday 08 October 2024 07:16:26 PM IST
root@sigmoid-ThinkPad-T470:/#
```