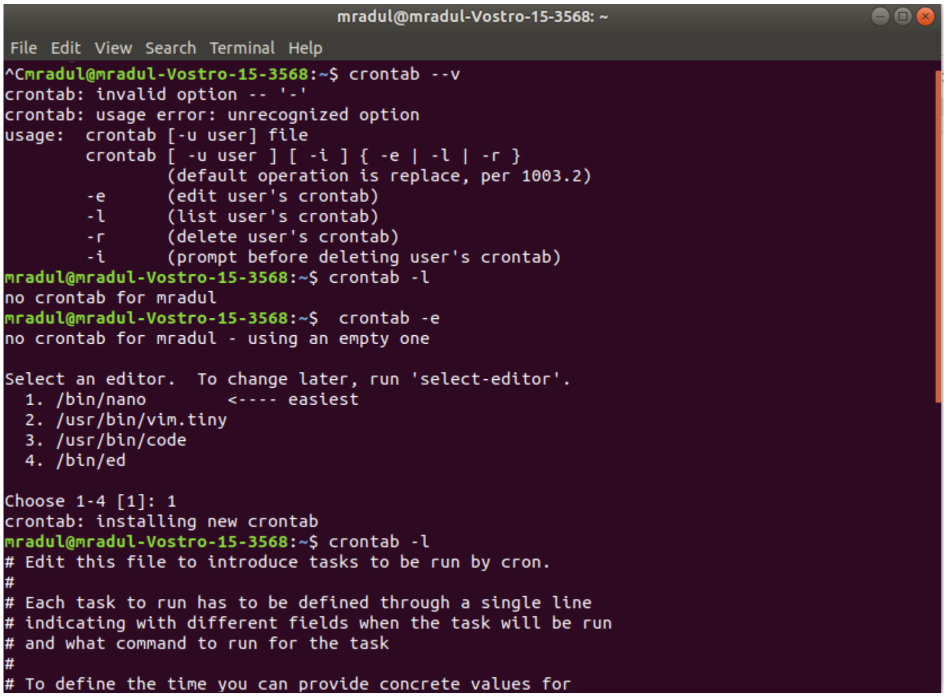
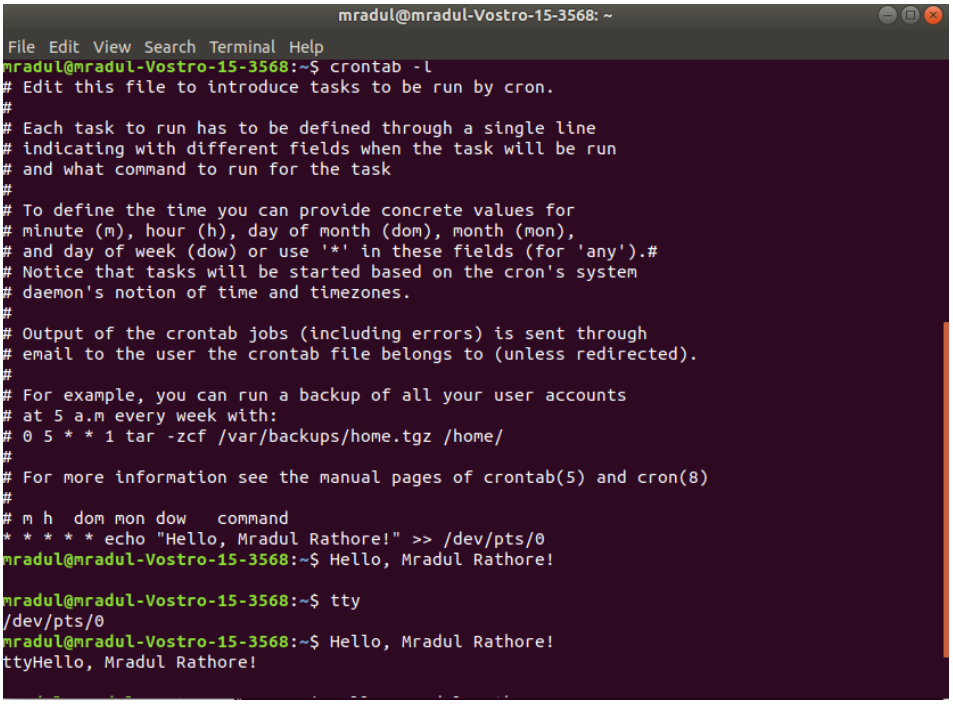
SHRI G S INSTITUTE OF TECHNOLOGY & SCIENCE, INDORE
DEPARTMENT OF COMPUTER ENGINEERING
Subject: SOL
Session Aug-Dec 2021
Lab Assignments 2
Cron Job

Name: Mradul Rathore
Roll No: 0801CS181043

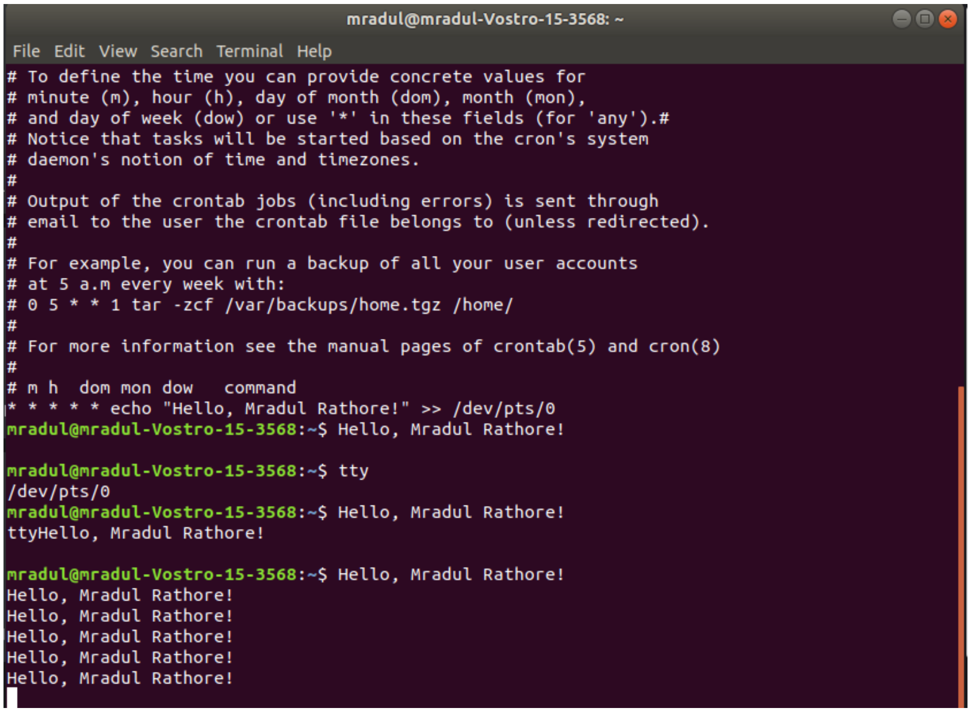
Display “Hello, Mradul Rathore!” on Terminal


mradul@mradul-Vostro-15-3568: ~
File Edit View Search Terminal Help

```
^Cmradul@mradul-Vostro-15-3568:~$ crontab --v
crontab: invalid option -- '-'
crontab: usage error: unrecognized option
usage:  crontab [-u user] file
        crontab [ -u user ] [ -i ] { -e | -l | -r }
                (default operation is replace, per 1003.2)
        -e      (edit user's crontab)
        -l      (list user's crontab)
        -r      (delete user's crontab)
        -i      (prompt before deleting user's crontab)
mradul@mradul-Vostro-15-3568:~$ crontab -l
no crontab for mradul
mradul@mradul-Vostro-15-3568:~$  crontab -e
no crontab for mradul - using an empty one

Select an editor.  To change later, run 'select-editor'.
  1. /bin/nano        <---- easiest
  2. /usr/bin/vim.tiny
  3. /usr/bin/code
  4. /bin/ed

Choose 1-4 [1]: 1
crontab: installing new crontab
mradul@mradul-Vostro-15-3568:~$ crontab -l
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
```


mradul@mradul-Vostro-15-3568: ~
File Edit View Search Terminal Help

```
mradul@mradul-Vostro-15-3568:~$ crontab -l
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
* * * * * echo "Hello, Mradul Rathore!" >> /dev/pts/0
mradul@mradul-Vostro-15-3568:~$ Hello, Mradul Rathore!

mradul@mradul-Vostro-15-3568:~$ tty
/dev/pts/0
mradul@mradul-Vostro-15-3568:~$ Hello, Mradul Rathore!
ttyHello, Mradul Rathore!
```


mradul@mradul-Vostro-15-3568: ~
File Edit View Search Terminal Help

```
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').#
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#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
* * * * * echo "Hello, Mradul Rathore!" >> /dev/pts/0
mradul@mradul-Vostro-15-3568:~$ Hello, Mradul Rathore!

mradul@mradul-Vostro-15-3568:~$ tty
/dev/pts/0
mradul@mradul-Vostro-15-3568:~$ Hello, Mradul Rathore!
ttyHello, Mradul Rathore!

mradul@mradul-Vostro-15-3568:~$ Hello, Mradul Rathore!
Hello, Mradul Rathore!
Hello, Mradul Rathore!
Hello, Mradul Rathore!
Hello, Mradul Rathore!
Hello, Mradul Rathore!
```
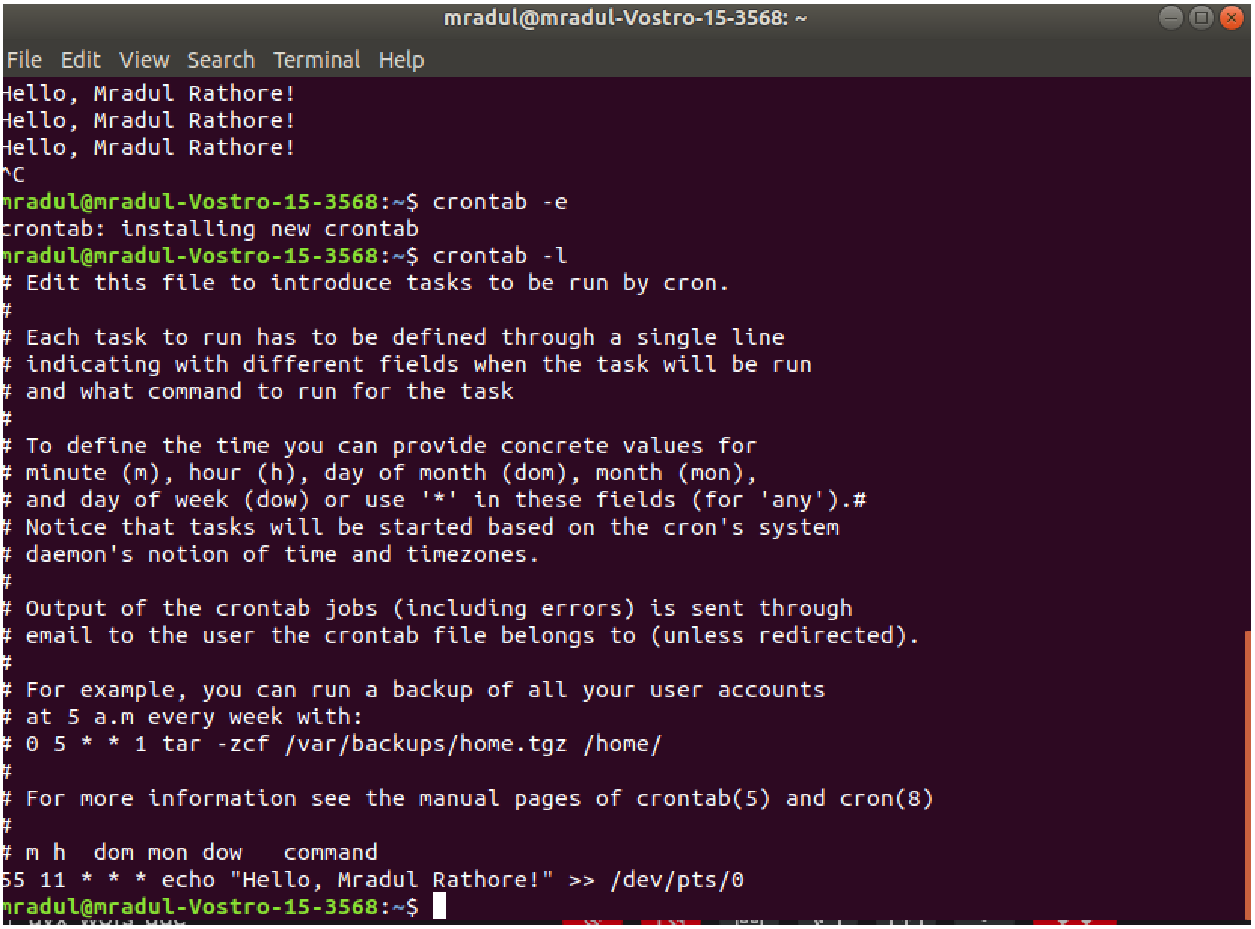

Display “Hello, Mradul Rathore!” at 11.55 pm


mradul@mradul-Vostro-15-3568: ~
File Edit View Search Terminal Help

```
Hello, Mradul Rathore!
Hello, Mradul Rathore!
Hello, Mradul Rathore!
^C
mradul@mradul-Vostro-15-3568:~$ crontab -e
crontab: installing new crontab
mradul@mradul-Vostro-15-3568:~$ crontab -l
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
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# minute (m), hour (h), day of month (dom), month (mon),
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# daemon's notion of time and timezones.
#
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# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
55 11 * * * echo "Hello, Mradul Rathore!" >> /dev/pts/0
mradul@mradul-Vostro-15-3568:~$
```
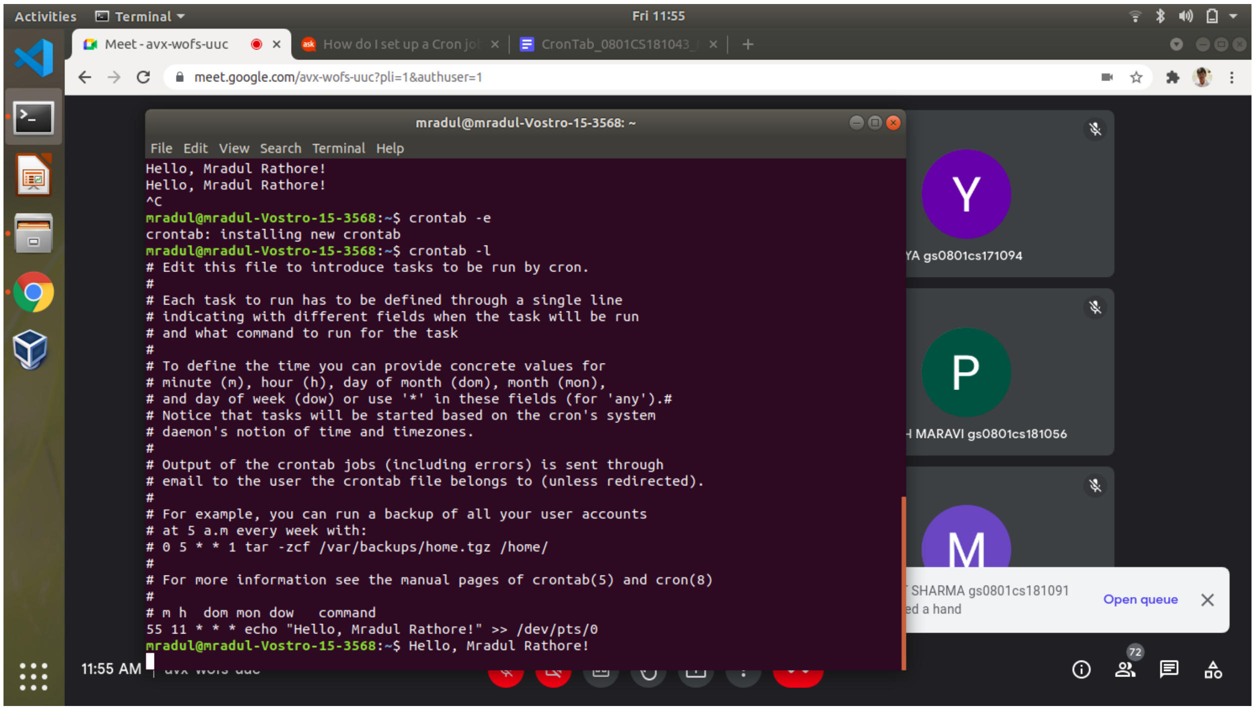
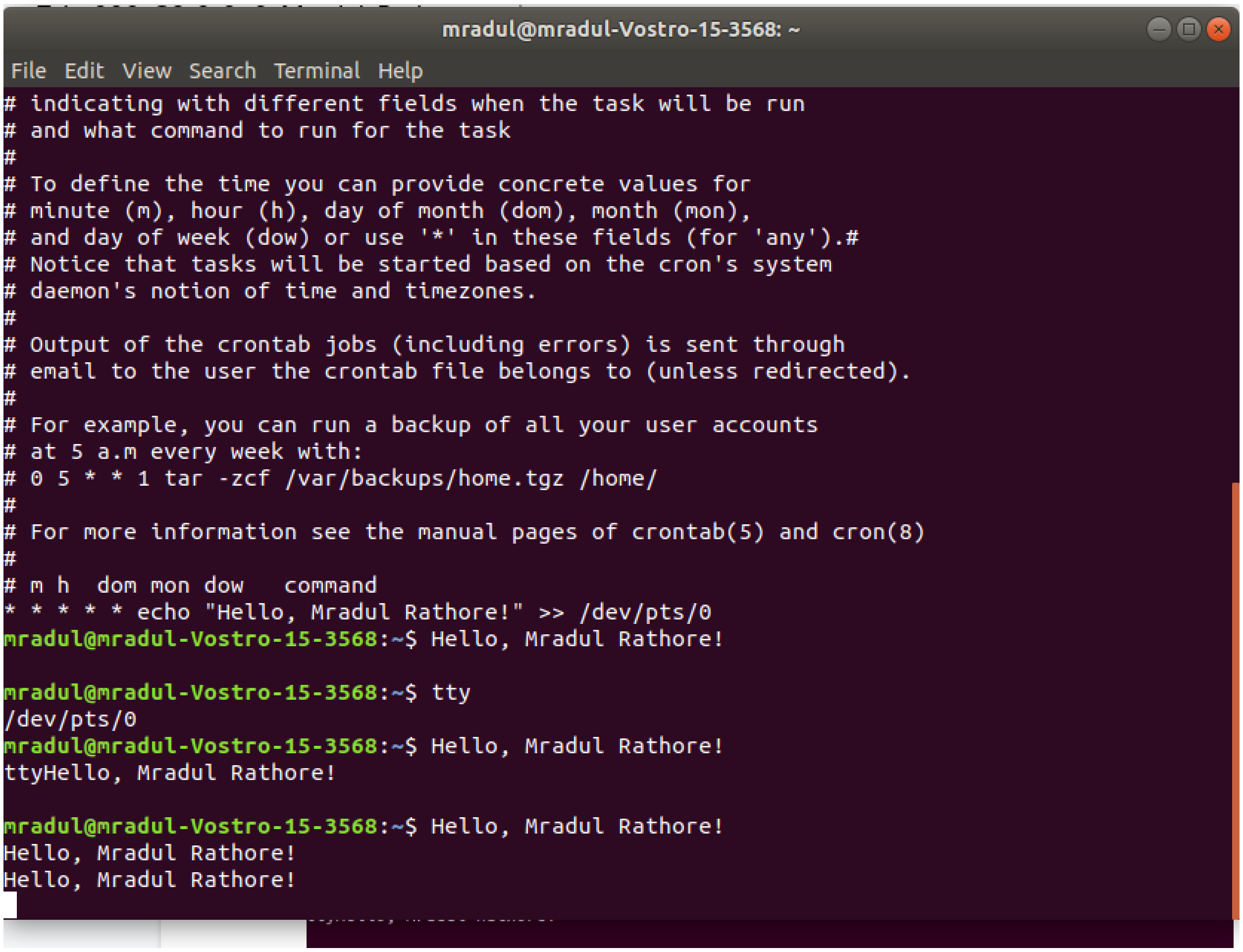



```
Hello, Mradul Rathore!
Hello, Mradul Rathore!
^C
mradul@mradul-Vostro-15-3568:~$ crontab -e
crontab: installing new crontab
mradul@mradul-Vostro-15-3568:~$ crontab -l
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
55 11 * * * echo "Hello, Mradul Rathore!" >> /dev/pts/0
mradul@mradul-Vostro-15-3568:~$ Hello, Mradul Rathore!
```


mradul@mradul-Vostro-15-3568: ~
File Edit View Search Terminal Help

```
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').#
# Notice that tasks will be started based on the cron's system
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#
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# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
* * * * * echo "Hello, Mradul Rathore!" >> /dev/pts/0
mradul@mradul-Vostro-15-3568:~$ Hello, Mradul Rathore!

mradul@mradul-Vostro-15-3568:~$ tty
/dev/pts/0
mradul@mradul-Vostro-15-3568:~$ Hello, Mradul Rathore!
ttyHello, Mradul Rathore!

mradul@mradul-Vostro-15-3568:~$ Hello, Mradul Rathore!
Hello, Mradul Rathore!
Hello, Mradul Rathore!
```
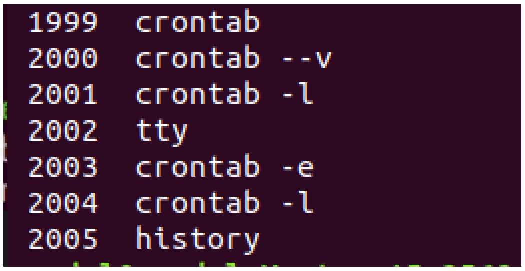
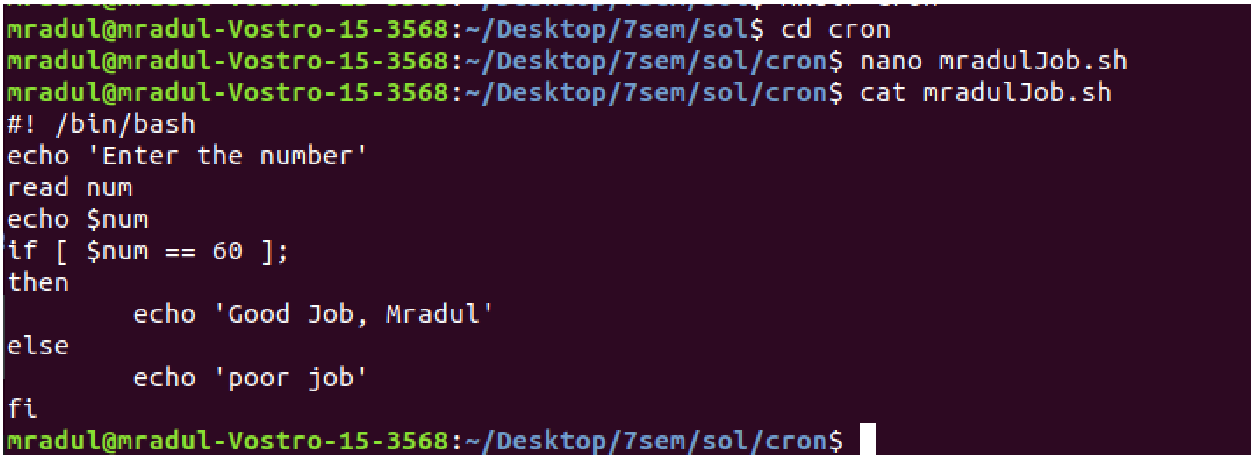

History:



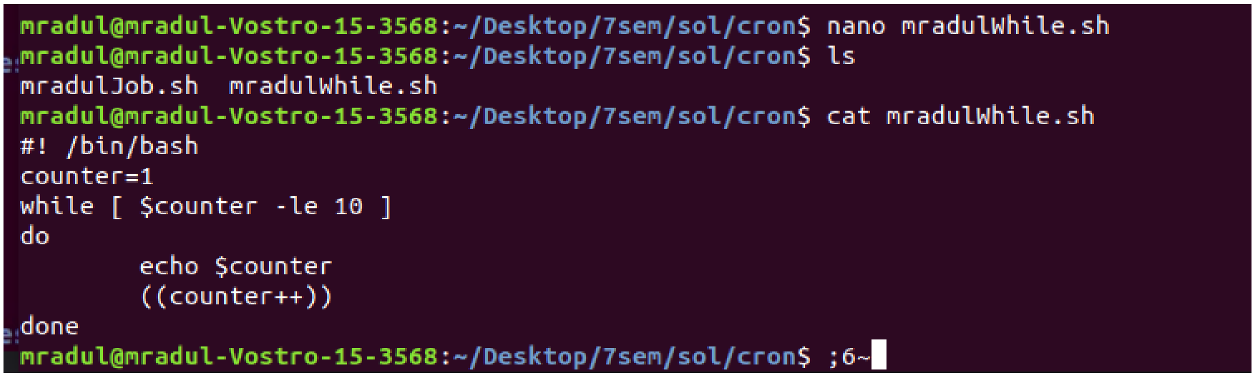
```
 1999  crontab
 2000  crontab --v
 2001  crontab -l
 2002  tty
 2003  crontab -e
 2004  crontab -l
 2005  history
```

Bash script

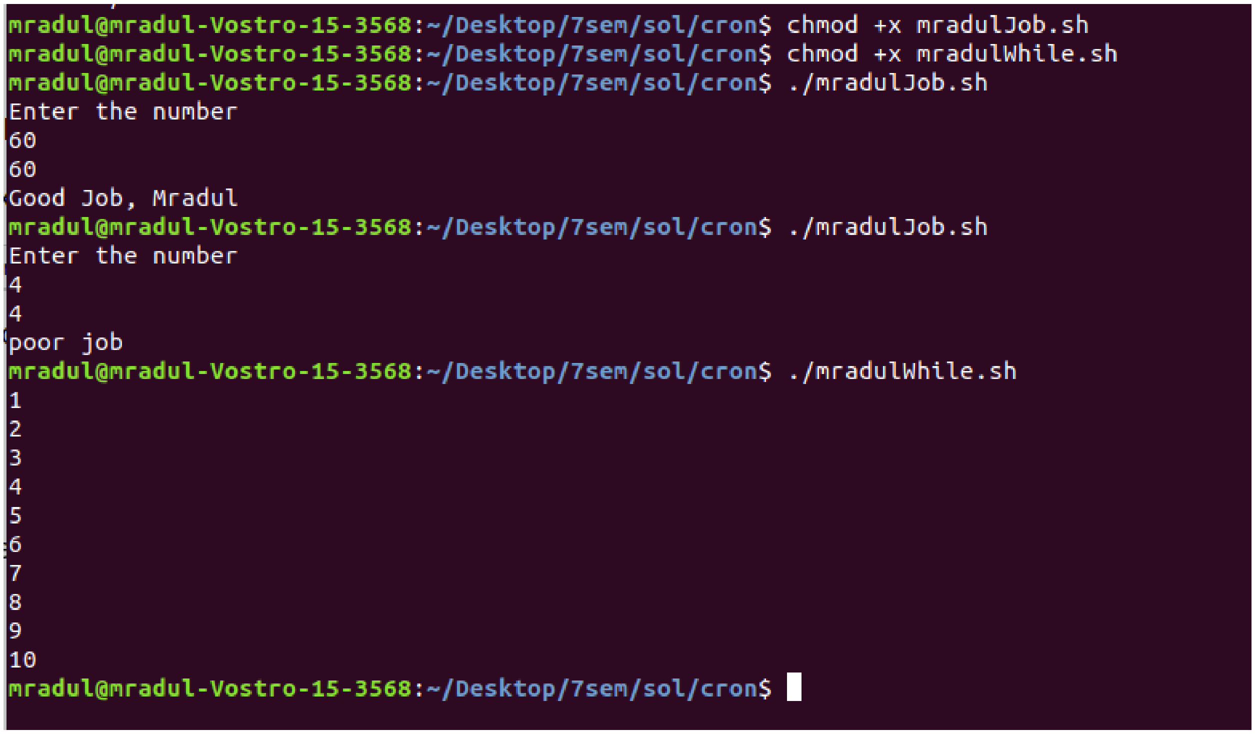
1. **If else and while loop**



```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol$ cd cron
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ nano mradulJob.sh
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ cat mradulJob.sh
#! /bin/bash
echo 'Enter the number'
read num
echo $num
if [ $num == 60 ];
then
        echo 'Good Job, Mradul'
else
        echo 'poor job'
fi
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ 
```

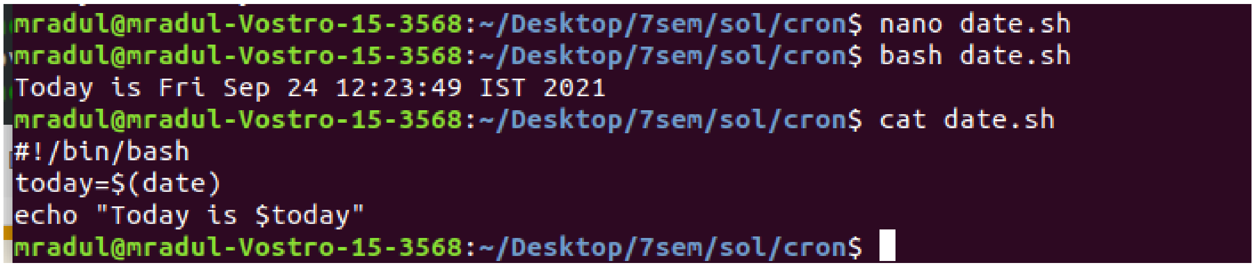


```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ nano mradulWhile.sh
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ ls
mradulJob.sh  mradulWhile.sh
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ cat mradulWhile.sh
#! /bin/bash
counter=1
while [ $counter -le 10 ]
do
        echo $counter
        ((counter++))
done
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ ;6~
```



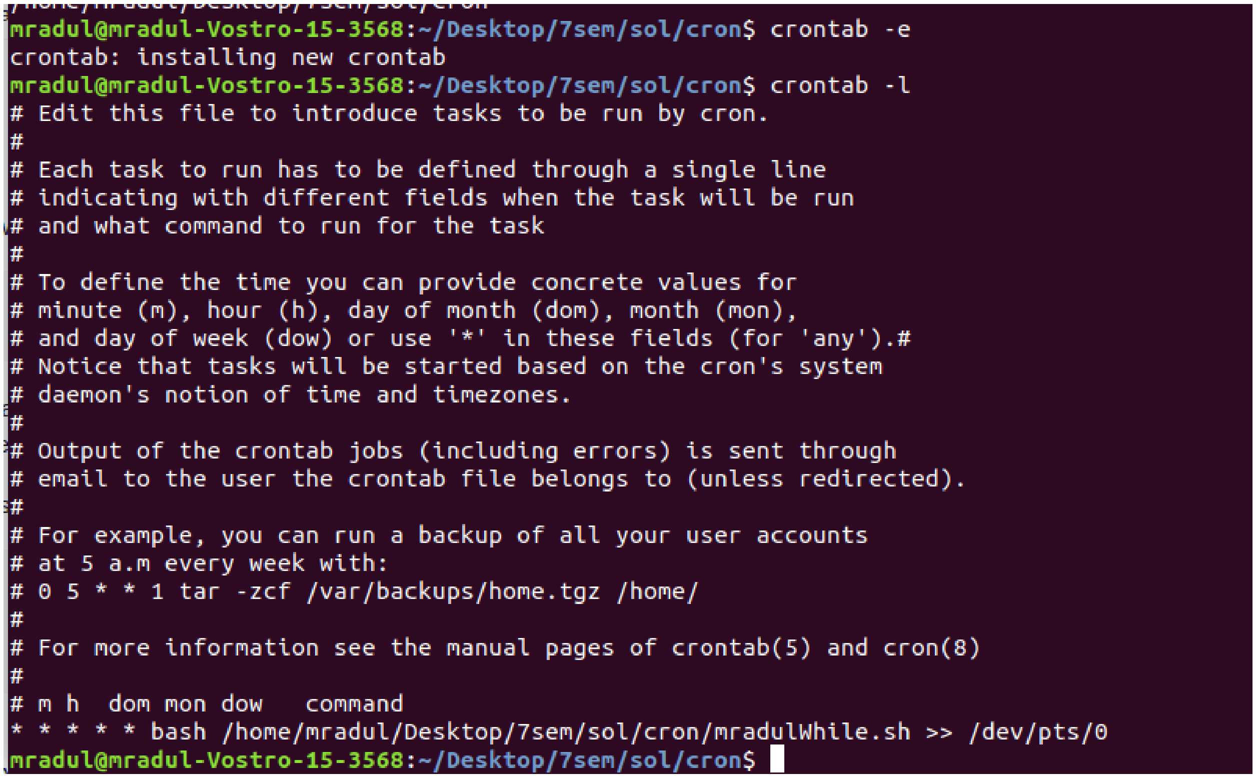
```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ chmod +x mradulJob.sh
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ chmod +x mradulWhile.sh
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ ./mradulJob.sh
Enter the number
60
60
Good Job, Mradul
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ ./mradulJob.sh
Enter the number
4
4
poor job
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ ./mradulWhile.sh
1
2
3
4
5
6
7
8
9
10
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$
```

Display current Date:



```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ nano date.sh
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ bash date.sh
Today is Fri Sep 24 12:23:49 IST 2021
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ cat date.sh
#!/bin/bash
today=$(date)
echo "Today is $today"
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$
```

Using chron tab to run bash script



```
/home/mradul/Desktop/7sem/sol/cron
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ crontab -e
crontab: installing new crontab
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ crontab -l
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
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#
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# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
* * * * * bash /home/mradul/Desktop/7sem/sol/cron/mradulWhile.sh >> /dev/pts/0
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ 
```
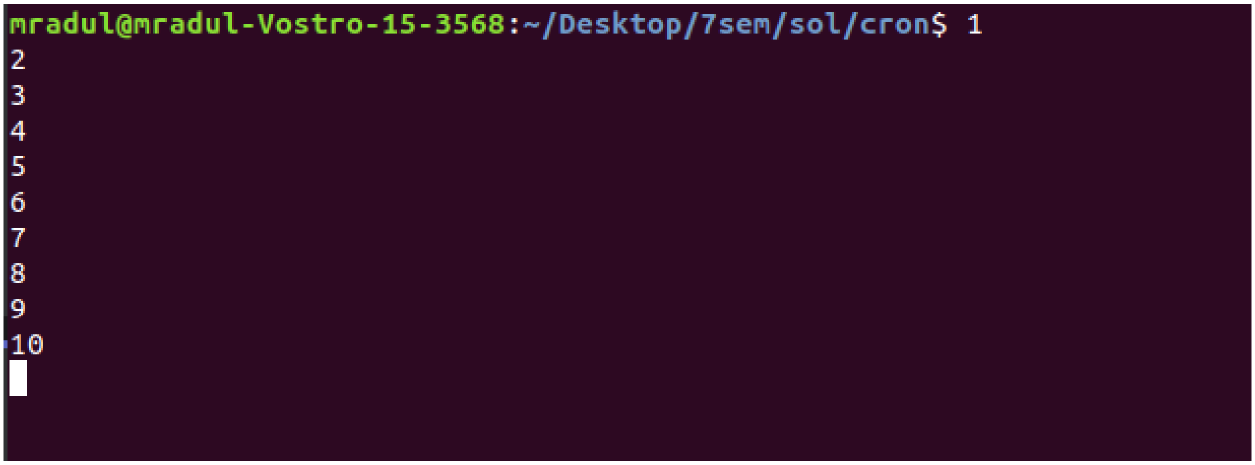
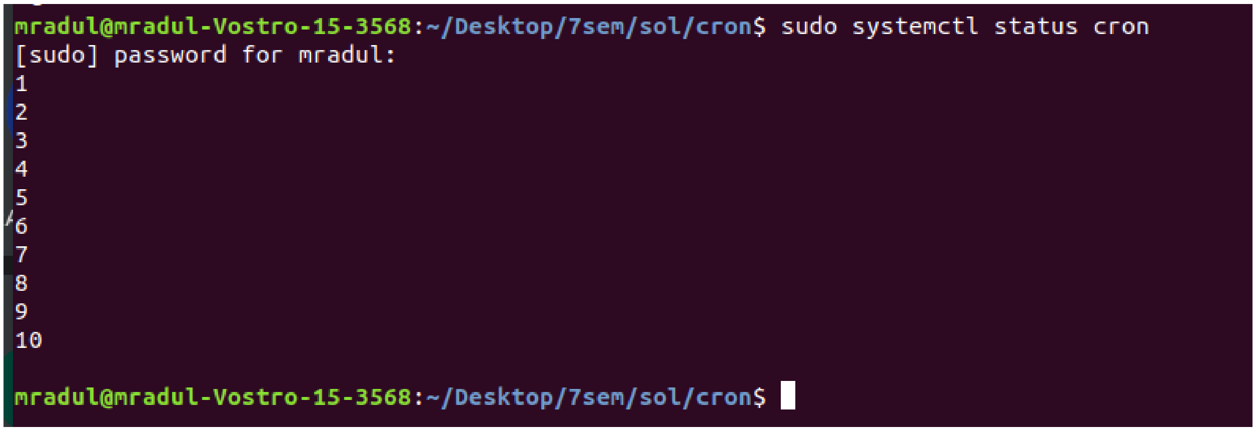
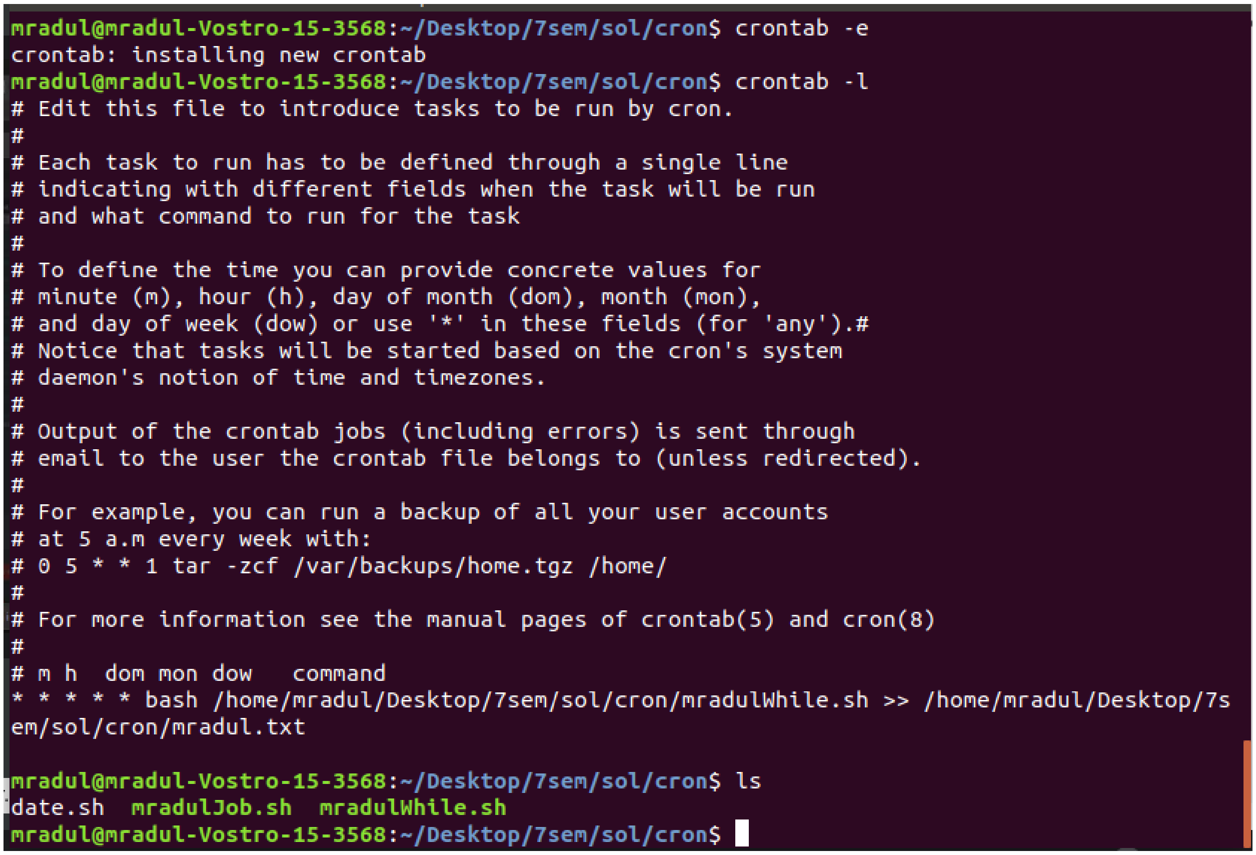



```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ 1
2
3
4
5
6
7
8
9
10
```



```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ sudo systemctl status cron
[sudo] password for mradul:
1
2
3
4
5
6
7
8
9
10

mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ 
```

Outputting script output to mradul.txt file



```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ crontab -e
crontab: installing new crontab
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ crontab -l
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# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
* * * * * bash /home/mradul/Desktop/7sem/sol/cron/mradulWhile.sh >> /home/mradul/Desktop/7s
em/sol/cron/mradul.txt

mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ ls
date.sh  mradulJob.sh  mradulWhile.sh
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$
```

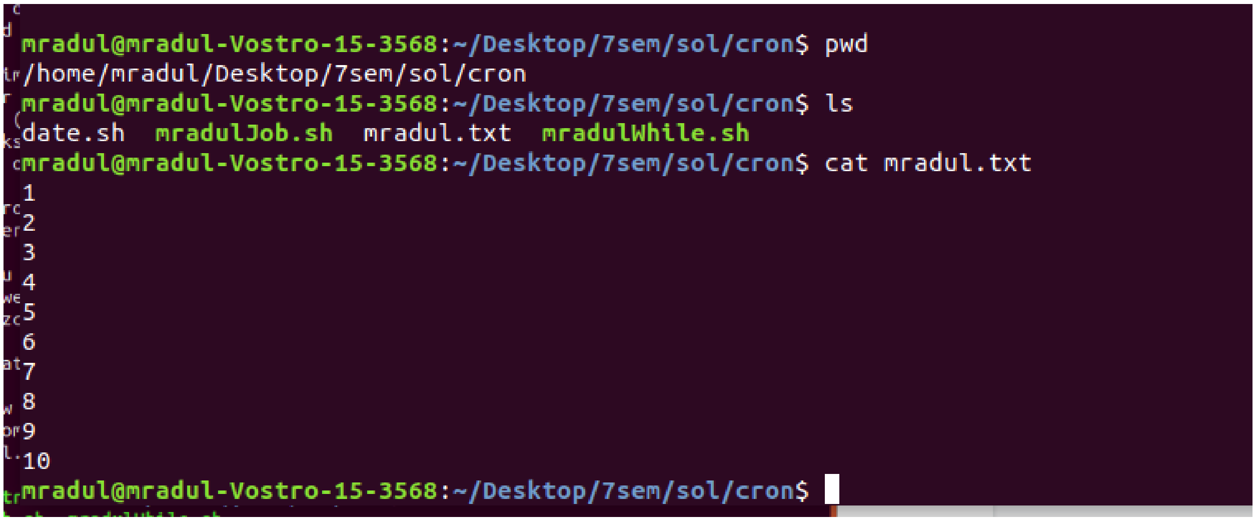

```
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ pwd
/home/mradul/Desktop/7sem/sol/cron
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ ls
date.sh  mradulJob.sh  mradul.txt  mradulWhile.sh
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$ cat mradul.txt
1
2
3
4
5
6
7
8
9
10
mradul@mradul-Vostro-15-3568:~/Desktop/7sem/sol/cron$
```