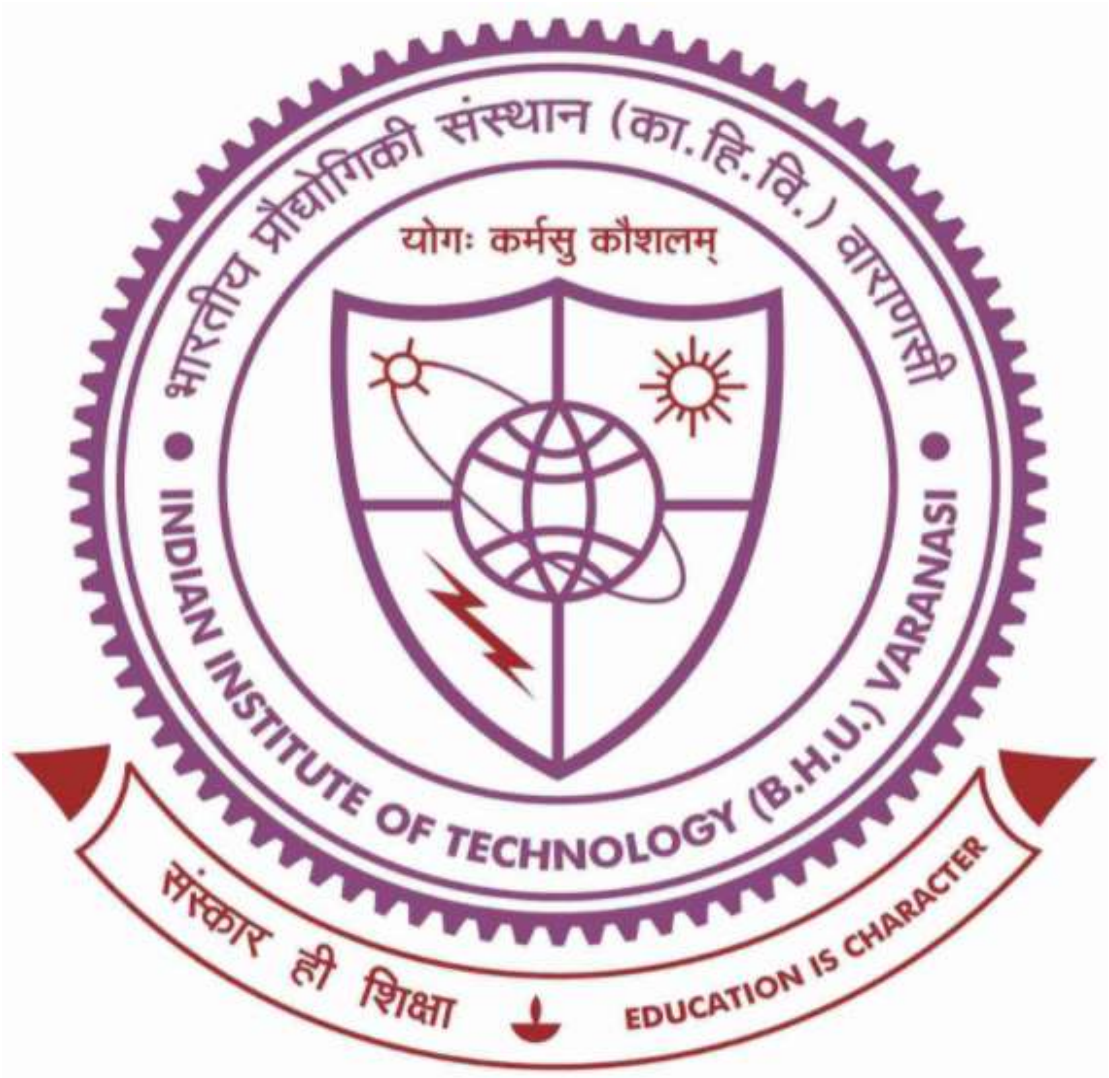

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COMPUTER SCIENCE AND ENGINEERING

ASSIGNMENT 3

SUBMITTED ON: MAY 14, 2022

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* Note: part (alphabet) indicates the part of the question is attempted

1) Write a shell script to get current date, time, user name and current working directory. Also, how can you find out how long the system has been running and how to check the status of the password for the user named ITW1?

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ gedit currentfile.sh
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ cat currentfile.sh
#!/bin/bash
dc=`date +"%d/%m/%Y"`
tc=`date +"%T"`
uc=`whoami`
cdc=`pwd`
echo Current Date is: $dc
echo Current Time is: $tc
echo Username is: $uc
echo Current Directory is: $cdc
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash currentfile.sh
Current Date is: 14/05/2022
Current Time is: 02:54:28
Username is: ruchpottah
Current Directory is: /home/ruchpottah/Documents/ITW1
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$
```

Open currentfile.sh ~/Documents/ITW1

```
1 #!/bin/bash
2 dc=`date +"%d/%m/%Y"`
3 tc=`date +"%T"`
4 uc=`whoami`
5 cdc=`pwd`
6 echo Current Date is: $dc
7 echo Current Time is: $tc
8 echo Username is: $uc
9 echo Current Directory is: $cdc
```

part (a)

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ uptime
 02:57:07 up  3:18,  1 user,  load average: 0.17, 0.26, 0.19
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ uptime -p
up 3 hours, 18 minutes
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$
```

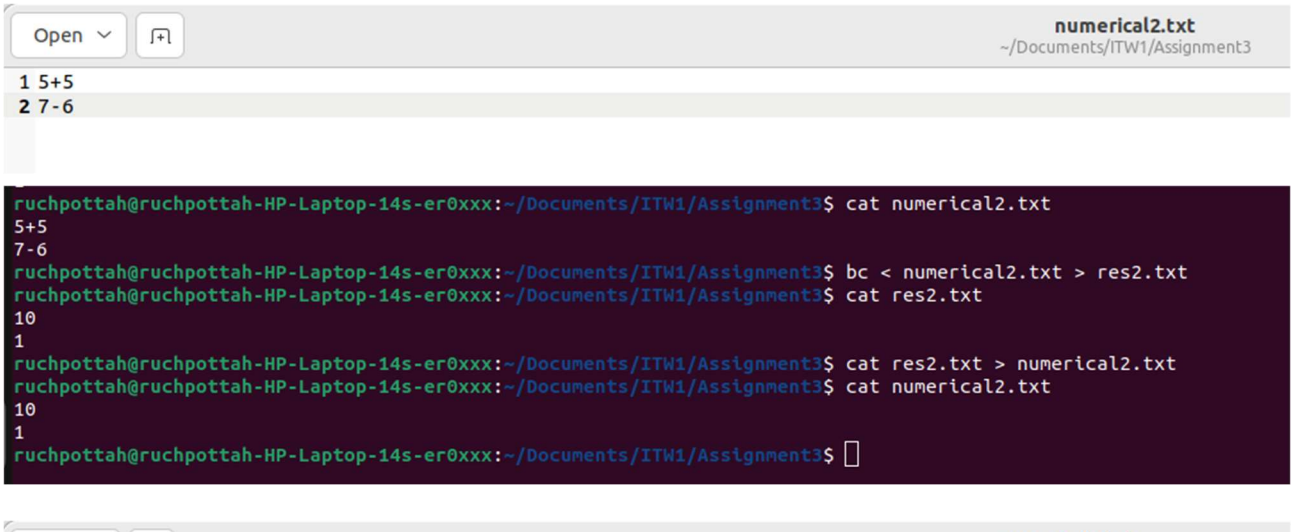
part (b)

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~$ sudo chage -l ITW1
Last password change                                    : May 13, 2022
Password expires                                        : never
Password inactive                                       : never
Account expires                                         : never
Minimum number of days between password change          : 0
Maximum number of days between password change          : 99999
Number of days of warning before password expires       : 7
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~$ passwd -S $ITW1
ruchpottah P 04/29/2022 0 99999 7 -1
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~$
```

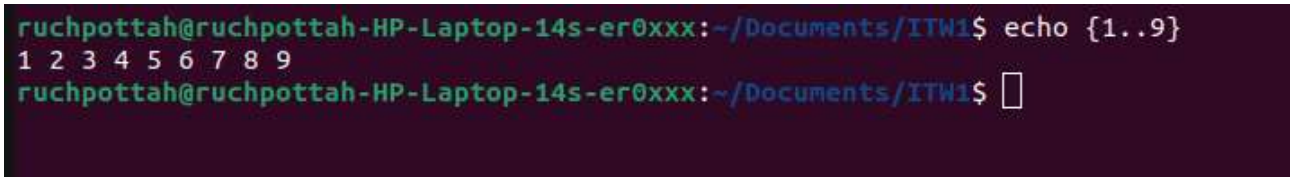
part (c)

* Note: part (alphabet) indicates the part of the question is attempted

2) Write a command to perform calculations of expression (5+5, 7-6) in file by directing the file to bc. How to print numbers from [1-9] without using script and for loop statement.



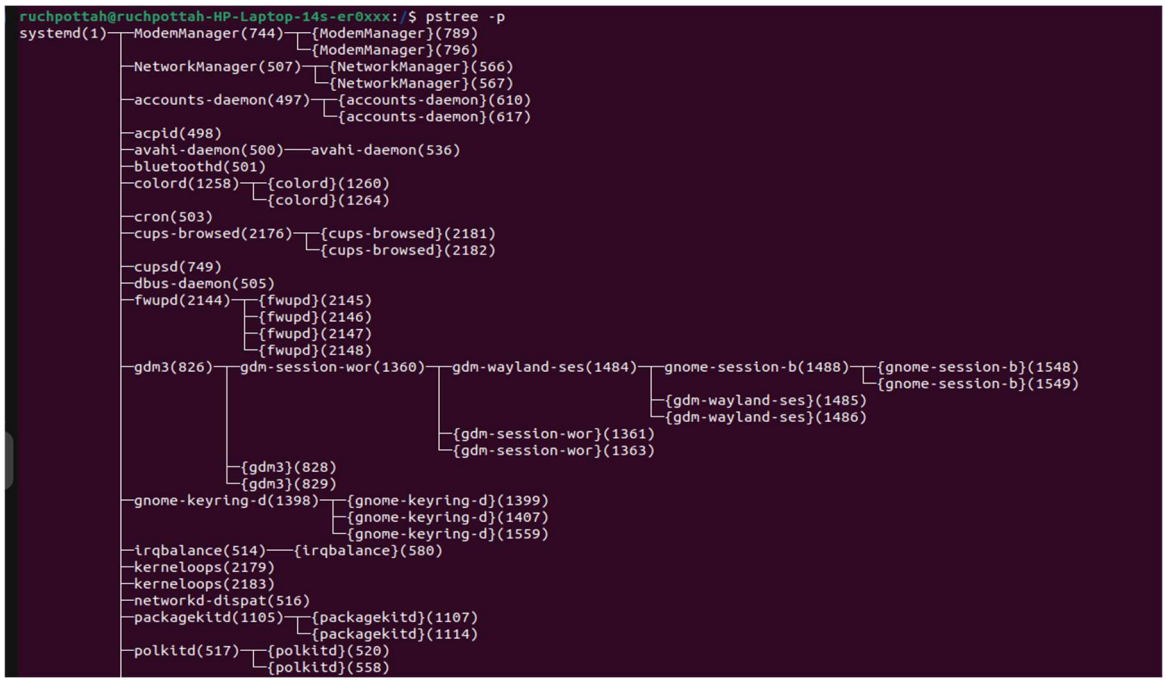
part (a) [Shows file before and after]

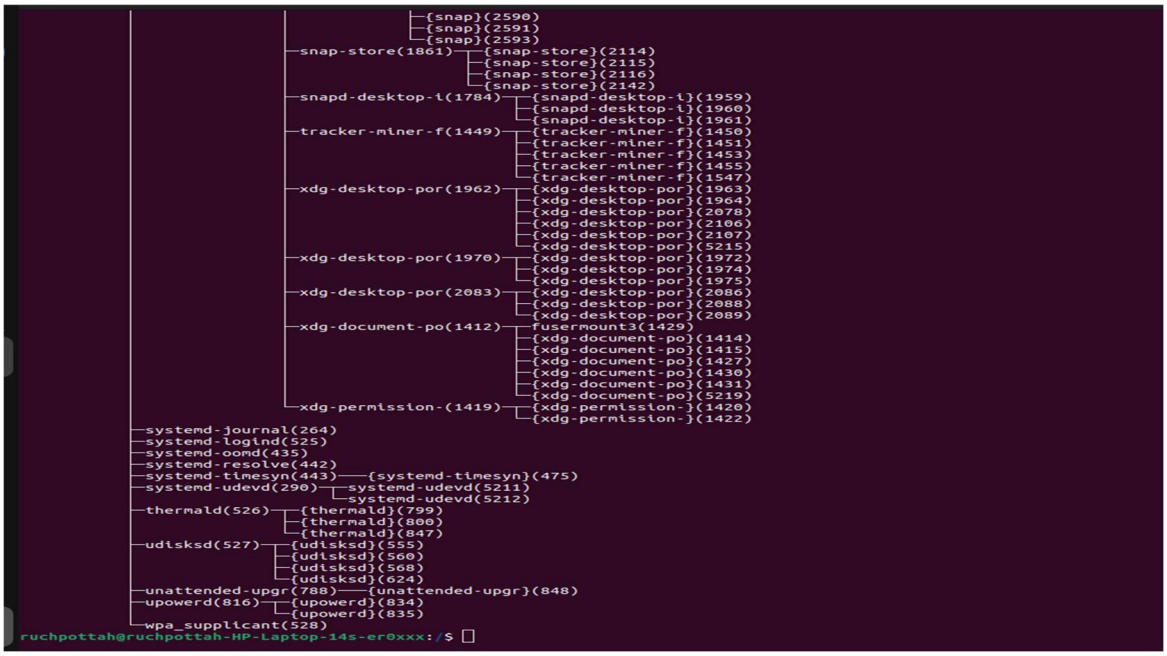


part (b)

* Note: part (alphabet) indicates the part of the question is attempted

3) How processes on the system are linked to each other write a command to print the structure. Also write the command to check the execution time of a process. What will the output of the command: $ ps -t dev/console.





part (a)

* Note: part (alphabet) indicates the part of the question is attempted

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:/$ pidof firefox
4263 4239 4211 3811 3808 3587 3167 2551 2525 2332
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:/$ ps -p 4263 -o etime
    ELAPSED
      25:09
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:/$
```

part (b)

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:/$ ps -t dev/console
error: TTY could not be found

Usage:
 ps [options]

 Try 'ps --help <simple|list|output|threads|misc|all>'
  or 'ps --help <s|l|o|t|m|a>'
 for additional help text.

For more details see ps(1).
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:/$ ps -t /dev/console
    PID TTY          TIME CMD
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:/$
```

part (c)

* Note: part (alphabet) indicates the part of the question is attempted

4) Write a shell script to take two numbers from command line and show result of dividing small number with bigger number. Also note that it should not accept zero or negative number. If user enter zero or negative number then it should prompt to “input correct number” after displaying proper message.

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ gedit divfileok.sh
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ cat divfileok.sh
#!/bin/bash
echo Enter a
read a
while [$a -le 0]
do
echo Not valid
echo Do you want to continue? y or n
read ch
if [ $ch == "n" ]
then
exit 0
fi
echo Input correct number
read a
done
echo Enter b
read b
while [$b -le 0]
do
echo Not valid
echo Do you want to continue? y or n
read ch
if [ $ch == "n" ]
then
exit 0
fi
echo Input correct number
read b
done
if [ $a -le $b ]
then
echo "scale=4; $a / $b" | bc
else
echo "scale=4; $b / $a" | bc
fi
```

* Note: part (alphabet) indicates the part of the question is attempted

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash divfileok.sh
Enter a
2
divfileok.sh: line 4: [2: command not found
Enter b
4
divfileok.sh: line 18: [4: command not found
.5000
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash divfileok.sh
Enter a
2
Enter b
4
divfileok.sh: line 18: [4: command not found
.5000
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash divfileok.sh
Enter a
2
Enter b
4
.5000
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash divfileok.sh
Enter a
0
Not valid
Do you want to continue? y or n
y
Input correct number
8
Enter b
16
.5000
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash divfileok.sh
Enter a
4
Enter b
-6
Not valid
Do you want to continue? y or n
y
Input correct number
5
.8000
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$
```

Open

divfileok.sh
~/Documents/ITW1

```
1 #!/bin/bash
2 echo Enter a
3 read a
4 while [ $a -le 0 ]
5 do
6 echo Not valid
7 echo Do you want to continue? y or n
8 read ch
9 if [ $ch == "n" ]
10 then
11 exit 0
12 fi
13 echo Input correct number
14 read a
15 done
16 echo Enter b
17 read b
18 while [ $b -le 0 ]
19 do
20 echo Not valid
21 echo Do you want to continue? y or n
22 read ch
23 if [ $ch == "n" ]
24 then
25 exit 0
26 fi
27 echo Input correct number
28 read b
29 done
30 if [ $a -le $b ]
31 then
32 echo "scale=4; $a / $b" | bc
33 else
34 echo "scale=4; $b / $a" | bc
35 fi
```

* Note: part (alphabet) indicates the part of the question is attempted

5) Write a shell script to examine all the number from 1 to 999 and display all those number whose sum of cube of the digit is equal to the number. E.g., 371 = 3*3*3+7*7*7+1*1*1.

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ gedit numsfile.sh
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ cat numsfile.sh
#!/bin/bash
i=1
while((i<=999))
do
c=$i
d=$i
s=0
r=0
while((c>0))
do
r=$((c%10))
s=$((s + r*r*r))
c=$((c/10))
done
if((s==d)); then
echo "$i"
fi
i=$((i+1))
done
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash numsfile.sh
1
153
370
371
407
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$
```

Open

numsfile.sh
~/Documents/ITW1

```
1 #!/bin/bash
2 i=1
3 while((i<=999))
4 do
5 c=$i
6 d=$i
7 s=0
8 r=0
9 while((c>0))
10 do
11 r=$((c%10))
12 s=$((s + r*r*r))
13 c=$((c/10))
14 done
15 if((s==d)); then
16 echo "$i"
17 fi
18 i=$((i+1))
19 done
```

* Note: part (alphabet) indicates the part of the question is attempted

6) Write a shell script to check if name given is file or directory and if it is a file then it should display content and if it is a directory then it should display the list. Also list all the files of the current directory having read and write permission to the user.

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ gedit filedirq.sh
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ cat filedirq.sh
#!/bin/bash
echo Enter name
read name
if [[ -d $name ]];
then
{
echo $name is a directory
ls -r -l .. $name
}
elif [[ -f $name ]];
then
{
echo $name is a file
cat $name
}
else
{
echo $name is not valid
exit 1
}
fi
```

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash filedirq.sh
Enter name
/home/ruchpottah/Documents/ITW1/Assignment3
/home/ruchpottah/Documents/ITW1/Assignment3 is a directory
/home/ruchpottah/Documents/ITW1/Assignment3:
total 804
-rw-rw-r-- 1 ruchpottah ruchpottah      5 May 13 02:43 res2.txt
-rw-rw-r-- 1 ruchpottah ruchpottah      5 May 13 02:43 numerical2.txt
-rwxrw-r-- 1 ruchpottah ruchpottah    183 May 13 03:51 leapyear.sh
-rw-rw-r-- 1 ruchpottah ruchpottah     72 May 12 13:16 filenew1.txt
-rw-rw-r-- 1 ruchpottah ruchpottah     72 May 13 01:51 blanklines.txt
-rw-rw-r-- 1 ruchpottah ruchpottah 799172 May 13 21:24 Assignment3.odt

..:
total 4
drwxrwxr-x 4 ruchpottah ruchpottah 4096 May 13 21:49 ITW1
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash filedirq.sh
Enter name
/home/ruchpottah/Documents/ITW1/leapyearfile.sh
/home/ruchpottah/Documents/ITW1/leapyearfile.sh is a file
#!/bin/sh
echo "Enter the year :"
read y
a=`expr $y % 4`
b=`expr $y % 100`
c=`expr $y % 400`
if [ $a -eq 0 -a $b -ne 0 -o $c -eq 0 ]
then
echo "The year $y is a leap year"
else
echo "The year $y is not a leap year"
fi
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash filedirq.sh
Enter name
/home/ruchpottah/Documents/ITW1/ok.txt
/home/ruchpottah/Documents/ITW1/ok.txt is not valid
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$
```

* Note: part (alphabet) indicates the part of the question is attempted

Open ▾ filedirq.sh ~/Documents/ITW1

```
#!/bin/bash
echo Enter name
read name
if [[ -d $name ]];
then
{
echo $name is a directory
ls -r -l .. $name
}
elif [[ -f $name ]];
then
{
echo $name is a file
cat $name
}
else
{
echo $name is not valid
exit 1
}
fi
```

part (a)

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ gedit rw1.sh
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ cat rw1.sh
for file in *
do
if [ -f $file ]
then
if [ -r $file -a -w $file ]
then
ls -l $file
fi
fi
done
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash rw1.sh
-rw-rw-r-- 1 ruchpottah ruchpottah 181 May 13 20:30 area1.sh
-rw-rw-r-- 1 ruchpottah ruchpottah 181 May 13 20:30 areafile.sh
-rw-rw-r-- 1 ruchpottah ruchpottah 231 May 13 16:59 div1.sh
-rw-rw-r-- 1 ruchpottah ruchpottah 231 May 13 17:06 divisionfile.sh
-rw-rw-r-- 1 ruchpottah ruchpottah 218 May 13 11:20 leapyear1.sh
-rw-rw-r-- 1 ruchpottah ruchpottah 218 May 13 11:21 leapyearfile.sh
-rw-rw-r-- 1 ruchpottah ruchpottah 187 May 13 11:09 numrevfile.sh
-rwxrw-r-- 1 ruchpottah ruchpottah 176 May 13 10:31 numrev.sh
-rw-rw-r-- 1 ruchpottah ruchpottah 94 May 13 21:33 rw1.sh
-rwxrw-r-- 1 ruchpottah ruchpottah 19 May 13 10:02 try2.sh
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$
```

Open ▾ rw1.sh ~/Documents/ITW1

```
for file in *
do
if [ -f $file ]
then
if [ -r $file -a -w $file ]
then
ls -l $file
fi
fi
done
```

part (b)

* Note: part (alphabet) indicates the part of the question is attempted

7) Write a shell script which takes input as a string on a terminal and check whether it is palindrome.

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ gedit palindrome.sh
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ cat palindrome.sh
#!/bin/bash
echo "Enter a string: "
read input
reverse=""
l=${#input}
for (( i=$l-1; i>=0; i-- ))
do
reverse="$reverse${input:$i:1}"
done
if [ $input == $reverse ]
then
echo "$input is palindrome"
else
echo "$input is not palindrome"
fi
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash palindrome.sh
Enter a string:
MOM
MOM is palindrome
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash palindrome.sh
Enter a string:
OKa1
OKa1 is not palindrome
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$
```

Open

palindrome.sh
~/Documents/ITW1

```
1 #!/bin/bash
2 echo "Enter a string: "
3 read input
4 reverse=""
5 l=${#input}
6 for (( i=$l-1; i>=0; i-- ))
7 do
8 reverse="$reverse${input:$i:1}"
9 done
10 if [ $input == $reverse ]
11 then
12 echo "$input is palindrome"
13 else
14 echo "$input is not palindrome"
15 fi
```

* Note: part (alphabet) indicates the part of the question is attempted

8) Write a shell script to check the giver year is leap year or not a leap year.

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ gedit leapyearfile.sh
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ cat leapyearfile.sh
#!/bin/sh
echo "Enter the year :"
read y
a=`expr $y % 4`
b=`expr $y % 100`
c=`expr $y % 400`
if [ $a -eq 0 -a $b -ne 0 -o $c -eq 0 ]
then
echo "The year $y is a leap year"
else
echo "The year $y is not a leap year"
fi
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash leapyearfile.sh
Enter the year :
2022
The year 2022 is not a leap year
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash leapyearfile.sh
Enter the year :
2100
The year 2100 is not a leap year
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash leapyearfile.sh
Enter the year :
2021
The year 2021 is not a leap year
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash leapyearfile.sh
Enter the year :
2800
The year 2800 is a leap year
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash leapyearfile.sh
Enter the year :
2016
The year 2016 is a leap year
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$
```

Open

leapyearfile.sh
~/Documents/ITW1

```
1 #!/bin/sh
2 echo "Enter the year :"
3 read y
4 a=`expr $y % 4`
5 b=`expr $y % 100`
6 c=`expr $y % 400`
7 if [ $a -eq 0 -a $b -ne 0 -o $c -eq 0 ]
8 then
9 echo "The year $y is a leap year"
10 else
11 echo "The year $y is not a leap year"
12 fi
```

* Note: part (alphabet) indicates the part of the question is attempted

9) Write a shell script to display the list of prime number. It takes input as “How many prime numbers:” from the user. E.g.: How many prime numbers: 4 then it displays 2,3,5,7.

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ gedit primefile.sh
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ cat primefile.sh
#!/bin/bash
echo How many prime numbers:
read n
echo The first $n prime numbers are:
echo 2
i=3
for (( c=2;c<=$n;i++ ))
do
for (( num=2; num< $i; num++ ))
do
if [ `expr $i \% $num` == 0 ]
then
break
fi
done
if [ $num == $i ]
then
echo $i
((c++))
fi
done
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash primefile.sh
How many prime numbers:
4
The first 4 prime numbers are:
2
3
5
7
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash primefile.sh
How many prime numbers:
2
The first 2 prime numbers are:
2
3
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$
```

Open

primefile.sh
~/Documents/ITW1

```
1 #!/bin/bash
2 echo How many prime numbers:
3 read n
4 echo The first $n prime numbers are:
5 echo 2
6 i=3
7 for (( c=2;c<=$n;i++ ))
8 do
9 for (( num=2; num< $i; num++ ))
10 do
11 if [ `expr $i \% $num` == 0 ]
12 then
13 break
14 fi
15 done
16 if [ $num == $i ]
17 then
18 echo $i
19 ((c++))
20 fi
21 done
```

* Note: part (alphabet) indicates the part of the question is attempted

10) Write a shell script to reverse the input digits.

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ gedit digrev.sh
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ cat digrev.sh
#!/bin/bash
echo Enter the number:
read n
echo Reversed form of $n is:-
echo "$n" | rev
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash digrev.sh
Enter the number:
123405
Reversed form of 123405 is:-
504321
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash digrev.sh
Enter the number:
09870
Reversed form of 09870 is:-
07890
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$
```

Open

digrev.sh
~/Documents/ITW1

```
1 #!/bin/bash
2 echo Enter the number:
3 read n
4 echo Reversed form of $n is:-
5 echo "$n" | rev
```

* Note: part (alphabet) indicates the part of the question is attempted

11) Write a script to generate a password of minimum length of 8. It must be alphanumeric, containing at least one upper case and one lower case character.

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ gedit passwordfile.sh
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ cat passwordfile.sh
#!/bin/bash
ok()
{
echo -n ${1:RANDOM%${#1}:1}
}
echo Enter the length of password:
read length
if [ $length -lt 8 ]
then
echo Generating password of 8 characters.
length=8
fi
newl=`expr $length - 3`
echo The password generated is:-
ok 'abcdefghijklmnopqrstuvwxyz'
ok 'ABCDEFGHIJKLMNOPQRSTUVWXYZ'
ok '0123456789'
echo $(tr -dc A-Za-z0-9 </dev/urandom | head -c $newl)
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash passwordfile.sh
Enter the length of password:
12
The password generated is:-
mX4byRJT216h
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash passwordfile.sh
Enter the length of password:
4
Generating password of 8 characters.
The password generated is:-
sI676zvn
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$
```

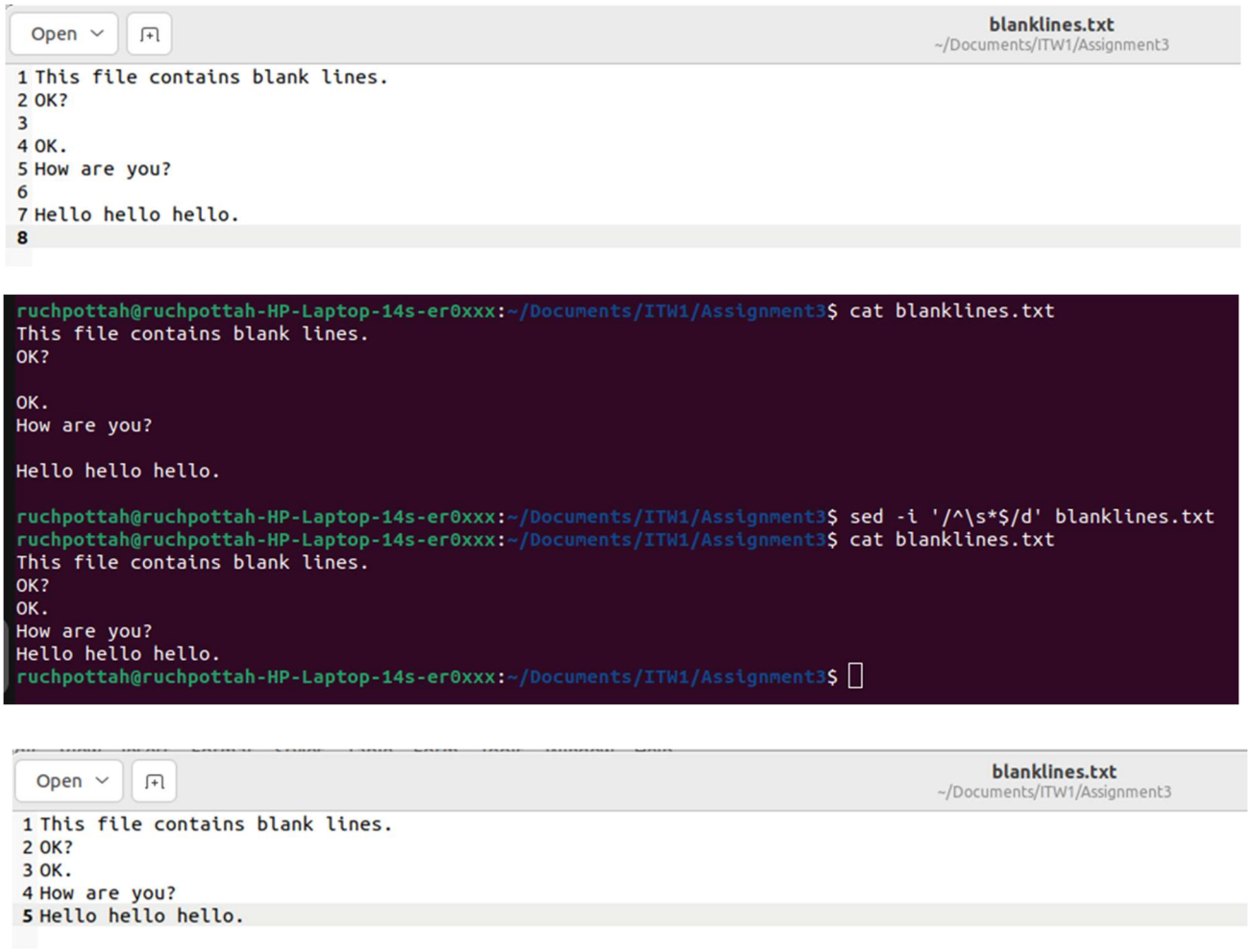
Open

passwordfile.sh
~/Documents/ITW1

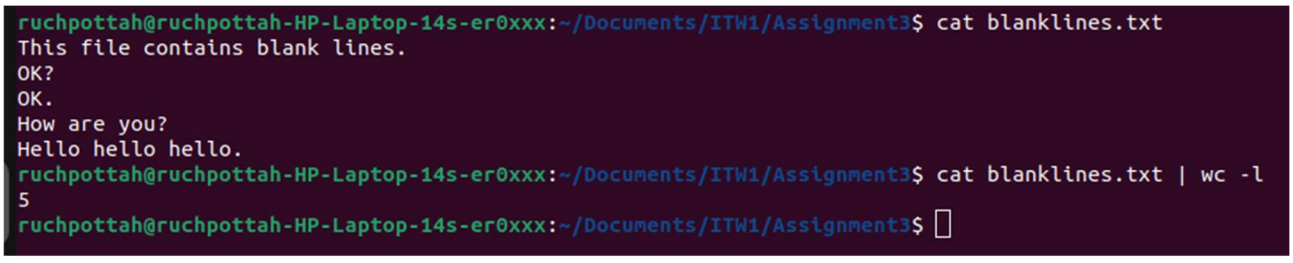
```
1 #!/bin/bash
2 ok()
3 {
4 echo -n ${1:RANDOM%${#1}:1}
5 }
6 echo Enter the length of password:
7 read length
8 if [ $length -lt 8 ]
9 then
10 echo Generating password of 8 characters.
11 length=8
12 fi
13 newl=`expr $length - 3`
14 echo The password generated is:-
15 ok 'abcdefghijklmnopqrstuvwxyz'
16 ok 'ABCDEFGHIJKLMNOPQRSTUVWXYZ'
17 ok '0123456789'
18 echo $(tr -dc A-Za-z0-9 </dev/urandom | head -c $newl)
```

* Note: part (alphabet) indicates the part of the question is attempted

12) Write a command to remove blank lines in a file. Write a command to find the total number of lines in a file?



part (a) [Shows file before and after]



part (b)

* Note: part (alphabet) indicates the part of the question is attempted

13) Sort the data that is in human readable format say 1K, 2M, 3G, 2T, where K, M, G, T represents Kilo, Mega, Giga, Tera from the /home/user file.

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~$ du -h | sort -h
4.0K    ./.cache/evolution/addressbook/trash
4.0K    ./.cache/evolution/calendar/trash
4.0K    ./.cache/evolution/mail/trash
4.0K    ./.cache/evolution/memos/trash
4.0K    ./.cache/evolution/sources/trash
4.0K    ./.cache/evolution/tasks/trash
4.0K    ./.cache/gnome-desktop-thumbnailer/gstreamer-1.0
4.0K    ./.cache/ibus-table
4.0K    ./.cache/thunderbird/cr0cu095.default
4.0K    ./.cache/thunderbird/osdzvhoa.default-release/cache2/doomed
4.0K    ./.cache/tracker3/files/errors
4.0K    ./.cache/update-manager-core
4.0K    ./.cache/yelp/WebKitCache/Version 16/Blobs
4.0K    ./.config/enchant
4.0K    ./.config/gnome-session/saved-session
4.0K    ./.config/goa-1.0
4.0K    ./.config/gtk-4.0
4.0K    ./.config/libreoffice/4/user/autocorr
```

```
4.0K    ./Templates
4.0K    ./.thunderbird/Crash Reports/events
4.0K    ./.thunderbird/osdzvhoa.default-release/crashes/events
4.0K    ./.thunderbird/osdzvhoa.default-release/minidumps
4.0K    ./.thunderbird/osdzvhoa.default-release/security_state
4.0K    ./.thunderbird/osdzvhoa.default-release/storage/permanent/chrome/idb/3870112724rsegmnoittet-es.files
4.0K    ./.thunderbird/Pending Pings
4.0K    ./Videos
8.0K    ./.cache/evolution/addressbook
8.0K    ./.cache/evolution/calendar
8.0K    ./.cache/evolution/mail
8.0K    ./.cache/evolution/memos
8.0K    ./.cache/evolution/sources
8.0K    ./.cache/evolution/tasks
8.0K    ./.cache/gnome-desktop-thumbnailer
8.0K    ./.cache/mesa_shader_cache/01
8.0K    ./.cache/mesa_shader_cache/02
8.0K    ./.cache/mesa_shader_cache/0a
8.0K    ./.cache/mesa_shader_cache/0b
8.0K    ./.cache/mesa_shader_cache/15
8.0K    ./.cache/mesa_shader_cache/16
8.0K    ./.cache/mesa_shader_cache/18
8.0K    ./.cache/mesa_shader_cache/1a
8.0K    ./.cache/mesa_shader_cache/1e
8.0K    ./.cache/mesa_shader_cache/28
8.0K    ./.cache/mesa_shader_cache/2b
8.0K    ./.cache/mesa_shader_cache/2c
8.0K    ./.cache/mesa_shader_cache/32
8.0K    ./.cache/mesa_shader_cache/34
8.0K    ./.cache/mesa_shader_cache/35
8.0K    ./.cache/mesa_shader_cache/36
8.0K    ./.cache/mesa_shader_cache/3c
8.0K    ./.cache/mesa_shader_cache/3e
8.0K    ./.cache/mesa_shader_cache/42
8.0K    ./.cache/mesa_shader_cache/4a
8.0K    ./.cache/mesa_shader_cache/4c
8.0K    ./.cache/mesa_shader_cache/53
8.0K    ./.cache/mesa_shader_cache/55
8.0K    ./.cache/mesa_shader_cache/5c
8.0K    ./.cache/mesa_shader_cache/61
8.0K    ./.cache/mesa_shader_cache/64
8.0K    ./.cache/mesa_shader_cache/6b
8.0K    ./.cache/mesa_shader_cache/6d
8.0K    ./.cache/mesa_shader_cache/74
8.0K    ./.cache/mesa_shader_cache/76
8.0K    ./.cache/mesa_shader_cache/78
8.0K    ./.cache/mesa_shader_cache/79
8.0K    ./.cache/mesa_shader_cache/7d
8.0K    ./.cache/mesa_shader_cache/83
8.0K    ./.cache/mesa_shader_cache/87
8.0K    ./.cache/mesa_shader_cache/8a
8.0K    ./.cache/mesa_shader_cache/8c
8.0K    ./.cache/mesa_shader_cache/8d
8.0K    ./.cache/mesa_shader_cache/8e
8.0K    ./.cache/mesa_shader_cache/91
```

* Note: part (alphabet) indicates the part of the question is attempted

```
424K    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/default/https+++www.youtube.com/idb
440K    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/default/https+++mail.google.com/cache/morgue/174
444K    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/default/https+++mail.google.com/cache/morgue/31
448K    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/default/https+++mail.google.com/cache/morgue/42
476K    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/datareporting/archived
504K    ./Downloads/firefox.tmp
520K    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/datareporting
596K    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/default/https+++www.youtube.com
624K    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/default/https+++mail.google.com/cache/morgue/232
648K    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/default/https+++mail.google.com/cache/morgue/215
696K    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/default/https+++mail.google.com/cache/morgue/15
804K    ./.local/share
808K    ./.local
812K    ./.config/libreoffice/4/user/pack
956K    ./.cache/gstreamer-1.0
1.1M    ./.config/libreoffice/4/user/backup
1.2M    ./.cache/mesa_shader_cache
1.2M    ./Documents/ITW1/Assignment3
1.2M    ./snap/firefox/common/.cache/mesa_shader_cache
1.3M    ./Documents/ITW1/Assignment1
1.3M    ./Downloads
1.4M    ./snap/firefox/common/.cache/mozilla/firefox/bg52yhfo.default/personality-provider
1.4M    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/gmp-gmpopenh264
1.4M    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/gmp-gmpopenh264/1.8.1.1
2.3M    ./Pictures
2.3M    ./Pictures/Screenshots
2.5M    ./Documents
2.5M    ./Documents/ITW1
2.5M    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/security_state
2.8M    ./.thunderbird
2.8M    ./.thunderbird/osdzvhoa.default-release
3.0M    ./.config/libreoffice
3.0M    ./.config/libreoffice/4
3.0M    ./.config/libreoffice/4/user
3.2M    ./.config
3.6M    ./.cache/thunderbird
3.6M    ./.cache/thunderbird/osdzvhoa.default-release
3.6M    ./.cache/thunderbird/osdzvhoa.default-release/startupCache
6.0M    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/default/https+++mail.google.com/cache/morgue
6.4M    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/default/https+++mail.google.com/cache
6.6M    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/default/https+++mail.google.com
8.5M    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/permanent
8.5M    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/permanent/chrome
8.5M    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/permanent/chrome/idb
8.7M    ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage/default
12M     ./.cache/tracker3
12M     ./.cache/tracker3/files
12M     ./snap/firefox/common/.cache/mozilla/firefox/bg52yhfo.default/startupCache
13M     ./snap/firefox/common/.cache/mozilla/firefox/bg52yhfo.default/safebrowsing/google4
15M     ./snap/firefox/common/.cache/mozilla/firefox/bg52yhfo.default/safebrowsing
18M     ./.cache
18M     ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/storage
51M     ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default/extensions
85M     ./snap/firefox/common/.mozilla
85M     ./snap/firefox/common/.mozilla/firefox
```

```
85M     ./snap/firefox/common/.mozilla/firefox/bg52yhfo.default
367M    ./snap/firefox/common/.cache/mozilla/firefox/bg52yhfo.default/cache2/entries
368M    ./snap/firefox/common/.cache/mozilla/firefox/bg52yhfo.default/cache2
395M    ./snap/firefox/common/.cache/mozilla
395M    ./snap/firefox/common/.cache/mozilla/firefox
395M    ./snap/firefox/common/.cache/mozilla/firefox/bg52yhfo.default
397M    ./snap/firefox/common/.cache
481M    ./snap/firefox/common
482M    ./snap
482M    ./snap/firefox
512M    .
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~$
```

* Note: part (alphabet) indicates the part of the question is attempted

14) Write a script to call a function with parameters. [Example: Calculate the area of a rectangle with given parameter values i.e., (10, 20)]

```
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ gedit areafile.sh
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ cat areafile.sh
#!/bin/bash
areaofrectangle()
{
echo The area of the rectangle is $(ans=`echo "$1 * $2" | bc` ;echo $ans)
}
echo Enter length
read a
echo Enter breadth
read b
areaofrectangle $a $b
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash areafile.sh
Enter length
20
Enter breadth
10
The area of the rectangle is 200
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$ bash areafile.sh
Enter length
3
Enter breadth
1
The area of the rectangle is 3
ruchpottah@ruchpottah-HP-Laptop-14s-er0xxx:~/Documents/ITW1$
```

Open

areafile.sh
~/Documents/ITW1

```
1 #!/bin/bash
2 areaofrectangle()
3 {
4 echo The area of the rectangle is $(ans=`echo "$1 * $2" | bc` ;echo $ans)
5 }
6 echo Enter length
7 read a
8 echo Enter breadth
9 read b
10 areaofrectangle $a $b
```

* Note: part (alphabet) indicates the part of the question is attempted