

15. Write a shell script to display only hidden file of current directory.

```
harshayee@harshayee-VirtualBox:~$ ./a15.sh
enter the directory name
Pictures
not having all permissions
harshayee@harshayee-VirtualBox:~$ cat a15.sh
echo "enter the directory name"
read dir

if [ -d $dir ]
then
    cd $dir
    ls > f
    exec < f
    while read line
    do
        if [ -f $line ]
        then
            if [ -r $line -a -w $line -a -x $line ]
            then
                echo "$line has all permission"
            else
                echo "$file not having all permissions"
            fi
        fi
    done
fi
```

16. Write a shell script to display only executable files of current directory.

```
harshayee@harshayee-VirtualBox:~$ vim a16.sh
harshayee@harshayee-VirtualBox:~$ ./a16.sh
We will list all the hidden file in the current directory /home/harshayee
919945 0 -rw-rw-r-- 1 harshayee harshayee 0 Sep 10 19:35 /.cache/thunderbird/uvp35fle.default-release/.startup-incomplete
917540 0 -rw-rw-r-- 1 harshayee harshayee 0 Sep 12 08:27 /.cache/tracker3/files/.meta.isrunning
917508 4 -rw-r--r-- 1 harshayee harshayee 807 Sep 8 18:45 /.profile
917672 4 -rw-r--r-- 1 harshayee harshayee 5 Sep 12 08:27 /.vboxclient-hostversion-tty2-control.pid
917845 8 -rw-r--r-- 1 harshayee harshayee 4298 Sep 11 23:56 /.bash_history
917509 4 -rw-r--r-- 1 harshayee harshayee 220 Sep 8 18:45 /.bash_logout
917953 4 -rw-r--r-- 1 harshayee harshayee 5 Sep 12 08:27 /.vboxclient-seamless-tty2-service.pid
917937 4 -rw-r--r-- 1 harshayee harshayee 20 Sep 9 23:02 /.lesshst
917809 0 -rw-r--r-- 1 harshayee harshayee 0 Sep 8 19:01 /.sudo_as_admin_successful
917669 4 -rw-r--r-- 1 harshayee harshayee 5 Sep 12 08:27 /.vboxclient-clipboard-tty2-control.pid
918018 4 -rw-r--r-- 1 harshayee harshayee 5 Sep 12 08:27 /.vboxclient-clipboard-tty2-service.pid
917686 0 -rw-rw-r-- 1 harshayee harshayee 0 Sep 8 18:57 /.config/.gsd-keyboard.settings-ported
918684 4 -rw-r--r-- 1 harshayee harshayee 5 Sep 12 08:27 /.vboxclient-draganddrop-tty2-service.pid
917778 4 -rw-r--r-- 1 harshayee harshayee 5 Sep 12 08:27 /.vboxclient-vmsvga-session-tty2-control.pid
920255 12 -rw-r--r-- 1 harshayee harshayee 8695 Sep 12 09:07 /.vminfo
917616 4 -rw-rw-r-- 1 harshayee harshayee 30 Sep 8 18:57 /snap/snap-desktop-integration/83/.last_revision
918075 4 -rw-rw-r-- 1 harshayee harshayee 32 Sep 10 18:57 /snap/firefox/2987/.last_revision
918089 0 -rw-rw-r-- 1 harshayee harshayee 0 Sep 10 19:39 /snap/firefox/common/.mozilla/firefox/s23k881j.default/.parentlock
918545 4 -rw-rw-r-- 1 harshayee harshayee 57 Sep 10 19:40 /snap/firefox/common/.mozilla/firefox/s23k881j.default/storage/default/https+++accounts.google.com/
918505 4 -rw-rw-r-- 1 harshayee harshayee 53 Sep 10 19:40 /snap/firefox/common/.mozilla/firefox/s23k881j.default/storage/default/https+++mail.google.com/.ne
918590 4 -rw-rw-r-- 1 harshayee harshayee 8 Sep 10 18:59 /snap/firefox/common/.mozilla/firefox/s23k881j.default/storage/default/https+++mail.google.com/cac
918654 4 -rw-rw-r-- 1 harshayee harshayee 57 Sep 10 19:39 /snap/firefox/common/.mozilla/firefox/s23k881j.default/storage/default/https+++contacts.google.com
918114 4 -rw-rw-r-- 1 harshayee harshayee 36 Sep 10 18:57 /snap/firefox/common/.mozilla/firefox/s23k881j.default/storage/permanent/chrome/.metadata-v2
917690 4 -rw-r--r-- 1 harshayee harshayee 5 Sep 12 08:27 /.vboxclient-seamless-tty2-control.pid
917510 4 -rw-r--r-- 1 harshayee harshayee 3771 Sep 8 18:45 /.bashrc
917755 4 -rw-r--r-- 1 harshayee harshayee 5 Sep 12 08:27 /.vboxclient-draganddrop-tty2-control.pid
919940 0 -rw-rw-r-- 1 harshayee harshayee 0 Sep 10 19:35 /.thunderbird/uvp35fle.default-release/.parentlock
919963 4 -rw-rw-r-- 1 harshayee harshayee 42 Sep 10 19:35 /.thunderbird/uvp35fle.default-release/storage/permanent/chrome/.metadata-v2
919893 4 -rw-r--r-- 1 harshayee harshayee 5 Sep 12 08:27 /.vboxclient-vmsvga-session-tty2-service.pid
harshayee@harshayee-VirtualBox:~$
```

13. Write a program to calculate gross salary if the DA is 40%, HRA is 20% of basic salary. Accept basic salary from user and display gross salary (Result can be floating point value).

```
harshayee@harshayee-VirtualBox:~$ ./a13.sh
enter the basic salary
25000
The gross salary is 40000.000000000000000000000000
harshayee@harshayee-VirtualBox:~$ cat a13.sh
#!/bin/bash

echo "enter the basic salary"

read basal

grosal=$(( echo "$basal + ((40/100) * $basal) + ((20/100) * $basal)" | bc -l))

echo "The gross salary is $grosal"
harshayee@harshayee-VirtualBox:~$
```

12. Write a program to find given number of terms in the Fibonacci series.

```
harshayee@harshayee-VirtualBox:~$ vim 12.sh
harshayee@harshayee-VirtualBox:~$ ./12.sh
Enter the number
4
Fibonacci series
0
1
1
2
3
harshayee@harshayee-VirtualBox:~$ cat 12.sh
echo "Enter the number"
read number

a=0
b=1
count=2

echo "Fibonacci series"
echo $a
echo $b

while [ $count -le $number ]
do
    fib=`expr $a + $b`
    a=$b
    b=$fib
    echo $fib
    count=`expr $count + 1`
done
```

11. Write a program to find the factorial of given number.

```
1
harshayee@harshayee-VirtualBox:~$ vim a11.sh
harshayee@harshayee-VirtualBox:~$ ./a11.sh
Enter a number
5
120
harshayee@harshayee-VirtualBox:~$ cat a11.sh
echo "Enter a number"
read number

fact=1

for((i=2;i<=number;i++))
{
    fact=$((fact * i))
}
echo $fact

harshayee@harshayee-VirtualBox:~$
```

11. Write a program to find the factorial of given number.

```
harshayee@harshayee-VirtualBox:~$ vim a10.sh
harshayee@harshayee-VirtualBox:~$ ./a10.sh
Enter the number
4
4 * 1 = 4
4 * 2 = 8
4 * 3 = 12
4 * 4 = 16
4 * 5 = 20
4 * 6 = 24
4 * 7 = 28
4 * 8 = 32
4 * 9 = 36
4 * 10 = 40
harshayee@harshayee-VirtualBox:~$ cat a10.sh
echo "Enter the number"
read number

i=1

while [ $i -le 10 ]
do
m=`expr $i \* $number`
echo "$number * $i = $m"
((++i))
done
harshayee@harshayee-VirtualBox:~$
```

9. Write a program to find whether a given number is positive or negative

```
harshayee@harshayee-VirtualBox:~$ ./a9.sh
Enter a number
25
25 is psoitive
harshayee@harshayee-VirtualBox:~$ ./a9.sh
Enter a number
-5
-5 is Negative
harshayee@harshayee-VirtualBox:~$ cat a9.sh
echo "Enter a number"
read number

if [ $number -lt 0 ]
then
    echo "$number is Negative"
elif [ $number -gt 0 ]
then
    echo "$number is psoitive"
else
    echo "Neither positive nor Negative"
fi

harshayee@harshayee-VirtualBox:~$
```

8. Write a program to find out the area of a rectangle

```
^[[Aharshayee@harshayee-VirtualBox:~$ ./a8.sh
Enter the lenght of rectangle
4
Enter the breadth of rectangle
5
20
harshayee@harshayee-VirtualBox:~$ cat a8.sh
echo "Enter the lenght of rectangle"
read length

echo "Enter the breadth of rectangle"
read breadth

echo "$length * $breadth" | bc
harshayee@harshayee-VirtualBox:~$
```

7. Write a program to find out the area of a circle

```
harshayee@harshayee-VirtualBox:~$ ./a7.sh
Enter the radius of circle
6
113.04
harshayee@harshayee-VirtualBox:~$ cat a7.sh
#!/bin/bash
echo "Enter the radius of circle"
read radius

echo "3.14 * $radius * $radius" | bc

harshayee@harshayee-VirtualBox:~$ █
```


1. Write a shell script to display your LOGIN NAME and HOME directory.

```
harshayee@harshayee-VirtualBox:~$ vim a1.sh
harshayee@harshayee-VirtualBox:~$ chmod a+x a1.sh
harshayee@harshayee-VirtualBox:~$ ./a1.sh
./a1.sh: line 3: harshayee: command not found

/home/harshayee
harshayee@harshayee-VirtualBox:~$ vim a1.sh
harshayee@harshayee-VirtualBox:~$ ./a1.sh
harshayee
/home/harshayee
harshayee@harshayee-VirtualBox:~$ cat a1.sh
#!/bin/bash

LOGINNAME=$(whoami)
echo $LOGINNAME

HOMEDIRECTORY=$(pwd)
echo $HOMEDIRECTORY
harshayee@harshayee-VirtualBox:~$
```

2. Write a shell script to display menu like “1. Date, 2. Cal, 3. Ls, 4. Pwd, 5. Exit”

and execute the commands depending on user choice.

```
harshayee@harshayee-VirtualBox:~$ vi a2.sh
harshayee@harshayee-VirtualBox:~$ chmod a+x a2.sh
harshayee@harshayee-VirtualBox:~$ ./a2.sh
1.date
2.cal
3.ls
4.pwd
5.exit
Enter your choice
1
Monday 11 September 2023 07:06:23 PM IST
harshayee@harshayee-VirtualBox:~$ ./a2.sh
1.date
2.cal
3.ls
4.pwd
5.exit
Enter your choice
3
1.sh 2.sh a1.sh a2.sh Desktop documents Documents Downloads hobby hobby.sh Music 'nano 1.sh' Pictures Public snap Templates Videos
harshayee@harshayee-VirtualBox:~$ cat a2.sh
#!/bin/bash
echo 1.date
echo 2.cal
echo 3.ls
echo 4.pwd
echo 5.exit

echo "Enter your choice"
read choice

case $choice in
    1) date ;;
    2) cal ;;
    3) ls ;;
    4) pwd ;;
    5) exit ;;
esac

harshayee@harshayee-VirtualBox:~$
```

3. Write a shell script to accept the name from the user and check whether user entered name is file or directory. If name is file display its size and if it is directory display its content

```
harshayee@harshayee-VirtualBox:~$ ./a3.sh
Enter name
hobby
4.0K    hobby
harshayee@harshayee-VirtualBox:~$ ./a3.sh
Enter name
Documents
apple.txt
harshayee@harshayee-VirtualBox:~$ ./a3.sh
Enter name
Pictures
Screenshots
harshayee@harshayee-VirtualBox:~$ cat a3.sh

#!/bin/bash

echo "Enter name"
read name

if [ -f "$name" ];
then
    du -h $name
elif [ -d "$name" ];
then
    ls $name
else
    echo "error"
fi
harshayee@harshayee-VirtualBox:~$
```

6. Write a program to find whether a given year is leap or not

```
2016 is not a leap year
harshayee@harshayee-VirtualBox:~$ vim a6.sh
harshayee@harshayee-VirtualBox:~$ ./a6.sh
Enter a year
2016
2016 is a leap year
harshayee@harshayee-VirtualBox:~$ ./a6.sh
Enter a year
2003
2003 is not a leap year
harshayee@harshayee-VirtualBox:~$ cat a6.sh
#!/bin/bash
echo "Enter a year"
read year

i=4
j=400

if [ `expr $year % $i` -eq 0 ]
then
    echo "$year is a leap year"
elif [ `expr $year % $j` -eq 0 ]
then
    echo "$year is a leap year"
else
    echo "$year is not a leap year"
fi
harshayee@harshayee-VirtualBox:~$
```

5. Write a program to find the greatest of three numbers

```
harshayee@harshayee-VirtualBox:~$ ./a5.sh
Enter num1
Enter num2
Enter num3
34
78
43
78 is greater
harshayee@harshayee-VirtualBox:~$ cat a5.sh
#!/bin/bash
echo "Enter num1"
echo "Enter num2"
echo "Enter num3"

read num1
read num2
read num3
if [ $num1 -gt $num2 ] && [ $num1 -gt $num3 ]
then
    echo "$num1 is greater"
elif [ $num2 -gt $num1 ] && [ $num2 -gt $num3 ]
then
    echo "$num2 is greater"
else
    echo "$num3"
fi

harshayee@harshayee-VirtualBox:~$
```

4. Write a shell script to determine whether a given number is prime or not

```
harshayee@harshayee-VirtualBox:~$ ./a4.sh
Enter a number
17
17 is a prime no
harshayee@harshayee-VirtualBox:~$ ./a4.sh
Enter a number
26
26 is not prime number
harshayee@harshayee-VirtualBox:~$ cat a4.sh
#!/bin/bash
echo "Enter a number"
read number
i=2

if [ $number -lt 2 ]
then
    echo "$number is not a prime number"
    exit
fi

while [ $i -lt $number ]
do
    if [ `expr $number % $i` -eq 0 ]
    then
        echo "$number is not prime number"
        exit
    fi
    i=`expr $i + 1`
done
echo "$number is a prime no"
harshayee@harshayee-VirtualBox:~$
```

17. Accept the two file names from user and append the contents in reverse case of first

file into second file.

```
harshayee@harshayee-VirtualBox:~$ ./a17.sh
enter first file name:
a1,sh
enter second file name:
hobby.sh
content in first file:
cat: a1,sh: No such file or directory
content in second file:
#!/bin/bash
name='Harshayee Jadhav'
org=C-DAC

echo $name is studying in $org

read hobby

echo "$name hobby is $hobby"

echo "This is the end of program"

./a17.sh: line 15: $file: ambiguous redirect
after changing the case and then appending the first file content to second:
#!/bin/bash
name='Harshayee Jadhav'
org=C-DAC

echo $name is studying in $org

read hobby

echo "$name hobby is $hobby"

echo "This is the end of program"

harshayee@harshayee-VirtualBox:~$
```

18. Print the following pattern.

```
5
*
**
***
****
*****
harshayee@harshayee-VirtualBox:~$ cat a18.sh
pattern1

read num
for ((i=1;i<=num;i++))
do
    for ((j=1;j<=i;j++))
    do echo -n "*"
    done
    echo " "
done

harshayee@harshayee-VirtualBox:~$
```

14. Write a shell script to accept a filename as argument and displays the last modification time if the file exists and a suitable message if it doesn't exist.

```
harshayee@harshayee-VirtualBox:~$ vim a14.sh
harshayee@harshayee-VirtualBox:~$ ./a14.sh
Enter a filename to see last modification time
hobby
hobby was last modified on 2023-09-10 18:36:06.832500603 +0530
harshayee@harshayee-VirtualBox:~$ cat a14.sh
#!/bin/bash
echo "Enter a filename to see last modification time"
read filename

if [ ! -f $filename ]
then
    echo "$filename not a file"
fi

echo "$filename was last modified on $(stat -c %x $filename)"
```


