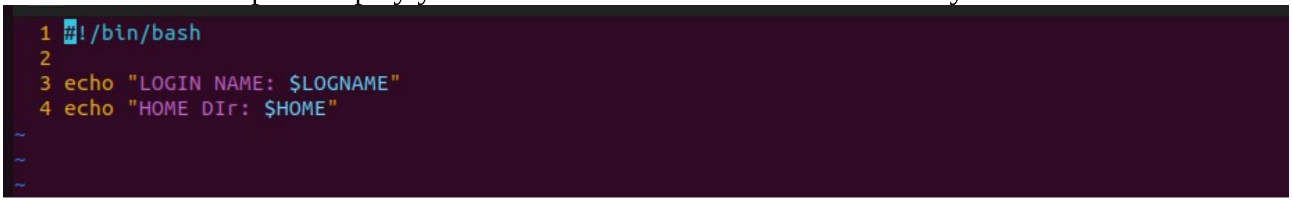
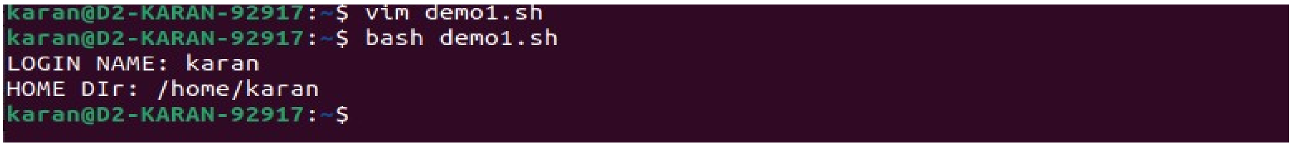
Assignment no 7

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

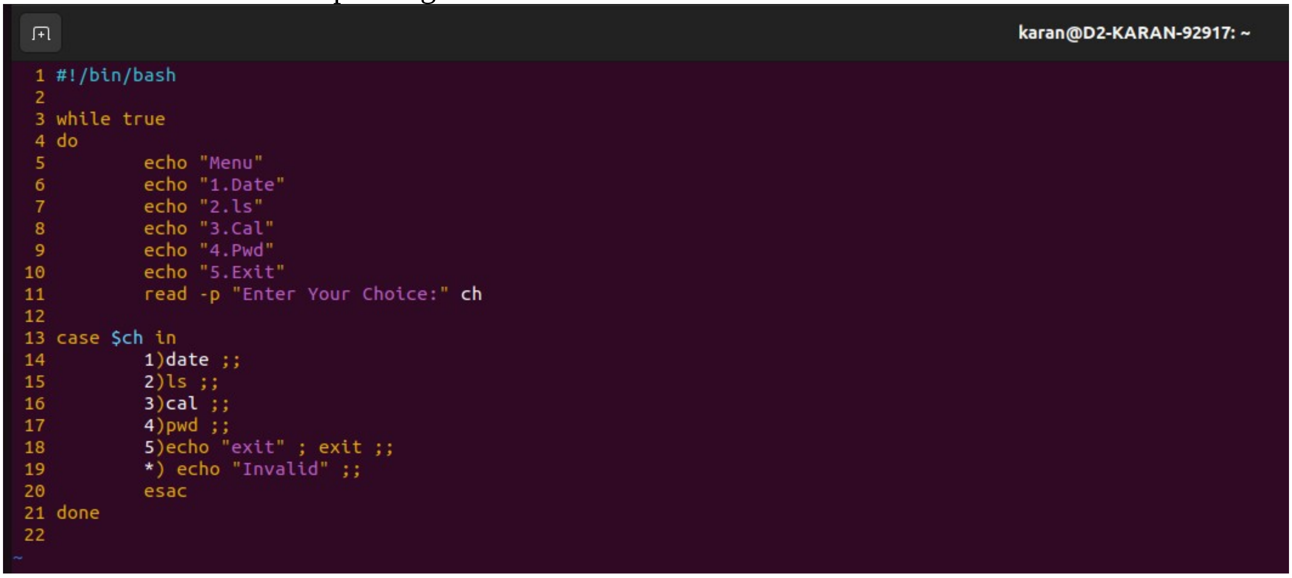


```
#!/bin/bash

echo "LOGIN NAME: $LOGNAME"
echo "HOME DIr: $HOME"
```

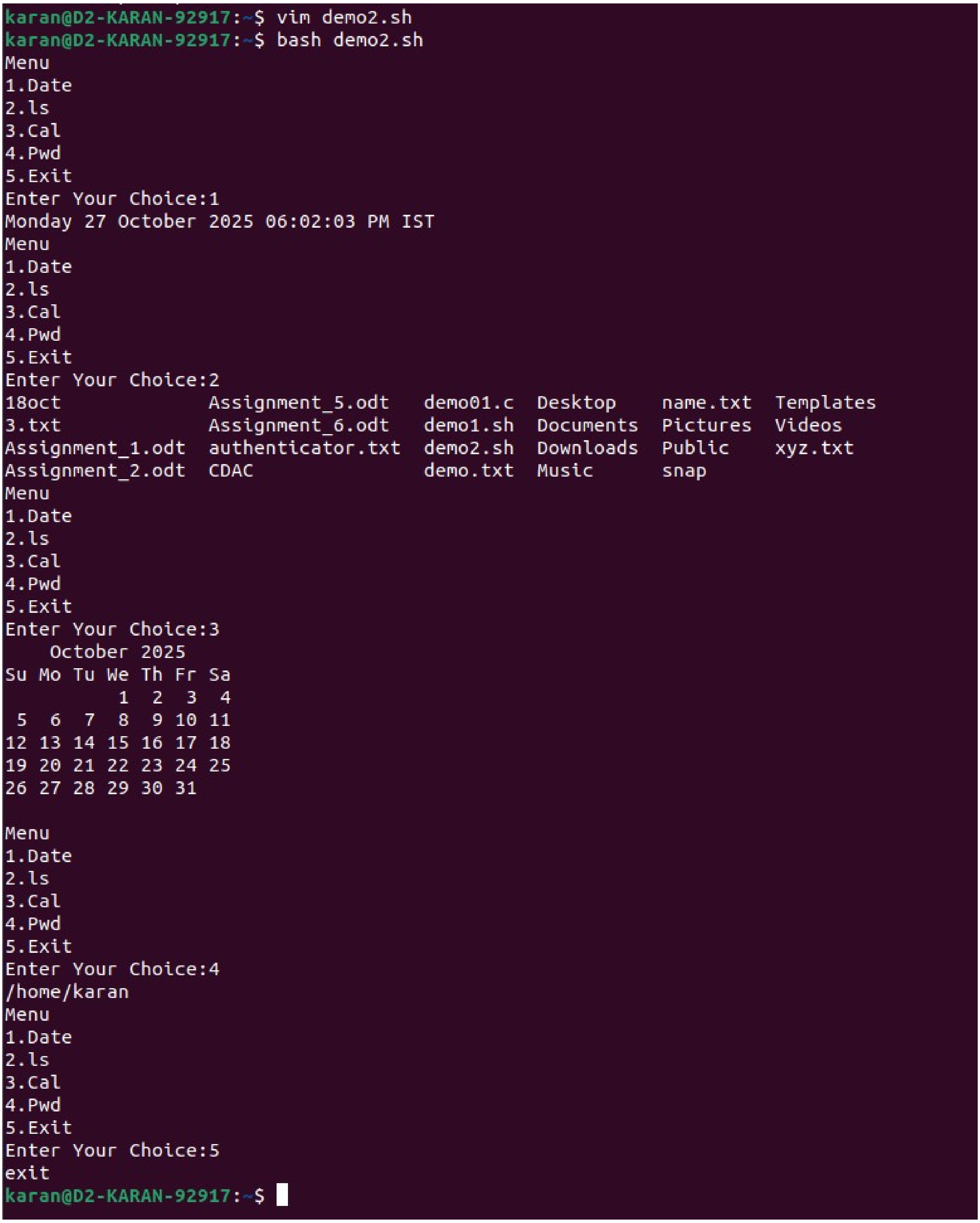


```
karan@D2-KARAN-92917:~$ vim demo1.sh
karan@D2-KARAN-92917:~$ bash demo1.sh
LOGIN NAME: karan
HOME DIr: /home/karan
karan@D2-KARAN-92917:~$
```

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.

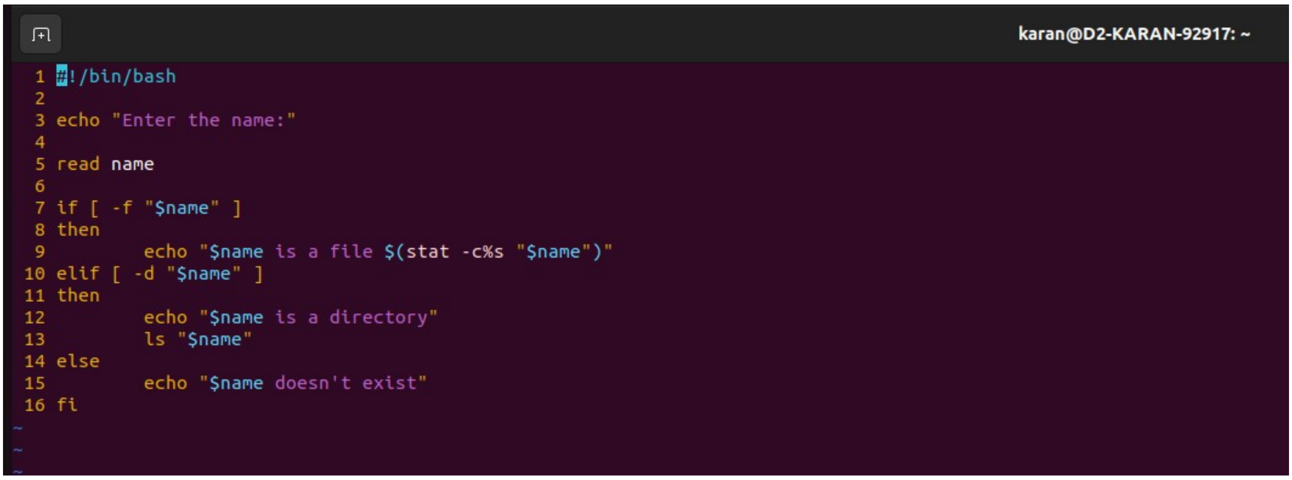


```
#!/bin/bash

while true
do
        echo "Menu"
        echo "1.Date"
        echo "2.ls"
        echo "3.Cal"
        echo "4.Pwd"
        echo "5.Exit"
        read -p "Enter Your Choice:" ch

case $ch in
        1)date ;;
        2)ls ;;
        3)cal ;;
        4)pwd ;;
        5)echo "exit" ; exit ;;
        *) echo "Invalid" ;;
        esac
done

```

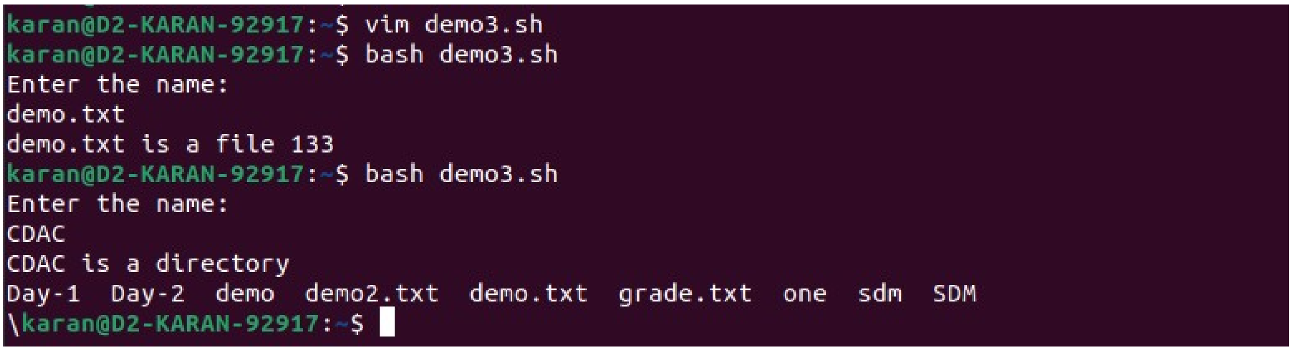


```
karan@D2-KARAN-92917:~$ vim demo2.sh
karan@D2-KARAN-92917:~$ bash demo2.sh
Menu
1.Date
2.ls
3.Cal
4.Pwd
5.Exit
Enter Your Choice:1
Monday 27 October 2025 06:02:03 PM IST
Menu
1.Date
2.ls
3.Cal
4.Pwd
5.Exit
Enter Your Choice:2
18oct             Assignment_5.odt   demo01.c  Desktop    name.txt  Templates
3.txt             Assignment_6.odt   demo1.sh  Documents  Pictures  Videos
Assignment_1.odt  authenticator.txt  demo2.sh  Downloads  Public    xyz.txt
Assignment_2.odt  CDAC               demo.txt  Music      snap
Menu
1.Date
2.ls
3.Cal
4.Pwd
5.Exit
Enter Your Choice:3
    October 2025
Su Mo Tu We Th Fr Sa
          1  2  3  4
 5  6  7  8  9 10 11
12 13 14 15 16 17 18
19 20 21 22 23 24 25
26 27 28 29 30 31

Menu
1.Date
2.ls
3.Cal
4.Pwd
5.Exit
Enter Your Choice:4
/home/karan
Menu
1.Date
2.ls
3.Cal
4.Pwd
5.Exit
Enter Your Choice:5
exit
karan@D2-KARAN-92917:~$ 
```

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 contents.

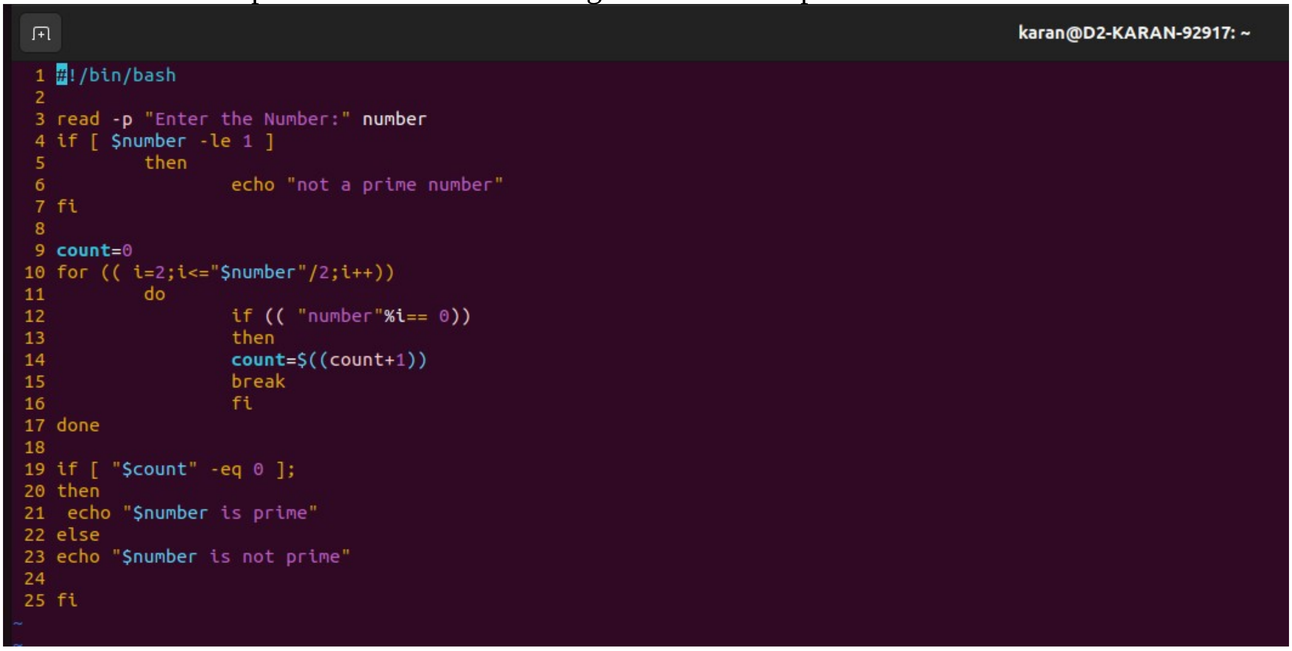


```
#!/bin/bash

echo "Enter the name:"

read name

if [ -f "$name" ]
then
        echo "$name is a file $(stat -c%s "$name")"
elif [ -d "$name" ]
then
        echo "$name is a directory"
        ls "$name"
else
        echo "$name doesn't exist"
fi
```

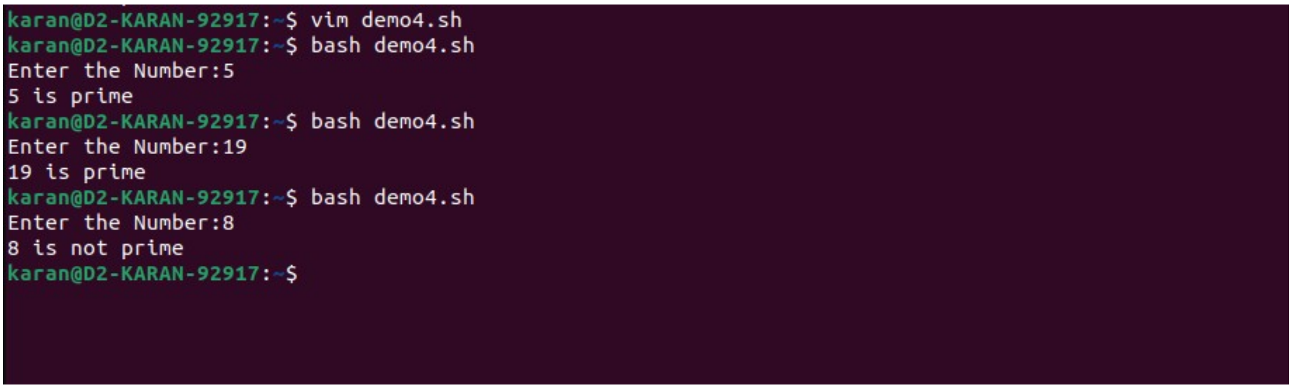


```
karan@D2-KARAN-92917:~$ vim demo3.sh
karan@D2-KARAN-92917:~$ bash demo3.sh
Enter the name:
demo.txt
demo.txt is a file 133
karan@D2-KARAN-92917:~$ bash demo3.sh
Enter the name:
CDAC
CDAC is a directory
Day-1  Day-2  demo  demo2.txt  demo.txt  grade.txt  one  sdm  SDM
\karan@D2-KARAN-92917:~$
```

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

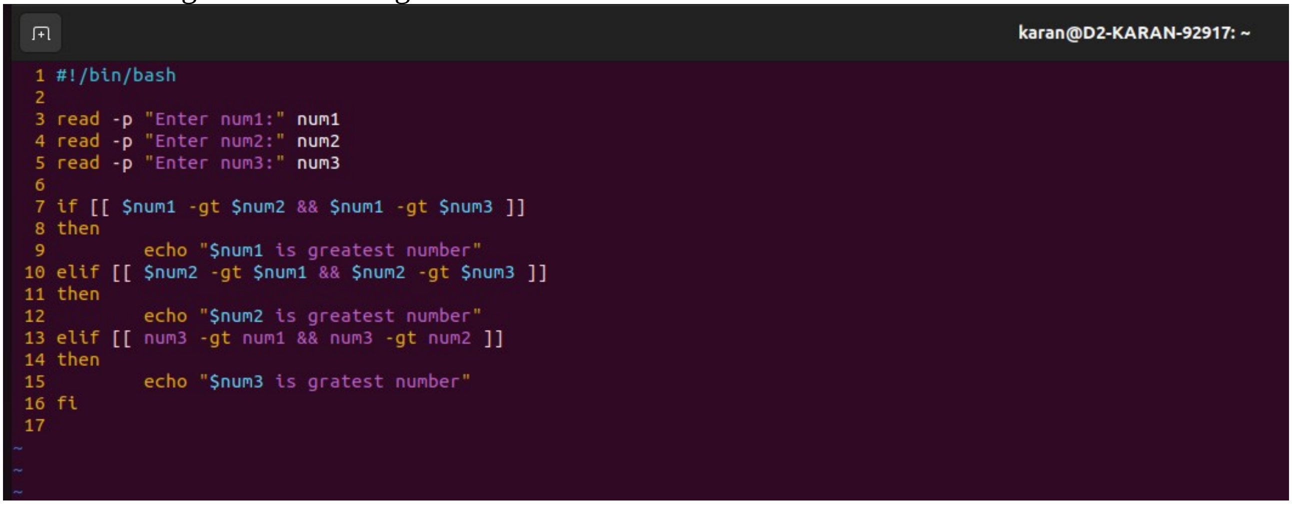


```
#!/bin/bash

read -p "Enter the Number:" number
if [ $number -le 1 ]
        then
                echo "not a prime number"
fi

count=0
for (( i=2;i<="$number"/2;i++))
        do
                if (( "number"%i== 0))
                then
                count=$((count+1))
                break
                fi
done

if [ "$count" -eq 0 ];
then
 echo "$number is prime"
else
echo "$number is not prime"

fi
```

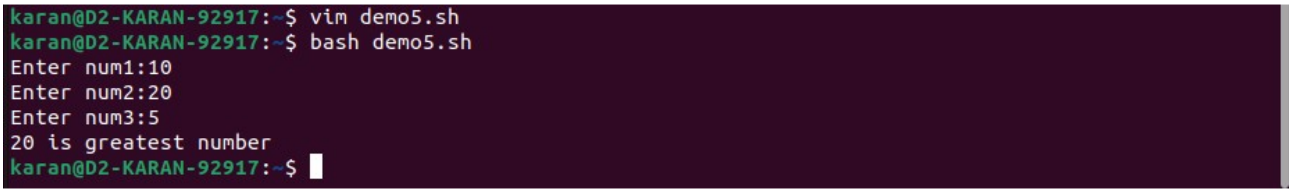


```
karan@D2-KARAN-92917:~$ vim demo4.sh
karan@D2-KARAN-92917:~$ bash demo4.sh
Enter the Number:5
5 is prime
karan@D2-KARAN-92917:~$ bash demo4.sh
Enter the Number:19
19 is prime
karan@D2-KARAN-92917:~$ bash demo4.sh
Enter the Number:8
8 is not prime
karan@D2-KARAN-92917:~$
```

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

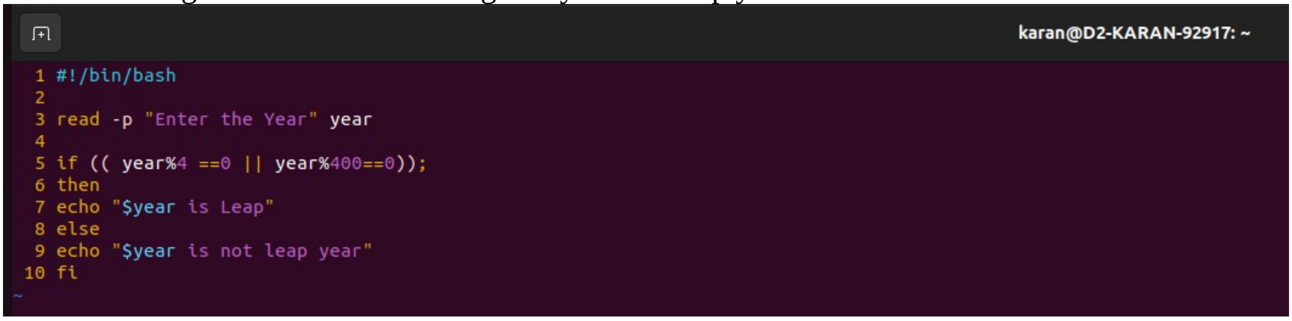


```
#!/bin/bash

read -p "Enter num1:" num1
read -p "Enter num2:" num2
read -p "Enter num3:" num3

if [[ $num1 -gt $num2 && $num1 -gt $num3 ]]
then
        echo "$num1 is greatest number"
elif [[ $num2 -gt $num1 && $num2 -gt $num3 ]]
then
        echo "$num2 is greatest number"
elif [[ num3 -gt num1 && num3 -gt num2 ]]
then
        echo "$num3 is gratest number"
fi

~
~
~
```

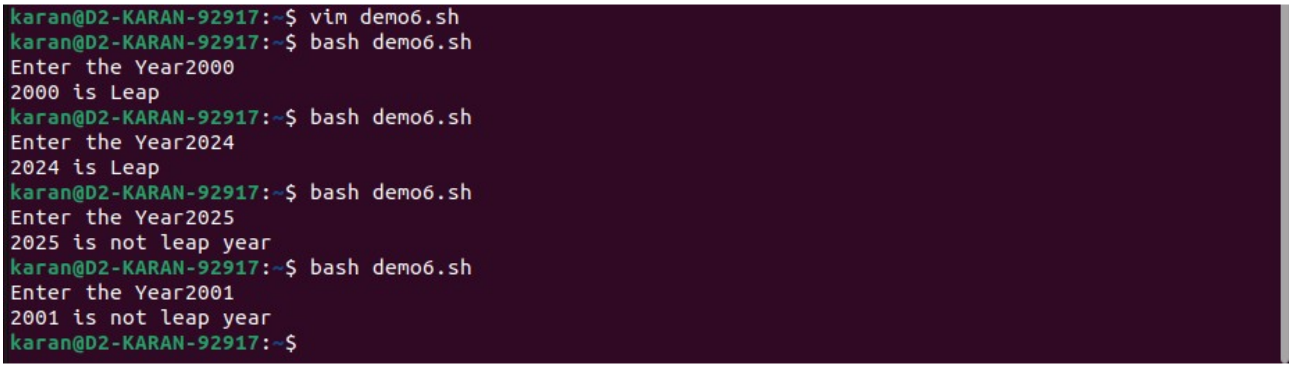


```
karan@D2-KARAN-92917:~$ vim demo5.sh
karan@D2-KARAN-92917:~$ bash demo5.sh
Enter num1:10
Enter num2:20
Enter num3:5
20 is greatest number
karan@D2-KARAN-92917:~$ 
```

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

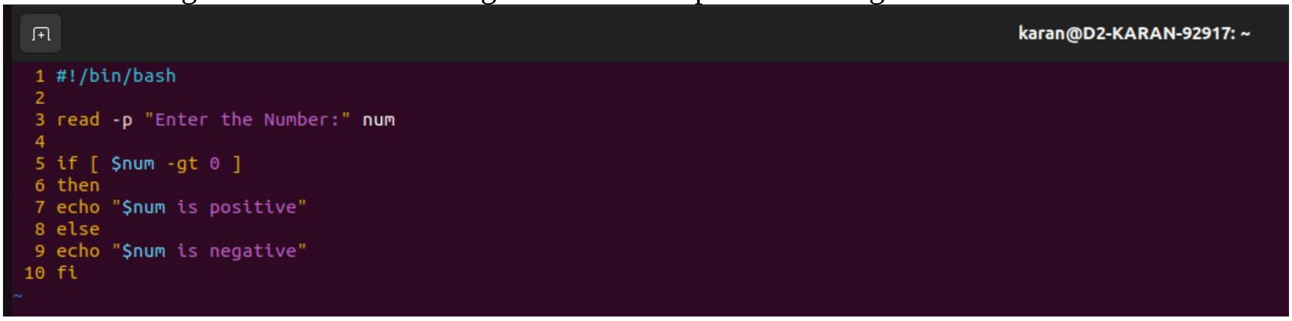


```
#!/bin/bash

read -p "Enter the Year" year

if (( year%4 ==0 || year%400==0));
then
echo "$year is Leap"
else
echo "$year is not leap year"
fi
~
```

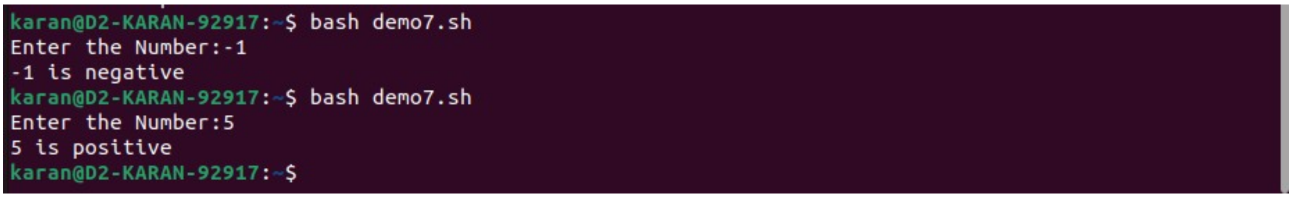


```
karan@D2-KARAN-92917:~$ vim demo6.sh
karan@D2-KARAN-92917:~$ bash demo6.sh
Enter the Year2000
2000 is Leap
karan@D2-KARAN-92917:~$ bash demo6.sh
Enter the Year2024
2024 is Leap
karan@D2-KARAN-92917:~$ bash demo6.sh
Enter the Year2025
2025 is not leap year
karan@D2-KARAN-92917:~$ bash demo6.sh
Enter the Year2001
2001 is not leap year
karan@D2-KARAN-92917:~$
```

7. Write a Program to find whether a given number is positive or negative

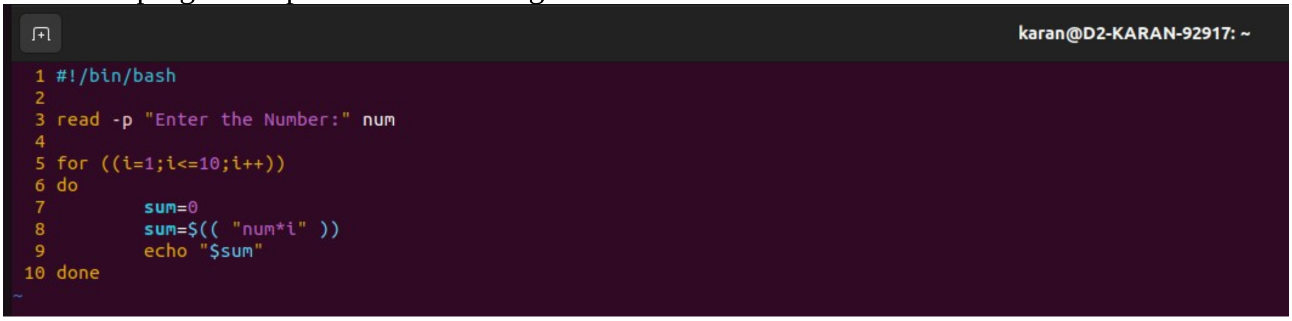


```
#!/bin/bash

read -p "Enter the Number:" num

if [ $num -gt 0 ]
then
echo "$num is positive"
else
echo "$num is negative"
fi
~
```

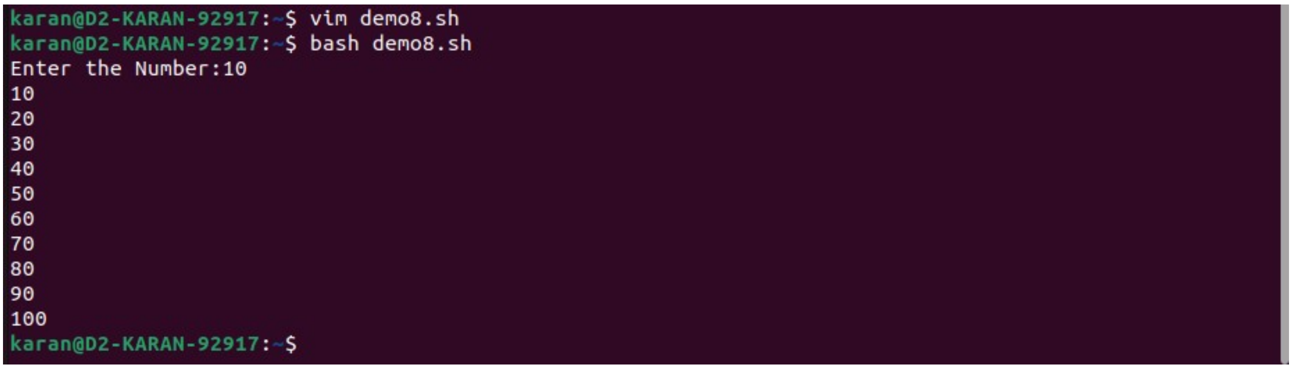


```
karan@D2-KARAN-92917:~$ bash demo7.sh
Enter the Number:-1
-1 is negative
karan@D2-KARAN-92917:~$ bash demo7.sh
Enter the Number:5
5 is positive
karan@D2-KARAN-92917:~$
```

8. Write a program to print the table of a given number.

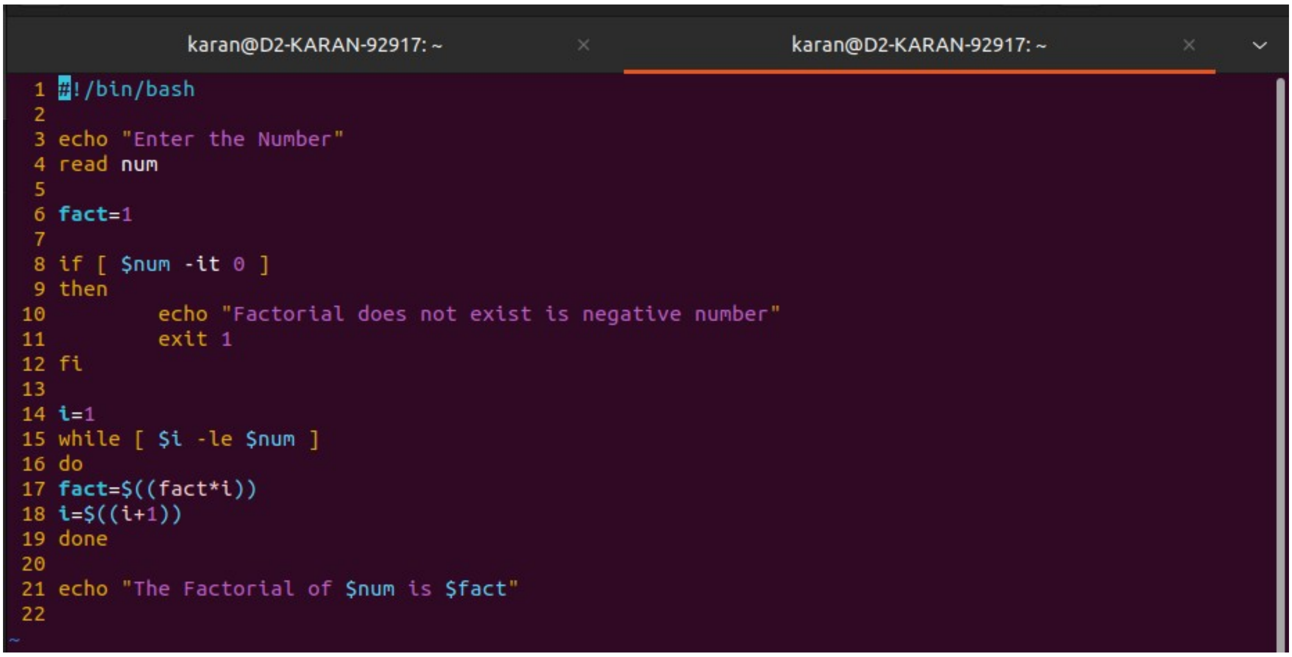


```
#!/bin/bash

read -p "Enter the Number:" num

for ((i=1;i<=10;i++))
do
        sum=0
        sum=$(( "num*i" ))
        echo "$sum"
done
~
```

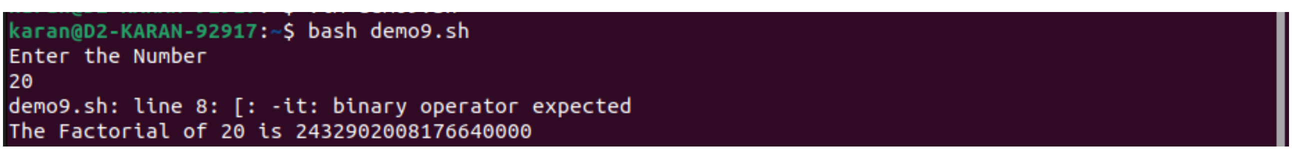


```
karan@D2-KARAN-92917:~$ vim demo8.sh
karan@D2-KARAN-92917:~$ bash demo8.sh
Enter the Number:10
10
20
30
40
50
60
70
80
90
100
karan@D2-KARAN-92917:~$
```

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

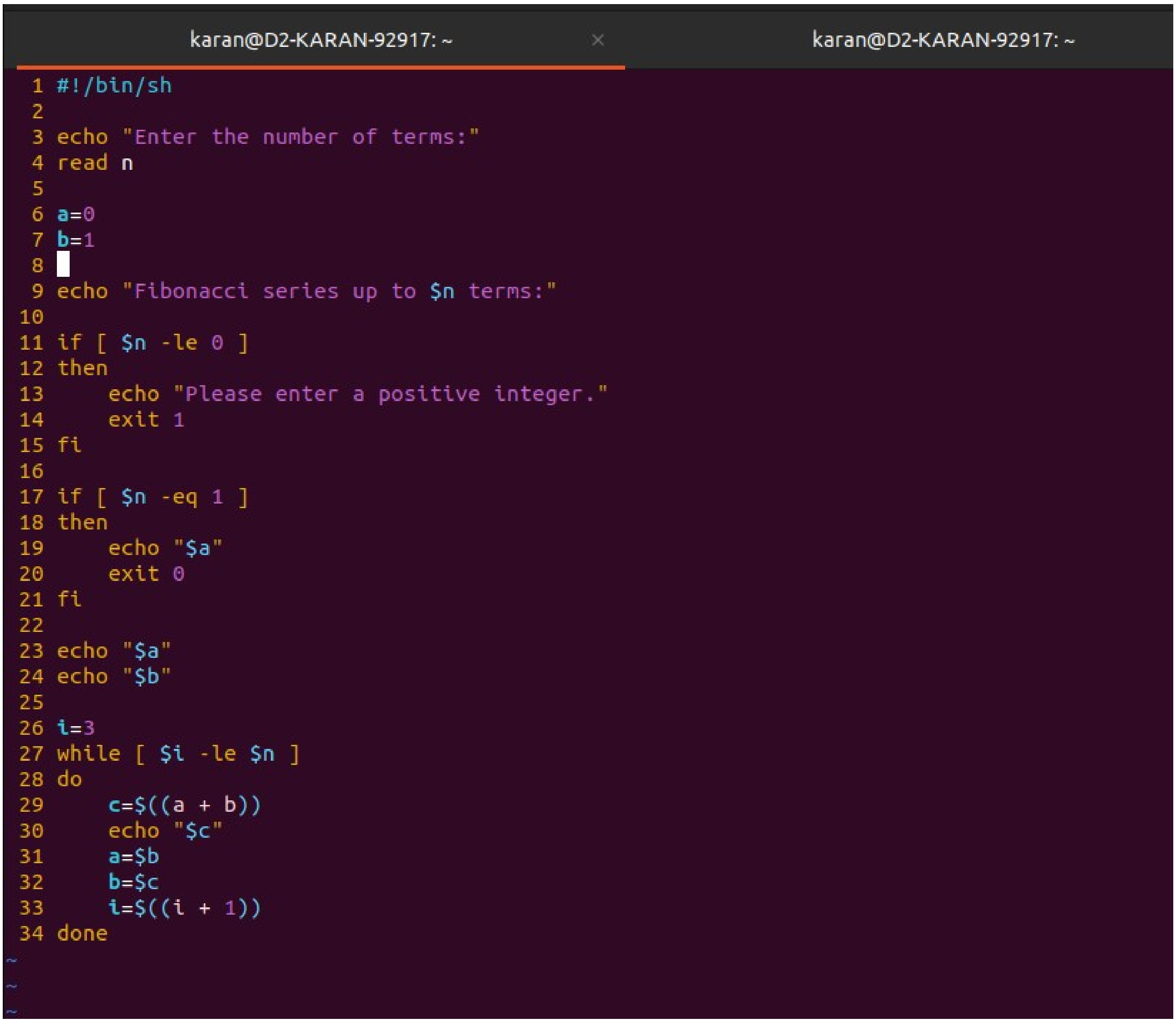


```
 1 #!/bin/bash
 2
 3 echo "Enter the Number"
 4 read num
 5
 6 fact=1
 7
 8 if [ $num -it 0 ]
 9 then
10         echo "Factorial does not exist is negative number"
11         exit 1
12 fi
13
14 i=1
15 while [ $i -le $num ]
16 do
17 fact=$((fact*i))
18 i=$((i+1))
19 done
20
21 echo "The Factorial of $num is $fact"
22
~
```

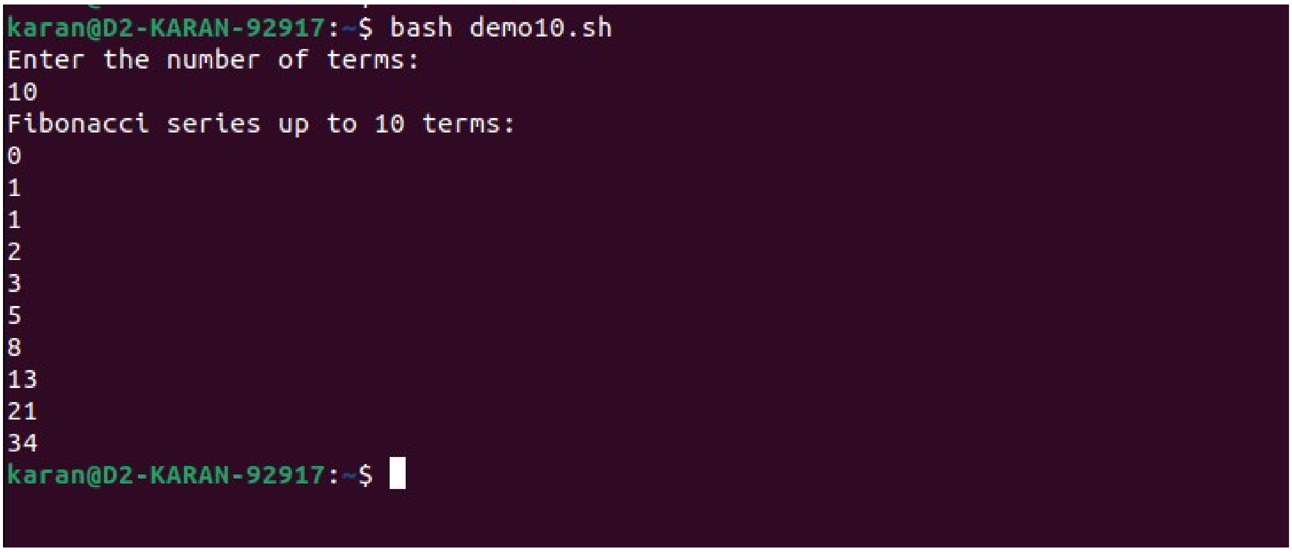


```
karan@D2-KARAN-92917:~$ bash demo9.sh
Enter the Number
20
demo9.sh: line 8: [: -it: binary operator expected
The Factorial of 20 is 2432902008176640000
```

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

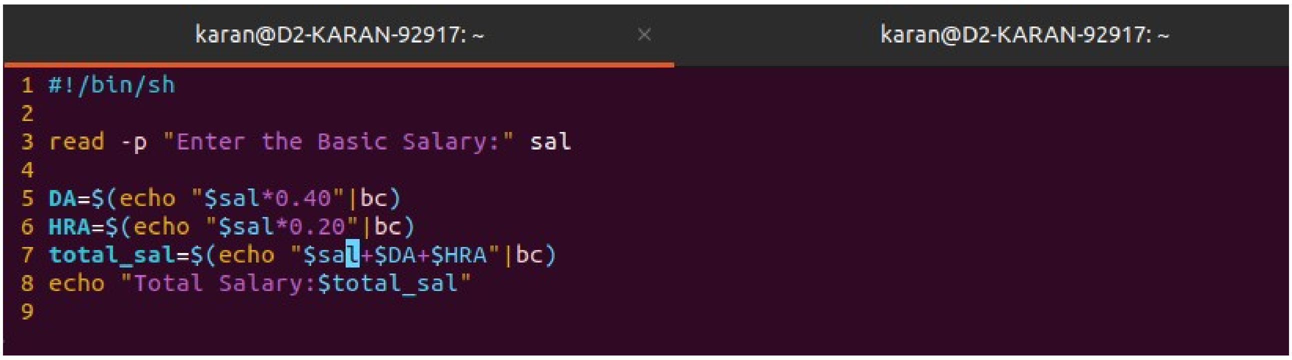


```
#!/bin/sh

echo "Enter the number of terms:"
read n

a=0
b=1

echo "Fibonacci series up to $n terms:"

if [ $n -le 0 ]
then
    echo "Please enter a positive integer."
    exit 1
fi

if [ $n -eq 1 ]
then
    echo "$a"
    exit 0
fi

echo "$a"
echo "$b"

i=3
while [ $i -le $n ]
do
    c=$((a + b))
    echo "$c"
    a=$b
    b=$c
    i=$((i + 1))
done
```

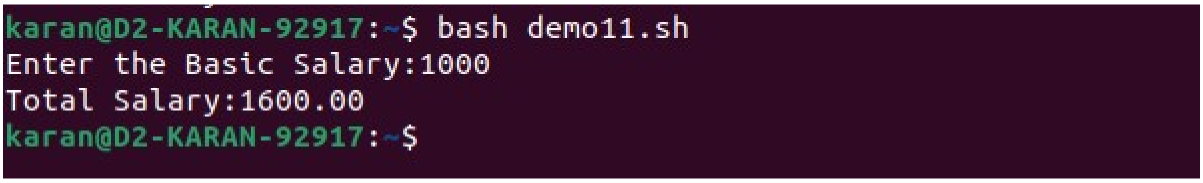


```
karan@D2-KARAN-92917:~$ bash demo10.sh
Enter the number of terms:
10
Fibonacci series up to 10 terms:
0
1
1
2
3
5
8
13
21
34
karan@D2-KARAN-92917:~$
```

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

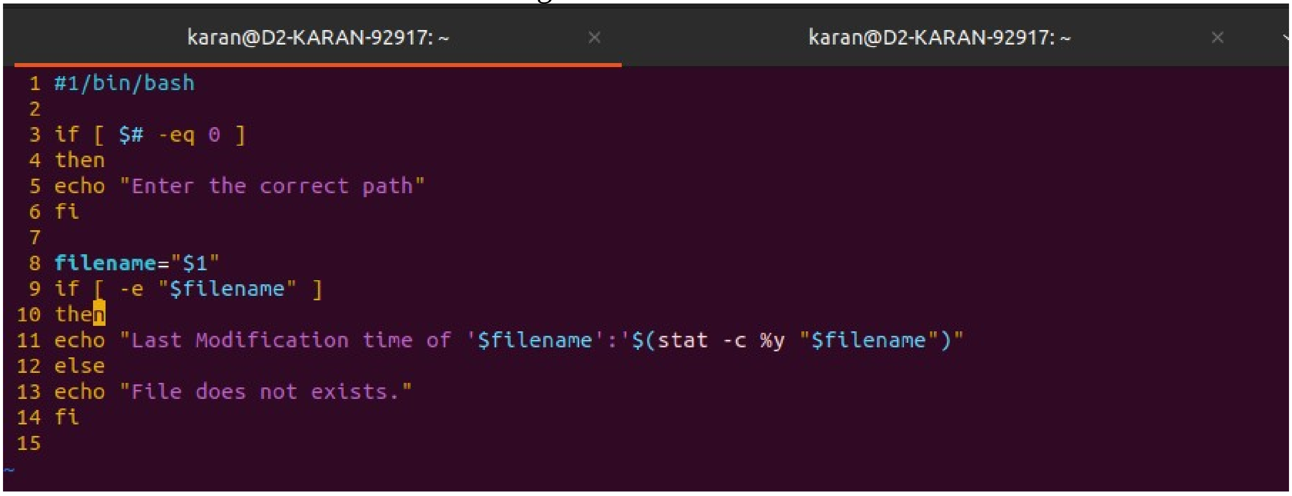


```
#!/bin/sh

read -p "Enter the Basic Salary:" sal

DA=$(echo "$sal*0.40"|bc)
HRA=$(echo "$sal*0.20"|bc)
total_sal=$(echo "$sal+$DA+$HRA"|bc)
echo "Total Salary:$total_sal"

```

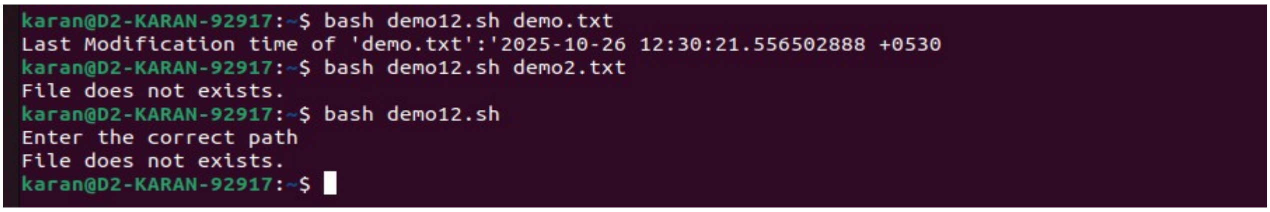


```
karan@D2-KARAN-92917:~$ bash demo11.sh
Enter the Basic Salary:1000
Total Salary:1600.00
karan@D2-KARAN-92917:~$
```

12. 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.

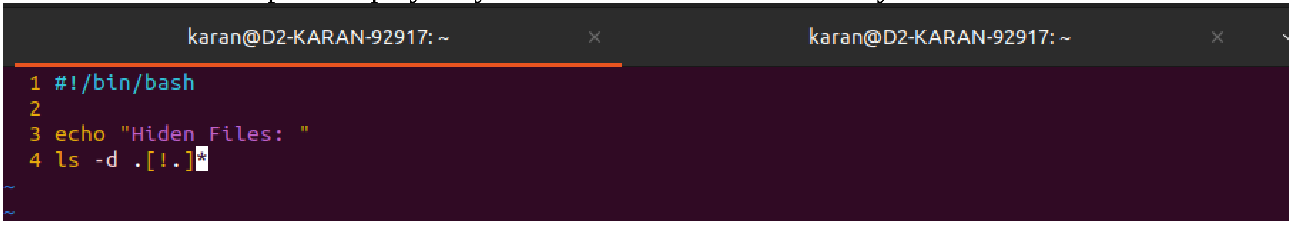


```
#1/bin/bash

if [ $# -eq 0 ]
then
echo "Enter the correct path"
fi

filename="$1"
if [ -e "$filename" ]
then
echo "Last Modification time of '$filename':'$(stat -c %y "$filename")"
else
echo "File does not exists."
fi

```

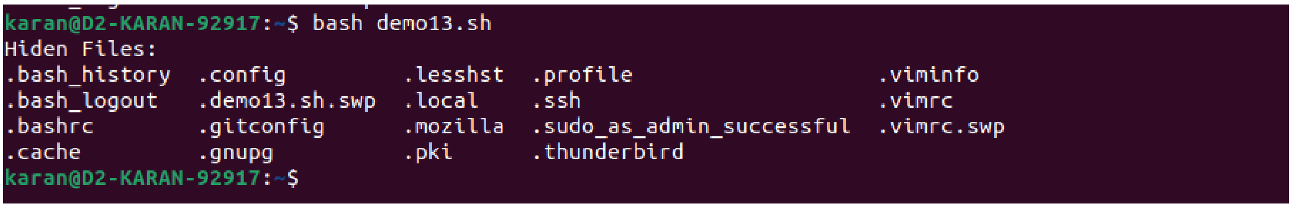


```
karan@D2-KARAN-92917:~$ bash demo12.sh demo.txt
Last Modification time of 'demo.txt':'2025-10-26 12:30:21.556502888 +0530
karan@D2-KARAN-92917:~$ bash demo12.sh demo2.txt
File does not exists.
karan@D2-KARAN-92917:~$ bash demo12.sh
Enter the correct path
File does not exists.
karan@D2-KARAN-92917:~$
```

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

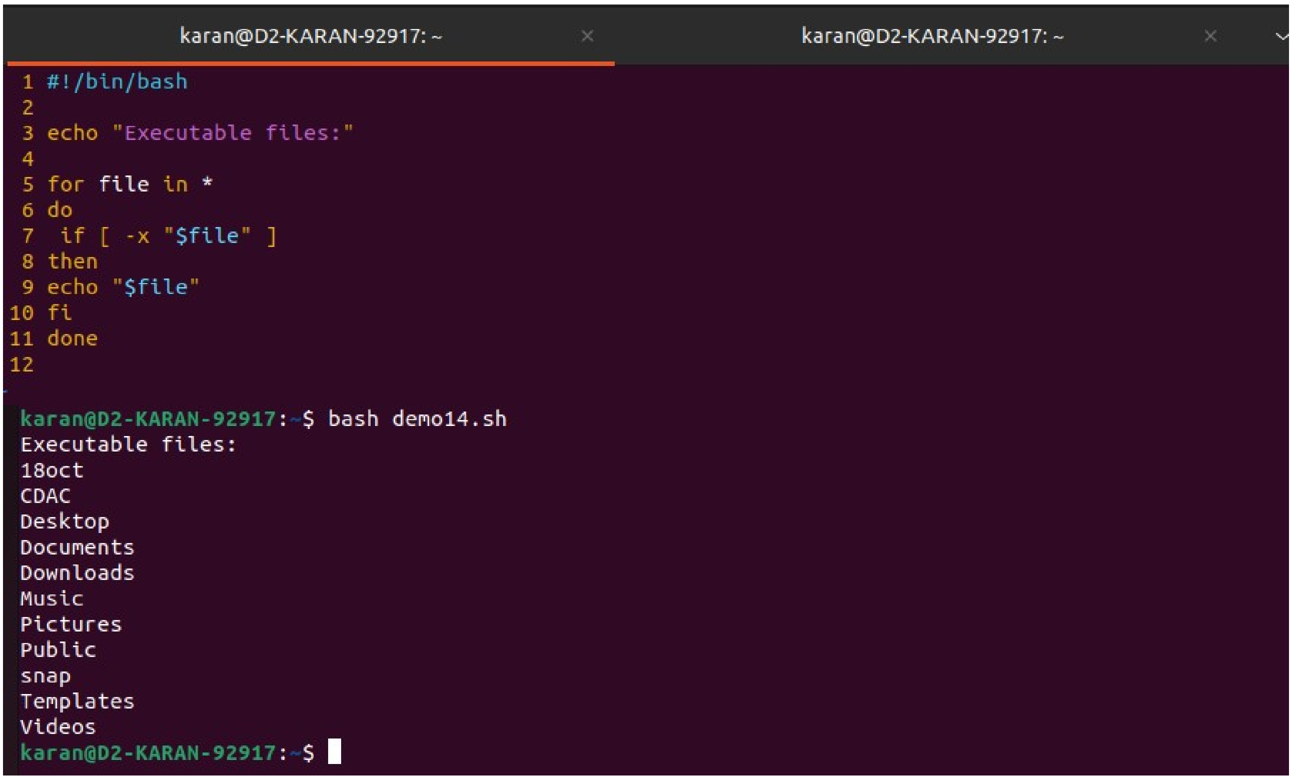


```
#!/bin/bash

echo "Hiden Files: "
ls -d .[!.]*
```



```
karan@D2-KARAN-92917:~$ bash demo13.sh
Hiden Files:
.bash_history  .config        .lesshst  .profile                    .viminfo
.bash_logout   .demo13.sh.swp .local    .ssh                        .vimrc
.bashrc        .gitconfig     .mozilla  .sudo_as_admin_successful   .vimrc.swp
.cache         .gnupg         .pki      .thunderbird
karan@D2-KARAN-92917:~$
```

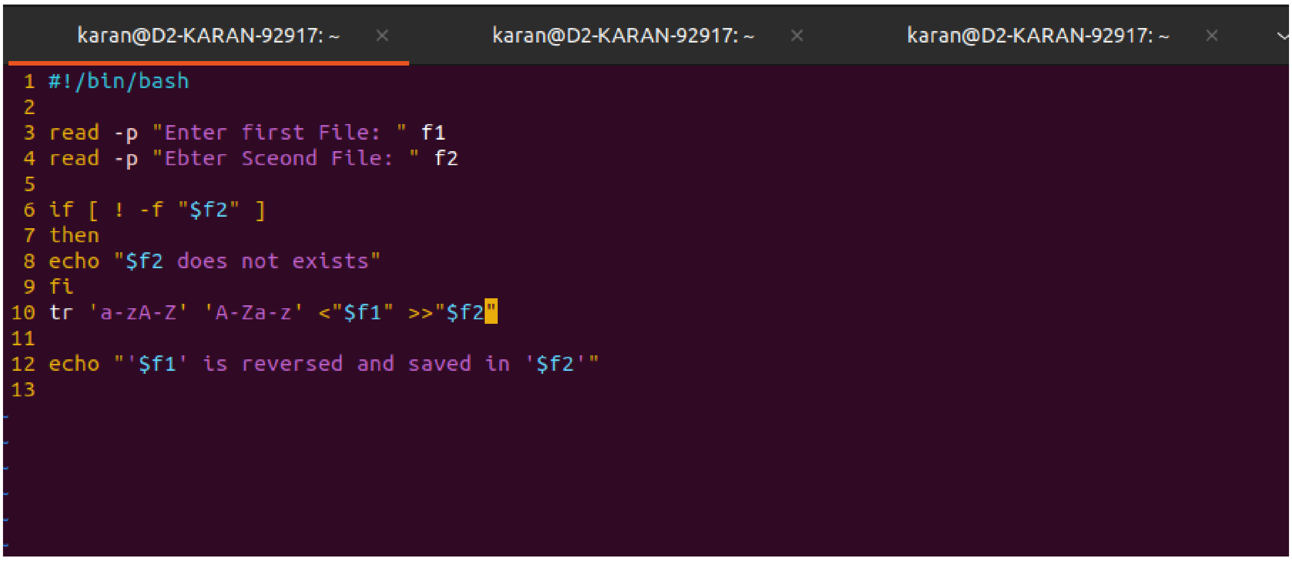
14. Write a shell script to display only executable files of current directory.



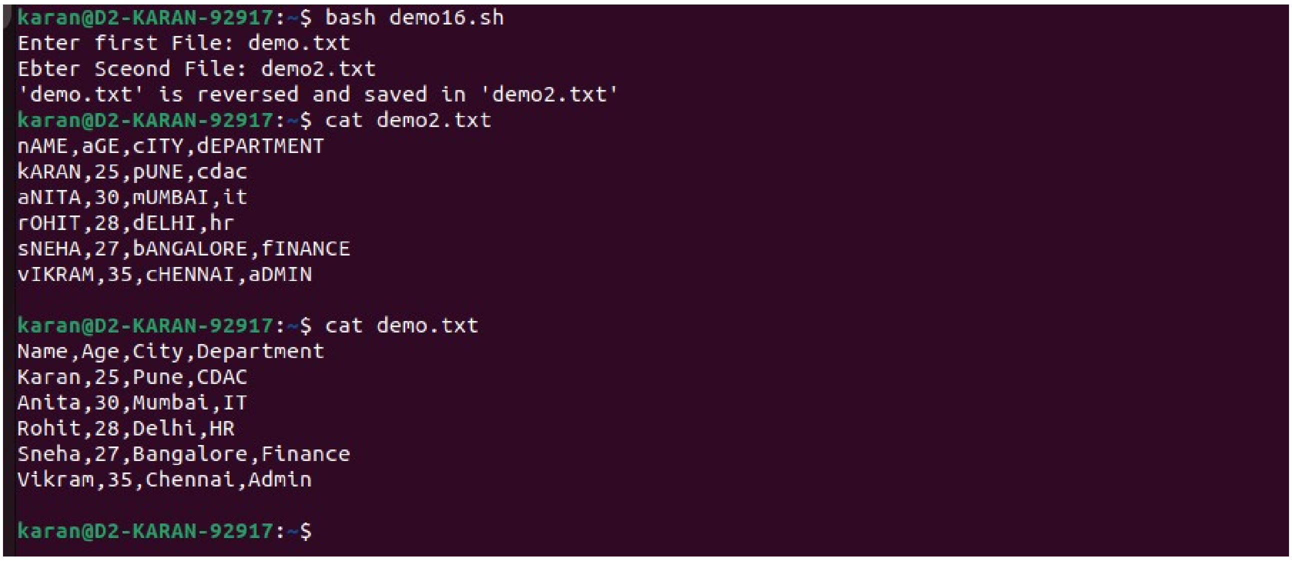
```
#!/bin/bash

echo "Executable files:"

for file in *
do
 if [ -x "$file" ]
then
echo "$file"
fi
done

```

```
karan@D2-KARAN-92917:~$ bash demo14.sh
Executable files:
18oct
CDAC
Desktop
Documents
Downloads
Music
Pictures
Public
snap
Templates
Videos
karan@D2-KARAN-92917:~$
```

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

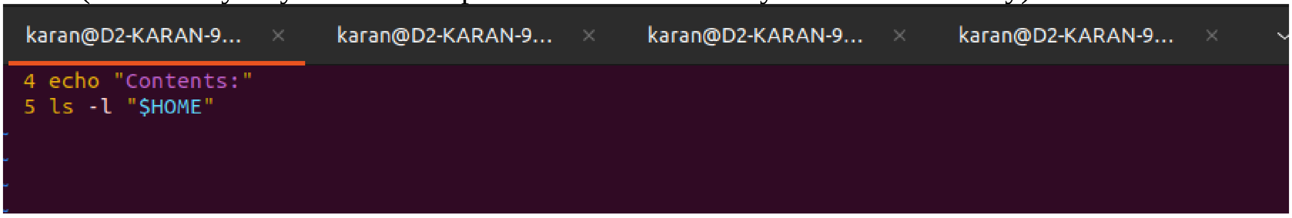


```
#!/bin/bash

read -p "Enter first File: " f1
read -p "Ebter Sceond File: " f2

if [ ! -f "$f2" ]
then
echo "$f2 does not exists"
fi
tr 'a-zA-Z' 'A-Za-z' <"$f1" >>"$f2"

echo "'$f1' is reversed and saved in '$f2'"

```

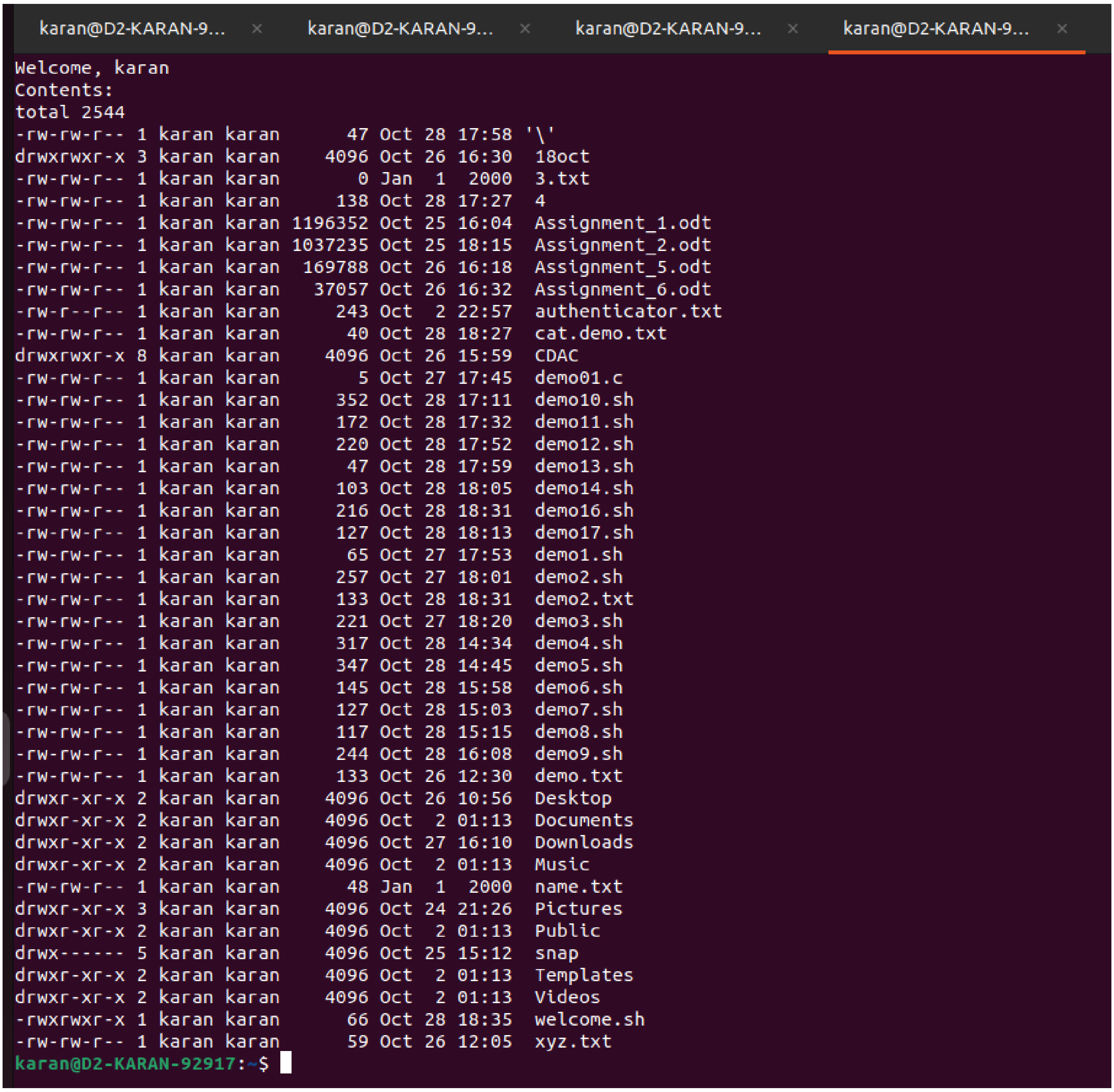


```
karan@D2-KARAN-92917:~$ bash demo16.sh
Enter first File: demo.txt
Ebter Sceond File: demo2.txt
'demo.txt' is reversed and saved in 'demo2.txt'
karan@D2-KARAN-92917:~$ cat demo2.txt
nAME,aGE,cITY,dEPARTMENT
kARAN,25,pUNE,cdac
aNITA,30,mUMBAI,it
rOHIT,28,dELHI,hr
sNEHA,27,bANGALORE,fINANCE
vIKRAM,35,cHENNAI,aDMIN

karan@D2-KARAN-92917:~$ cat demo.txt
Name,Age,City,Department
Karan,25,Pune,CDAC
Anita,30,Mumbai,IT
Rohit,28,Delhi,HR
Sneha,27,Bangalore,Finance
Vikram,35,Chennai,Admin

karan@D2-KARAN-92917:~$
```

16. Write a shell script to display welcome message to the user along with contents of his home directory. Ensure that shell script will execute automatically when user login to the shell. (Make entry of your shell script into .bashrc file into your home directory).



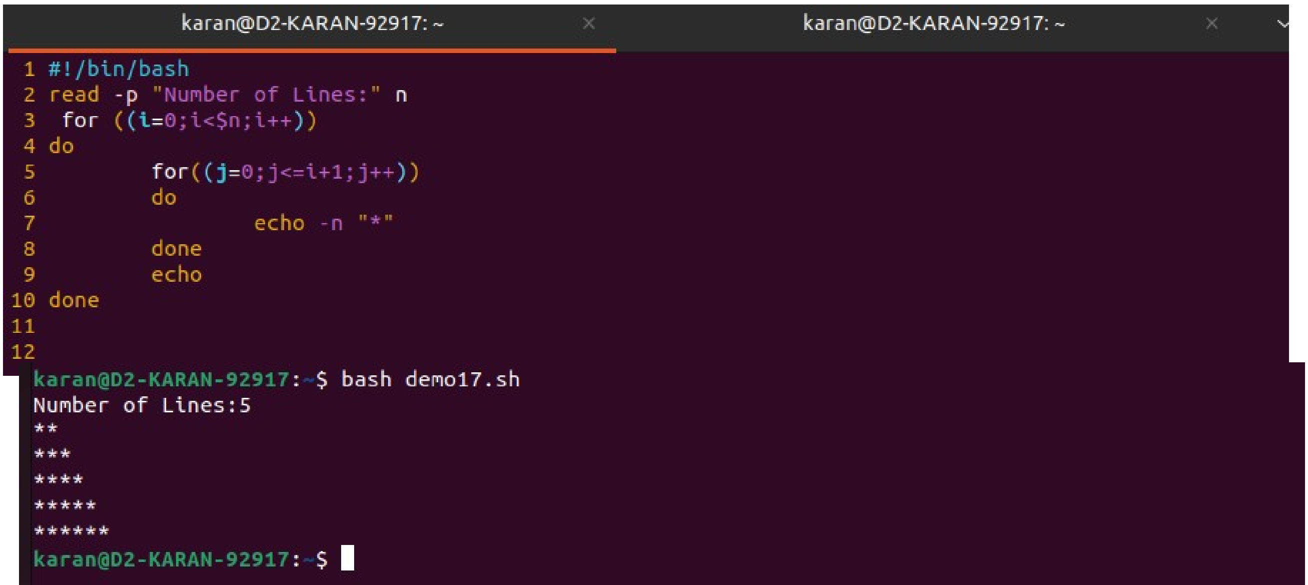
```
echo "Contents:"
ls -l "$HOME"
```



```
Welcome, karan
Contents:
total 2544
-rw-rw-r-- 1 karan karan      47 Oct 28 17:58 '\'
drwxrwxr-x 3 karan karan    4096 Oct 26 16:30  18oct
-rw-rw-r-- 1 karan karan       0 Jan  1  2000  3.txt
-rw-rw-r-- 1 karan karan     138 Oct 28 17:27  4
-rw-rw-r-- 1 karan karan 1196352 Oct 25 16:04  Assignment_1.odt
-rw-rw-r-- 1 karan karan 1037235 Oct 25 18:15  Assignment_2.odt
-rw-rw-r-- 1 karan karan  169788 Oct 26 16:18  Assignment_5.odt
-rw-rw-r-- 1 karan karan   37057 Oct 26 16:32  Assignment_6.odt
-rw-r--r-- 1 karan karan     243 Oct  2 22:57  authenticator.txt
-rw-rw-r-- 1 karan karan      40 Oct 28 18:27  cat.demo.txt
drwxrwxr-x 8 karan karan    4096 Oct 26 15:59  CDAC
-rw-rw-r-- 1 karan karan       5 Oct 27 17:45  demo01.c
-rw-rw-r-- 1 karan karan     352 Oct 28 17:11  demo10.sh
-rw-rw-r-- 1 karan karan     172 Oct 28 17:32  demo11.sh
-rw-rw-r-- 1 karan karan     220 Oct 28 17:52  demo12.sh
-rw-rw-r-- 1 karan karan      47 Oct 28 17:59  demo13.sh
-rw-rw-r-- 1 karan karan     103 Oct 28 18:05  demo14.sh
-rw-rw-r-- 1 karan karan     216 Oct 28 18:31  demo16.sh
-rw-rw-r-- 1 karan karan     127 Oct 28 18:13  demo17.sh
-rw-rw-r-- 1 karan karan      65 Oct 27 17:53  demo1.sh
-rw-rw-r-- 1 karan karan     257 Oct 27 18:01  demo2.sh
-rw-rw-r-- 1 karan karan     133 Oct 28 18:31  demo2.txt
-rw-rw-r-- 1 karan karan     221 Oct 27 18:20  demo3.sh
-rw-rw-r-- 1 karan karan     317 Oct 28 14:34  demo4.sh
-rw-rw-r-- 1 karan karan     347 Oct 28 14:45  demo5.sh
-rw-rw-r-- 1 karan karan     145 Oct 28 15:58  demo6.sh
-rw-rw-r-- 1 karan karan     127 Oct 28 15:03  demo7.sh
-rw-rw-r-- 1 karan karan     117 Oct 28 15:15  demo8.sh
-rw-rw-r-- 1 karan karan     244 Oct 28 16:08  demo9.sh
-rw-rw-r-- 1 karan karan     133 Oct 26 12:30  demo.txt
drwxr-xr-x 2 karan karan    4096 Oct 26 10:56  Desktop
drwxr-xr-x 2 karan karan    4096 Oct  2 01:13  Documents
drwxr-xr-x 2 karan karan    4096 Oct 27 16:10  Downloads
drwxr-xr-x 2 karan karan    4096 Oct  2 01:13  Music
-rw-rw-r-- 1 karan karan      48 Jan  1  2000  name.txt
drwxr-xr-x 3 karan karan    4096 Oct 24 21:26  Pictures
drwxr-xr-x 2 karan karan    4096 Oct  2 01:13  Public
drwx------ 5 karan karan    4096 Oct 25 15:12  snap
drwxr-xr-x 2 karan karan    4096 Oct  2 01:13  Templates
drwxr-xr-x 2 karan karan    4096 Oct  2 01:13  Videos
-rwxrwxr-x 1 karan karan      66 Oct 28 18:35  welcome.sh
-rw-rw-r-- 1 karan karan      59 Oct 26 12:05  xyz.txt
karan@D2-KARAN-92917:~$
```

17. Print the following pattern.

```
*
* *
* * *
* * * *
* * * * *
```



```
#!/bin/bash
read -p "Number of Lines:" n
 for ((i=0;i<$n;i++))
do
        for((j=0;j<=i+1;j++))
        do
                echo -n "*"
        done
        echo
done


```

```
karan@D2-KARAN-92917:~$ bash demo17.sh
Number of Lines:5
**
***
****
*****
******
karan@D2-KARAN-92917:~$
```