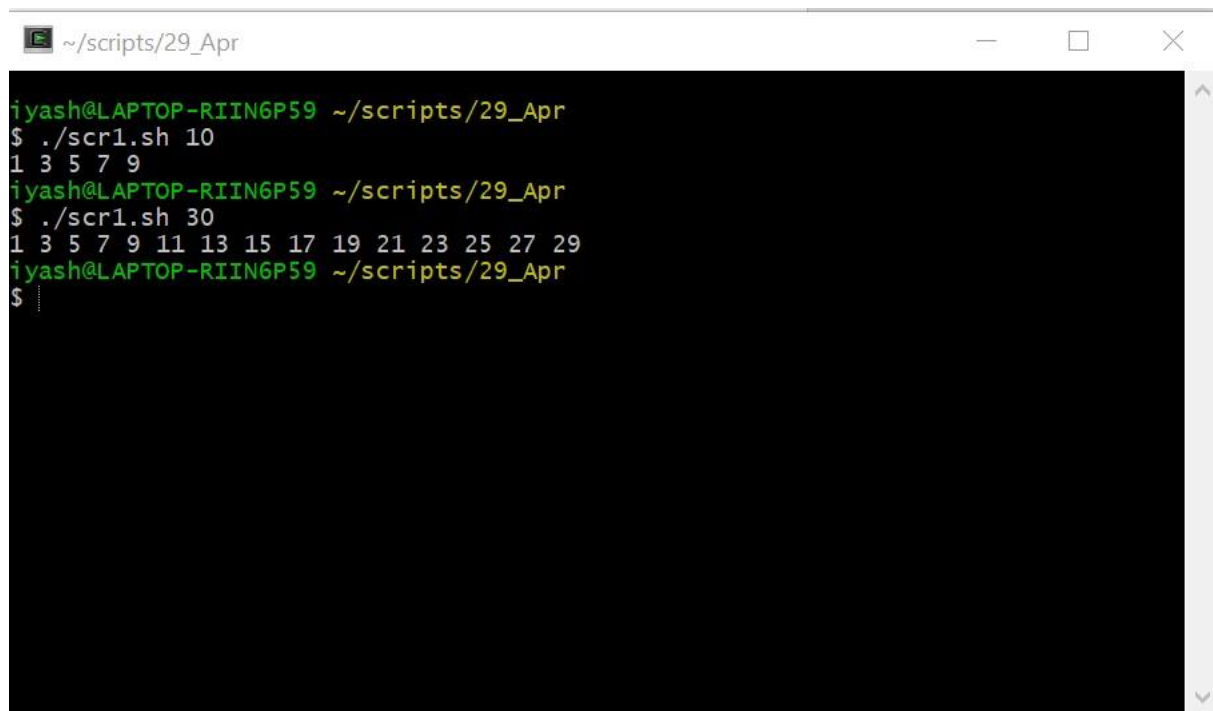


1. Write a shell script to display odd numbers from 1 to n. Accept number as a command line argument.

Script –

```
#!/bin/bash
num=$1
for (( i=1; i <= $num; i++ )) do
    a=`expr $i % 2`
    if [ $a -ne 0 ]
    then    echo -
n "$i "
    fi
done
```

Output –

A terminal window titled "~/scripts/29_Apr" showing the execution of a shell script. The user runs the script with arguments 10, 30, and 50. The output shows odd numbers from 1 to the specified number, with a space after each number and a newline after every second number (when the number is even).

```
iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$ ./scr1.sh 10
1 3 5 7 9
iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$ ./scr1.sh 30
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29
iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$ ./scr1.sh 50
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49
```

2. Write a shell script to check type of tybsc subjects using case statements.

Script – #!/bin/bash

CHOICE=5

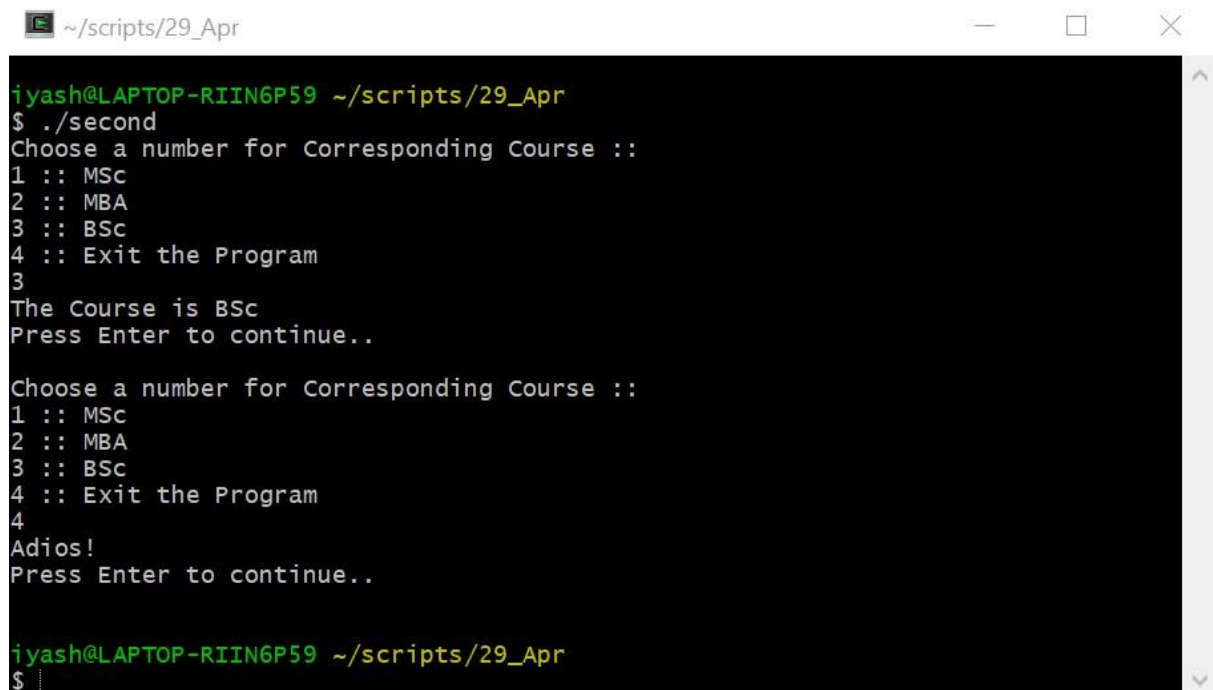
```
until [ $CHOICE -eq 4 ] do echo -n -e "Choose a number for
Corresponding Course ::\n" echo "1 :: MSc" echo "2 :: MBA"
```

```

echo "3 :: BSc" echo "4 :: Exit the Program" read CHOICE
case $CHOICE in
1) echo "The Course is MSc";;
2) echo "The Course is MBA";;
3) echo "The Course is BSc";;
4) echo "Adios!";; *) echo "Invalid Input !";; esac echo "Press
Enter to continue.." read ENTER done

```

Output –



```

iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$ ./second
Choose a number for Corresponding Course ::
1 :: MSc
2 :: MBA
3 :: BSc
4 :: Exit the Program
3
The Course is BSc
Press Enter to continue..
Choose a number for Corresponding Course ::
1 :: MSc
2 :: MBA
3 :: BSc
4 :: Exit the Program
4
Adios!
Press Enter to continue..
iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$

```

3. Write a shell script to display the reverse numbers from nine to zero using while loop.

Script –

```

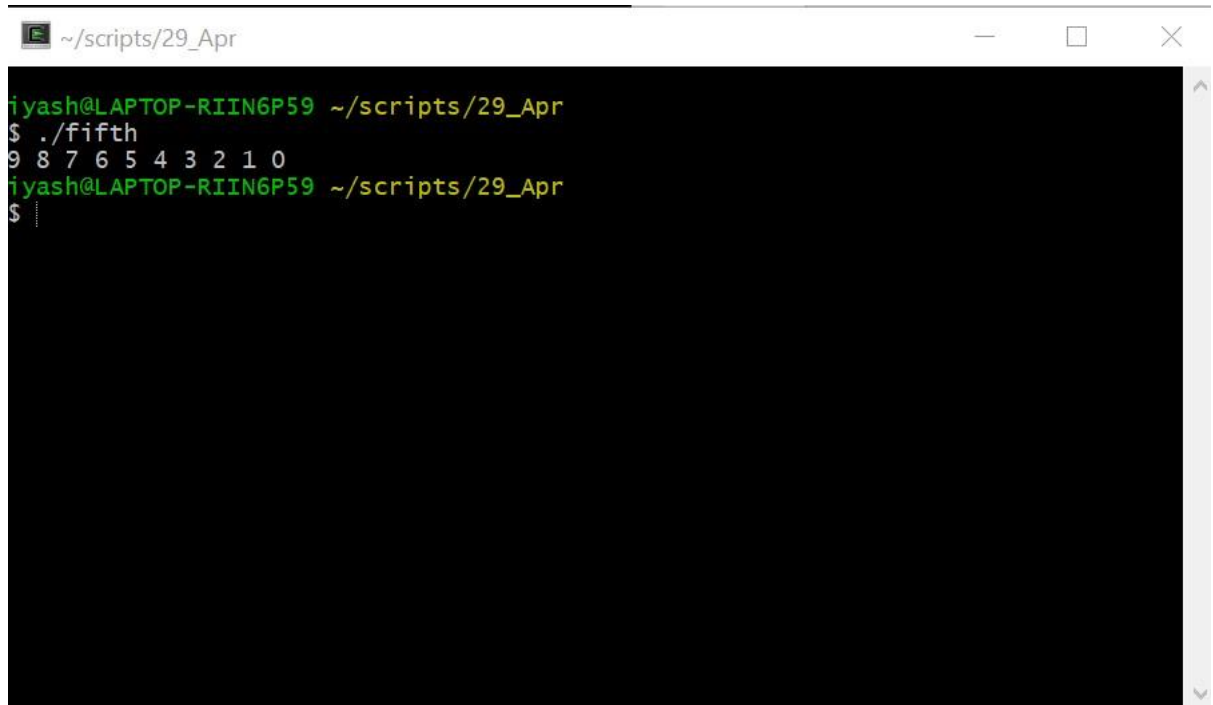
#!/bin/bash

number=9

while [ "$number" -ge 0 ]
do echo -n "$number "
sleep 1
number=`expr $number - 1` done

```

Output –

A terminal window titled "~/scripts/29_Apr" with standard window controls. The prompt is "iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr". The user enters "\$./fifth", and the output is "9 8 7 6 5 4 3 2 1 0". The prompt returns to "iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr" with a cursor on a new line.

```
iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$ ./fifth
9 8 7 6 5 4 3 2 1 0
iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$
```

4. Write a shell script to find the factorial of a given number

Script – #!/bin/sh echo -n

"Enter a number ::"

read num fact=1

for((i=2;i<=num;i++))

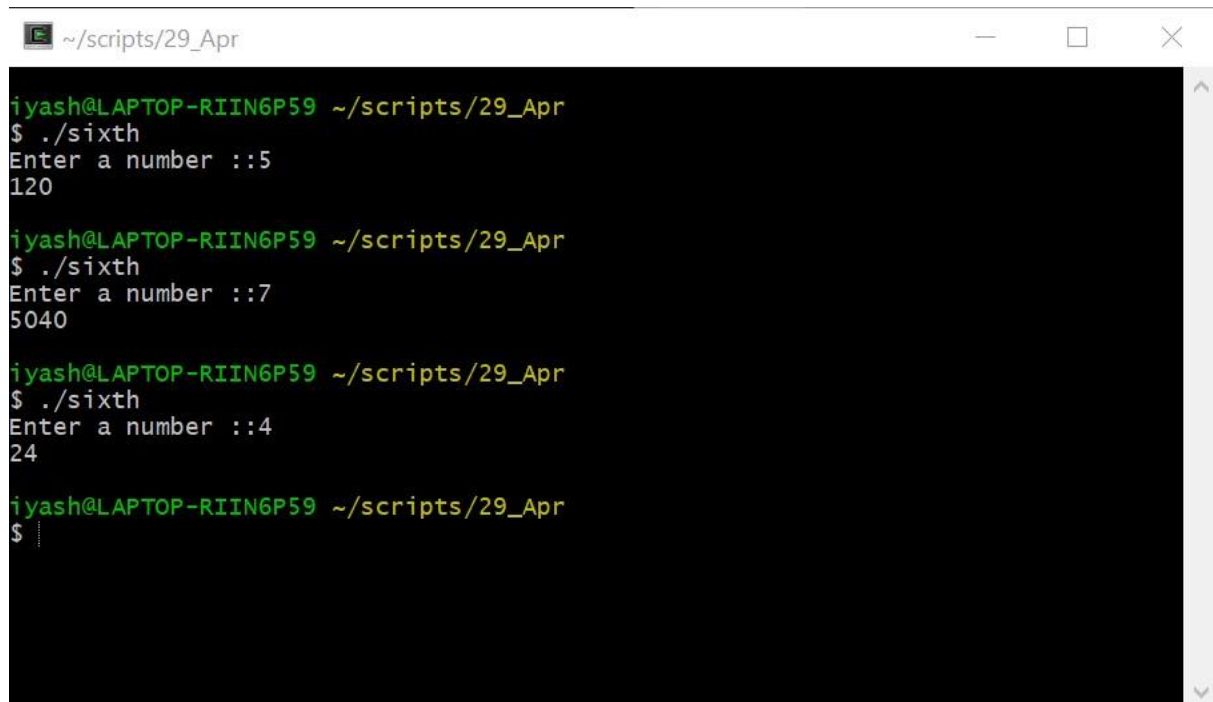
{

fact=\$((fact * i)) #fact = fact * i

}

echo \$fact Output

–

A terminal window titled ~/scripts/29_Apr. The prompt is iyash@LAPTOP-RIIN6P59. The user runs ./sixth, enters 5, and the output is 120. Then the user runs ./sixth, enters 7, and the output is 5040. Then the user runs ./sixth, enters 4, and the output is 24. Finally, the user runs ./sixth and the prompt returns without output.

```
iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$ ./sixth
Enter a number ::5
120

iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$ ./sixth
Enter a number ::7
5040

iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$ ./sixth
Enter a number ::4
24

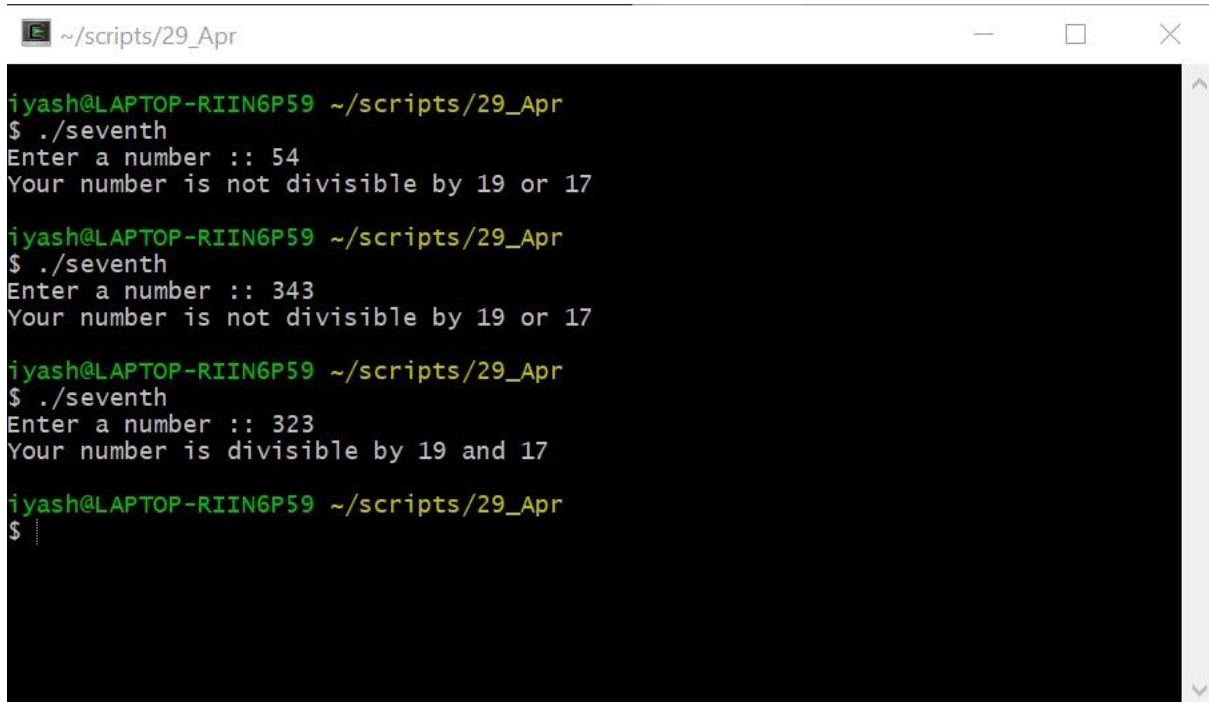
iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$
```

5. Write single if condition to check number is divisible by 17 and 19

Script –

```
#!/bin/bash
echo -n "Enter a number :: "
read number
if [ $(( $number % 17 )) -eq 0 ] && [ $(( $number % 19 )) -eq 0 ]
then echo "Your number is divisible by 19 and 17" else
echo "Your number is not divisible by 19 or 17"
fi
```

Output –

A terminal window titled '~/.scripts/29_Apr' with standard window controls. The prompt is 'iyash@LAPTOP-RIIN6P59 ~/.scripts/29_Apr'. The user runs './seventh' three times. The first two times, the input is 54 and 343, and the output is 'Your number is not divisible by 19 or 17'. The third time, the input is 323, and the output is 'Your number is divisible by 19 and 17'. The prompt returns to '\$..' after the third run.

```
iyash@LAPTOP-RIIN6P59 ~/.scripts/29_Apr
$ ./seventh
Enter a number :: 54
Your number is not divisible by 19 or 17

iyash@LAPTOP-RIIN6P59 ~/.scripts/29_Apr
$ ./seventh
Enter a number :: 343
Your number is not divisible by 19 or 17

iyash@LAPTOP-RIIN6P59 ~/.scripts/29_Apr
$ ./seventh
Enter a number :: 323
Your number is divisible by 19 and 17

iyash@LAPTOP-RIIN6P59 ~/.scripts/29_Apr
$ ..
```

6. Write a shell script to find maximum and minimum of given n numbers.

Script –

```
#!/bin/bash
echo -n "Enter number of elements: "
read n
```

```
i=1
max=0
min=0
```

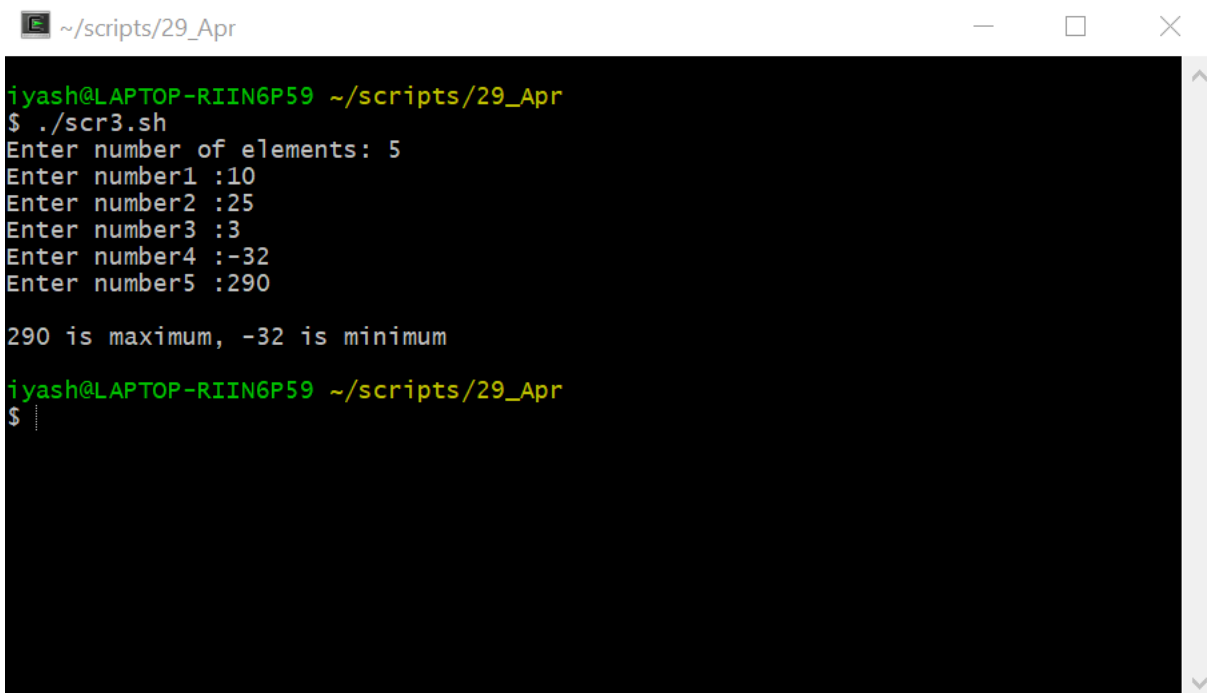
```
while [ $i -le $n ]
do
    echo -n "Enter number$i : "
    read num
    if [ $i -eq 1 ]
    then
        max=$num
        min=$num
    else
        if [ $num -gt $max ]
        then
            max=$num
        fi
        if [ $num -lt $min ]
        then
            min=$num
        fi
    fi
    i=$((i+1))
done
```

```

fi
i=$(( i + 1 ))
done
echo " "
echo "$max is maximum, $min is minimum"

```

Output –



```

iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$ ./scr3.sh
Enter number of elements: 5
Enter number1 :10
Enter number2 :25
Enter number3 :3
Enter number4 :-32
Enter number5 :290

290 is maximum, -32 is minimum

iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$

```

7. Write a shell script to create a directory, change directory and rename the directory.

Script –

```

#!/bin/bash
echo "1)Create a Directory."
echo "2)Change to a directory."
echo "3)To rename a direcotry."
echo -n "Enter your choice:: "
read CHOICE

case $CHOICE in
    1) echo -n "Enter directory name:: "
       read dirname
       mkdir $dirname
       echo "$dirname directory created in current directory!"
       ;;
    2) echo -n "Enter directory name:: "
       read dirname
       echo "You were in this directory... "
       pwd
       cd $dirname
       echo "Now you're in this directory..."

```

```

    pwd
    ;;
3) echo -n "Enter old directory name:: "
    read olddirname
    echo -n "Enter new directory name:: "
    read newdirname
    echo "directories previously.."
    ls -d */                #displays only the directory's name, if you remove the -d option will also display
directories content
    mv $olddirname $newdirname
    echo "directories now..."
    ls -d */
    ;;
*) echo "Inavlid Choice!!!"
    ;;
esac

```

Output –

```

iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$ ./scr4.sh
1)Create a Directory.
2)Change to a directory.
3)To rename a direcotry.
Enter your choice:: 1
Enter directory name:: testdir
testdir directory created in current directory!

iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$ ./scr4.sh
1)Create a Directory.
2)Change to a directory.
3)To rename a direcotry.
Enter your choice:: 2
Enter directory name:: cd testdir
You were in this directory...
/home/iyash/scripts/29_Apr
./scr4.sh: line 18: cd: too many arguments
Now you're in this directory...
/home/iyash/scripts/29_Apr

iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$ ./scr4.sh
1)Create a Directory.
2)Change to a directory.
3)To rename a direcotry.
Enter your choice:: 3
Enter old directory name:: testdir
Enter new directory name:: demodir
directories previously..
newdir2/ testdir/
directories now...
demodir/ newdir2/

iyash@LAPTOP-RIIN6P59 ~/scripts/29_Apr
$

```