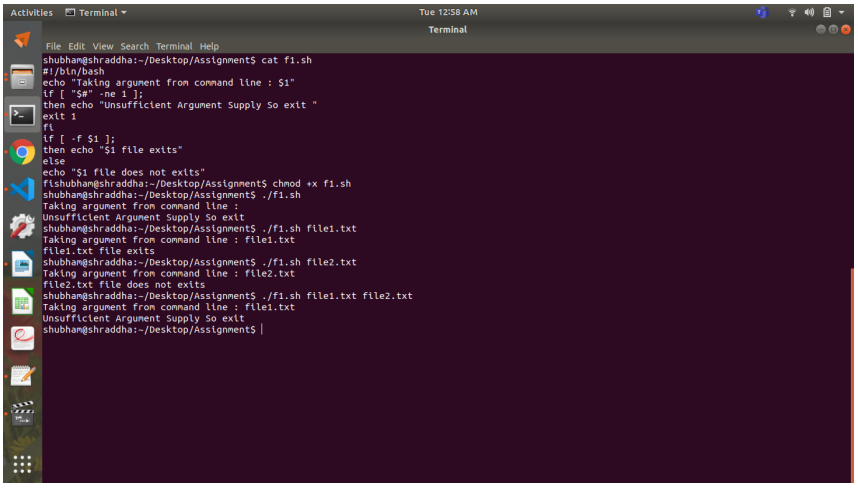
Assignment 3

Name -Shraddha Tripathi

1.Write a script to determine whether given file exists or not, the file name is supplied as command line argument, also check for sufficient number of command line arguments.

Soln-

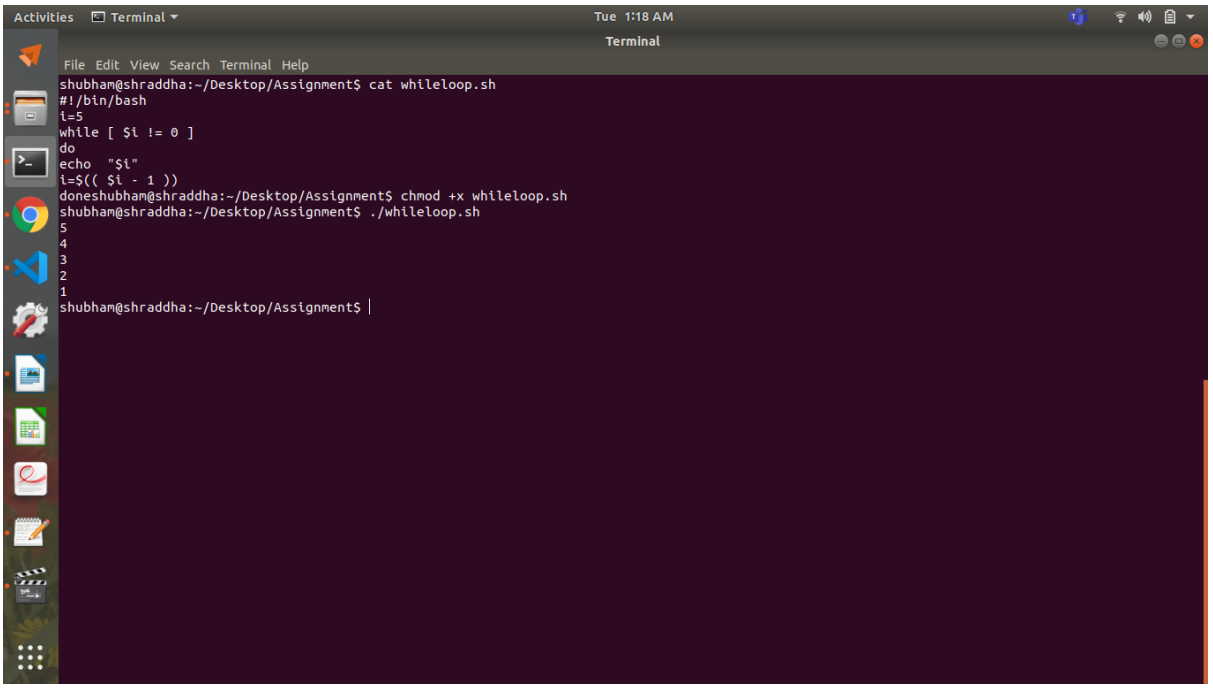
```
shubham@shraddha:~/Desktop/Assignment$ cat f1.sh
echo "Taking argument from command line : $1"
if [ -f $1 ];
then echo "$1 file exits"
else
echo "$1 file does not exits"
fishubham@shraddha:~/Desktop/Assignment$ chmod +x f1.sh
shubham@shraddha:~/Desktop/Assignment$ ./f1.sh aaaa
Taking argument from command line : aaaa
aaaa file does not exits
shubham@shraddha:~/Desktop/Assignment$ ./f1.sh file1.txt
Taking argument from command line : file1.txt
file1.txt file exits
```



2. Write a script to print nos. as 5, 4, 3, 2, 1 using while loop.

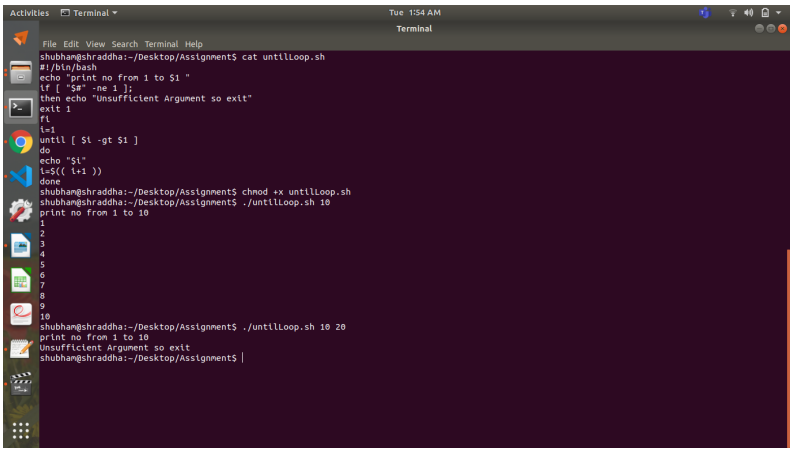
Sol-

```
shubham@shraddha:~/Desktop/Assignment$ cat whileloop.sh
#!/bin/bash
i=5
while [ $i != 0 ]
do
echo  "$i"
i=$(( $i - 1 ))
doneshubham@shraddha:~/Desktop/Assignment$ chmod +x whileloop.sh
shubham@shraddha:~/Desktop/Assignment$ ./whileloop.sh
5
4
3
2
1
```



Qus- 3.Take a number as command line and using until loop print value from 1 to till number.

Sol-shubham@shraddha:~/Desktop/Assignment$ cat untilLoop.sh
#!/bin/bash
echo "print no from 1 to $1 "
if ["$#" -ne 1];
then echo "Unsufficient Argument so exit"
exit 1
fi
i=1
until [$i -gt $1]
do
echo "$i"
i=$((i+1))
done
shubham@shraddha:~/Desktop/Assignment$ chmod +x untilLoop.sh
shubham@shraddha:~/Desktop/Assignment$ ./untilLoop.sh 10
print no from 1 to 10
1
2
3
4
5
6
7
8
9
10
shubham@shraddha:~/Desktop/Assignment$ ./untilLoop.sh 10 20
print no from 1 to 10
Unsufficient Argument so exit



Qus 4-Write a script, using case statement to perform basic math operation as follows

+ addition

-subtraction

x multiplication

/ division

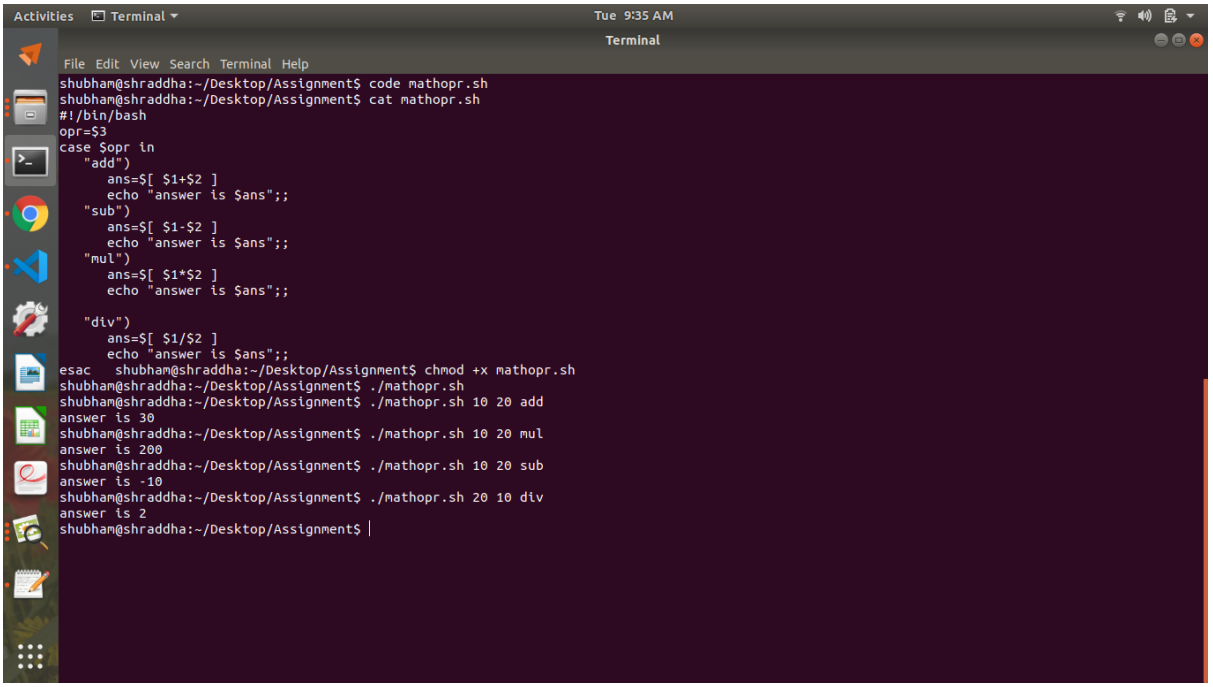
NOTE -two numbers will be given as command line arguments.

Soln-

```
shubham@shraddha:~/Desktop/Assignment$ code mathopr.sh
shubham@shraddha:~/Desktop/Assignment$ cat mathopr.sh
#!/bin/bash
opr=$3
case $opr in
  "add")
    ans=$[ $1+$2 ]
    echo "answer is $ans";;
  "sub")
    ans=$[ $1-$2 ]
    echo "answer is $ans";;
  "mul")
    ans=$[ $1*$2 ]
    echo "answer is $ans";;

  "div")
    ans=$[ $1/$2 ]
    echo "answer is $ans";;
esac   shubham@shraddha:~/Desktop/Assignment$ chmod +x
mathopr.sh
shubham@shraddha:~/Desktop/Assignment$ ./mathopr.sh
shubham@shraddha:~/Desktop/Assignment$ ./mathopr.sh 10 20 add
answer is 30
```

shubham@shraddha:~/Desktop/Assignment$ ./mathopr.sh 10 20 mul
answer is 200
shubham@shraddha:~/Desktop/Assignment$ ./mathopr.sh 10 20 sub
answer is -10
shubham@shraddha:~/Desktop/Assignment$ ./mathopr.sh 20 10 div
answer is 2



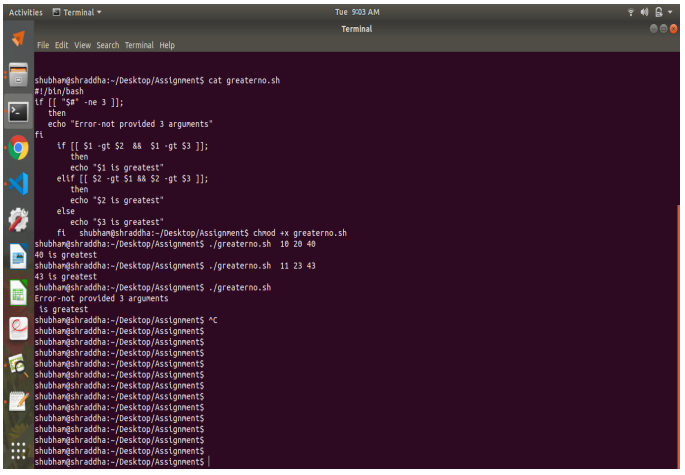
Qus 5.Write a script to find out biggest number from three

Given numbers. Numbers are supplied as command line arguments

Print error if sufficient arguments are not supplied.

Sol-

```
shubham@shraddha:~/Desktop/Assignment$ cat greaterno.sh
#!/bin/bash
if [[ "$#" -ne 3 ]];
   then
   echo "Error-not provided 3 arguments"
fi
     if [[ $1 -gt $2  &&  $1 -gt $3 ]];
        then
        echo "$1 is greatest"
     elif [[ $2 -gt $1 && $2 -gt $3 ]];
        then
        echo "$2 is greatest"
     else
        echo "$3 is greatest"
     fi   shubham@shraddha:~/Desktop/Assignment$ chmod +x greaterno.sh
shubham@shraddha:~/Desktop/Assignment$ ./greaterno.sh  10 20 40
40 is greatest
shubham@shraddha:~/Desktop/Assignment$ ./greaterno.sh  11 23 43
43 is greatest
shubham@shraddha:~/Desktop/Assignment$ ./greaterno.sh
Error-not provided 3 arguments
 is greatest
```



Qus 6-Write a program using while loop to print

0

1 0

2 1 0

3 2 1 0

4 3 2 1 0

5 4 3 2 1 0

6 5 4 3 2 1 0

7 6 5 4 3 2 1 0

8 7 6 5 4 3 2 1 0

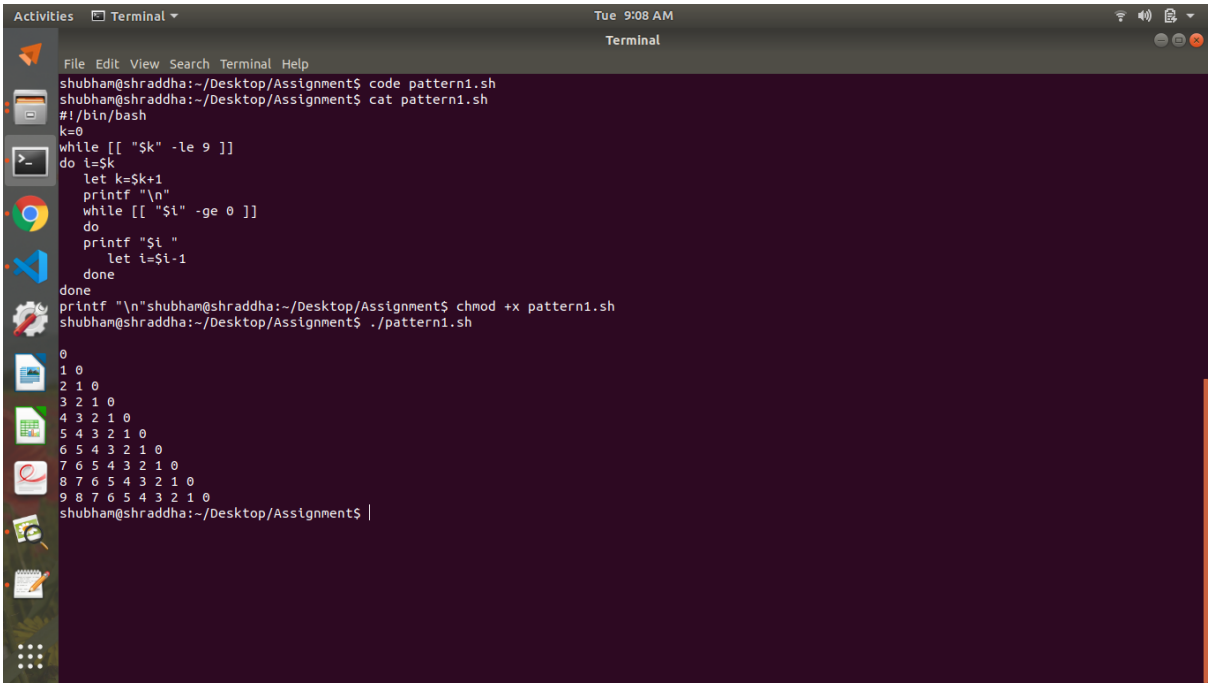
9 8 7 6 5 4 3 2 1 0

Soln-

```
shubham@shraddha:~/Desktop/Assignment$ code pattern1.sh
shubham@shraddha:~/Desktop/Assignment$ cat pattern1.sh
#!/bin/bash
k=0
while [[ "$k" -le 9 ]]
do i=$k
   let k=$k+1
   printf "\n"
   while [[ "$i" -ge 0 ]]
   do
   printf "$i "
      let i=$i-1
   done
done
printf "\n"shubham@shraddha:~/Desktop/Assignment$ chmod +x pattern1.sh
shubham@shraddha:~/Desktop/Assignment$ ./pattern1.sh

0
1 0
2 1 0
```

3 2 1 0
4 3 2 1 0
5 4 3 2 1 0
6 5 4 3 2 1 0
7 6 5 4 3 2 1 0
8 7 6 5 4 3 2 1 0
9 8 7 6 5 4 3 2 1 0



Qus 7-Write a program using for loop to print

*

*

* *

* * *

* * * *

* * * *

* * *

* *

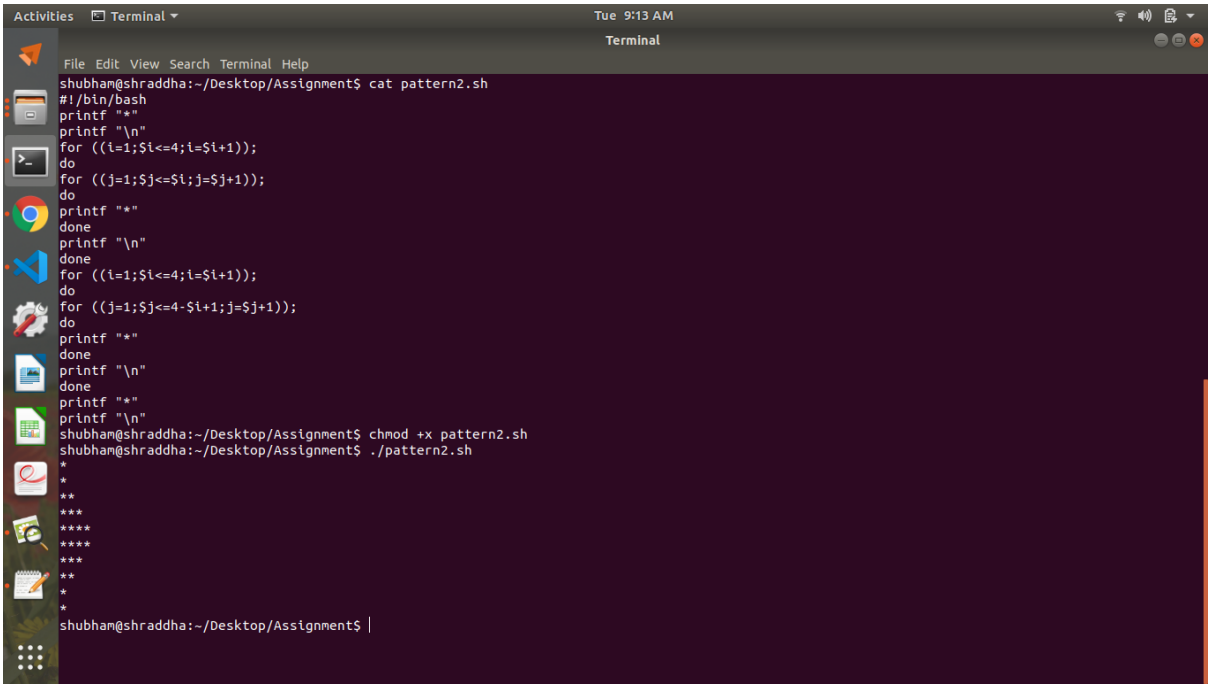
*

*

Soln-

```
shubham@shraddha:~/Desktop/Assignment$ cat pattern2.sh
#!/bin/bash
printf "*"
printf "\n"
for ((i=1;$i<=4;i=$i+1));
do
for ((j=1;$j<=$i;j=$j+1));
do
printf "*"
done
printf "\n"
done
for ((i=1;$i<=4;i=$i+1));
do
for ((j=1;$j<=4-$i+1;j=$j+1));
do
printf "*"
done
printf "\n"
```

```
done
printf "*"
printf "\n"
shubham@shraddha:~/Desktop/Assignment$ chmod +x pattern2.sh
shubham@shraddha:~/Desktop/Assignment$ ./pattern2.sh
*
*
**
***
****
****
***
**
*
*
```

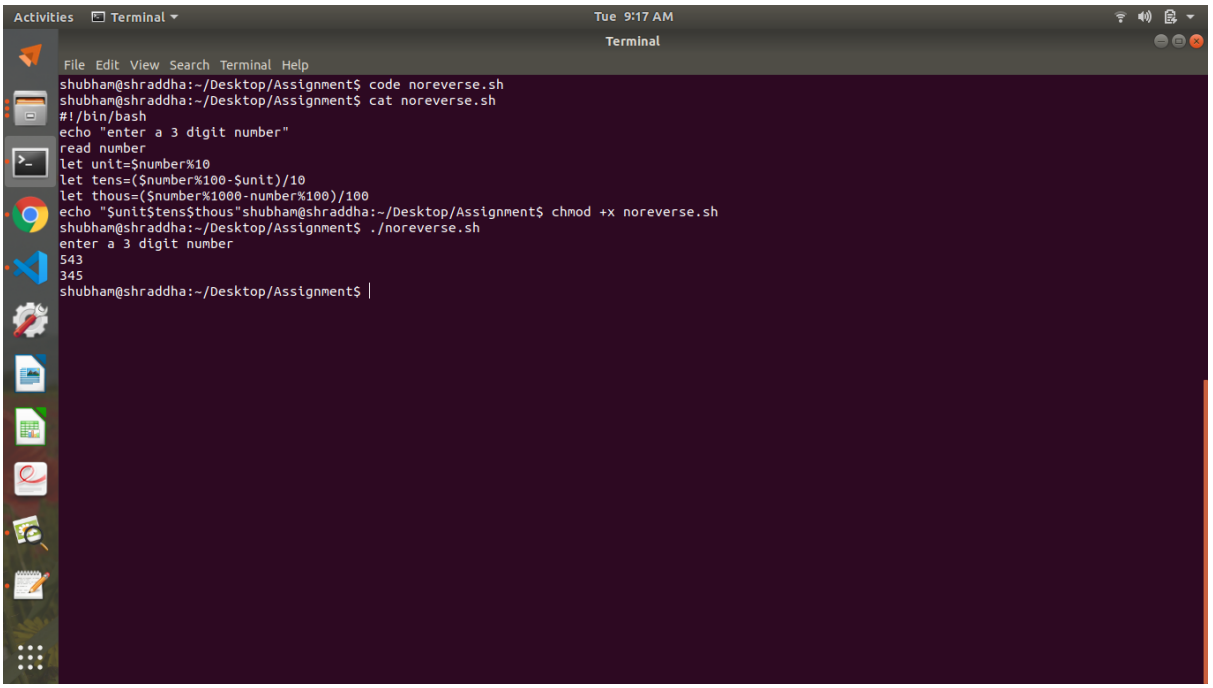


Qus 8. Write a script to print given number in reverse order, for eg. If

number is 123 it must print as 321.

Soln-

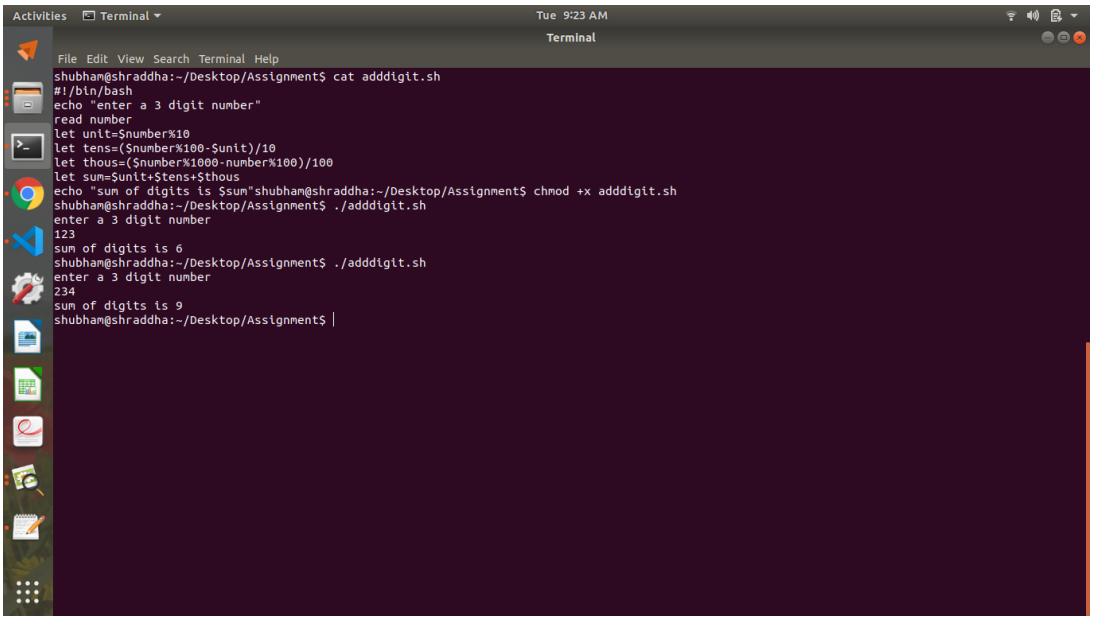
shubham@shraddha:~/Desktop/Assignment$ code noreverse.sh
shubham@shraddha:~/Desktop/Assignment$ cat noreverse.sh
#!/bin/bash
echo "enter a 3 digit number"
read number
let unit=$number%10
let tens=($number%100-$unit)/10
let thous=($number%1000-number%100)/100
echo "$unit$tens$thous"shubham@shraddha:~/Desktop/Assignment$
chmod +x noreverse.sh
shubham@shraddha:~/Desktop/Assignment$ ./noreverse.sh
enter a 3 digit number
543
345



Qus 9. Write script to print the sum of all the digits of a given number.For eg. If the number is 123, sum of all the digits will be 1+2+3 = 6.

Soln-

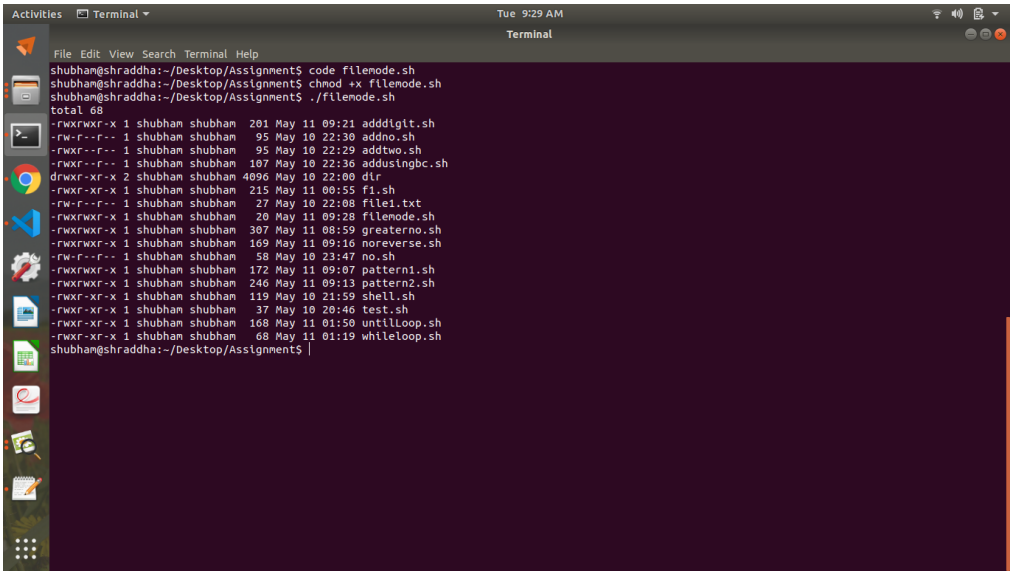
```
shubham@shraddha:~/Desktop/Assignment$ cat adddigit.sh
#!/bin/bash
echo "enter a 3 digit number"
read number
let unit=$number%10
let tens=($number%100-$unit)/10
let thous=($number%1000-number%100)/100
let sum=$unit+$tens+$thous
echo "sum of digits is $sum"shubham@shraddha:~/Desktop/Assignment$ chmod +x
adddigit.sh
shubham@shraddha:~/Desktop/Assignment$ ./adddigit.sh
enter a 3 digit number
123
sum of digits is 6
shubham@shraddha:~/Desktop/Assignment$ ./adddigit.sh
enter a 3 digit number
234
sum of digits is 9
```



Qus 10.Create a file named file.txt and write a shell script to check is a file is readable , writable and executable.

Sol-

```
shubham@shraddha:~/Desktop/Assignment$ code filemode.sh
shubham@shraddha:~/Desktop/Assignment$ chmod +x filemode.sh
shubham@shraddha:~/Desktop/Assignment$ ./filemode.sh
total 68
-rwxrwxr-x 1 shubham shubham  201 May 11 09:21 adddigit.sh
-rw-r--r-- 1 shubham shubham   95 May 10 22:30 addno.sh
-rwxr--r-- 1 shubham shubham   95 May 10 22:29 addtwo.sh
-rwxr--r-- 1 shubham shubham  107 May 10 22:36 addusingbc.sh
drwxr-xr-x 2 shubham shubham 4096 May 10 22:00 dir
-rwxr-xr-x 1 shubham shubham  215 May 11 00:55 f1.sh
-rw-r--r-- 1 shubham shubham   27 May 10 22:08 file1.txt
-rwxrwxr-x 1 shubham shubham   20 May 11 09:28 filemode.sh
-rwxrwxr-x 1 shubham shubham  307 May 11 08:59 greaterno.sh
-rwxrwxr-x 1 shubham shubham  169 May 11 09:16 noreverse.sh
-rw-r--r-- 1 shubham shubham   58 May 10 23:47 no.sh
-rwxrwxr-x 1 shubham shubham  172 May 11 09:07 pattern1.sh
-rwxrwxr-x 1 shubham shubham  246 May 11 09:13 pattern2.sh
-rwxr-xr-x 1 shubham shubham  119 May 10 21:59 shell.sh
-rwxr-xr-x 1 shubham shubham   37 May 10 20:46 test.sh
-rwxr-xr-x 1 shubham shubham  168 May 11 01:50 untilLoop.sh
-rwxr-xr-x 1 shubham shubham   68 May 11 01:19 whileloop.sh
```



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