

Title: Shell scripting

Objective

- To learn about shell scripting
- To learn about different shell scripting commands
- To learn to program on the shell

Background

Shell

The shell provides users with an interface to the UNIX system. It gathers input from users and executes programs based on that input. After successful executions of command, it displays the output. A shell is an environment in which we can run our commands, programs, and shell scripts. There are different types of shells, just as there are different operating systems. Each type of shell has its own set of recognized commands and functions.

Shell Scripting

Shell scripting is writing a series of commands for the shell to execute. It can combine lengthy and repetitive sequences of commands into a single and simple script, which can be stored and executed anytime. This reduces the effort required by the end user. The shell script is interpreted and not compiled. There are many types of shells. In this session, we are learning BASH Shell scripting.

Lab Activities

1.

```
echo "Arithmetic operations"
echo "enter (a)="
read a
echo "enter (b)="
read b
echo "add=`expr $a + $b`"
echo "mult=`expr $a \* $b`"
echo "div=`expr $a / $b`"
echo "mod=`expr $a % $b`"
echo "sub=`expr $a
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro1.sh
Airthmetic operations
enter (a)=
10
enter (b)=
5
add=15
mult=50
div=2
mod=0
sub=5
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

2.

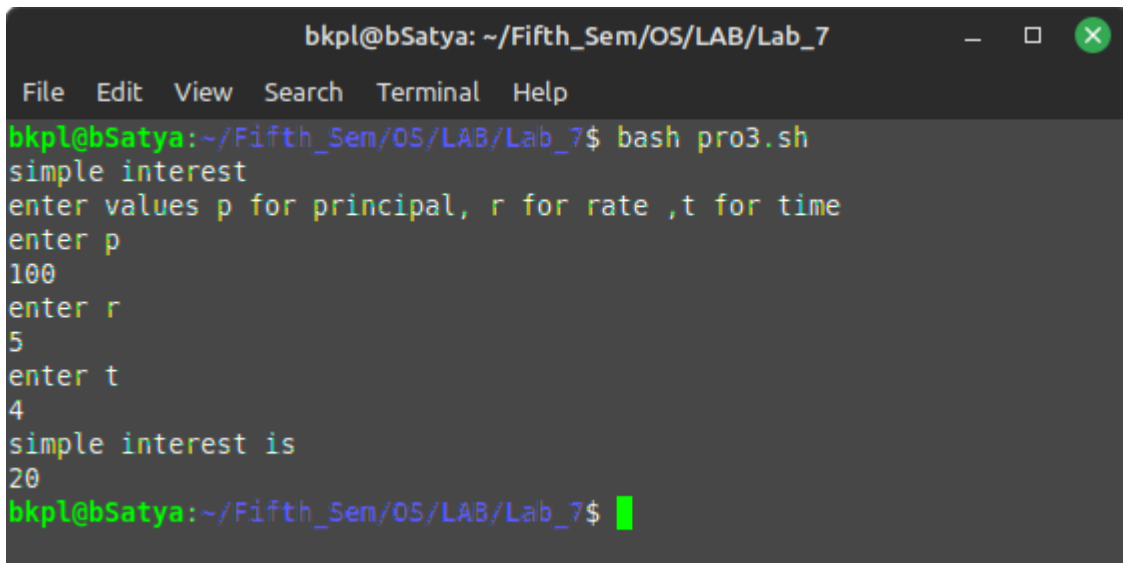
```
echo "all arithmetic operations on floating point"
echo "enter two variables"
echo "enter a"
read a
echo "enter b"
read b
sum=` echo $a + $b | bc `
sub=` echo $a - $b | bc `
div=` echo $a / $b | bc `
mul=` echo $a * $b | bc `
mod=` echo $a % $b | bc `
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro2.sh
all airthmetic operations on floating point
enter two variables
enter a
6.5
enter b
3.5
sum= 10.0
sub=3.0
div= 1
mul= 22.7
mod= 3.0
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

3.

```
echo "simple interest"
echo "enter values p for principal , r for rate ,t for time"
echo "enter p"
read p
echo "enter r"
read r
echo "enter t"
read t
```

```
echo "simple interest is"
s=`expr $p \* $r \* $t `
si=`echo $s / 100 | bc`
echo "$si"
```

A screenshot of a terminal window titled "bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7". The terminal shows the execution of a script named "pro3.sh". The script prompts the user to enter values for principal (p), rate (r), and time (t). The user enters 100 for p, 5 for r, and 4 for t. The script then calculates the simple interest and outputs "simple interest is 20".

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro3.sh
simple interest
enter values p for principal, r for rate ,t for time
enter p
100
enter r
5
enter t
4
simple interest is
20
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$
```

4.

```
echo "Area of circle"
echo "Enter the radius of the circle"
read r
a1=`echo $r \* $r \* 3.14 | bc `
echo "$a1"
echo Area of rectangle
echo Enter the length and the breath of the rectangle
echo enter the length
read l
echo enter weight of rectangle
read b
a2=`echo $l \* $b | bc `
echo $a2
echo Area of square
echo enter side of square a
read a
a3=`echo $a \* $a | bc `
echo $a3
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro4.sh
Area of circle
Enter the radius of the circle
4
50.24
Area of rectangle
Enter the length and the brith of the rectangle
enter the length
10
enter wight of rectangle
21
210
Area of square
enter side of square a
4
16
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

5.

echo "script to find given no is +ve ,-ve or 0"

echo enter value

read a

if [\$a -gt 0]

then

echo no. is positive

else

if [\$a -lt 0]

then

echo no. is negative

else

echo no. is zero

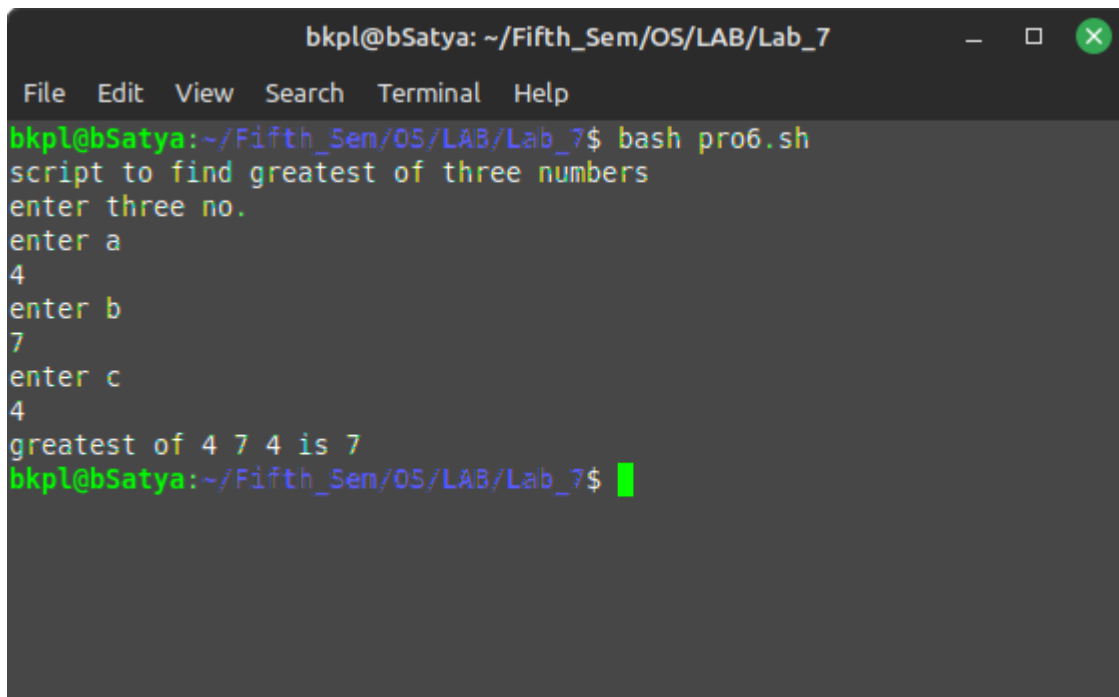
fi

fi

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro5.sh
script to find given no is +ve ,-ve or 0
enter value
4
no. is positive
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro5.sh
script to find given no is +ve ,-ve or 0
enter value
-5
no. is negative
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

6.

```
echo "script to find greatest of three numbers"
echo enter three no.
echo enter a
read a
echo enter b
read b
echo enter c
read c
r=$a
if [ $b -gt $r ]
then
r=$b
fi
if [ $c -gt $r ]
then
r=$c
fi
echo greatest of $a $b $c is $r
```

A screenshot of a terminal window titled "bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal shows the execution of a script named "pro6.sh". The output of the script is: "script to find greatest of three numbers", "enter three no.", "enter a", "4", "enter b", "7", "enter c", "4", "greatest of 4 7 4 is 7". The prompt "bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7\$ " is visible at the bottom.

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro6.sh
script to find greatest of three numbers
enter three no.
enter a
4
enter b
7
enter c
4
greatest of 4 7 4 is 7
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$
```

7.

```
echo "to find leap year"
echo enter year
read year
if [ `expr $year % 100` -eq 0 -a `expr $year % 400` -eq 0 ]
then
    echo "$year is a leap year"
elif [ `expr $year % 100` -ne 0 -a `expr $year % 4` -eq 0 ]
then
    echo "$year is a leap year"
else
    echo "$year is a not leap year"
fi
```

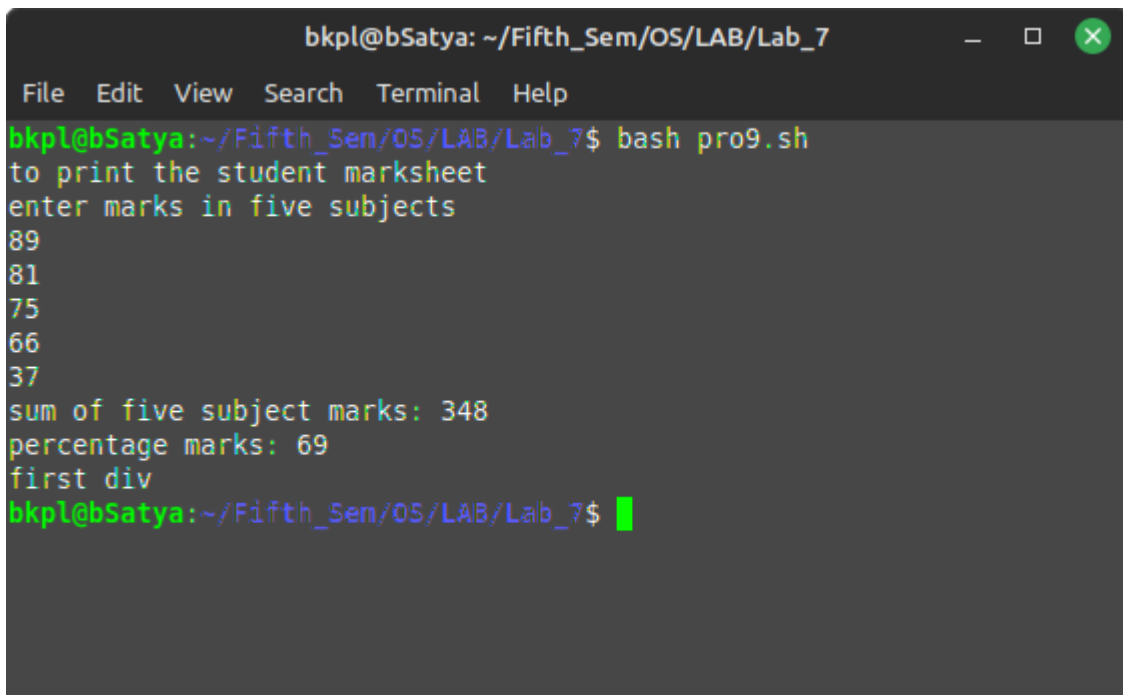
```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro7.sh
to find leap year
enter year
2000
2000 is a leap year
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro7.sh
to find leap year
enter year
2010
2010 is a not leap year
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

- 8.
- ```
echo to check no. is even or not
echo enter no
read a
e=`expr $a % 2`
if [$e -eq 0]
then
 echo even no
else
 echo odd
fi
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro8.sh
to cheack no. is even or not
enter no
6
even no
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro8.sh
to cheack no. is even or not
enter no
7
odd
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

9.

```
echo to print the student marksheet
echo "enter marks in five subjects"
read s1
read s2
read s3
read s4
read s5
sum=`echo $s1 + $s2 + $s3 + $s4 + $s5 | bc `
echo "sum of five subject marks: $sum "
per=`echo $sum / 5 | bc `
echo "percentage marks: $per "
if [$per -ge 60]
then
 echo first div
elif [$per -ge 50]
then
 echo second div
elif [$per -ge 40]
then
 echo third div
else
 echo fail
fi
```

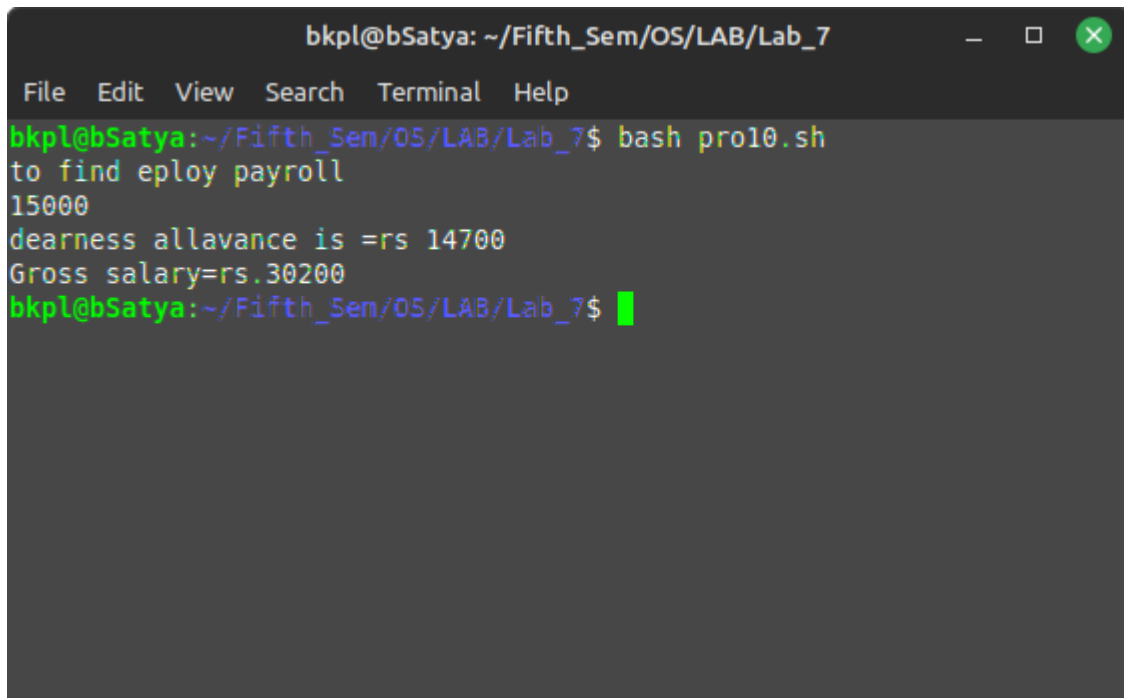


```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro9.sh
to print the student marksheet
enter marks in five subjects
89
81
75
66
37
sum of five subject marks: 348
percentage marks: 69
first div
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$
```

10.

```
echo "to find employee payroll"
read basic
if [$basic -lt 1500]
then
 hra=`echo $basic * 10 / 100 | bc `
 da=`expr $basic * 90 / 100 100 | bc `
else
 hra=500
 da=`echo $basic * 98 / 100 | bc `
```

```
echo dearness allowance is =rs $da
fi
gs=` echo $basic + $hra +$da | bc `
echo Gross salary=rs.$gs
```



```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro10.sh
to find eploy payroll
15000
dearness allavance is =rs 14700
Gross salary=rs.30200
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$
```

11.

```
echo to generate the table of any number
echo enter a number
read num
j=1
while [$j -le 10]
do
res=` expr $j * $num `
echo "$num X $j= $res "
j=` expr $j + 1 `
done
```



```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro11.sh
to generate the table of any number
enter a number
6
6 X 1= 6
6 X 2= 12
6 X 3= 18
6 X 4= 24
6 X 5= 30
6 X 6= 36
6 X 7= 42
6 X 8= 48
6 X 9= 54
6 X 10= 60
6 X 11= 66
6 X 12= 72
6 X 13= 78
```

12. echo program to generate all possible combinations of 1 2 3
- ```
clear
for i in 1 2 3
do
for j in 1 2 3
do
for k in 1 2 3
do
echo $i $j $k
done
done
done
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
1 1 1
1 1 2
1 1 3
1 2 1
1 2 2
1 2 3
1 3 1
1 3 2
1 3 3
2 1 1
2 1 2
2 1 3
2 2 1
2 2 2
2 2 3
2 3 1
2 3 2
2 3 3
3 1 1
3 1 2
3 1 3
3 2 1
3 2 2
3 2 3
3 3 1
3 3 2
3 3 3
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$
```

- 13.
- ```
echo program copy two files
echo "enter source file name"
read file1
echo "enter destination file name"
read file2
if cp $file1 $file2 2>rav
then
 echo "file copied successfully"
else
 echo "unable to copy"
fi
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro13.sh
program copy two files
enter source file name
file1.txt
enter destination file name
file2.txt
file copied successfully
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

14.

```
clear
echo program to calculate factorial of a given no.
j=1
k=1
echo Enter the value of required factorial
read num
while [$j -le $num]
do
k=`expr $k * $j`
j=`expr $j + 1`
done
echo the factorial of $num is $k
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
program to calculate factorial of a given no.
Enter the value of required factorial
5
the factorial of 5 is 120
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

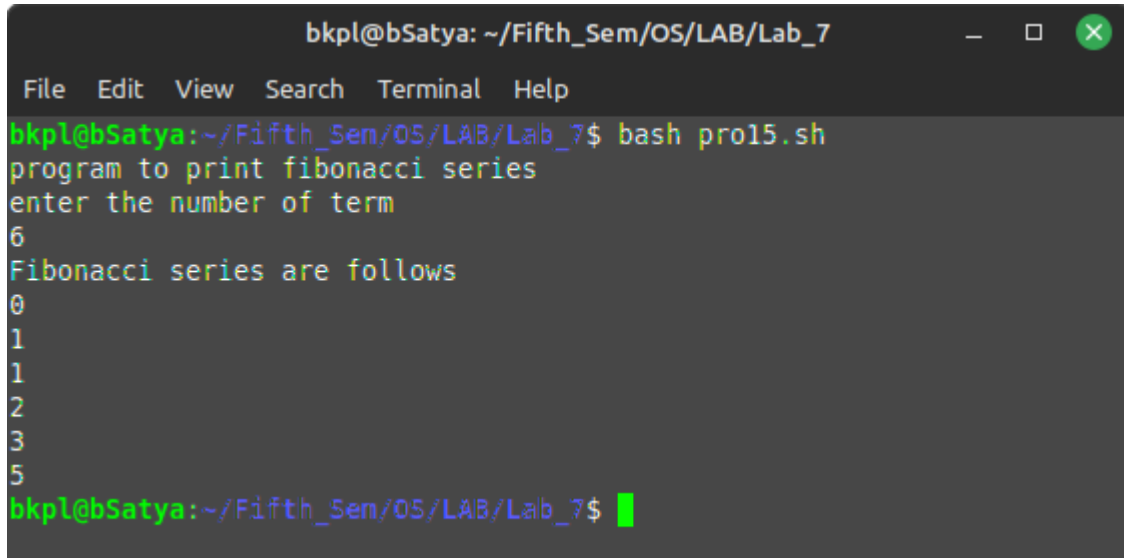
15.

```
echo program to print fibonacci series
echo enter the number of term
read num
num=`expr $num - 2`
a=0
b=1
echo "Fibonacci series are follows"
echo $a
```

```

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

```



A terminal window titled 'bkpl@bSatya: ~/Fifth\_Sem/OS/LAB/Lab\_7' showing the execution of a script named 'pro15.sh'. The script prompts the user to enter the number of terms, and the user enters '6'. The script then prints the Fibonacci series: 0, 1, 1, 2, 3, 5.

```

bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro15.sh
program to print fibonacci series
enter the number of term
6
Fibonacci series are follows
0
1
1
2
3
5
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █

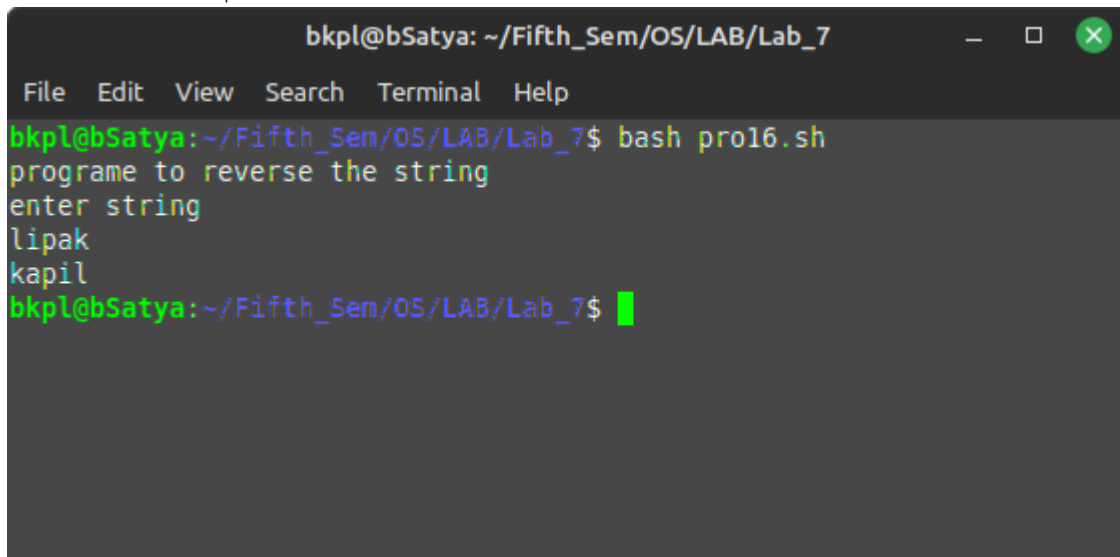
```

16.

```

echo programe to reverse the string
echo enter string
read str
echo $str | rev

```



A terminal window titled 'bkpl@bSatya: ~/Fifth\_Sem/OS/LAB/Lab\_7' showing the execution of a script named 'pro16.sh'. The script prompts the user to enter a string, and the user enters 'lipak'. The script then prints the reversed string: 'kapil'.

```

bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro16.sh
programe to reverse the string
enter string
lipak
kapil
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █

```

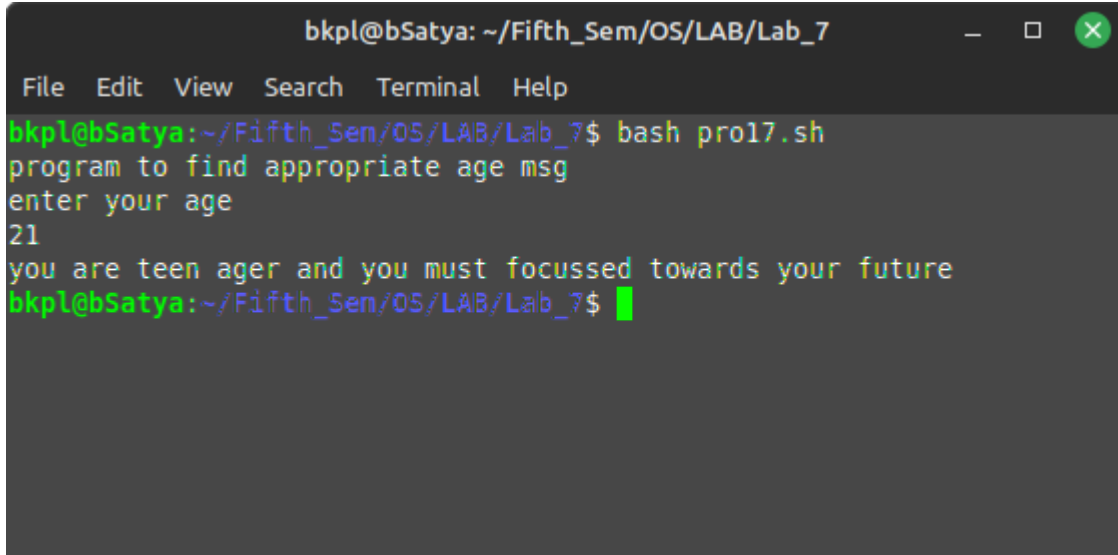
17.

```

echo program to find appropriate age msg
echo enter your age
read age
if [$age -ge 18 -o $age -lt 30]
then

```

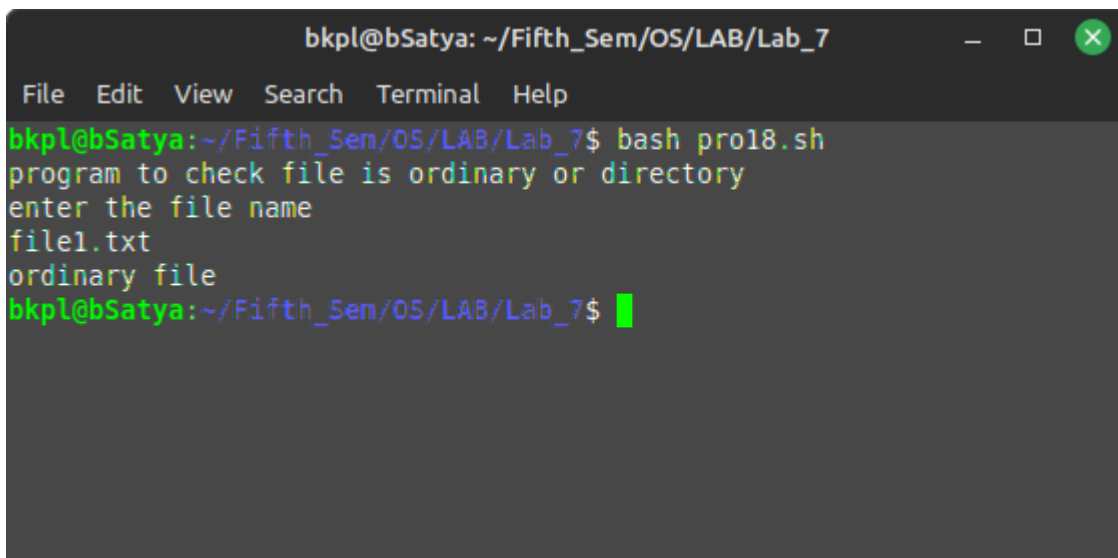
```
 echo you are teen ager and you must focussed towards your future
elif [$age -ge 31 -o $age -lt 60]
then
 echo take care your family
elif [$age -ge 61 -o $age -ge 100]
then
 echo ecpend your time happily
fi
```

A terminal window titled 'bkpl@bSatya: ~/Fifth\_Sem/OS/LAB/Lab\_7' with a menu bar (File, Edit, View, Search, Terminal, Help). The prompt is 'bkpl@bSatya:~/Fifth\_Sem/OS/LAB/Lab\_7\$'. The user enters 'bash pro17.sh'. The script outputs 'program to find appropriate age msg', prompts 'enter your age', receives input '21', and outputs 'you are teen ager and you must focussed towards your future'. The prompt returns to 'bkpl@bSatya:~/Fifth\_Sem/OS/LAB/Lab\_7\$' with a green cursor.

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro17.sh
program to find appropriate age msg
enter your age
21
you are teen ager and you must focussed towards your future
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

18.

```
echo "program to check file is ordinary or directory"
echo "enter the file name"
read fl
if [-d $fl]
then
echo "directory file"
else
echo "ordinary file"
fi
```

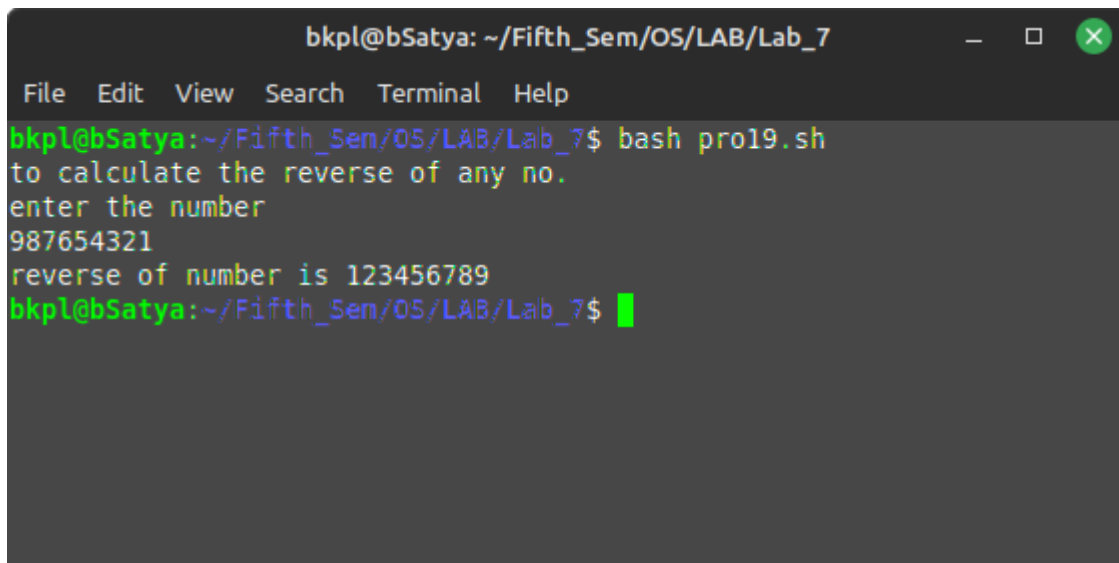
A terminal window titled 'bkpl@bSatya: ~/Fifth\_Sem/OS/LAB/Lab\_7' with a menu bar (File, Edit, View, Search, Terminal, Help). The prompt is 'bkpl@bSatya:~/Fifth\_Sem/OS/LAB/Lab\_7\$'. The user enters 'bash pro18.sh'. The script outputs 'program to check file is ordinary or directory', prompts 'enter the file name', receives input 'file1.txt', and outputs 'ordinary file'. The prompt returns to 'bkpl@bSatya:~/Fifth\_Sem/OS/LAB/Lab\_7\$' with a green cursor.

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro18.sh
program to check file is ordinary or directory
enter the file name
file1.txt
ordinary file
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

19.

echo to calculate the reverse of any no.

```
echo enter the number
read no
rev=0
while [$no -gt 0]
do
d=`expr $no % 10 `
rev=`expr $rev * 10 `
rev=`expr $rev + $d `
no=`expr $no / 10 `
done
echo reverse of number is $rev
```

A screenshot of a terminal window with a dark background. The title bar shows the user 'bkpl@bSatya' and the directory '~/Fifth\_Sem/OS/LAB/Lab\_7'. The menu bar includes 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The terminal content shows the user running 'bash pro19.sh', which outputs 'to calculate the reverse of any no.' and 'enter the number'. The user enters '987654321', and the script outputs 'reverse of number is 123456789'. The prompt returns to the user.

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro19.sh
to calculate the reverse of any no.
enter the number
987654321
reverse of number is 123456789
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$
```

20.

```
echo "to calculate the sum of digits of a given number"
echo enter the number
read no
sum=0
while [$no -gt 0]
do
d=`expr $no % 10 `
sum=`expr $sum + $d `
no=`expr $no / 10 `
done
echo "sum of digits is $sum"
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro20.sh
to calculate the sum of digits of a given number
enter the number
123456789
sum of digits is 45
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$
```

21.

```
echo to calculate the length of any given string
echo enter the string
read s
len=`expr $s | wc -c`
len=`expr $len - 1`
echo length of string $s is $len
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro21.sh
to calculate the length of any given string
enter the string
lipak
length of string lipak is 5
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$
```

22.

```
echo "program to implement the break statement"
a=0
while [$a -lt 10]
do
echo $a
if [$a -eq 5]
then
break
fi
a=`expr $a + 1`
done
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro22.sh
program to implement the break statement
0
1
2
3
4
5
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

23.

```
echo "program to implement the continue statement"
num="1 2 3 4 5 6 7"
for nu in $num
do
p=`expr $nu % 2 `
if [$p -eq 0]
then
echo "Number is an even"
continue
fi
echo found odd number
done
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro23.sh
program to implement the continue statement
found odd number
Number is an even
found odd number
Number is an even
found odd number
Number is an even
found odd number
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

24.

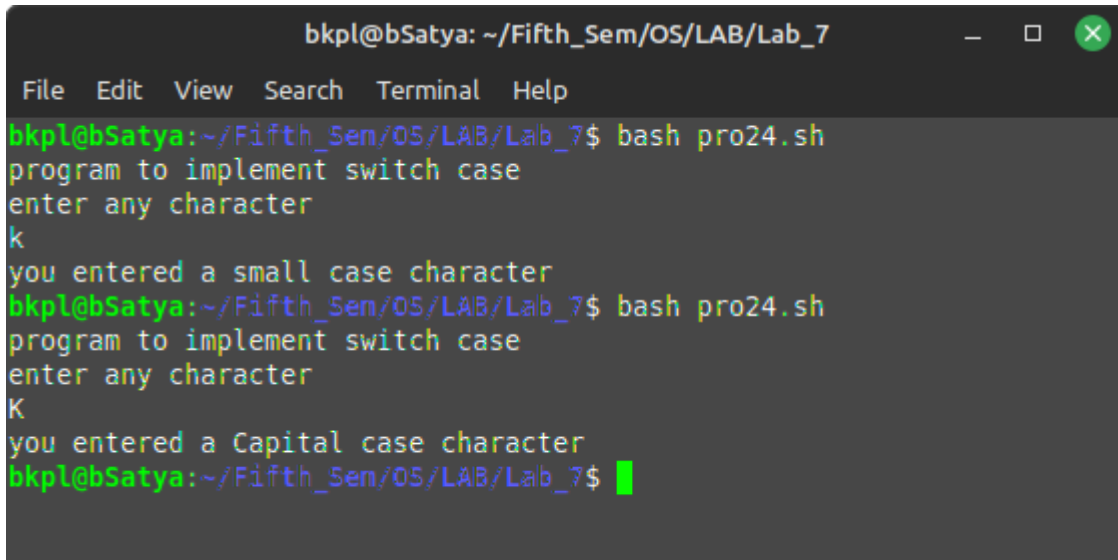
```
echo program to implement switch case
echo enter any character
read char
case $char in [A-Z])
echo you entered a Capital case character;;
```



```

[a-z])
echo you entered a small case character;;
[0-9])
echo you entered a digit;;
?)
echo you entered special character;;
*)
echo you entered more than one character;;
esac

```



```

bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro24.sh
program to implement switch case
enter any character
k
you entered a small case character
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro24.sh
program to implement switch case
enter any character
K
you entered a Capital case character
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █

```

25.

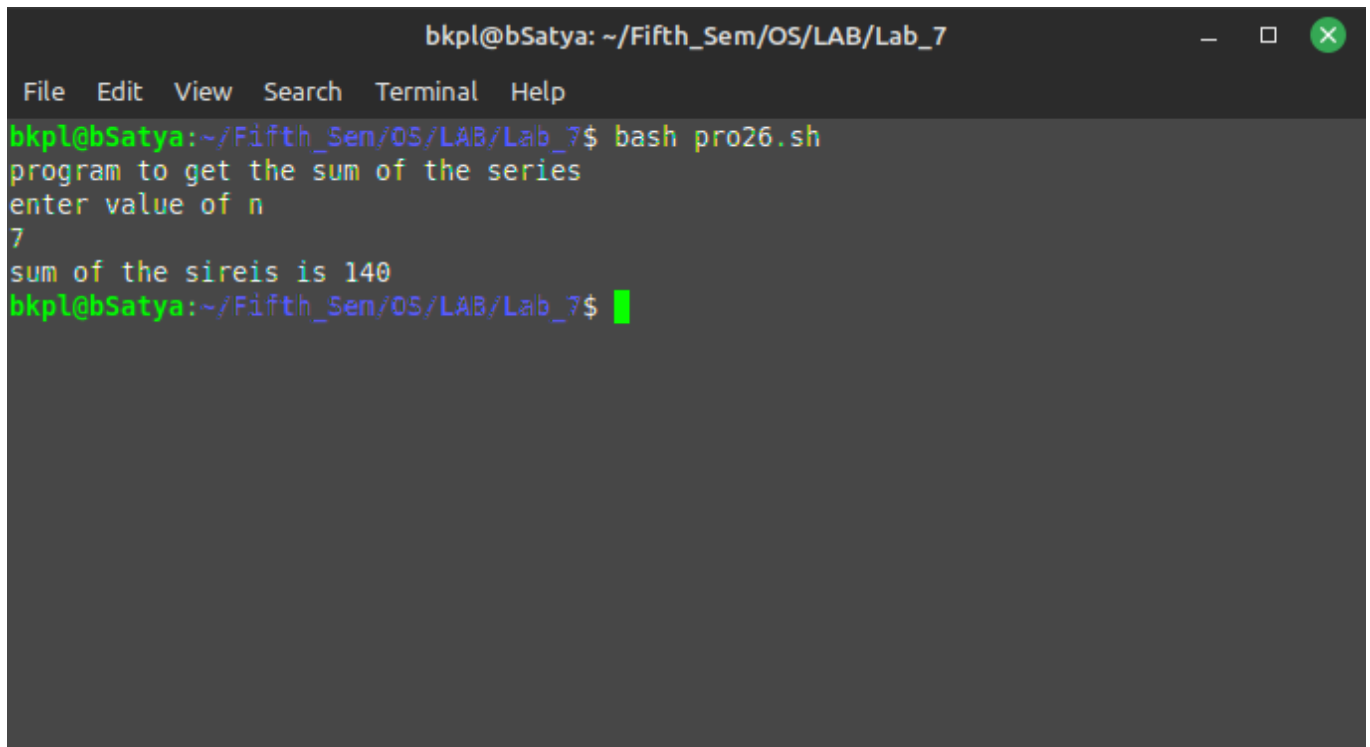
```

echo program to generate prime no. between two given inputs
echo enter low range
read low
echo enter max range
read max
while [$low -le $max]
do
i=2
while [$i -le `expr $low - 1`]
Do
if [`expr $low % $i` -eq 0]
then
break
else
i=`expr $i + 1`
fi
done
if [$low -eq $i]
then
echo $low
fi
low=`expr $low + 1`
done

```

26.

```
echo "program to get the sum of the series"
echo enter value of n
read n
a=`expr 2 * $n + 1 `
b=`expr $n + 1 `
c=`expr $a * $b `
d=`expr $c * $n `
sum=`expr $d / 6 `
echo "sum of the sireis is $sum"
```

A terminal window titled 'bkpl@bSatya: ~/Fifth\_Sem/OS/LAB/Lab\_7' with standard window controls. The terminal shows the execution of a script named 'pro26.sh'. The output of the script is: 'program to get the sum of the series', 'enter value of n', '7', and 'sum of the sireis is 140'. The prompt returns to the user.

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro26.sh
program to get the sum of the series
enter value of n
7
sum of the sireis is 140
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$
```

27.

```
echo program to calculate the power of any no.
echo enter number
read num
echo enter power
read pow
counter=0
ans=1
while [$pow -ne $counter]
do
ans=`expr $ans * $num `
counter=`expr $counter + 1 `
done
echo "$num power of $power $ans"
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro27.sh
program to calculate the power of any no.
enter number
5
enter power
4
5 power of 625
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$
```

28.

```
echo program to find sum of the series
echo "Enter a number:"
read num
i=1
sum=0
while [$i -le $num]
do
sum=`expr $sum + $i`
i=`expr $i + 1`
done
echo "The sum of first $num numbers is: $sum"
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro28.sh
program to find sum of the series
Enter a number:
7
The sum of first 7 numbers is: 28
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$
```

29.

```
echo program to check no. is prime or not
echo enter the number
read no
count=2
while [$count -le `expr $no / 2 + 1`]
do
if [`expr $no % $count` -eq 0]
then
f=1
break
else
f=0
fi
count=`expr $count + 1`
done
if [$f -eq 0]
then
echo prime number
else
echo not prime number
fi
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro29.sh
program to check no. is prime or not
enter the number
9
not prime number
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro29.sh
program to check no. is prime or not
enter the number
3
prime number
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

30.

```
echo program to check no. is armstrong or not
echo enter the number
read no
sum=0
dup=$no
while [$no -gt 0]
do
d=`expr $no % 10 `
d=`expr $d * $d * $d `
sum=`expr $sum + $d `
no=`expr $no / 10 `
done
if [$sum -eq $dup]
then
echo "armstrong number"
else
echo not armstrong number
fi
```

```
bkpl@bSatya: ~/Fifth_Sem/OS/LAB/Lab_7
File Edit View Search Terminal Help
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro30.sh
program to check no. is armstrong or not
enter the number
153
armstrong number
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ bash pro30.sh
program to check no. is armstrong or not
enter the number
351
not armstrong number
bkpl@bSatya:~/Fifth_Sem/OS/LAB/Lab_7$ █
```

## Conclusion

- Learned about shell scripting
- Learned about different shell scripting commands
- Learned to program on the shell