Practical – 7
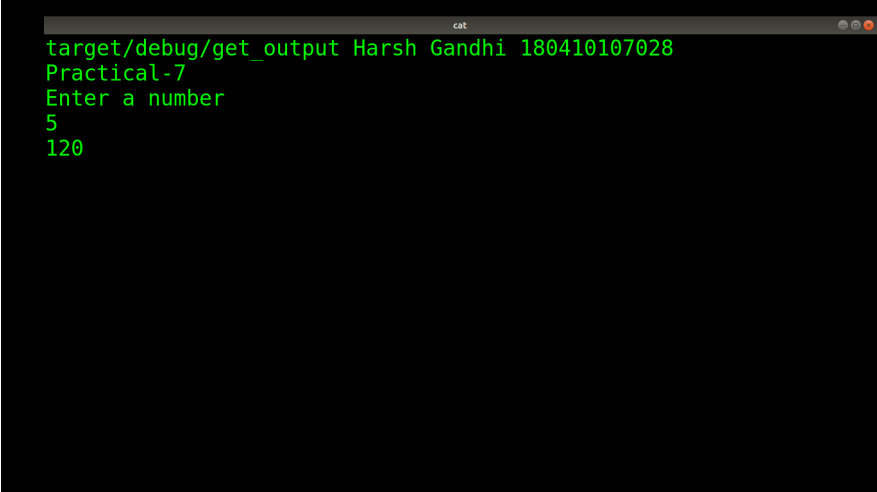
1)Write a shell script to find factorial of given
number n

```
echo "target/debug/get_output Harsh Gandhi 180410107028"
echo "Practical-7"
echo "Enter a number"
read num
echo $num
fact=1
for((i=2;i<=num;i++))
{
fact=$((fact * i))
}
echo $fact
```

```
                              cat                          ● ● ✖
target/debug/get_output Harsh Gandhi 180410107028
Practical-7
Enter a number
5
120
```

2) write a shell script to find whether given number is prime or not

```
echo "target/debug/get_output Harsh Gandhi 180410107028"
echo "Practical-7"
echo "Enter the number"
read a
echo $a
i=2
z=0
echo $a
while [ $i -lt $a ]
do
s=`expr $a % $i`
if [ $s -eq $z ]
then
echo "Not Prime"
exit
else
i=`expr $i + 1`
fi
done
echo "Prime number"
```

```
target/debug/get_output Harsh Gandhi 180410107028
Practical-7
Enter the number
5
5
Prime number
```

Practical – 8

1).Write a shell script to check entered string is palindrome or not

```
echo "target/debug/get_output Harsh Gandhi 180410107028"
echo "Practical-8"
echo -n "Enter number : "
read n
echo $n
sd=0
rev=""
on=$n
echo $n
while [ $n -gt 0 ]
do
    sd=$(( $n % 10 )) # get Remainder
    n=$(( $n / 10 ))   # get next digit
    # store previous number and current digit in reverse
    rev=$( echo ${rev}${sd} )
done
if [ $on -eq $rev ];
then
    echo "Number is palindrome"
else
    echo "Number is NOT palindrome"
fi
```

```
target/debug/get_output Harsh Gandhi 180410107028
Practical-8
Enter number : 5
5
Number is palindrome
```

2) Write a shell script which will generate first n Fibonacci numbers like: 1, 1, 2, 3, 5, 8,...

```
echo "target/debug/get_output Harsh Gandhi 180410107028"
echo "Practical-8"
echo "Enter a number"
read N
echo $N
a=0
b=1
echo "The Fibonacci series is : "
for (( i=0; i<N; i++ ))
do
    echo -n "$a "
    fn=$((a + b))
    a=$b
    b=$fn
done
```

```
target/debug/get_output Harsh Gandhi 180410107028
Practical-8
Enter a number
5
The Fibonacci series is :
0 1 1 2 3
```

Practical – 9

Write a shell script to generate mark sheet of a student. Take 3 subjects, calculate and display total marks, percentage and Class obtained by the student.

```
echo "target/debug/get_output Harsh Gandhi 180410107028"
echo "Practical-9"
echo "Enter the three subject marks for the student"
read m1 m2 m3
echo $m1
echo $m2
echo $m3
sum1=`expr $m1 + $m2 + $m3`
echo "Sum of 3 subjects are:" $sum1
per=`expr $sum1 / 3`
echo "Percentage:" $per
if [ $per -ge 60 ]
then
echo "You get Distinction"
elif [ $per -ge 50 ]
then
echo "You get First class"
elif [ $per -ge   40 ]
then
echo "You get Second class"
else
    echo "You get Fail"
fi
```

```
target/debug/get_output Harsh Gandhi 180410107028
Practical-9
Enter the three subject marks for the student
5


Sum of 3 subjects are:
Percentage:
You get Fail
```
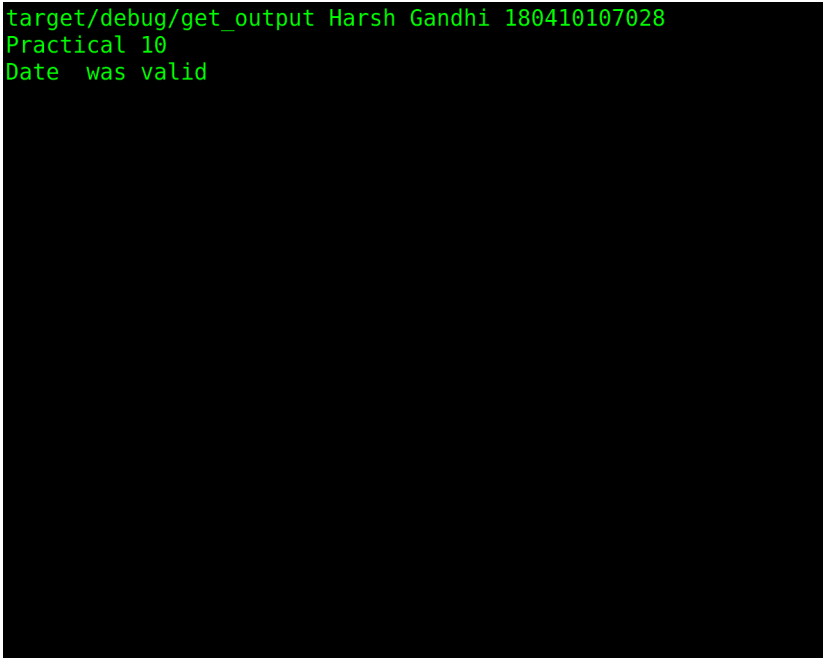
Practical-10

1). Write a menu driven shell script to make calculator using switch case.

```
echo "target/debug/get_output Harsh Gandhi 180410107028"
read a
echo $a
read b
echo $b
echo "Enter Choice :"
echo "1. Addition"
echo "2. Subtraction"
echo "3. Multiplication"
echo "4. Division"
read ch
echo $ch
case $ch in
1)res=`echo $a + $b | bc`
;;
2)res=`echo $a - $b | bc`
;;
3)res=`echo $a \* $b | bc`
;;
4)res=`echo "scale=2; $a / $b" | bc`
;;
esac
echo "Result : $res"
```

```
target/debug/get_output Harsh Gandhi 180410107028
5
4
Enter Choice :
1. Addition
2. Subtraction
3. Multiplication
4. Division
3
Result : 20
```

2) Write a shell script to validate the entered date.

```
echo "target/debug/get_output Harsh Gandhi 180410107028"
echo "Practical 10"
usrdate=$1
date -d "$usrdate"    > /dev/null 2>&1
if [ $? -eq 0 ]; then
     echo "Date $usrdate was valid"
else
     echo "Date $usrdate was invalid"
fi
```

```
target/debug/get_output Harsh Gandhi 180410107028
Practical 10
Date  was valid
```