Sum and Reverse of Digits in a Number

```
#!bin/bash
echo 'enter the number'
read num
s=0
rev=0
while((num>0))
do
((rem=num%10))
((rev=rem+(rev*10)))
((sum=sum+rem))
((num=num/10))
done
echo Sum is $sum
echo Reverse is $rev
```

Output

```
42813@user:/mnt/42813/os$ bash sum3.sh
enter the number
12
Sum is 3
Reverse is 21
```

Factorial of A Number

```
#!bin/bash
fact()
{
if((\$1==0))
then
res=1
else
expr=\$((\$1-1))
fact \$expr
res=\$((res*(\$1)))
fi
}
echo 'Enter Number'
read num
fact \$num
echo Factorial is \$res
```

Output

```
42813@user:/mnt/42813/os$ bash fact.sh
Enter Number
5
Factorial is 120
```

Fibonacci Series

```
#!bin/bash
n1=0
n2=1
echo 'Enter the range'
read num
echo 'Series is:'
echo $n1
if ((num>=2))
then
echo $n2
fi
((num=num-2))
while((num!=0))
do
((n=n1+n2))
((n1=n2))
((n2=n))
((num=num-1))
echo $n
done
```

Output

```
#42813@user:/mnt/42813/os$ bash fib.sh
Enter the range
6
Series is:
0
1
1
2
3
```

Armstrong Number

```
#!bin/bash
echo 'Enter the number'
read num
i=0
sum=0
((num1=num))
((num2=num))
while((num>0))
do
((rem=num%10))
((num=num/10))
((i=i+1))
done
while((num1>0))
do
((rem=num1%10))
((num1=num1/10))
res=1
j=1
while((j<=i))
do
((res=res*rem))
((j=j+1))
done
((sum=sum+res))
done
if((sum==num2))
then
echo $num2 is an armstrong number
else
echo $num2 is not an Armstrong number
fi
```

Output

```
42813@user:/mnt/42813/os$ bash arms.sh
Enter the number
141
141 is not an Armstrong number
42813@user:/mnt/42813/os$ bash arms.sh
Enter the number
153
153 is an armstrong number
```