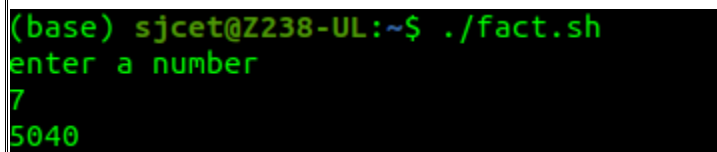


Program 1

```
do
    fact=$((fact * num))
    num=$((num - 1))

done
echo $fact
```

A terminal window with a black background and green text. The prompt is (base) sjcet@Z238-UL:~\$. The user enters ./fact.sh. The prompt changes to enter a number. The user enters 7. The output is 5040.

```
(base) sjcet@Z238-UL:~$ ./fact.sh
enter a number
7
5040
```

Using For loop

```
echo "enter a number"
read num
fact=1
for ((i=2;i<=num;i++))
{
    fact=$((fact * i))
}
echo $fact
```

Sum of all digits - Shell Script

```
echo "Enter a number"
read num
sum=0
while [ $num -gt 0 ]
do
    mod=$((num % 10))
```

```
sum=$((sum + mod))
num=$((num / 10))
done
echo $sum
~
```

```
(base) sjcet@Z238-UL:~$ ./sadd.sh
Enter a number
567
18
```

Shell script to print sum of all digit using **expr**

```
echo "Enter a number"
read num
sum=0
while [ $num -gt 0 ]

do
mod=`expr $num % 10`
sum=`expr $sum + $mod`
num=`expr $num / 10`
done
echo $sum
```

```
(base) sjcet@Z238-UL:~$ vim saddexpr.sh
(base) sjcet@Z238-UL:~$ chmod +x saddexpr.sh
(base) sjcet@Z238-UL:~$ ./saddexpr.sh
Enter a number
56
11
```

Print numbers 1 to 100 using while loop - Shell Script

```
i=1
while [ $i -le 100 ]
do
echo $i
i=$((i+1))
done
```

Same program using expr

```
echo "Enter a number"
read num
sum=0
while [ $num -gt 0 ]

do
mod=`expr $num % 10`
sum=`expr $sum + $mod`
num=`expr $num / 10`
done
echo $sum
```

Print numbers 1 to 100 using while loop - Shell Script

```
i=1
while [ $i -le 100 ]
do
echo $i
i=$((i+1))
done
using expr
i=1
```

```
while [ $i -le 100 ]
```

```
do
```

```
echo $i
```

```
i=`expr $i + 1`
```

```
done
```

using for loop

```
for((i=1;i<=100;i++))
```

```
do
```

```
echo $i
```

```
done
```

Largest of n numbers

```
echo "enter size"
```

```
read n;
```

```
i=1
```

```
max=0
```

```
echo "enter numbers"
```

```
while [ $i -le $n ]
```

```
do
```

```
    read num;
```

```
    if [ $i -eq 1 ]
```

```
    then
```

```
        max=$num
```

```
    else
```

```
        if [ $num -gt $max ]
```

```
        then
```

```
            fi
```

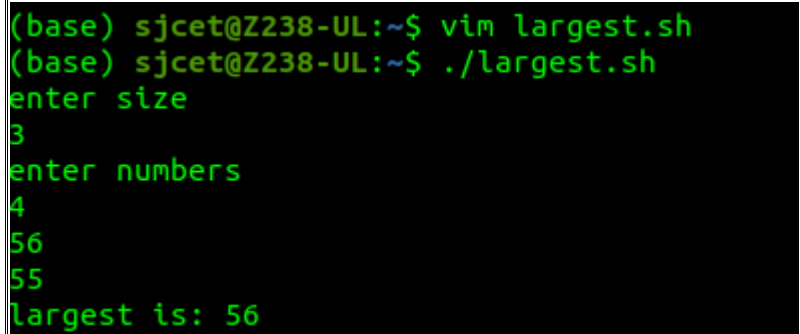
```
    fi
```

```
    i=$((i+1))
```

```
done
```

```
echo "largest is: $max"
```

~



```
(base) sjcet@Z238-UL:~$ vim largest.sh
(base) sjcet@Z238-UL:~$ ./largest.sh
enter size
3
enter numbers
4
56
55
largest is: 56
```

Multiplication of two numbers using expr in shell

```
script
```

```
num1=10
```

```
num2=20
```

```
ans=`expr $num1 \* $num2`
```

```
echo $ans
```

Average of n numbers

```
echo "enter size"
```

```
read n
```

```
i=1
```

```
sum=0
```

```
echo "enter numbers"
```

```
while [ $i -le $n ]
```

```
do
```

```
    read num
```

```
    sum=$((sum + num))
```

```
    i=$((i + 1))
```

```
done
```

```
avg=$(echo `expr $sum / $n` )
```

```
echo "average is:$avg"
```

```
enter size
2
enter numbers
30
20
average is:25
```

Sum of n numbers using while loop

```
echo "Enter Size(N)"
read N
i=1
sum=0
echo "Enter Numbers"
while [ $i -le $N ]
do
read num
sum=$((sum + num))
i=$((i + 1))
done
echo "sum is:$sum"
```

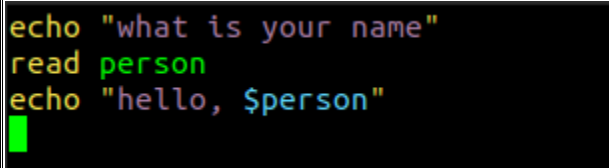
```
Enter Size(N)
3
Enter Numbers
234
65
4
sum is:303
```

Sum of n numbers using for loop

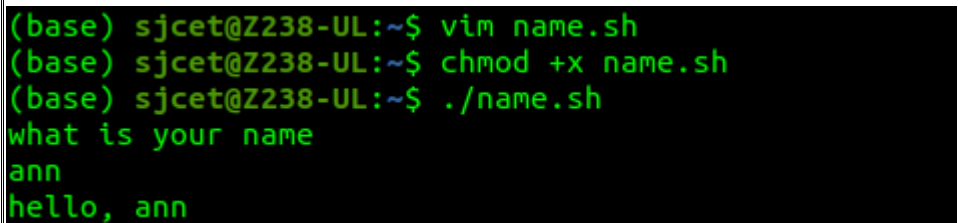
```
echo "Enter Size(N)"
read N
sum=0
echo "Enter Numbes"
for((i=1;i<=N;i++))
do
```

```
read num
sum=$((sum + num))
done
echo $sum

echo "What is your name?"
read PERSON
echo "Hello, $PERSON"
```



```
echo "what is your name"
read person
echo "hello, $person"
█
```



```
(base) sjcet@Z238-UL:~$ vim name.sh
(base) sjcet@Z238-UL:~$ chmod +x name.sh
(base) sjcet@Z238-UL:~$ ./name.sh
what is your name
ann
hello, ann
```

Shell script for odd or even

```
nums="1 2 3 4 5 6 7"
for n in $nums
do
    q=`expr $n % 2`
    if [ $q -eq 0 ]
    then
        echo "number is even"

    fi
    echo "oddd number"
Done
```

```
(base) sjcet@Z238-UL:~$ vim odd.sh
(base) sjcet@Z238-UL:~$ ./odd.sh
oddd number
number is even
oddd number
number is even
oddd number
number is even
oddd number
```

shell script for factorial of a number

```
echo "enter a number"
```

```
read num
```

```
fact=1
```

```
while [ $num -gt 1 ]
```

```
Enter a number
5
120
(base) sjcet@Z238-UL:~$
```