Program 1

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

done
echo $fact
```

```
(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&lt;=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]