```
FACT USING IF ELSE ++

echo "enter anumber"
read num
fact=1
if [ $num -gt 1 ] ;
then
for ((i = $num;i >= 1;i--))
do
fact=$(($fact * $i))
done
echo $fact
else
echo"invalid"
fi
```

```
fact do while loop ++

echo "Enter a number"
read num

fact=1

while [ $num -gt 1 ]
do
  fact=$((fact * num))
  num=$((num - 1))
done
echo $fact
```

```
fact using forloop ++

echo "Enter a number"
read num
fact=1
for((i=2;i<=num;i++))
do
   fact=$((fact * i))
done
echo $fact
```

print odd with forloop

```
echo "enter the number "
read n
for(( i=1;i<n;i=i+2))
do
echo $i
done
\
```

odd with do while

```
INDEX=0
while [ $INDEX -lt 20 ]
do
  REMAINDER=$(( $INDEX % 2 ))
 if [ $REMAINDER -ne 0 ]
  then
    echo $INDEX
  fi
 INDEX=$(($INDEX+1))
done
```

odd number using if else ++

```
echo -n "Enter a number:"

read n

echo -n "RESULT: "

if [ `expr $n % 2` == 0 ]
then
     echo "$n is even"
else
     echo "$n is Odd"
fi
```

```
echo "Enter the number"
read n
function ams
{
t=$n
s=0
b=0
c=10
while [ $n -gt $b ]
do
r=$((n % c))
i=$((r * r * r))
s=$((s + i))
n=$((n / c))
doneecho enter n
read n
num=0
while [ $n -gt 0 ]
do
num=$(expr $num \* 10)
k=$(expr $n % 10)
num=$(expr $num + $k)
n=$(expr $n / 10)
done
echo number is $num
echo $s
if [ $s == $t ]
then
echo "Amstrong number"
else
echo "Not an Armstrong number"
fi
}
result=`ams $n`
echo "$result"
```

prime with forloop

```
echo -e "Enter Number : \c"
read n
for((i=2; i<=$n/2; i++))
do
  ans=$(( n%i ))
  if [ $ans -eq 0 ]
  then
    echo "$n is not a prime number."
    exit 0
  fi
done
echo "$n is a prime number."
```

largest using if elif ++

```
echo "Enter Num1"
read num1
echo "Enter Num2"
read num2
echo "Enter Num3"
read num3

if [ $num1 -gt $num2 ] && [ $num1 -gt $num3 ]
then
    echo $num1
elif [ $num2 -gt $num1 ] && [ $num2 -gt $num3 ]
then
    echo $num2
else
    echo $num3
fi
```

palindrom

```
echo enter n
read n
num=0
on=$n
while [ $n -gt 0 ]
do
num=$(expr $num \* 10)
k=$(expr $n % 10)
num=$(expr $num + $k)
n=$(expr $n / 10)
done
if [ $num -eq $on ]
then
echo palindrome
else
echo not palindrome
fi
```

```
echo "Input the string without space"
read str
for i in $(seq 0 ${#str}) ; do
revstr=${str:$i:1}$revstr
done
echo "The given string is " $str
echo "Its reverse is " $revstr
if [ "$str" = "$revstr" ]; then
echo "It is a palindrome."
else
echo "It is not a palindrome."
fi
```

find sum of n numbers do while loop

```bash
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
```

shell script to find sum of n numbers using for loop

```bash
echo "Enter Size(N)"
read N
sum=0
echo "Enter Numbers"
for((i=1;i<=N;i++))
do
   read num
   sum=$((sum + num))
done
echo $sum
```

(sum using array)

```bash
arr=(10 20 30 40 50)

sum=0
for i in ${arr[@]}
do
    sum=`expr $sum + $i`
doneecho $sum
```

```
fib using do while ++
a=0
b=1
d=0
echo  "enter the number of elements"
read n
echo "$a"
echo "$b"
while((c<n))
do
d=$((a+b))
echo "$d"
a=$b
b=$d
c=$((c+1))
done


switch case prize program ++

echo "Enter your lucky number"
read n
case $n in
101)
echo echo "You got 1st prize" ;;
510)
echo "You got 2nd prize" ;;
999)
echo "You got 3rd prize" ;;
*)
echo "Sorry, try for the next time" ;;
esac
```

reverse of number

```
echo enter n
read n
num=0
while [ $n -gt 0 ]
do
num=$(expr $num \* 10)
k=$(expr $n % 10)
num=$(expr $num + $k)
n=$(expr $n / 10)
done
echo number is $num
```

print a pattern

```
rows=4

for((i=1; i<=rows; i++))

do

  for((j=1; j<=i; j++))

  do

    echo -n "* "

  done

  echo
```

```
echo "enter a: "
read a
echo "enter b: "
read b
echo "enter c: "
read c
if [ $a -le $b -a $a -le $c ]
then
echo "a is Smallest"
elif [ $b -le $c -a $b -le $a ]
then
echo "b is Smallest"
else
echo "c is Smallest"
fi
```

```
echo "---- EVEN OR ODD IN SHELL SCRIPT -----"
echo -n "Enter a number:"
read n
echo -n "RESULT: "
if [ `expr $n % 2` == 0 ]
then
    echo "$n is even"
else
    echo "$n is Odd"
fi
```