Assignment 3

1.Write a shell script to print1+2+3+4+5=15

Ans:- gedit sum1.sh

```
echo "enter n:"
read n
sum=0
i=1
while [ $i -le $n ]

do
echo -n "$i+"
sum=$((sum+i))
i=$((i+1))
done
echo -e "\b=$sum"
```

Output:

```
enter n: 7
1+2+3+4+5+6+7=28
```

2.Write a shell script to input a number and find the factorial of a given integer number

Ans:- gedit facto.sh

```
echo "enter a number:"
read n
fact=1
i=1
while [ $i -le $n ]
do
fact=$((fact*i))
i=$((i+1))
done
echo "factorial = $fact"
```

Output:

```
enter a number:3
factorial = 6
```

3.Write a shell script to input a number and find the sum of digit and count the number of digits of a given integer number.

Ans:- gedit dight.sh

```
echo "enter a number:"
read n
sum=0
count=0
temp=$n
while [ $temp -gt 0 ]
do
digit=$((temp%10))
sum=$((sum+digit))
count=$((count+1))
temp=$((temp/10))
done
echo "sum of digit = $sum"
echo "number of digit = $count"
```

Output:

```
enter a number:987

sum of digit = 24

number of digit = 3
```

4.Write a shell script to input a number, find reverse of a number and check whether an input number is Palindrome or NOT.

Ans:- gedit pall.sh

```
echo "enter a number:"
read n
temp=$n
rev=0
while [ $temp -gt 0 ]
do
d=$((temp%10))
rev=$((rev*10+d))
temp=$((temp/10))
done
if [ $n -eq $rev ]; then
echo "palindrome"
else
echo "not palindrome"
fi
```

Output:

```
enter a number:1234
  not palindrome
```

5.Write a shell script to input a number and check whether the number is prime or not.

Ans:- gedit prime.sh

```
echo "enter a number:"
read n
i=2
flag=0
while [ $i -le $((n/2)) ]
do
if [ $((n%i)) -eq 0 ]; then
flag=1
break
fi
i=$((i+1))
done
if [ $n -eq 1 ]; then
echo "not prime"
elif [ $flag -eq 0 ]; then
echo "prime"
else
echo "not prime"
fi
```

Output:

```
enter a number:7
prime
```

6.Write a shell script to input a number and check whether the number is Armstrong or Not.

Ans:- gedit arm.sh

```
echo "Enter a number:"
read n
temp=$n
sum=0
while [ $temp -gt 0 ]
do
   digit=$((temp%10))
   sum=$((sum+digit*digit*digit))
   temp=$((temp/10))
done
if [ $n -eq $sum ]; then
   echo "Armstrong"
else
   echo "Not Armstrong"
fi
```

Output:

```
Enter a number:371
Armstrong
```