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Registraion No: 219310279
Batch 1
Name : Akash Kumar Singh
Program 1: Program to make a Simple Calculator using Functions.
```

In [60]:

```
def add(nums):
    sm = 0
    for num in nums:
        sm+=num
    return sm
def sub(nums):
    diff = 0
    for num in nums:
        diff-=num
    return diff
def mul(nums):
    prod = 0
    for num in nums:
        prod*=num
    return prod
def div(nums):
    return nums[0]/nums[1]
```

In [23]:

```
print("1.Addtion\n2.Subtraciton\n3.Multiplication\n4.Division")
ch = int(input("Enter choice:"))
if ch == 1:
    nums = eval(input("Enter numbers to be added:"))
    print("\nSum =",add(nums))
elif ch == 2:
    nums = eval(input("Enter numbers to be subtracted:"))
    print("\nDifference =",diff(nums))
elif ch == 3:
    nums = eval(input("Enter numbers to be multiplied:"))
    print("\nProduct =",mul(nums))
elif ch == 4:
    nums = eval(input("Enter dividend and divisor:"))
    print("\nQuotient =",div(nums))
```

```
1.Addtion
2.Subtraciton
3.Multiplication
4.Division
Enter choice:4
Enter dividend and divisor:1234,4

Quotient = 308.5
```

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Program 2: Program to print program to print LCM and HCF for the given numbers.
```

In [57]:

```
def lcm(n1, n2):
    gr = max(n1,n2)
    while(True):
        if gr%n1==0 and gr%n2==0:
            lcm=gr
            break
        gr+=1
    return lcm
```

In [58]:

```
def hcf(n1,n2):
    return (n1*n2)/lcm(n1,n2)
```

In [59]:

```
n1 = int(input("Enter a number:"))
n2 = int(input("Enter a number:"))
print("LCM =",lcm(n1,n2))
print("HCF =",hcf(n1,n2))
```

```
Enter a number:5
Enter a number:6
LCM = 30
HCF = 1.0
```

```
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Program 3: Program to print factorial of a given number using recursion.
```

In [32]:

```
def fact(num):
    if(num==1):
        return 1
    else:
        return num*fact(num-1)
```

In [35]:

```
n = int(input("Enter a number:"))
print("Factorial of %d = %d"%(n,fact(n)))
```

```
Enter a number:10
Factorial of 10 = 3628800
```

```
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Program 4: Program to print fibonacci sequence up to nth term using recursion.
```

In [55]:

```
def fibonacci(num):
    if num==0:
        return 0
    elif num==1:
        return 1
    else:
        return (fibonacci(num-1) + fibonacci(num-2))
```

In [56]:

```
num = int(input("Enter a number:"))
for i in range(num):
    print(fibonacci(i))
```

```
Enter a number:10
0
1
1
2
3
5
8
13
21
34
```