1. Write a Python Program to Find the Factorial of a Number?

Ans:

In [8]:
```
x = int(input('enter a number'))
def factorial(x):
    if x<0:
        return 0
    if x <= 1:
        print('Factorial = 1')
    else:
        fact = 1
        for i in range(1,(x+1)):
            fact = fact*i
        print('Factorial = ',fact)
factorial(x)
```

```
enter a number56
Factorial =  710998587804863451854045647463724949736497978881168458687447040000000000000
```

2. Write a Python Program to Display the multiplication Table?

Ans:

In [13]:
```
x = int(input('enter a number'))
def mult_table(x):
    if x == 0:
        return 0
    else:
        for i in range(1,11):
            print(x, '*', i, '=', x*i)
mult_table(x)
```

```
enter a number35
35 * 1 = 35
35 * 2 = 70
35 * 3 = 105
35 * 4 = 140
35 * 5 = 175
35 * 6 = 210
35 * 7 = 245
35 * 8 = 280
35 * 9 = 315
35 * 10 = 350
```

3. Write a Python Program to Print the Fibonacci sequence?

Ans:

In [26]:
```
n = int(input('enter a number of elements in fibonacci series'))
def fib(n):
    if n == 0:
        return 0
    elif n == 1:
        return 1
    else:
        f = 1
        s = 1
        print(f,s,end=" ")
    for x in range(2,n):
        next=f+s
        print(next,end=" ")
        f=s
        s=next

fib(n)
```

```
enter a number of elements in fibonacci series20
1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181 6765
```

4. Write a Python Program to Check Armstrong Number?

Ans:

In [11]:
```
num = int(input('Enter a number'))
n = len(str(num))
def Armstrong(num):
    temp = num
    sum = 0
    while(temp>0):
        digit = temp%10
        sum += digit ** n
        temp = temp//10
    if(sum==num):
        print(num, ' is an Armstrong number')
    else:
        print(num, ' is not an Armstrong number')
Armstrong(num)
```

```
Enter a number407
407  is an Armstrong number
```

5. Write a Python Program to Find Armstrong Number in an Interval?

Ans:

In [21]:
```
lower = int(input('Enter a lower range '))
upper = int(input('Enter a higher range '))
for num in range(lower, upper + 1):
    sum = 0
    for i in range(len(str(num))):
        sum += pow(int(str(num)[i]),3)
    if sum == num:
        print(num)
```

```
Enter a lower range 10
Enter a higher range 3000
153
370
371
407
```

6. Write a Python Program to Find the Sum of Natural Numbers?

Ans:

In [13]:
```
n = int(input('Enter the number of natural numbers'))
def SumNat(n):
    sum = 0
    for i in range(1,n+1):
        print(i, ' ')
        sum += i
        i = i+1
    return sum
SumNat(n)
```

```
Enter the number of natural numbers17
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
```

Out[13]: 153