1. Write a function that calculates the factorial of a given number. The function should take an integer "n" as its parameter and return the factorial of "n".

In [13]:
```
n=eval(input())
for i in range(1,n+1):
    if n%i==0:
        print(i)
```

```
1
2
3
6
```

2. Write a Python program to calculate the solutions of a given quadratic equation is Input:X 2 -5X+6=0 Output:2,3

In [ ]:
```
```

3. Write a Python program that calculates three interesting values for a range of natural numbers: • the sum of all numbers, • the sum of all their squares, • and the sum of all their cubes. That demonstrate this by finding these values for the numbers 1 to 10?

In [21]:
```
sum=0
for i in range(1,11):
    sum=sum+i
print(sum)
```

```
55
```

In [42]:
```
#sum if square
sum=0
for i in range(1,11):
    sum=sum+i*i
print(sum)
```

```
385
```

In [45]:
```
#sum if square
sum=0
for i in range(1,11):
    sum=sum+i*i*i
print(sum)
```

```
3025
```

4. Write a program that prints the multiplication table of a given number using a "for" loop.

In [27]:
```
n=int(input('Enter the number'))
for i in range(1,11):
```

```
    print(f"n*{i} ={n*i}")
```

```
n*1 =6
n*2 =12
n*3 =18
n*4 =24
n*5 =30
n*6 =36
n*7 =42
n*8 =48
n*9 =54
n*10 =60
```

5. write a Python function to check the given number is palindrome or not? The catch: you can't use string slicing or built-in reversal functions!

In [47]:
```
def palindrome():
    num=int(input("enter the number"))
    num1=num.reverse()
    if num1==num:
        print(f"it is palindrome!" )
    else:
         print(f"it is not palindrome!" )
palindrome()
```

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
Cell In[47], line 8
      6     else:
      7          print(f"it is not palindrome!" )
----> 8 palindrome()

Cell In[47], line 3, in palindrome()
      1 def palindrome():
      2     num=int(input("enter the number"))
----> 3     num1=num.reverse()
      4     if num1==num:
      5         print(f"it is palindrome!" )

AttributeError: 'int' object has no attribute 'reverse'
```

In [ ]:
```

```