Find the factorial number

In [12]:
```
def factorial(num):
    """This is a recursive function that calls
   itself to find the factorial of given number"""
    if num == 1:
        return num
    else:
        return num * factorial(num - 1)


# We will find the factorial of this number
num = int(input("Enter a Number: "))

# if input number is negative then return an error message
# elif the input number is 0 then display 1 as output
# else calculate the factorial by calling the user defined function
if num < 0:
    print("Factorial cannot be found for negative numbers")
elif num == 0:
    print("Factorial of 0 is 1")
else:
    print("Factorial of", num, "is: ", factorial(num))
```

```
Enter a Number: 5
Factorial of 5 is:  120
```

In [ ]:
```

```

check if the number is prime or composite number

In [9]:
```
#Input a number and check if the number is prime or composite number
n= int(input("Enter any number:"))
if(n ==0 or n == 1):
    printf(n,"Number is neither prime nor composite")
elif n>1 :
    for i in range(2,n):
        if(n%i == 0):
```

```
            print(n,"is not prime but composite number")
            break
    else:
        print(n,"number is prime but not composite number")
else :
    print("Please enter positive number only ")
```

```
Enter any number:4
4 is not prime but composite number
```

Write a program to check whether a string is palindrome or not in python

In [4]:

```
st = input("Please enter your own text : ")

if(st == st[:: - 1]):
   print("This is a Palindrome String")
else:
   print("This is Not Palindrome String")
```

```
Please enter your own text : aabbaa
This is a Palindrome String
```

Get the third side of right angled triangle from two given sides

In [20]:

```
import math

a = float(input("Enter base: "))
b = float(input("Enter height: "))
x = float(input("Enter angle: "))

c = math.sqrt(a ** 2 + b ** 2)

print("Hypotenuse =", c)
```

```
Enter base: 5
Enter height: 4
Enter angle: 3
Hypotenuse = 6.4031242374328485
```

Write a python program to print the frequency of each of the characters present in a given string.

In [19]:
```
#Given a string and you want to count how many times each character appears

str1 = input ("Enter the string: ")
d = dict()
for c in str1:
    if c in d:
        d[c] = d[c] + 1
    else:
        d[c] = 1
print(d)
```

```
Enter the string: BTM BGU
{'B': 2, 'T': 1, 'M': 1, ' ': 1, 'G': 1, 'U': 1}
```

In [ ]:
```

```