1. Write a python program to find the factorial of a number.

In [1]:
```
# To take input from the user
num = int(input("Enter a number: "))

factorial = 1

# check if the number is negative, positive or zero
if num < 0:
   print("Sorry, factorial does not exist for negative numbers")
elif num == 0:
   print("The factorial of 0 is 1")
else:
   for i in range(1,num + 1):
       factorial = factorial*i
   print("The factorial of",num,"is",factorial)
```

```
Enter a number: 5
The factorial of 5 is 120
```

1. Write a python program to find whether a number is prime or composite.

In [2]:
```
from math import sqrt

# Number to be checked for prime
n = int(input("Enter a number: "))

flag = 0

if(n > 1):
    for k in range(2, int(sqrt(n)) + 1):
        if (n % k == 0):
            flag = 1
        break
    if (flag == 0):
        print(n," is a Prime Number!")
    else:
        print(n," is Not a Prime Number!")
else:
    print(n," is Not a Prime Number!")
```

```
Enter a number: 7
7  is a Prime Number!
```

1. Write a python program to check whether a given string is palindrome or not.

In [3]:
```
# function which return reverse of a string

def isPalindrome(s):
    return s == s[::-1]


# Driver code
s = "madam"
ans = isPalindrome(s)

if ans:
    print("Yes")
else:
    print("No")
```

```
Yes
```

1. Write a Python program to get the third side of right-angled triangle from two given sides.

In [4]:
```
from math import sqrt
print("Input lengths of shorter triangle sides:")
a = float(input("a: "))
b = float(input("b: "))
c = sqrt(a**2 + b**2)
print("The length of the hypotenuse is:", c )
```

```
Input lengths of shorter triangle sides:
a: 3
b: 2
The length of the hypotenuse is: 3.605551275463989
```

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

In [5]:
```
# Python code to demonstrate each occurrence frequency using
# collections.Counter()
from collections import Counter

# initializing string
test_str = "malayalam"

# using collections.Counter() to get count of each element in string
res = Counter(test_str)

# printing result
print("Count of all characters in "+ test_str +" is :\n "
    +str(res))
```

```
Count of all characters in malayalam is :
 Counter({'a': 4, 'm': 2, 'l': 2, 'y': 1})
```

In [ ]: