In [26]:
```
#Python program to find factorial of a number provided by the user.
#change  the value for different result

num=8

#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("factorial of 0 is 1")
else:
    for i in range(1,num + 1):
        factorial = factorial*i
    print("The factorial of",num,"is",factorial)
```

```
The factorial of 8 is 40320
```

In [40]:
```
# To find wheather a number is prime or composite number


num = int(input("Enter any number : "))
if num > 1:
    for i in range(2, num):
        if (num % i) == 0:
            print(num, "is NOT a prime number")
            break
    else:
        print(num, "is a PRIME number")
elif num == 0 or 1:
    print(num, "is a neither prime NOR composite number")
else:
    print(num, " it is a COMPOSITE number")
```

```
Enter any number : 47
47 is a PRIME number
```

In [4]:
```
# to check whether a given string is palindrome or not


a=input("enter string:")
b=a[-1::-1]
if a==b:
    print("palindrome")
else:
    print("not palindrome")
```

```
enter string:12421
palindrome
```

In [49]:
```
#get the third side of right-angled triangle from two given sides
# a**2 + b**2= c**2

def pythagoras(a,b,c):
        if a == str("x"):
            return ("a = " + str(((c**2) - (b**2))**0.5))
        elif b == str("x"):
            return ("b = " + str(((c**2) - (a**2))**0.5))
        elif c == str("x"):
            return ("c = " + str(((a**2) + (b**2))**0.5))
        else:
            return "length of the missing side"

print(pythagoras(3,4,'x'))
print(pythagoras(3,'x',5))
print(pythagoras('x',4,5))
print(pythagoras(3,4,5))
```

```
c = 5.0
b = 4.0
a = 3.0
length of the missing side
```

In [3]:
```
# print the frequency of each of the characters present in a given string

str1=input("enter a string")
d1=dict()
for c in str1:
    if c in d1:
        d1[c]= d1[c] + 1
    else:
        d1[c]= 1
print (d1)
```

```
enter a stringmy name is madhu sharma
{'m': 4, 'y': 1, ' ': 4, 'n': 1, 'a': 4, 'e': 1, 'i': 1, 's': 2, 'd': 1, 'h': 2, 'u': 1, 'r': 1}
```

In [ ]:

In [ ]:

In [ ]: