In [5]:
```
#fictorial of a number
num = int(input("Enter a number: "))
factorial = 1
if num < 0:
   print(" 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: 2
The factorial of 2 is 2
```

In [7]:
```
#to find whether a number is prime or composite.
n = int(input("Enter any number: "))

if(n == 0 or n == 1):
    print(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: 6
6 is not prime but composite number
```

In [10]:
```
# Program to check if a string is palindrome or not

my_str = 'sugar'

# make it suitable for caseless comparison
my_str = my_str.casefold()

# reverse the string
rev_str = reversed(my_str)

# check if the string is equal to its reverse
if list(my_str) == list(rev_str):
   print("The string is a palindrome.")
else:
   print("The string is not a palindrome.")
```

```
The string is not a palindrome.
```

In [11]:
```
#to get the third side of right-angled triangle from two given sides.
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: 3
Enter height: 4
Enter angle: 60
Hypotenuse = 5.0
```

In [18]:
```
#print the frequency of each of the characters present in a given string
test_str = "shubham"

all_freq = {}

for i in test_str:
    if i in all_freq:
        all_freq[i] += 1
    else:
        all_freq[i] = 1
        print ("Count of all characters in shubham is :\n" +  str(all_freq))
```

```
Count of all characters in shubham is :
{'s': 1}
Count of all characters in shubham is :
{'s': 1, 'h': 1}
Count of all characters in shubham is :
{'s': 1, 'h': 1, 'u': 1}
Count of all characters in shubham is :
{'s': 1, 'h': 1, 'u': 1, 'b': 1}
Count of all characters in shubham is :
{'s': 1, 'h': 2, 'u': 1, 'b': 1, 'a': 1}
Count of all characters in shubham is :
{'s': 1, 'h': 2, 'u': 1, 'b': 1, 'a': 1, 'm': 1}
```

In [ ]:

In [ ]: