In [40]:
```
# 11. Write a python program to find the factorial of a number
# Factorial of a Number using Loop

num = 16
factorial = 1

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)
```

```
The factorial of 16 is 20922789888000
```

In [39]:
```
# 12. Write a python program to find whether a number is prime or composite


number = 9

if number > 1:
    for i in range(2,int(number/2)+1):
        if (number % i == 0):
            print(number, "is a composite Number")
            break
    else:
        print(number,"is a Prime number")
else:
    print(number,"is not a Prime number")
```

```
9 is a composite Number
```

In [42]:
```
# 12. Write a python program to find whether a number is prime or composite


number = 2

if number > 1:
    for i in range(2,int(number/2)+1):
        if (number % i == 0):
            print(number, "is a composite Number")
            break
    else:
        print(number,"is a Prime number")
else:
    print(number,"is a composite Number")
```

```
2 is a Prime number
```

In [43]:
```
# 13. Write a python program to check whether a given string is palindrome or not.

def isPalindrome(s):

    rev = ''.join(reversed(s))
    if (s == rev):
        return True
    return False
```

```
s = "noon"
ans = isPalindrome(s)

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

```
Yes
```

In [46]:
```
# 14. Write a Python program to get the third side of right-angled triangle from two g
# Input: side1 = 4, side2 = 3



def pythagoras(opposite_side,adjacent_side,hypotenuse):
        if opposite_side == str("x"):
            return ("Opposite = " + str(((hypotenuse**2) - (adjacent_side**2))**0.5))
        elif adjacent_side == str("x"):
            return ("Adjacent = " + str(((hypotenuse**2) - (opposite_side**2))**0.5))
        elif hypotenuse == str("x"):
            return ("Hypotenuse = " + str(((opposite_side**2) + (adjacent_side**2))**0
        else:
            return "You know the answer!"

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

```
Hypotenuse = 5.0
Adjacent = 4.0
Opposite = 3.0
You know the answer!
```

In [45]:
```
#15.Write a python program to print the frequency of each of the characters present ir

test_str = "helloworld"

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 helloworld is :\n "
      + str(all_freq))
```

```
Count of all characters in helloworld is :
 {'h': 1, 'e': 1, 'l': 3, 'o': 2, 'w': 1, 'r': 1, 'd': 1}
```

In [ ]:
```

```