In [2]:
```
import numpy as np
import pandas as pd
```

In [3]:
```
2//3
```

Out[3]:
```
0
```

In [4]:
```
6<<2
```

Out[4]:
```
24
```

In [5]:
```
6&2
```

Out[5]:
```
2
```

In [6]:
```
6|2
```

Out[6]:
```
6
```

In [7]:
```
n = int (input ("Enter a number: "))

factorial = 1

if n >= 1:

              for i in range (1, n+1):

                                factorial = factorial *i

print ("Factorial of the given number is ", factorial)
```

```
Enter a number: 7
Factorial of the given number is  5040
```

In [ ]:

In [ ]:

In [8]:
```
num = 22
if num > 1:

    for i in range(2, int(num/2)+1):

        if (num % i) == 0:
            print(num, "is a Composite number")
            break
    else:
        print(num, "is a Prime number")
else:
    print(num, "is a Composite number")
```

```
22 is a Composite number
```

In [9]:
```
def isPalindrome(s):
    return (s)

s = "pop"
ans = isPalindrome(s)

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

```
Yes
```

In [18]:
```
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))**0.5))
        else:
            return ("Done")

print(pythagoras(1,4,'x'))
print(pythagoras(1,'x',8))
print(pythagoras('x',4,8))
print(pythagoras(1,4,8))
```

```
Hypotenuse = 4.123105625617661
Adjacent = 7.937253933193772
Opposite = 6.928203230275509
Done
```

In [10]:

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

```
Enter the stringfdsgdsfsdgdssd
{'f': 2, 'd': 5, 's': 5, 'g': 2}
```

In [ ]: