

```
In [5]: # python program to find factorial
n=int(input('enter a positive integer'))
if n==1:
    print('1!= 1')
else:
    f=1
    k=range(1,n+1)
    for i in k:
        f=f*i
print(f'{n}!={f}')
```

enter a positive integer4
4!=24

```
In [23]: #python program to find whether a number is prime or composite.
a=int(input('enter a positive integer'))
if a==1 or a==2:
    print(f'The given number {a} is composite')
else:
    k=range(2,a+1)
    for i in k:
        if a%i==0:
            print(f'{a} is composite')
            break
        else:
            if i==k:
                print(f'{a} is prime')
```

enter a positive integer11
11 is composite

```
In [53]: #python program to check whether a given string is palindrome or not
str=list(input('Enter string '))
l=len(str)
for i in range(0,int(l/2)):
    if str[i]!=str[-i-1]:
        print(f'{str}is not palindrome')
    else:
        if i==int(l/2):
            print(f'{str}is palindrome')
```

Enter string tea
['t', 'e', 'a']is not palindrome

```
In [58]: #Python program to get the third side of right-angled triangle from two given sides
a=int(input('enter the first side of triangle'))
b=int(input('enter the second side of triangle'))
c=int(input('enter the third side of triangle'))
if a>b and a>c:
    fir,sec,thi=a,b,c
elif b>a and b>c:
    fir,sec,thi=b,a,c
else:
    fir,sec,thi=c,a,b
if pow(fir,2)==pow(sec,2)+pow(thi,2):
    print(f'length of longest side of the triangle is {fir}')
    print('The given triangle is right angle triangle')
else:
    print('The given triangle is not right angle triangle')
```

enter the first side of triangle3
enter the second side of triangle4
enter the third side of triangle5
length of longest side of the triangle is 5
The given triangle is right angle triangle

```
In [76]: #python program to print the frequency of each of the characters present in a given string.
import numpy as np
str=list(input('Enter string '))
s=list(set(str))
lstr=len(str)
ls=len(s)
c=np.repeat(0,ls)
for i in range(0,lstr):
    for j in range(0,ls):
        if s[j]==str[i]:
            c[j]=c[j]+1
print('char:    Freq')
for i in range(0,ls):
    print(f'{s[i]} :    {c[i]}')
```

Enter string tea
char: Freq
a : 1
t : 1
e : 1