```
#program to find the factorial
a=int(input("Enter a number "))
f=1
i=1
if a<0:
   print("Fact is not possible")
elif a==0:
   print("Fact is 1")
else:
   while i<=a:
      f=f*i
      i=i+1
   print("The Factorial is:", f)
```

```
#program to find the 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, "is not a prime number it is a Composite number")
```

```
#palindrome number
```

```
a=int(input("Enter any number"))
b=a
sum=0
def pal(a):
    global sum
    if a>0:
        r=a%10
        sum=sum*10+r
        a=pal(a//10)
        return sum
m=pal(a)
if m==b:
        print("This is a palindrom number")
else:
        print("This is not a palindrom number")
```

```
#program to get the third side of right-angled triangle from two given sides.


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 "All the sides are given"
```

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

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

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

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

```
#python program to print the frequency of each of the characters present in a given string

test_str=str(input("Enter the string "))

res = {}


for keys in test_str:

    res[keys] = res.get(keys, 0) + 1


print ("Count of all characters is: \n"+  str(res))

================================================
```