Functions

In [2]:
```
# reverse of a string
def reverse(name):
    print(name[::-1])
```

In [5]:
```
reverse("keerthi")
```

```
ihtreek
```

In [6]:
```
# square of number
def square(n):
    print(n**2)
```

In [7]:
```
square(24)
```

```
576
```

In [8]:
```
# sum of two numbers
def su(a,b):
    print(a+b)
su(2,3)
```

```
5
```

In [45]:
```
def factorial(n):
    if(n>0):
        result=n*factorial(n-1)
        return result
    else:
        n=1
        return n
```

In [46]:
```
print(factorial(5))
```

```
120
```

In [34]:
```
def digit_count(n):
    f=str(n)
    print(int(len(f)))
```

In [35]:
```
digit_count(5)
```

```
1
```

In [36]:
```
digit_count(345)
```

```
3
```

In [38]:
```
def palindrome(name):
    if(name[::-1]==name):
        print("palindrome")
    else:
        print("not a palindrome")

palindrome("kek")
```

```
palindrome
```

Tasks

In [2]:
```
# Function to print all numbers divisible by 6 and not a factor of 100 in a given r
ange(lb,ub) inclusive
def divisible (lb,ub):
    x=lb;
    while x<=ub:
        if(x%6==0):
            if(100%x!=0):
                print(x)
        x=x+1;
```

In [5]:
```
divisible(2,30)
```

```
6
12
18
24
30
```

In [6]:
```
# function to find the average of cubes of all the even numbers in a given range(l
b,ub) inclusive
```

In [7]:
```
def cub(lb,ub):
    y=lb;
    while y<=ub:
        s=0
        if(y%2==0):
            s=s+y**3
            print(s)
        y=y+1;
```

In [8]:
```
cub(2,6)
```

```
8
64
216
```

In [3]:
```
# Function to generate the list of factors for a given number
def factor(n):
    x=1
    while x<n:
        if (n%x==0):
            print(x)
        x=x+1
```

In [4]:
```
factor(6)
```

```
1
2
3
```

In [2]:
```
# Function to check if a given number is Prime by using recursive function

def prime(h):
    i=1
    c=0
    for i in range(i,h+1):
        if(h%i==0):
            c=c+1;
    if(c==2):
        print(h)
```

In [5]:
```
# function to print factorial of a given numebr
def factorial(f):
    if (f>1):
        return f*factorial(f-1)
    else:
        return f
factorial(3)
```

Out[5]: 6

In [4]:
```
s=input()
print(s)
```

```
er
er
```

write a program to check whether a given number is prime or not using Recursion function

In [8]:
```
def prime(n,i):
    if(n==i):
        return 1
    else:
        if n%i==0:
            return 0
        else:
            return 0+prime(n,i+1)
res=prime(23,2)
if(res==1):
    print("prime")
else:
    print("Not prime")
```

```
prime
```

Write a program to calculate average of prime numbers below N value

In [21]:
```
def prime(n,i):
    if(n==i):
        return 1
    else:
        if n%i==0:
            return 0
        else:
            return 0+prime(n,i+1)
N=int(input("enter N value"))
s=0
c=0
for k in range(2,N+1):
    res=prime(k,2)
    if(res==1):
        c=c+1
        s=s+k

print(s//c)
```

```
enter N value40
16
```

Write a program to print perfect numbers in a given range

In [49]:
```
def perfect(n,i):
    if(n%i==0 and n!=i):
        return i+ perfect(n,i+1)
    elif(i==n):
        return 0
    else:
        return 0+perfect(n,i+1)
j=int(input("enter a number"))
for j in range(1,j+1):
    s=perfect(j,1)
    if(s==j):
        print(j)
```

```
enter a number600
6
28
496
```

In [ ]: