Generate a random number

```
#To generate a random number
import random
num = random.randint(0,100)
print(num)
```

Output: 24

Print all Prime Numbers in an Interval

```
lower = int(input("Enter the Lower limit here:"))
upper = int(input("Enter the Upper limit here:"))

for num in range(lower, upper + 1):
    if num > 1:
        for i in range(2, num):
            if num % i == 0:
                break
        else:
            print(num)
```

Output:

Enter the Lower limit here: 2
Enter the Upper limit here: 50
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47

Convert Celsius to Fahrenheit

```
# To Convert Celsius To Fahrenheit
celsius = int(input("Enter the temperature in Celsius:"))
fahrenheit = (celsius* (9/5))+32
print("The converted value is", fahrenheit,"Fahrenheit")
```

Output

Enter the temperature in Celsius: 50
The converted value is 122.0 Fahrenheit

Find the Factorial of a Number

```
#Find the Factorial of a Number
#Using for Loop

num = int(input("Enter a number here: "))
fact = 1
if num < 0:
    print("Factorial of 0 does not exist")
if num == 0:
    print ("Factorial of 0 is", 1)
if num > 0:
    for i in range (1, num+1):
        fact = fact * i
print ("The factorial of the given number is", fact)
```

Output

Enter a number here: 20
The factorial of the given number is 2432902008176640000

```
#Using recursion

def fact(a):
    if a == 0:
        return 1
    else:
        return ((a)*fact(a-1))
num = int(input("enter a number here: " ))
result = fact(num)
print ("The factorial of the given number is", result)
```

Output

Enter a number here: 25
The factorial of the given number is 15511210043330985984000000

Display the Multiplication Table

```
#with for loop

n=int(input('Enter a number here: '))
for i in range (1,11):
    print(n, "x", i, "=", n*i)
```

Output

Enter a number here: 15
15 x 1 = 15
15 x 2 = 30
15 x 3 = 45
15 x 4 = 60
15 x 5 = 75
15 x 6 = 90
15 x 7 = 105
15 x 8 = 120
15 x 9 = 135
15 x 10 = 150

```
#with while loop
n = int(input('Enter a number here: '))
for i in range(1, 11):
    print(n, "x", i, "=", n * i)
```

Output

Enter a number here: 45
45 x 1 = 45
45 x 2 = 90
45 x 3 = 135
45 x 4 = 180
45 x 5 = 225
45 x 6 = 270
45 x 7 = 315
45 x 8 = 360
45 x 9 = 405
45 x 10 = 450

Fibonacci sequence

```
#Fibonacci Sequence
a = 0
b = 1
num = int(input("Enter a number to obtain Fibonacci sequence: "))
if num == 1:
    print (a)
else:
    print (a)
    print (b)
    for i in range (1,num+1):
        c = a + b
        a = b
        b = c
        print (c)
```

Output

Enter a number to obtain Fibonacci sequence: 7
0
1
1
2
3
5
8
13
21

Check If the Number is Armstrong or Not

```
# To Check If the Number is Armstrong or Not
num = int(input("Enter the number here: "))
sum = 0
temp = num

while temp > 0:
    digit = temp % 10
    cube = digit ** 3
    sum = sum + cube
    temp //= 10

if sum == num:
    print('It is an Armstrong number')
else:
    print('It is not an Armstrong number')
```

Output
Enter the number here: 10
It is not an Armstrong number

Enter the number here: 153
It is an Armstrong number

To Find Armstrong Number in an Interval

```
#to Find Armstrong Number in an Interval
lower = int(input("Enter the lower limit here: "))
upper = int(input("Enter the upper limit here: "))
for num in range (lower,upper +1):
    order = len(str(num))
    sum = 0
    temp = num
    while temp > 0:
        digit = temp % 10
        sum += digit ** order
        temp //=10
    if num == sum:
        print(num)
```

Output

Enter the lower limit here: 100
Enter the upper limit here: 1000
153
370
371
407

Find the sum of natural numbers

```
#Find the sum of natural numbers
num = int(input("Enter the number here: "))
if num < 0:
    print("please enter positive number")
else:
    sum=0
    while num>0:
        sum +=num
        num -= 1
    print(sum)
```

Output

Enter the number here: 15
120

To Display Powers of 2 Using Anonymous Function

```
#To Display Powers of 2 Using Anonymous Function
nterms = int(input("Enter number of terms here: "))
result = list(map(lambda x : 2 ** x, range(nterms+1)))
print(result)
```

Output

Enter number of terms here: 5
[1, 2, 4, 8, 16, 32]

```
#To Display Powers of 2 Using Anonymous Function
nterms = int(input("Enter number of terms here: "))
result = list(map(lambda x : 2 ** x, range(nterms+1)))
print(result)
for i in range (nterms+1):
    print("The value of 2 raised to power",i,"is",result[i])
```

Output

Enter number of terms here: 6
[1, 2, 4, 8, 16, 32, 64]
The value of 2 raised to power 0 is 1
The value of 2 raised to power 1 is 2
The value of 2 raised to power 2 is 4
The value of 2 raised to power 3 is 8
The value of 2 raised to power 4 is 16
The value of 2 raised to power 5 is 32
The value of 2 raised to power 6 is 64