Bitwise operators

a=11

b=9

print("a",bin(a))

print("b",bin(b))

d=b<<4 #010010000

result=d|a

print(result,"--->",bin(result))

#to separate them

print("mask",int(0b01111))

a1=result&15

print(a1)

b1=result>>4

print(b1)

Loops

There are 2 loops in python, for and while

for loop

- When you know the number of iterations in advance, then use for loop

| Syntax |  |
| --- | --- |
| for <var> in iterable:  statements | for i in range(1,11): #1-10  print(i,end=" ")  print()  print("end of loop")  for i in range(10): #0-9  print(i,end=" ")  print()  print("end of loop")  for i in range(3,21,3): #0-9  print(i,end=" ")  print()  print("end of loop") |
| for <var> in iterable:  statements  if condition:  break  else:  statements | #to chek the number is prime or not  num=int(input("enter a number"))  for i in range(2,num):  if num%i==0:  print("The number is not prime")  break |

|  | else: #if break statement does not get executed print("The number is prime") |
| --- | --- |

While loop

You should use while loop, if you are not aware of number of iterations in advance

| syntax |  |
| --- | --- |
| while <condition>:  statements | #to find addition of digits of the number num=int(input("enetr number"))  s=0  #345345  while num>0:  d=num%10  num=num//10  s=s+d  print("sum of digits:",s) |
| while <condition>:  statements  if condition:  break  else:  statements |  |