Logical operator

and , or, not

```
In [5]:  a=5
         b=4
```

```
In [7]:  a<6 and b<5
```
Out[7]: True

```
In [9]:  a<6 and b<4
```
Out[9]: False

```
In [11]:  a<4 and b<3
```
Out[11]: False

```
In [13]:  a>4 and b>4
```
Out[13]: False

```
In [15]:  x=False
          x
```
Out[15]: False

```
In [17]:  x=not x
          x
```
Out[17]: True

```
In [19]:  x
```
Out[19]: True

```
In [21]:  not x
```
Out[21]: False

binary method

```
In [24]:  25
```
Out[24]: 25

```
In [26]:  bin(25)
```
Out[26]: '0b11001'

```
In [28]:  int(0b11001)
```
Out[28]: 25

```
In [30]:  bin(35)
```
Out[30]: '0b100011'

```
In [32]:  int(0b100011)
```
Out[32]: 35

```
In [34]:  bin(20)
```
Out[34]: '0b10100'

```
In [36]:  int(0b10100)
```
Out[36]: 20

```
In [38]:  0b1111
```

```
Out[38]:  15
```

```
In [40]:  0b101100
```
```
Out[40]:  44
```

```
In [42]:  oct(15)
```
```
Out[42]:  '0o17'
```

```
In [44]:  hex(10)
```
```
Out[44]:  '0xa'
```

```
In [45]:  hex(25)
```
```
Out[45]:  '0x19'
```

```
In [46]:  0x15
```
```
Out[46]:  21
```

```
In [47]:  oct(20)
```
```
Out[47]:  '0o24'
```

```
In [48]:  hex(20)
```
```
Out[48]:  '0x14'
```

swap variable in python

```
In [50]:  a=5
          b=6
```

```
In [51]:  a=b
          b=a
```

```
In [52]:  a,b=b,a
```

```
In [61]:  a
```
```
Out[61]:  6
```

```
In [63]:  b
```
```
Out[63]:  6
```

```
In [65]:  print(a)
          print(b)

          6
          6
```

```
In [67]:  a1=7
          b1=8
```

```
In [69]:  temp=a1
          a1=b1
          b1=temp
```

```
In [71]:  print(a1)
          print(b1)

          8
          7
```

```
In [73]:  a2=5
          b2=6
```

```
In [75]:  a2=a2+b2
          b2=a2-b2
          a2=a2-b2
```

```
In [77]:  a2
```
```
Out[77]:  6
```

```
In [79]:  b2
Out[79]:  5

In [81]:  print(0b101)
          print(0b110)
          5
          6

In [83]:  print(bin(11))
          print(0b1011)
          0b1011
          11

In [85]:  a2=a2^b2
          b2=a2^b2
          a2=a2^b2

In [87]:  print(a2)
          print(b2)
          5
          6

In [89]:  a2, b2=b2,a2

In [91]:  a2
Out[91]:  6

In [93]:  b2
Out[93]:  5
```

bit wise and operator

```
In [96]:   12&13
Out[96]:   12

In [98]:   1&1
Out[98]:   1

In [100…   1|0
Out[100…   1

           12|13

In [103…   35|40
Out[103…   43

In [105…   12^13
Out[105…   1

In [107…   25^30
Out[107…   7

In [109…   bin(30)
Out[109…   '0b11110'

In [111…   bin(25)
Out[111…   '0b11001'

In [113…   int(0b000111)
Out[113…   7

In [115…   20<<4
```

```
Out[115…  320

In [117…  10>>2

Out[117…  2

In [119…  bin(20)

Out[119…  '0b10100'

In [121…  20>>4

Out[121…  1
```

import math module

```
In [124…  x=sqrt(25)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[124], line 1
----> 1 x=sqrt(25)

NameError: name 'sqrt' is not defined
```

```
In [ ]:  x=math.sqrt(25)
```

```
In [ ]:  import math
```

```
In [ ]:  x=math.sqrt(25)
         x
```

```
In [ ]:  print(math.floor(2.9))
```

```
In [125…  print(math.ceil(2.9))
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[125], line 1
----> 1 print(math.ceil(2.9))

NameError: name 'math' is not defined
```

```
In [127…  print(math.pow(3,2))
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[127], line 1
----> 1 print(math.pow(3,2))

NameError: name 'math' is not defined
```

```
In [129…  print(math.pi)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[129], line 1
----> 1 print(math.pi)

NameError: name 'math' is not defined
```

```
In [131…  print(math.e)
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[131], line 1
----> 1 print(math.e)

NameError: name 'math' is not defined
```

```
In [133…  print(math.pow(3,3))
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[133], line 1
----> 1 print(math.pow(3,3))

NameError: name 'math' is not defined
```

```
In [135…  import math as m
```

```
m.sqrt(10)
```

Out[135… 3.1622776601683795

In [137…
```
from math import sqrt, pow
pow(2,3)
```

Out[137… 8.0

In [139…
```
round(pow(2,3))
```

Out[139… 8

In [141…
```
round(pow(2,3))
```

Out[141… 8

In [143…
```
x=input()
y=input()
z=x+y
print(z)
```

56

In [ ]:

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