Arithmetic operator

In [1]:
```
x1,y1 = 10,5
```

In [2]:
```
x1 + y1
```
Out[2]: 15

In [3]:
```
x1 -y1
```
Out[3]: 5

In [4]:
```
x1/y1
```
Out[4]: 2.0

In [5]:
```
x1//y1
```
Out[5]: 2

In [7]:
```
x1%y1
```
Out[7]: 0

In [9]:
```
x1**y1
```
Out[9]: 100000

In [10]:
```
x2 = 3
y2 = 3
x2 ** y2
```
Out[10]: 27

Assignment operator

In [11]:
```
x = 2
```

In [12]:
```
x = x+2
```

In [13]:
```
x
```
Out[13]: 4

In [24]:
```
x += 2
x
```
Out[24]: 20

In [25]:
```
x *= 2
x
```
Out[25]: 40

In [26]:
```
x -= 2
x
```
Out[26]: 38

In [27]:
```
x /=2
x
```
Out[27]: 19.0

In [28]:
```
x //=2
```

In [29]:
```
x
```
Out[29]: 9.0

In [30]:
```
a, b =5,6
print(a)
print(b)
```
```
5
6
```

In [31]:
```
a
```
Out[31]: 5

In [32]:
```
b
```
Out[32]: 6

In [33]:
```
n = 7
n
```
Out[33]: 7

In [34]:
```
m =-(n)
m
```
Out[34]: -7

In [35]:
```
n
```
Out[35]: 7

In [36]:
```
-n
```
Out[36]: -7

Relational operator

In [37]:
```
a = 5
b = 6
```

In [38]:
```
a<b
```
Out[38]: True

In [39]:
```
a>b
```
Out[39]: False

In [40]:
```
a == b
```
Out[40]: False

In [41]:
```
a != b
```
Out[41]: True

In [42]:
```
b = 5
```

In [43]:
```
b
```
Out[43]: 5

In [44]:
```
a == b
```
Out[44]: True

In [45]:
```
a
```
Out[45]: 5

In [46]:
```
b
```
Out[46]: 5

In [47]:
```
a>b
```
Out[47]: False

In [48]:
```
a>=b
```
Out[48]: True

In [49]:
```
a<b
```
Out[49]: False

In [50]:
```
a>b
```
Out[50]: False

In [51]:
```
b=7
```

In [52]:
```
a!=b
```
Out[52]: True

In [55]:
```
a = 5
b = 4
```

In [56]:
```
a<8 and b<5
```
Out[56]: True

In [57]:
```
a<8 and b<2
```
Out[57]: False

In [59]:
```
a<8 and b<2
```
Out[59]: False

In [60]:
```
a<8 or b<2
```
Out[60]: True

In [61]:
```
a>8 or b<2
```
Out[61]: False

In [63]:
```
x = False
x
```
Out[63]: False

In [64]:
```
not x
```
Out[64]: True

In [65]:
```
x = not x
x
```
Out[65]: True

In [66]:
```
x
```
Out[66]: True

In [67]:
```
not x
```
Out[67]: False

Number system

In [68]:
```
25
```
Out[68]: 25

In [69]:
```
bin(25)
```
Out[69]: '0b11001'

In [70]:
```
int(25)
```
Out[70]: 25

In [73]:
```
int(0b11001)
```
Out[73]: 25

In [74]:
```
bin(30)
```
Out[74]: '0b11110'

In [75]:
```
int(0b11110)
```
Out[75]: 30

In [76]:
```
int(0b11001)
```
Out[76]: 25

In [77]:
```
oct(25)
```
Out[77]: '0o31'

In [78]:
```
int(0o31)
```
Out[78]: 25

In [79]:
```
int(0b11110)
```
Out[79]: 30

In [80]:
```
0o31
```
Out[80]: 25

In [81]:
```
0b1101
```
Out[81]: 13

In [82]:
```
int(0b1101)
```
Out[82]: 13

In [83]:
```
bin(7)
```
Out[83]: '0b111'

In [85]:
```
oct(25)
```
Out[85]: '0o31'

In [86]:
```
int(0o31)
```
Out[86]: 25

In [87]:
```
hex(25)
```
Out[87]: '0x19'

In [88]:
```
hex(16)
```
Out[88]: '0x10'

In [90]:
```
0xa
```
Out[90]: 10

In [91]:
```
0xb
```
Out[91]: 11

In [92]:
```
hex(1)
```
Out[92]: '0x1'

In [93]:
```
hex(25)
```
Out[93]: '0x19'

In [94]:
```
hex(256)
```
Out[94]: '0x100'

In [95]:
```
0x15
```
Out[95]: 21

Swap 2- variables

In [96]:
```
a = 5
b = 6
```

In [97]:
```
a=b
b=a
```

In [98]:
```
print(a)
print(b)
```
```
6
6
```

In [99]:
```
a1 = 7
b1 = 8
```

In [100…:
```
temp = a1
a1 = b1
b1=temp
```

In [101…:
```
print(a1)
print(b1)
```
```
8
7
```

In [102…:
```
a2 = 5
b2 = 6
```

In [103…:
```
a2 = a2+b2
b2 = a2-b2
a2 = a2-b2
```

In [104…:
```
print(a2)
print(b2)
```
```
6
5
```

In [105…:
```
0b110
```
Out[105…: 6

In [106…:
```
0b101
```
Out[106…: 5

In [107…:
```
print(0b110)
print(0b101)
```
```
6
5
```

In [108…:
```
print(bin(11))
print(0b1011)
```
```
0b1011
11
```

In [109…:
```
print(a2)
print(b2)
```
```
6
5
```

In [110…:
```
a2 = a2^b2
b2 = a2^b2
a2 = a2^b2
```

In [111…:
```
print(a2)
print(b2)
```
```
5
6
```

In [112…:
```
a2,b2
```
Out[112…: (5, 6)

In [113…:
```
a2,b2=b2,a2
```

In [114…:
```
print(a2)
print(b2)
```
```
6
5
```

Bitwise operator

In [115…:
```
print(bin(12))
print(bin(13))
```
```
0b1100
0b1101
```

In [116…:
```
~12
```
Out[116…: -13

In [117…:
```
~46
```
Out[117…: -47

In [118…:
```
~54
```
Out[118…: -55

In [119…:
```
~10
```
Out[119…: -11

In [120…:
```
12&13
```
Out[120…: 12

In [121…:
```
12|13
```
Out[121…: 13

In [122…:
```
1&0
```
Out[122…: 0

In [123…:
```
1|0
```
Out[123…: 1

In [124…:
```
bin(13)
```
Out[124…: '0b1101'

In [125…:
```
print(bin(35))
print(bin(40))
```
```
0b100011
0b101000
```

In [126…:
```
35&40
```
Out[126…: 32

In [127…:
```
bin(35)
```
Out[127…: '0b100011'

In [128…:
```
bin(40)
```
Out[128…: '0b101000'

In [129…:
```
bin(32)
```
Out[129…: '0b100000'

In [130…:
```
35|40
```
Out[130…: 43

In [131…:
```
bin(101011)
```
Out[131…: '0b11000101010010011'

In [132…:
```
bin(43)
```
Out[132…: '0b101011'

In [133…:
```
12^13
```
Out[133…: 1

In [134…:
```
print(bin(25))
print(bin(30))
```
```
0b11001
0b11110
```

In [135…:
```
25^30
```
Out[135…: 7

In [136…:
```
bin(25)
```
Out[136…: '0b11001'

In [137…:
```
bin(30)
```
Out[137…: '0b11110'

In [138…:
```
10<<1
```
Out[138…: 20

In [140…:
```
10<<2
```
Out[140…: 40

In [141…:
```
20<<4
```
Out[141…: 320

In [142…:
```
bin(10)
```
Out[142…: '0b1010'

In [143…:
```
10>>1
```
Out[143…: 5

In [144…:
```
10>>2
```
Out[144…: 2

In [145…:
```
10>>3
```