Operators:

In [ ]:

In [ ]:

Arithmetic Opertors:

In [ ]:

In [2]:
```
x1, y1 = 10, 5
```

In [3]:
```
x1 + y1
```

Out[3]: 15

In [4]:
```
x1 - y1
```

Out[4]: 5

In [5]:
```
x1 * y1
```

Out[5]: 50

In [6]:
```
x1 / y1
```

Out[6]: 2.0

In [7]:
```
x1 // y1
```

Out[7]: 2

In [8]:
```
x1 % y1
```

Out[8]: 0

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

Out[9]: 100000

In [10]:
```
x2 = 3
y2 = 3

x2 ** y2
```

Out[10]: 27

In [ ]:

Assignment Operator:

In [ ]:

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

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

In [13]:
```
x
```

Out[13]: 4

In [14]:
```
x += 2
x
```

Out[14]: 6

In [15]:
```
x += 2
```

In [16]:
```
x
```

Out[16]: 8

In [17]:
```
x *= 2
x
```

Out[17]: 16

In [18]:
```
x -= 2
```

In [19]:
```
x
```

Out[19]: 14

In [20]:
```
x /= 2
x
```

Out[20]: 7.0

In [21]:
```
x // 2
x
```

Out[21]: 7.0

In [22]:
```
a, b = 5,6
print(a)
print(b)
```

```
5
6
```

In [23]:
```
a = 5
b = 6
```

```
print (a)
print (b)
```

```
5
6
```

In [24]:
```
a
```

Out[24]: 5

In [25]:
```
b
```

Out[25]: 6

In [ ]:
```

```

Unary Operator

In [ ]:
```

```

In [27]:
```
n = 7
n
```

Out[27]: 7

In [28]:
```
m = -(n)
```

In [29]:
```
m
```

Out[29]: -7

In [30]:
```
n
```

Out[30]: 7

In [31]:
```
-n
```

Out[31]: -7

In [ ]:
```

```

Relational Operator

In [ ]:
```

```

In [32]:
```
a = 5
b = 6
```

In [33]:
```
a < b
```

Out[33]: True

In [34]:
```
a > b
```

Out[34]: False

In [35]:
```
a == b
```

Out[35]: False

In [36]:
```
a != b
```

Out[36]: True

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

In [38]:
```
a == b
```

Out[38]: True

In [39]:
```
a
```

Out[39]: 5

In [40]:
```
b
```

Out[40]: 5

In [41]:
```
a > b
```

Out[41]: False

In [42]:
```
a >= b
```

Out[42]: True

In [43]:
```
a <= b
```

Out[43]: True

In [44]:
```
a < b
```

Out[44]: False

In [45]:
```
a > b
```

Out[45]: False

In [46]:
```
b = 7
```

In [48]:
```
a != b
```

Out[48]: True

In [ ]:

Logical Operator

In [ ]:

In [49]:
```
a = 5
b = 4
```

In [50]:
```
a < 8 and b < 5
```

Out[50]: True

In [51]:
```
a < 8 and b < 2
```

Out[51]: False

In [52]:
```
a < 8 or b < 2
```

Out[52]: True

In [53]:
```
a > 8 or b < 2
```

Out[53]: False

In [54]:
```
x = False
x
```

Out[54]: False

In [55]:
```
not x
```

Out[55]: True

In [56]:
```
x = not x
x
```

Out[56]: True

In [57]:
```
x
```

Out[57]: True

In [58]:
```
not x
```

Out[58]: False

In [ ]:

Number System Conversion (bit - binary digit)

In [ ]:

In [60]:
```
25
```

Out[60]: 25

In [61]:
```
bin(25)
```

Out[61]: '0b11001'

In [62]:
```
int(0b11001)
```

Out[62]: 25

In [63]:
```
bin(30)
```

Out[63]: '0b11110'

In [64]:
```
int(0b11110)
```

Out[64]: 30

In [65]:
```
int(0b11001)
```

Out[65]: 25

In [66]:
```
oct(25)
```

Out[66]: '0o31'

In [67]:
```
int(0o31)
```

Out[67]: 25

In [68]:
```
int(0b11110)
```

Out[68]: 30

In [69]:
```
0o31
```

Out[69]: 25

In [70]:
```
0b11001
```

Out[70]: 25

In [71]:
```
int(0b11001)
```

Out[71]: 25

In [72]:
```
bin(7)
```

Out[72]: '0b111'

In [73]:
```
oct(25)
```

Out[73]: '0o31'

In [74]:
```
int(0o31)
```

Out[74]: 25

In [75]:
```
hex(25)
```

Out[75]: '0x19'

In [76]:
```
hex(16)
```

Out[76]: '0x10'

In [79]:
```
0xa
```

Out[79]: 10

In [80]:
```
0xb
```

Out[80]: 11

In [81]:
```
hex(1)
```

Out[81]: '0x1'

In [83]:
```
0x19
```

Out[83]: 25

In [84]:
```
0x15
```

Out[84]: 21

Swap 2-variable in python

In [85]:
```
a = 5
b = 6
```

In [86]:
```
a = b
b = a
```

In [87]:
```
print(a)
print(b)
```

```
6
6
```

In [88]:
```
a1 = 7
b1 = 8
```

In [89]:
```
temp = a1
a1 = b1
b1 = temp
```

In [90]:
```
print (a1)
print (b1)
```

```
8
7
```

Third Variable

In [ ]:
```

```

In [91]:
```
a2 = 5
b2 = 6
```

In [92]:
```
a2 = a2 + b2
b2 = a2 - b2
a2 = a2 - b2
```

In [93]:
```
print(a2)
print(b2)
```

```
6
5
```

In [94]:
```
0b110
```

Out[94]: 6

In [95]:
```
0b101
```

Out[95]: 5

In [96]:
```
print(0b110)
print(0b101)
```

```
6
5
```

In [97]:
```
print(0b101)
print(0b110)
```

```
5
6
```

In [98]:
```
print (bin(11))
print (0b1011)
```

```
0b1011
11
```

In [ ]:

In [ ]:

XOR

In [ ]:

In [99]:
```
print(a2)
print(b2)
```

```
6
5
```

In [100…
```
a2 = a2 ^ b2
b2 = a2 ^ b2
a2 = a2 ^ b2
```

In [101…
```
print(a2)
print(b2)
```

```
5
6
```

In [102…
```
a2 , b2 = b2, a2
```

In [103…
```
print(a2)
print(b2)
```

```
6
5
```

In [ ]:

BITWISE OPERATOR

In [ ]:

In [104…
```
print(bin(12))
print(bin(13))
```

```
0b1100
0b1101
```

In [105…
```
-13
```

Out[105… -13

In [106…
```
~46
```

Out[106… -47

In [107…
```
~54
```

Out[107… -55

In [108…
```
~10
```

Out[108… -11

In [ ]:

BIT WISE AND OPERATOR

In [ ]:

In [110…
```
12 & 13
```

Out[110… 12

In [111…
```
12 | 13
```

Out[111… 13

In [112…
```
1 & 0
```

Out[112… 0

In [113…
```
1 | 0
```

Out[113… 1

In [115…
```
bin(13)
```

Out[115… '0b1101'

In [116…
```
print(bin(35))
```

```
0b100011
```

In [117…
```
print(bin(40))
```

```
0b101000
```

In [119…
```
35 & 40
```

Out[119… 32

In [120…
```
35 | 40
```

Out[120… 43

In [121…
```
12 ^ 13
```

Out[121… 1

In [122…
```
print(bin(25))
print(bin(30))
```

```
0b11001
0b11110
```

In [123…
```
25^30
```

Out[123… 7

In [124…
```
bin(7)
```

Out[124… '0b111'

In [125…
```
bin(25)
```

Out[125… '0b11001'

In [126…
```
bin(30)
```

Out[126… '0b11110'

In [127…
```
bin(10)
```

Out[127… '0b1010'

In [128…
```
10<<1
```

Out[128… 20

In [129…
```
10<<2
```

Out[129… 40

In [130…
```
10<<3
```

Out[130… 80

In [131…
```
bin(20)
```

Out[131… '0b10100'

In [132…
```
20<<4
```

Out[132… 320

In [133…
```
bin(10)
```

Out[133… '0b1010'

In [134…
```
10 >> 1
```

Out[134… 5

In [135…
```
10 >> 2
```

Out[135… 2

In [136…
```
10 >> 3
```

Out[136… 1

In [137…
```
bin(20)
```

Out[137… '0b10100'

In [ ]: