Diffrent types of operators in python:

- Arithmatic Operators : +,-,,/,//,%,*
- Assignment Operators : +=, -=, /=,=,*=,%=
- Conditional Operators: <, >, <=, >=, !=, ==
- Logical Operators : and, or, not
- Identity Operators: is, is not
- Membership Operators: in, not in
- Bitwise Operators: &, |, ^

In [2]:
```
12/4
```
Out[2]:
```
3.0
```

In [1]:
```
10/4
```
Out[1]:
```
2.5
```

In [3]:
```
10//4    # floor division
```
Out[3]:
```
2
```

In [4]:
```
2**3
```
Out[4]:
```
8
```

In [5]:
```
a = 10
a += 10
```

In [6]:
```
print(a)
```
```
20
```

In [8]:
```
a = 2
a**=4
print(a)
```
```
16
```

In [9]:
```
16%9
```
Out[9]:
```
7
```

In [10]:

```
a = 16
a%=9

print(a)
```

```
7
```

In [12]:

```
a= 10 > 11
```

In [13]:

```
10 >= 10
```

Out[13]:

```
True
```

In [14]:

```
10 == 10
```

Out[14]:

```
True
```

In [15]:

```
10 != 10
```

Out[15]:

```
False
```

In [16]:

```
"Apple" == "Apple"
```

Out[16]:

```
True
```

In [19]:

```
10==10 and 10==11
```

Out[19]:

```
False
```

In [24]:

```
not(20 > 30 and 30==30)
```

Out[24]:

```
True
```

In [25]:

```
a = 10
b = 10

print(a is b)
```

```
True
```

In [26]:

```
id(a)
```

Out[26]:

```
2850220239440
```

In [27]:

```
id(b)
```

Out[27]:

```
2850220239440
```

In [28]:

```
a = 20
b = 30

a is b
```

Out[28]:

```
False
```

In [29]:

```
a is not b
```

Out[29]:

```
True
```

In [30]:

```
20 in [23,20,40]
```

Out[30]:

```
True
```

In [31]:

```
ml = [23,20,40]

20 in ml
```

Out[31]:

```
True
```

In [34]:

```
"Apl" in "Apple"
```

Out[34]:

```
False
```

What is the difference between is, in and == operators

In [49]:

```
print([20,30] is [20,30])
print([20,30] in [20,30])
print([20,30] == [20,30])
```

```
False
False
True
```

In [37]:

```
a = [20]
b = [20]

a is b
```

Out[37]:

```
False
```

In [45]:

```
a = 257
b = 257

a is b
```

Out[45]:

```
False
```

In [47]:

```
print([20,30] in [20,30,[20,30]])

```

```
True
```

In [50]:

```
5 & 10
```

Out[50]:

```
0
```

In [51]:

```
15 & 10
```

Out[51]:

```
10
```

In [52]:

```
15 | 10
```

Out[52]:

```
15
```

In [54]:

```
15 ^ 10
```

Out[54]:

```
5
```

In [ ]:

```
# esc + m : markdown cell
# esc + y : code cell
# esc + a : add a cell above
# esc + b : add a cell below
# esc + z : undo the deleted cell
# esc + h : help
# esc + f : find  and replace
```

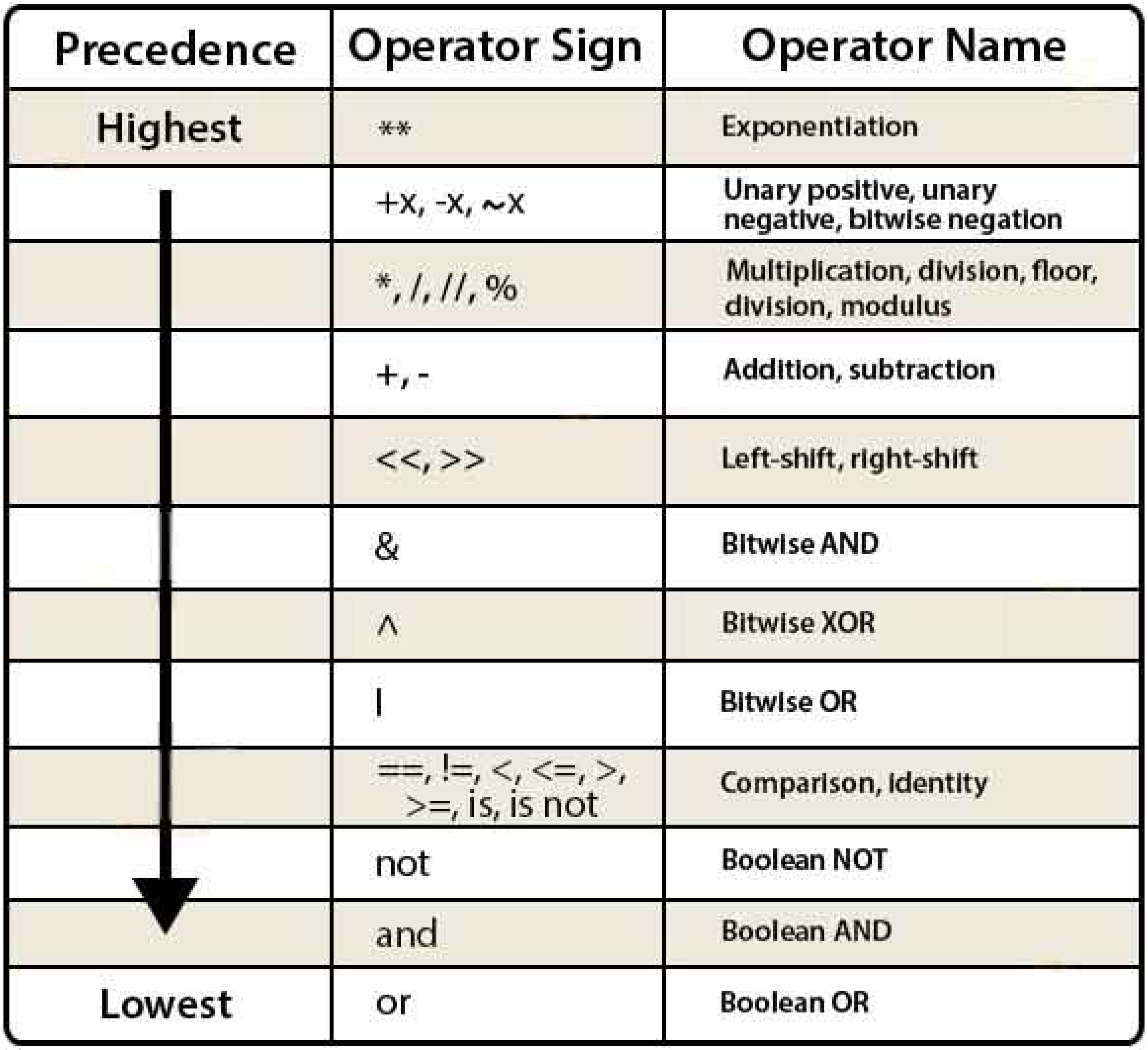
Precedence

In [55]:

```
10**2//3
```

Out[55]:

```
33
```



Precedence	Operator Sign	Operator Name
Highest	**	Exponentiation
	+x, -x, ~x	Unary positive, unary negative, bitwise negation
	*, /, //, %	Multiplication, division, floor, division, modulus
	+, -	Addition, subtraction
	<<, >>	Left-shift, right-shift
	&	Bitwise AND
	^	Bitwise XOR
	|	Bitwise OR
	==, !=, <, <=, >, >=, is, is not	Comparison, identity
	not	Boolean NOT
	and	Boolean AND
Lowest	or	Boolean OR

```
In [56]: -10/4
Out[56]: -2.5
```

```
In [57]: -10//4
Out[57]: -3
```

```
In [ ]:
```