In [1]:
```
#OPerators in python:-
```

In [2]:
```
# A.Arithmetic operators(+,-,*,/):-
```

In [3]:
```
#Example-01 of arithmetic operators:-
```

In [4]:
```
a = 10
b = 20
a,b
```

Out[4]:
```
(10, 20)
```

In [5]:
```
a+b
```

Out[5]:
```
30
```

In [6]:
```
a-b
```

Out[6]:
```
-10
```

In [7]:
```
b-a
```

Out[7]:
```
10
```

In [8]:
```
a*b
```

Out[8]:
```
200
```

In [9]:
```
a/b
```

Out[9]:
```
0.5
```

In [10]:
```
b/a
```

Out[10]: 2.0

In [11]:
```
#Example-02 of arithmetic operators:-
```

In [12]:
```
x = 100
y = 200
z = 300
```

In [13]:
```
x+y+z
```

Out[13]: 600

In [14]:
```
x-y-z
```

Out[14]: -400

In [15]:
```
-x-y-z
```

Out[15]: -600

In [16]:
```
x-y+z
```

Out[16]: 200

In [17]:
```
-x+y+z
```

Out[17]: 400

In [18]:
```
-x+y-z
```

Out[18]: -200

In [19]:
```
x+y-z
```

Out[19]: 0

In [ ]:
```

```

```
In [20]: x*y*z
Out[20]: 6000000

In [21]: x/y/z
Out[21]: 0.0016666666666666668

In [22]: x/z/y
Out[22]: 0.0016666666666666666

In [23]: y/x/z
Out[23]: 0.006666666666666667

In [24]: y/z/x
Out[24]: 0.006666666666666666

In [25]: z/x/y
Out[25]: 0.015

In [26]: z/y/x
Out[26]: 0.015

In [27]: x/y*z
Out[27]: 150.0

In [28]: x*y/z
Out[28]: 66.66666666666667

In [29]: x*z/y
```

Out[29]: 150.0

In [30]:
```
(x+y)*z
```

Out[30]: 90000

In [31]:
```
((x-y)+z)*x
```

Out[31]: 20000

In [32]:
```
(x/y)*(x+y-z)*(x+y)
```

Out[32]: 0.0

In [33]:
```
# B. Relational operators(<,>,==,!=):-
```

In [34]:
```
#Example-01 of relational operators:-
```

In [35]:
```
p = 15
q = 25
p,q
```

Out[35]: (15, 25)

In [36]:
```
p > q
```

Out[36]: False

In [37]:
```
p < q
```

Out[37]: True

In [38]:
```
p == q
```

Out[38]: False

In [39]:
```
p == p
```

Out[39]: True

In [40]:
```
q == q
```

Out[40]: True

In [41]:
```
p != q
```

Out[41]: True

In [42]:
```
q != p
```

Out[42]: True

In [43]:
```
#Example-02 of relational operators:-
```

In [44]:
```
m = 150
n = 260
r = 370
m,n,r
```

Out[44]: (150, 260, 370)

In [45]:
```
m>n>r
```

Out[45]: False

In [46]:
```
m>n<r
```

Out[46]: False

In [47]:
```
m<n>r
```

Out[47]: False

In [48]:
```
m<n<r
```

Out[48]: True

In [49]:
```
n>m>r
```

Out[49]: False

In [50]:
```
n>m<r
```

Out[50]: True

In [51]:
```
n<m<r
```

Out[51]: False

In [52]:
```
n<m>r
```

Out[52]: False

In [53]:
```
r>m>n
```

Out[53]: False

In [54]:
```
r>m<n
```

Out[54]: True

In [55]:
```
r<m>n
```

Out[55]: False

In [56]:
```
r<m<n
```

Out[56]: False

In [57]:
```
m == n == r
```

Out[57]: False

In [58]:
```
m == n >r
```

Out[58]: False

In [59]:
```
m == n < r
```

Out[59]: False

In [60]:
```
m == n != r
```

Out[60]: False

In [61]:
```
m > n == r
```

Out[61]: False

In [62]:
```
m > n != r
```

Out[62]: False

In [63]:
```
m < n == r
```

Out[63]: False

In [64]:
```
m < n != r
```

Out[64]: True

In [65]:
```
m != n == r
```

Out[65]: False

In [66]:
```
m != n > r
```

Out[66]: False

In [67]:
```
m != n < r
```

Out[67]: True

In [68]:
```
m != n != r
```

Out[68]: True

In [69]:
```
# C. Logical operators (&, |):-
```

In [70]:
```
#Example-01 of logical operators:-
```

In [71]:
```
u = True
v = False
u,v
```

Out[71]: (True, False)

In [72]:
```
u & u
```

Out[72]: True

In [73]:
```
u & v
```

Out[73]: False

In [74]:
```
v & u
```

Out[74]: False

In [75]:
```
v & v
```

Out[75]: False

In [76]:
```
u | u
```

Out[76]: True

In [77]:
```
u | v
```

Out[77]: True

In [78]:
```
v | u
```

Out[78]: True

In [79]:
```
v | v
```

Out[79]: False

In [80]:
```
#Example-02 of logical operators:-
```

In [81]:
```
x = True
y = False
z = True
x,y,z
```

Out[81]: (True, False, True)

In [82]:
```
x & y & z
```

Out[82]: False

In [83]:
```
x & y | z
```

Out[83]: True

In [84]:
```
x | y | z
```

Out[84]: True

In [85]:
```
x | y & z
```

```
Out[85]: True

In [86]: y | z & x
Out[86]: True

In [87]: x | y | z
Out[87]: True

In [88]: x & x & x
Out[88]: True

In [89]: x | x | x
Out[89]: True

In [90]: y & y & y
Out[90]: False

In [91]: y | y | y
Out[91]: False

In [92]: z & z & z
Out[92]: True

In [93]: z | z | z
Out[93]: True
```