# BASIC PYTHON CLASS

In [1]:
```
1+1
```

Out[1]:
```
2
```

In [2]:
```
4-2
```

Out[2]:
```
2
```

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

Out[3]:
```
8
```

In [4]:
```
4/2
```

Out[4]:
```
2.0
```

In [5]:
```
# in python jupyter notebook percentage symbol work as REMAINDERB
4%2
```

Out[5]:
```
0
```

In [6]:
```
3%2
```

Out[6]:
```
1
```

In [7]:
```
# '**' WORK AS EXPONENT like 4 raised to 2b
4**2
```

Out[7]:
```
16
```

In [8]:
```
# will learn about how to ASSIGN to variable
a=2
a
```

Out[8]:
```
2
```

In [9]:
```
#will see what type of data  'a'
```

In [10]:
```
a=9.7
type(a)
```

Out[10]:
```
float
```

In [11]:
```
type(a)          # it is an 'integar (int)' type data
```

Out[11]:
```
float
```

In [12]:
```
#will see about 'string'
```

In [13]:
```
str='Hi python'
print(str)
type(str)
```

Out[13]:
```
Hi python
str
```

In [14]:
```
string1='Hi PYTHON'
string2='Hi JUPYTER'
print(string1,string2)
```

```
Hi PYTHON Hi JUPYTER
```

In [15]:
```
print(string1)
print(string2)
```

```
Hi PYTHON
Hi JUPYTER
```

In [16]:
```
string1 + string2
```

Out[16]:
```
'Hi PYTHONHi JUPYTER'
```

In [17]:
```
string1>string2
```

Out[17]:
```
True
```

In [18]:
```
string1<string2   # it count each character in sentence
```

Out[18]:
```
False
```

In [19]:
```
# USE OF 'MARKDOWN' whenever writing any programe as a title without code we can use
```

1.list = list are the data type which hold multiple values,its' a collection of data type like-int,float,char,var etc. list reperented as '[ ]'

In [20]:
```
list1=[1,70,90,34]
```

In [21]:
```
list1
```

Out[21]:
```
[1, 70, 90, 34]
```

In [22]:
```
list2=[6,68,[92,34]]
```

In [23]:
```
```

```
list2
```

Out[23]:
```
[6, 68, [92, 34]]
```

To access any specific value inside list2 see below, here value start from '0'zero

In [24]:
```
list2[0]
```

Out[24]:
```
6
```

In [25]:
```
list2[2]
```

Out[25]:
```
[92, 34]
```

w.r.t. above if want to find out specific value inside bracket ?b

In [26]:
```
list2[2][0]
```

Out[26]:
```
92
```

In [27]:
```
list2[2][1]
```

Out[27]:
```
34
```

use of : colon sign,suppose we have to find out first 3 or 4 value out of 50 value how?

In [28]:
```
list3=[34,26,85,96,12,36,25,28,78,59,46,12,11,45,465,49,14654]
```

In [29]:
```
list3[0:3]   # equal sign'=' not alllowed
```

Out[29]:
```
[34, 26, 85]
```

In [30]:
```
list3
```

Out[30]:
```
[34, 26, 85, 96, 12, 36, 25, 28, 78, 59, 46, 12, 11, 45, 465, 49, 14654]
```

In [31]:
```
len(list3)  #  Total no. of value inside list3
```

Out[31]:
```
17
```

In [32]:
```
list3[0:5]
```

Out[32]:
```
[34, 26, 85, 96, 12]
```

In [33]:
```
list3[2:7] # +ve value start from 0 to 6 excluding 7th value
```

Out[33]:
```
[85, 96, 12, 36, 25]
```

In [44]:
```
list3[-1] # -ve value start from -1
```

Out[44]:
```
7
```

INDEX METHOD = how to find index no. of values inside bracket ?

In [34]:
```
list3.index(465) # in lsit3 value 465 is on which index no.counting start from 0,her
```

Out[34]:
```
14
```

In [35]:
```
list3.index(96)
```

Out[35]:
```
3
```

append/add= by using this functions we can add value inside list,will add few value inside list3

In [36]:
```
list3.append(7)
```

In [39]:
```
list3
```

Out[39]:
```
[34, 26, 85, 96, 12, 36, 25, 28, 78, 59, 46, 12, 11, 45, 465, 49, 7]
```

remove/pop = any value from list3

In [40]:
```
list3.remove(14654)
```

```
---------------------------------------------------------------------------
ValueError                                Traceback (most recent call last)
~\AppData\Local\Temp/ipykernel_14104/3585876369.py in <module>
----> 1 list3.remove(14654)

ValueError: list.remove(x): x not in list
```

In [41]:
```
list3   # the value 14654 got removed from list3
```

Out[41]:
```
[34, 26, 85, 96, 12, 36, 25, 28, 78, 59, 46, 12, 11, 45, 465, 49, 7]
```

In [42]:
```
list3.pop(3)  # with pop function will remove specific index no say index no.3 i.e.
```

Out[42]:
```
96
```

In [45]:
```
list3
```

Out[45]:
```
[34, 26, 85, 12, 36, 25, 28, 78, 59, 46, 12, 11, 45, 465, 49, 7]
```

In [47]:
```
range(0,4)
```

Out[47]:
```
range(0, 4)
```

Dictionery = it's a pair of keys and values = it define as curly bracket "{}"

In [55]:
```
{'ram':80,'adam':60,'sam':96}  # we have formed dictionery of MARKS of students
```

Out[55]:
```
{'ram': 80, 'adam': 60, 'sam': 96}
```

In [56]:
```
marks={'ram':80,'adam':60,'sam':96}
```

In [57]:
```
marks
```

Out[57]:
```
{'ram': 80, 'adam': 60, 'sam': 96}
```

In [58]:
```
type(marks)
```

Out[58]:
```
dict
```

In [59]:
```
marks['ram']
```

Out[59]:
```
80
```

In [61]:
```
marks.keys()
```

Out[61]:
```
dict_keys(['ram', 'adam', 'sam'])
```

In [62]:
```
marks.values()
```

Out[62]:
```
dict_values([80, 60, 96])
```

In [63]:
```
marks['sam']= 90  # we have changed marks of same from 96 to 90
```

In [64]:
```
marks
```

Out[64]:
```
{'ram': 80, 'adam': 60, 'sam': 90}
```