List Membership

```
In [1]:  l = [100,10,15,20,30,40]
         l
```

```
Out[1]:  [100, 10, 15, 20, 30, 40]
```

```
In [3]:  100 in l
```

```
Out[3]:  True
```

```
In [4]:  1000 in l
```

```
Out[4]:  False
```

```
In [6]:  for i in l:
             print(i)
```

```
100
10
15
20
30
40
```

```
In [7]:  l
```

```
Out[7]:  [100, 10, 15, 20, 30, 40]
```

```
In [8]:  for i in enumerate(l):
             print(i)
```

```
(0, 100)
(1, 10)
(2, 15)
(3, 20)
(4, 30)
(5, 40)
```

```
In [9]:  l2= [9,True, 9.3]
         l2
```

```
Out[9]:  [9, True, 9.3]
```

```
In [12]:  print (l2)
          print (l)
```

```
[9, True, 9.3]
[100, 10, 15, 20, 30, 40]
```

```
In [13]:  l2.extend(l)
          l2
```

Out[13]: [9, True, 9.3, 100, 10, 15, 20, 30, 40]

In [14]: ```l.sort()```

In [15]: ```l```

Out[15]: [10, 15, 20, 30, 40, 100]

In [16]: ```l.sort(reverse=True)```

In [17]: ```l```

Out[17]: [100, 40, 30, 20, 15, 10]

In [18]: ```l2```

Out[18]: [9, True, 9.3, 100, 10, 15, 20, 30, 40]

In [19]: ```
l3= [1,2.3,'nit',2]
l3
```

Out[19]:  [1, 2.3, 'nit', 2]

In [20]:  ```l3.sort()```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[20], line 1
----> 1 l3.sort()

TypeError: '<' not supported between instances of 'str' and 'float'
```

In [21]: ```
l4=['a','z','n','m']
l4
```

Out[21]: ['a', 'z', 'n', 'm']

In [22]: ```l4.sort()```

In [23]: ```l4```

Out[23]: ['a', 'm', 'n', 'z']

In [24]: ```#the sort functions work when we have similar data tyepes```

In [ ]: ```#in mix datatypes sort() function does not work```

In [25]: ```l4.reverse()```

In [26]: ```l4```

Out[26]:   ['z', 'n', 'm', 'a']

In [29]:   *#LIST Data Structure concept completed*

All / ANY

In [30]:   `all(l)`

Out[30]:   True

In [32]:   `any(l)`

Out[32]:   True

In [ ]:

Tuple

In [ ]:

In [33]:   `t=()`

In [34]:   `t`

Out[34]:   ()

In [35]:   `type(t)`

Out[35]:   tuple

In [36]:   ```
t1 =(10,20,30)
t1
```

Out[36]:    (10, 20, 30)

In [38]:    `t1.append(10)`

```
---------------------------------------------------------------------------
AttributeError                            Traceback (most recent call last)
Cell In[38], line 1
----> 1 t1.append(10)

AttributeError: 'tuple' object has no attribute 'append'
```

In [39]:   `t1.remove(20)`

```
----------------------------------------------------------------------------
AttributeError                               Traceback (most recent call last)
Cell In[39], line 1
----> 1 t1.remove(20)

AttributeError: 'tuple' object has no attribute 'remove'
```

In [42]: t1.index(20)

Out[42]: 1

In [46]: sbi = ('alex',123456789,'cizp567',4567)
         sbi

Out[46]: ('alex', 123456789, 'cizp567', 4567)

In [47]: sbi[1] = 20

```
----------------------------------------------------------------------------
TypeError                                    Traceback (most recent call last)
Cell In[47], line 1
----> 1 sbi[1] = 20

TypeError: 'tuple' object does not support item assignment
```

In [48]: t1.count(10)

Out[48]: 1

In [49]: t1.index(20)

Out[49]: 1

In [50]: for i in t1:
             print(i)

         10
         20
         30

In [52]: t2 = t1*3
         t2

Out[52]: (10, 20, 30, 10, 20, 30, 10, 20, 30)

In [53]: t2[2:6]

Out[53]: (30, 10, 20, 30)

In [54]: del t2

In [55]: t2
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
Cell In[55], line 1
----> 1 t2

NameError: name 't2' is not defined
```

In [ ]: