Nested Collections

- It is the process of defining the Collection in side another collection

Example 1:

```
#      0  1      2            3            4                  5
lst=[10,3.14,["A","B"],(1.1,2.2),{"aaa","bbb"},
                {"sno":101,"sname":"ramesh","scity":"hyd"}]

print("First Object :",lst[0]) #10
print("List Collection : ",lst[2]) #["A","B"]
print("Second item from lst : ",lst[2][1]) #B

print("Student : ",lst[5])
print("sname is : ",lst[5]['sname'])
lst[5]['sname']='Ravali'
print("Student : ",lst[5])
```

Example 2:

```
#      0  1      2            3            4                  5
lst=[10,3.14,["A","B"],(1.1,2.2),{"aaa","bbb"},
                {"sno":101,"sname":"ramesh","scity":"hyd"}]

import time
```

```
for i in lst:
   time.sleep(1)
   print(i)
```

Example 3:

```
#      0                1                2                3
lst=[ ["A","B","C"],(1.1,2.2,3.3),{"aaa","bbb","ccc"},
                {"sno":101,"sname":"ramesh","scity":"hyd"}]

import time
for i in lst:
   if isinstance(i,dict):
      for k,d in i.items():
         time.sleep(.4)
         print(k,d,sep='<<>>')
   else:
      time.sleep(1)
      print("Type is : ",type(i))
      for j in i:
         time.sleep(.2)
         print(j)
      print("- "*30)
```

Example 4:

```
#   0              1          2                3
t=([10,20,30],(1.1,2.2),{"aaa","bbb"},
        {"sno":101,"sname":"ramesh"})

print("Sname is : ",t[3]['sname'])
t[3]['sname']='Ravi'
print("Sname is : ",t[3]['sname'])

del t[1]
```

Example 5:

#Set Collection with Other Type of Collection

```
#Set Collection doesn't support nested List Collection
#s={ [10,20], (1.1,2.2), {"aaa","bbb"}, {"sno":101} }

#Set Collection doesn't support Nested Set Collection
#s={  (1.1,2.2), {"aaa","bbb"}, {"sno":101} }

#Set Collection doesn't support Nested Dict collection
#s={  (1.1,2.2), {"sno":101} }

s={  (1.1,2.2),("aaa","bbb"),(10,20,30) }
```

```
import time
for i in s:
   time.sleep(1)
   print(i)
```

Example 6:

```
stu={"sno":101,
       "sname":"ramesh",
       "marks":[40,50,60,70,80,30],
       "Address":{"Hno":"1-2-3",
                  "City":"Hyderabad",
                  "pin":500072
                 }
     }

import time
for k,d in stu.items():
   if isinstance(d,dict):
      print(k)
      for i,j in d.items():
         time.sleep(1)
         print(i,"------> ",j)
   elif isinstance(d,list):
      print(k)
```

```
        s=0
        for m in d:
            print(m)
            s=s+m
        print("total Marks : ",s)

    else:
        time.sleep(.4)
        print(k,d,sep="<<<>>>")
```

Common Function for iterable Collection

```
#len(iterable) -> int
lst=[10,"A",30,"B",50]
print(lst)
ni=len(lst)
print("No.of.Items : ",ni)

#sum(iterable) -> sum
s=0
for m in lst:
    s=s+m
print("Sum is : ",s)

s1=sum(lst)
```

```
print("Sum is : ",s1)

#max(iterable) -> int
lst=[10,20,30,40,2]
print("list ",lst)
m=max(lst)
print("Biggest is : ",m)

#min(iterable) -> int
s=min(lst)
print("Least Value : ",s)

#all(iterable) -> bool
lst=[10,1.2,"shashi"]
print("list : ",lst)
b=all(lst)
print("Result is : ",b)

#any(iterable) -> bool
lst=[None,0.0,"",123]
print("list : ",lst)
b=any(lst)
print("Result is : ",b)
```