

## Objectives

**Date : 03-10-2019**

- explanation of yesterday tasks
- Problem set on Dictionaries
- Sets in python

In [ ]:

```

1  #Tasks
2  # 1.Find the lowest frequency element of given list. if the list having more than one lowest
3  # max element (key) (by using a function)
4      #l=[20,33,4,5,101,20,33,5,20,33,5,4,5,4]
5  # 2.create a function to find the second highest frequency element in the given list
6      #l=[22,1,3,44,22,3,44,44,22]
7  # 3.create a function to find the third lowest frequency element in the given list
8      #l=[20,33,4,5,101,20,33,5,20,33,5,4,5,4]
9  # 4.create a function to find the kth frequency element in given list
10     #l=[20,33,4,5,101,20,33,5,20,33,5,4,5,4]
11     # If the k value is greater than the length of the list then return -1

```

In [20]:

```

1  # 1.Find the lowest frequency element of given list. if the list having more than one lowest
2  # max element (key) (by using a function)
3      #l=[20,33,4,5,101,20,33,5,20,33,5,4,5,4]
4
5  def lowfrequency(l):
6      dic1={}
7      for i in l:
8          dic1[i]=l.count(i)
9      valueslist=list(dic1.values())
10     lowestfreqvalue=min(valueslist)
11     print(dic1)
12     lowfreqlist=[]
13     for item in dic1.items():
14         if item[1]==lowestfreqvalue:
15             lowfreqlist.append(item[0])
16     if len(lowfreqlist)>1:
17         print(max(lowfreqlist))
18
19 a = [20,33,4,5,101,20,33,5,20,33,5,4,5,4,55,22,34]
20 lowfrequency(a)

```

```

{20: 3, 33: 3, 4: 3, 5: 4, 101: 1, 55: 1, 22: 1, 34: 1}
101

```

In [3]:

```

1  # 2.create a function to find the second highest frequency element in the given list
2      #l=[22,1,3,44,22,3,44,44,22]
3
4  def secondfrequency(l):
5      dic1={}
6      for i in l:
7          dic1[i]=l.count(i)
8      valueslist=list(dic1.values())
9      print(valueslist)
10     sortedlist=[]
11     sortedlist=sorted(valueslist)
12     print(sortedlist)
13     finallist=[]
14     for i in sortedlist:
15         if i not in finallist:
16             finallist.append(i)
17     print(finallist)
18     secondhighfreq=finallist[1]
19     print(dic1)
20
21     for item in dic1.items():
22         if item[1]==secondhighfreq:
23             print("second high frequency element is: ",item[0])
24
25 a = [20,33,4,5,101,20,33,5,20,33,5,4,5,4,55,22,34]
26 secondfrequency(a)
27

```

```
[3, 3, 3, 4, 1, 1, 1, 1]
```

```
[1, 1, 1, 1, 3, 3, 3, 4]
```

```
[1, 3, 4]
```

```
{20: 3, 33: 3, 4: 3, 5: 4, 101: 1, 55: 1, 22: 1, 34: 1}
```

```
second high frequency element is: 20
```

```
second high frequency element is: 33
```

```
second high frequency element is: 4
```

In [33]:

```

1  # 3.create a function to find the third lowest function in the given List
2      #l=[20,33,4,5,101,20,33,5,20,33,5,4,5,4]
3
4  def lowfrequency(l):
5      dic1={}
6      for i in l:
7          dic1[i]=l.count(i)
8      valueslist=list(dic1.values())
9      print(valueslist)
10     sortedlist=[]
11     sortedlist=sorted(valueslist)
12     print(sortedlist)
13     finallist=[]
14     for i in sortedlist:
15         if i not in finallist:
16             finallist.append(i)
17     print(finallist)
18     thirdlowestfreq=finallist[2]
19     print(dic1)
20
21     for item in dic1.items():
22         if item[1]==thirdlowestfreq:
23             print("third lowest frequency element is: ",item[0])
24
25 a = [20,33,4,5,101,20,33,5,20,33,5,4,5,4,55,22,34]
26 lowfrequency(a)

```

```
[3, 3, 3, 4, 1, 1, 1, 1]
```

```
[1, 1, 1, 1, 3, 3, 3, 4]
```

```
[1, 3, 4]
```

```
{20: 3, 33: 3, 4: 3, 5: 4, 101: 1, 55: 1, 22: 1, 34: 1}
```

```
third lowest frequency element is: 5
```

In [41]:

```

1  # 4.create a function to find the kth freuancy element in given list
2      #l=[20,33,4,5,101,20,33,5,20,33,5,4,5,4]
3      # If the k value is greater then the length of the list then return -1
4  def lowfrequency(l):
5      n=int(input("enter the nth frequency required"))
6      dic1={}
7      for i in l:
8          dic1[i]=l.count(i)
9      valueslist=list(dic1.values())
10     print(valueslist)
11     sortedlist=[]
12     sortedlist=sorted(valueslist)
13     print(sortedlist)
14     finallist=[]
15     for i in sortedlist:
16         if i not in finallist:
17             finallist.append(i)
18     print(finallist)
19     kthfreq=finallist[n-1]
20     print(dic1)
21
22     for item in dic1.items():
23         if item[1]==kthfreq:
24             print(n," th frequency element is: ",item[0])
25
26 a = [20,33,4,5,101,20,33,5,20,33,5,4,5,4,55,22,34]
27 lowfrequency(a)

```

enter the nth frequency required3

[3, 3, 3, 4, 1, 1, 1, 1]

[1, 1, 1, 1, 3, 3, 3, 4]

[1, 3, 4]

{20: 3, 33: 3, 4: 3, 5: 4, 101: 1, 55: 1, 22: 1, 34: 1}

3 th frequency element is: 5