# Experiment 10

## AIM

Write a Python program to get the frequency of the elements in a list.

## Description

## Sets:

Sets are used to store multiple items in a single variable. A set is a collection which is unordered, unchangeable, and unindexed. Sets are written with curly brackets.

## List:

A list can be defined as a collection of values or items of different types. The items in the list are separated with the comma (,) and enclosed with the square brackets [].

## Program

```
lst1 = list('Everyday is a Good day to learn Python')
print("List:",lst1)
# Determine unique elements in lst1 by converting to Set
unique_elements = set(lst1)
print(unique_elements)
# Determine Count of unique elements in lst1
count = {}
for i in lst1:
  if i in count:
    count[i]+=1
  else:
    count[i]=1
print("Items\tFrequency")
for i,j in count.items():
  print(f"{i}\t{j}")
```

```
List: ['E', 'v', 'e', 'r', 'y', 'd', 'a', 'y', ' ', 'i', 's', ' ', 'a', ' ', 'G', 'o
{'s', 'v', 'a', 'h', 'o', 'l', ' ', 'i', 'G', 'd', 'r', 't', 'P', 'E', 'e', 'y', 'n'}
Items   Frequency
E       1
v       1
```

```
e       2
r       2
y       4
d       3
a       4
        7
i       1
s       1
G       1
o       4
t       2
l       1
n       2
P       1
h       1
```

```
# Use dict comprehension to do the same
dictionary = {i:lst1.count(i) for i in unique_elements}
print(dictionary)
print('\n')
keys = []
values = []
for i,j in dictionary.items():
  keys.append(i)
  values.append(j)
import pandas as pd
df = pd.DataFrame({'Items':keys,'Values':values})
print(df)
```

```
{'s': 1, 'v': 1, 'a': 4, 'h': 1, 'o': 4, 'l': 1, ' ': 7, 'i': 1, 'G': 1, 'd': 3, 'r'


   Items  Values
0      s       1
1      v       1
2      a       4
3      h       1
4      o       4
5      l       1
6              7
7      i       1
8      G       1
9      d       3
10     r       2
11     t       2
12     P       1
13     E       1
14     e       2
15     y       4
16     n       2
```

# Conclusion

Hence, we have created a set of unique elements from list lst1, calculated the frequency of each element and stored them in a dictionary. In second method, we used Dictionary comprehension to create a dictionary key:value pairs of characters and their freqeuency in the list.

**Evaluation**

| Criteria | Total Marks | Marks Obtained | Comments |
|---|---|---|---|
| Concept(A) | 2 | | |
| Implementation(B) | 2 | | |
| Performance(C) | 2 | | |
| Total | 6 | | |

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