Que1.Write a Python program to remove duplicates from a list.

Ans:-

```
mylist = ["a", "b", "a", "c", "c"]
mylist = list(dict.fromkeys(mylist))
print(mylist)
```

Output:['a', 'b', 'c']

Que2.Write a Python program to get the difference between the two lists.

Ans:

```
def Diff(li1, li2):
    return (list(list(set(li1)-set(li2)) + list(set(li2)-set(li1))))
li1 = [10, 15, 20, 25, 30, 35, 40]
li2 = [25, 40, 35]
print(Diff(li1, li2))
```

Output:-[10, 20, 30, 15]

Que3.write a python program to get the frequency of the elements in a list.

Ans:

```
def CountFrequency(my_list):
    freq = {}
    for item in my_list:
        if (item in freq):
            freq[item] += 1
        else:
            freq[item] = 1

    for key, value in freq.items():
        print ("% d : % d"%(key, value))
if __name__ == "__main__":
    my_list =[1, 1, 1, 5, 5, 3, 1, 3, 3, 1, 4, 4, 4, 2, 2, 2, 2]

    CountFrequency(my_list)
```

Output:

```
 1 :  5
 5 :  2
 3 :  3
 4 :  3
 2 :  4
```

Que4.Write a Python program to compute the similarity between two lists.

Sample data: ["red", "orange", "green", "blue", "white"], ["black", "yellow", "green", "blue"]
Expected Output:
Color1-Color2: ['white', 'orange', 'red']
Color2-Color1: ['black', 'yellow']

Ans:

```
def Diff(li1, li2):
    return (list(list(set(li1)-set(li2)) + list(set(li2)-set(li1))))
li1 = ["red", "orange", "green", "blue", "white"]
li2 = ["black", "yellow", "green", "blue"]
print(Diff(li1, li2))
```

Output:
['red', 'white', 'orange', 'yellow', 'black']

Que5.Write a Python function that takes a list of words and returns the length of the longest one.

Ans:
```
def longestLength(a):
    max1 = len(a[0])
    temp = a[0]
    for i in a:
        if(len(i) > max1):

            max1 = len(i)
            temp = i

    print("The word with the longest length is:", temp,
          " and length is ", max1)
a = ["one", "two", "third", "four"]
longestLength(a)
```

Output:
The word with the longest length is: third and length is 5

Que6.write a python program to count the occurrences of each word in a given sentence.

Ans:
```
def word_count(str):
    counts = dict()
    words = str.split()

    for word in words:
        if word in counts:
            counts[word] += 1
        else:
            counts[word] = 1

    return counts

print( word_count('the quick brown fox jumps over the lazy dog.'))
```

Output:{'the': 2, 'quick': 1, 'brown': 1, 'fox': 1, 'jumps': 1, 'over': 1, 'lazy': 1, 'dog.': 1}

Que7.Write a Python program to count and display the vowels of a given text.

Ans:
```
def Check_Vow(string, vowels):
    final = [each for each in string if each in vowels]
    print(len(final))
    print(final)
string = "I am engineer"
vowels = "AaEeIiOoUu"
Check_Vow(string, vowels);
```

Output:
6
['I', 'a', 'e', 'i', 'e', 'e']

Que8.Write a Python script to generate and print a dictionary that contains a number (between 1 and n) in the form (x, x*x).

Ans:

```
n=int(input("Input a number "))
d = dict()

for x in range(1,n+1):
    d[x]=x*x

print(d)
```

Output:

```
Input a number 5
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25}
```

Que9.Write a Python program to combine two dictionary adding values for common keys

- d1 = {'a': 100, 'b': 200, 'c':300}
- d2 = {'a': 300, 'b': 200, 'd':400}
- Sample output: Counter({'a': 400, 'b': 400, 'd': 400, 'c': 300})

Ans:

```
from collections import Counter
d1 = {'a': 100, 'b': 200, 'c':300}
d2 = {'a': 300, 'b': 200, 'd':400}
d = Counter(d1) + Counter(d2)
print(d)
```

Output:

```
Counter({'a': 400, 'b': 400, 'd': 400, 'c': 300})
```

Que10.Write a Python program to print all unique values in a dictionary

- Sample Data : [{"V":"S001"}, {"V": "S002"}, {"VI": "S001"}, {"VI": "S005"}, {"VII":"S005"}, {"V":"S009"},{"VIII":"S007"}]
- Expected Output : Unique Values: {'S005', 'S002', 'S007', 'S001', 'S009'}

Ans:

```
L = [{"V":"S001"}, {"V": "S002"}, {"VI": "S001"}, {"VI": "S005"}, {"VII":"S005"}, {"V":"S009"},{"VIII":"S007"}]
print("Original List: ",L)
u_value = set( val for dic in L for val in dic.values())
print("Unique Values: ",u_value)
```

Output:

```
Original List:  [{'V': 'S001'}, {'V': 'S002'}, {'VI': 'S001'}, {'VI': 'S005'}, {'VII': 'S005'}, {'V': 'S009'}, {'VIII': 'S007'}]
Unique Values:  {'S005', 'S002', 'S007', 'S009', 'S001'}
```