Set & Dictionary

01) WAP to iterate over a set.

```
s1 = {'hello',45,89.23,45}
for i in s1:
    print(i)
```

```
89.23
45
hello
```

02) WAP to convert set into list, string and tuple.

```
my_set = {1, 2, 3, 4, 5}

set_to_list = list(my_set)
print("Set converted to List:", set_to_list)

set_to_string = ''.join(map(str, my_set))
print("Set converted to String:", set_to_string)

set_to_tuple = tuple(my_set)
print("Set converted to Tuple:", set_to_tuple)
```

```
Set converted to List: [1, 2, 3, 4, 5]
Set converted to String: 12345
Set converted to Tuple: (1, 2, 3, 4, 5)
```

03) WAP to find Maximum and Minimum from a set.

```
my_set = {10, 25, 5, 80, 15}

max_value = max(my_set)
min_value = min(my_set)

print("Maximum value in the set:", max_value)
print("Minimum value in the set:", min_value)
```

```
Maximum value in the set: 80
Minimum value in the set: 5
```

04) WAP to perform union of two sets.

```
s1 = {10,20,30,40,50}
s2 = {10,20,60,70,80}
```

```
uni = s1.union(s2)
print(uni)
```

```
{70, 40, 10, 80, 50, 20, 60, 30}
```

05) WAP to check if two lists have at-least one element common.

```
list1 = [1, 2, 3, 4, 5]
list2 = [5, 6, 7, 8, 9]

common = set(list1) & set(list2)

if common:
    print("The lists have at least one common element:", common)
else:
    print("The lists have no common elements.")
```

```
The lists have at least one common element: {5}
```

06) WAP to remove duplicates from list.

```
list1 = [12,12,24,36,48,48,60]
result = set(list1)
print(result)
```

```
{36, 12, 48, 24, 60}
```

07) WAP to find unique words in the given string.

```
text = "This is a test string with test words and unique words"

words = text.split()

unique_words = set(words)

print("Unique words in the string:", unique_words)
```

```
Unique words in the string: {'is', 'words', 'a', 'string', 'and',
'This', 'with', 'test', 'unique'}
```

08) WAP to remove common elements of set A & B from set A.

```
set1 = {1,2,3,4,5,6,7}
set2 = {1,2,3,9,7}
result = set1-set1.intersection(set2)
print(result)
```

```
{4, 5, 6}
```

09) WAP to check whether two given strings are anagram or not using set.

```
str1 = "medical"
str2 = "decimal"
s1 = set(str1)
s2 = set(str2)
dict1 = {}
dict2 = {}

for i in s1:
    dict1[i] = str1.count(i)
for i in s2:
    dict2[i] = str2.count(i)

if dict1==dict2:
    print("String is anagram")
else:
    print("String is not anagram")
```

```
String is anagram
```

10) WAP to find common elements in three lists using set.

```
l1 = {1,2,3,4,5,6}
l2 = {1,2,3,4,7,8}
l3 = {1,2,3,9,10,11}
result = set(l1&l2&l3)
print(result)
```

```
{1, 2, 3}
```

11) WAP to count number of vowels in given string using set.

```
input_string = input("Enter a string: ")

vowels = {'a', 'e', 'i', 'o', 'u'}

input_string = input_string.lower()

count = 0

for char in input_string:
    if char in vowels:
        count += 1

print(count)
```

12) WAP to check if a given string is binary string or not.

```
input_string = input("Enter a string: ")

if all(char in {'0', '1'} for char in input_string):
    print("The string is a binary string.")
else:
    print("The string is not a binary string.")
```

```
Enter a string:  101010

The string is a binary string.
```

13) WAP to sort dictionary by key or value.

```
dic = {'a':56,'c':78,'b':67}
result = sorted(dic.items(), key = lambda kv : (kv[1],kv[0]))
print(result)
```

```
[('a', 56), ('b', 67), ('c', 78)]
```

14) WAP to find the sum of all items (values) in a dictionary given by user. (Assume: values are numeric)

```
d1 = {'a': 5, 'b': 8, 'c': 2}
sum = 0
for i in d1.values():
    sum += i
print(sum)
```

```
15
```

15) WAP to handle missing keys in dictionaries.

Example : Given, dict1 = {'a': 5, 'c': 8, 'e': 2}

if you look for key = 'd', the message given should be 'Key Not Found', otherwise print the value of 'd' in dict1.

```
d1 = {'a': 5, 'b': 8, 'c': 2}
key = input("Enter key:")
d1.get(key,"Key Not Found")
```

```
Enter key: a

5
```