



Python Programming - 2301CS404

Lab - 7

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Set & Dictionary

01) WAP to iterate over a set.

```
In [10]: size = int(input("Enter size of set"))
s1=set({})
for i in range(size):
    s1.add(input("Enter set Element"))
for i in s1:
    print(i)
```

2
3
1

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

```
In [19]: size = int(input("Enter size of set"))
s1=set({})
for i in range(size):
    s1.add(input("Enter set Element"))
print(s1)
l1 = list(s1)
print(l1)
```

```
t1 = tuple(s1)
print(t1)
```

```
{'2', '3', '4', '1'}
['2', '3', '4', '1']
('2', '3', '4', '1')
```

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

```
In [17]: s1 = {22,34,12,98,34,88,67}
print("Maximum:",max(s1))
print("Minimum:",min(s1))
```

```
Maximum: 98
Minimum: 12
```

04) WAP to perform union of two sets.

```
In [20]: s1={1,2,3,4,5}
s2={6,7,8,9,10}

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

```
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
```

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

```
In [24]: l1=[1,2,3,4,5,6]
l2=[10,4,7,19,1,5]

s1 = set(l1)
s2 = set(l2)

ans = s1.intersection(s2)
print(list(ans))
```

```
[1, 4, 5]
```

06) WAP to remove duplicates from list.

```
In [28]: l1 = [1,1,2,2,3,3,4,4,5,5,6,6,5]
s1 = set(l1)
print(set(l1))
```

```
{1, 2, 3, 4, 5, 6}
```

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

```
In [33]: st = "Apple Is Red, Apple Is Red Fruit"
words = st.split()
unique_words = set(words)
print(unique_words)
```

```
{'Is', 'Red,', 'Apple', 'Fruit', 'Red'}
```

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

```
In [34]: a={1,3,2,6,4,9,4}
         b={5,2,8,5,1,7,2}
         print(a-b)
```

{9, 3, 4, 6}

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

```
In [46]: s1 = "apple"
         s2 = "pale"
         ans1=set({})
         ans2=set({})
         for i in s1:
             ans1.add(i)
         for i in s2:
             ans2.add(i)
         print(ans1,ans2)
         if(ans1==ans2):
             print("Anagram")
         else:
             print("Not Anagram")
```

{'p', 'l', 'a', 'e'} {'p', 'l', 'a', 'e'}
Anagram

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

```
In [38]: l1 = [1,2,3,4,5,6]
         l2 = [2,6,0,9,11,4]
         l3 = [6,1,9,0,4,21,5]

         s1 = set(l1)
         s2 = set(l2)
         s3 = set(l3)

         ans1 = s1.intersection(s2)
         ans2 = ans1.intersection(s3)
         print(list(ans2))
```

[4, 6]

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

```
In [40]: s1='Rutvik'
         vowel = {'a','e','i','o','u','A','E','I','O','U'}
         vcount = 0
         for i in s1:
             if (i in vowel):
                 vcount+=1
         print(vcount)
```

2

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

```
In [49]: st = '1010101011'
bi = {'0','1'}
isBinary = True
for i in st:
    if i not in bi:
        isBinary = False
if(isBinary):
    print("String is Binary")
else:
    print("String is Not Binary")
```

String is Binary

13) WAP to sort dictionary by key or value.

```
In [5]: d1 = {"rutvik":21,"rishabh":73,"yash":2,"smit":54,"meet":92}
sorted_key = dict(sorted(d1.items())) #because it will gives output in list of t
sorted_value = dict(sorted(d1.items(),key=lambda x:x[1]))
print("Sorted by keys:",sorted_key)
print("Sorted by values:",sorted_value)
```

Sorted by keys: {'meet': 92, 'rishabh': 73, 'rutvik': 21, 'smit': 54, 'yash': 2}
Sorted by values: {'yash': 2, 'rutvik': 21, 'smit': 54, 'rishabh': 73, 'meet': 92}

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

```
In [7]: d1 = {'a':1,'c':3,'f':6,'r':18,'j':10}
sum_values = sum(d1.values())
print(sum_values)
```

38

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.

```
In [9]: d1 = {'k':12,'f':34,'s':56,'q':89,'r':87,'u':21,'v':9}
key = input("Enter your key:")
if key in d1:
    print("Key is ",key," and value is ",d1[key])
else:
    print("Key is not found")
```

Key is not found