



Python Programming - 2301CS404

Lab - 7

23010101161 - Smit Maru - 260

Set & Dictionary

01) WAP to iterate over a set.

```
In [3]: n = int(input("Enter the size of the set"))
s = set()
for i in range(n):
    s.add(input(f"Enter {i+1} element"))
for i in s:
    print(i)
```

```
hello
10.3
True
2
```

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

```
In [13]: s = {10, 'hello', 10.2, False}
print(f"Set to List : {list(s)}")
print(f"Set to Tuple : {tuple(s)}")
print(f"Set to Str : {''.join(map(str,s))}")
```

```
Set to List : [False, 10.2, 10, 'hello']
Set to Tuple : (False, 10.2, 10, 'hello')
Set to Str : False10.210hello
```

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

```
In [15]: s = {65,10,21,10.2,98}
print(f"Max : {max(s)}")
print(f"Min : {min(s)}")
```

Max : 98
Min : 10

04) WAP to perform union of two sets.

```
In [22]: s1 = {1,'hello',2,3.3,True}
s2 = {4.4,5,6,8}
print(f"Union : {s1.union(s2)}")
```

Union : {1, 2, 3.3, 'hello', 4.4, 5, 6, 8}

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

```
In [25]: s1 = {1,2,3.3}
s2 = {4.4,5,6,8}
True if len(s1&s2)>=1 else False
```

Out[25]: False

06) WAP to remove duplicates from list.

```
In [28]: s1 = [1,2,3.3,3.3,4,4]
print(list(set(s1)))
```

[1, 2, 3.3, 4]

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

```
In [35]: s1 = "Smit Maru Smit"
l = set(s1.split())
for i in l:
    if(s1.count(i) == 1):
        print(i)
```

Maru

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

```
In [39]: s1 = {1,2,3.3,4.4}
s2 = {4.4,5,6,8}
print(s1.symmetric_difference(s2))
```

{1, 2, 3.3, 5, 6, 8}

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

```
In [41]: s1 = 'Smit'
s2 = 'tmiS'
True if sorted(s1) == sorted(s2) else False
```

```
Out[41]: True
```

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

```
In [43]: s1 = {1,2,3,3,4.4}
s2 = {4.4,5,6,8}
s3 = {4.4,9,10}
print((s1&s2)&s3)
```

```
{4.4}
```

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

```
In [45]: s1 = 'aeiouAEIOU'
s2 = 'Haril Hadvani'
temp = set(s1) & set(s2)
print(len(temp))
```

```
2
```

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

```
In [1]: s = (input("Enter String"))
temp = set(s)
a = {'0','1'}
if temp.issubset(a):
    print("Binary")
else:
    print("Not")
```

```
Binary
```

13) WAP to sort dictionary by key or value.

```
In [2]: data = {"apple": 3, "banana": 1, "cherry": 2}

# Sort by keys
by_keys = dict(sorted(data.items(), key=lambda x: x[0]))
print("Sorted by keys:", by_keys)

# Sort by values
by_values = dict(sorted(data.items(), key=lambda x: x[1]))
print("Sorted by values:", by_values)
```

```
Sorted by keys: {'apple': 3, 'banana': 1, 'cherry': 2}
```

```
Sorted by values: {'banana': 1, 'cherry': 2, 'apple': 3}
```

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

```
In [4]: user_input = input("Enter a dictionary : ")

user_dict = {}
for item in user_input.split(','):
    key, value = item.split(':')
    user_dict[key] = float(value)
total_sum = sum(user_dict.values())
print(f"The sum of all values in the dictionary is: {total_sum}")
```

The sum of all values in the dictionary is: 11.0

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 [7]: # Given dictionary
dict1 = {'a': 5, 'c': 8, 'e': 2}

# Key to search
find = 'A'

# Check if the key exists in the dictionary
if find in dict1:
    print(f"The value of '{find}' is:", dict1[find])
else:
    print(f"Key '{find}' Not Found")
```

Key 'A' Not Found

```
In [ ]:
```