

## Unit - 11

### Assignment

- 1) Write a Python script to concatenate the following dictionaries to create a new one

Input

```
dic1={1:10, 2:20}
```

```
dic2={3:30, 4:40}
```

```
dic3={5:50,6:60}
```

Output

```
{1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
```

- 2) Write a Python program to check whether a given key already exists in a dictionary.

- 3) Write a Python program to sum all the items in a dictionary.

Input {'data1':100,'data2':-54,'data3':247}

Output 293

- 4) Write a Python program to get the maximum and minimum values of a dictionary.

Input

```
{'x':500, 'y':5874, 'z': 560}
```

Output

Maximum Value: 5874

Minimum Value: 500

- 5) Write a Python program to remove a key from a dictionary.

Input

```
{'a':1,'b':2,'c':3,'d':4}
```

Output

```
{'b': 2, 'c': 3, 'd': 4}
```

- 6) Write a Python program to sort a given dictionary by key

Input

```
{'red': '#FF0000',  
    'green': '#008000',  
    'black': '#000000',  
    'white': '#FFFFFF'}
```

Output

black: #000000

green: #008000

red: #FF0000

white: #FFFFFF

7) Write a Python program to access dictionary key's element by index.

Input

```
{'physics': 80, 'math': 90, 'chemistry': 86}
```

Output

physics

math

chemistry

8) Define Dictionary

9) What is the difference between List, Tuple, Set & Dictionary

10) What are the advantages of using Dictionary in Python

# Unit 11

## Assignment Solutions

In [ ]: Question 1 - Write a Python script to concatenate the following dictionaries to create a new one

Input

```
dic1={1:10, 2:20}
```

```
dic2={3:30, 4:40}
```

```
dic3={5:50,6:60}
```

Output

```
{1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
```

```
In [1]: dic1={1:10, 2:20}
dic2={3:30, 4:40}
dic3={5:50,6:60}
dic4 = {}
for d in (dic1, dic2, dic3): dic4.update(d)
print(dic4)
```

```
{1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
```

In [ ]: Question 2 - Write a Python program to check whether a given key already exists in a dictionary.

```
In [2]: d = {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}
def is_key_present(x):
    if x in d:
        print('Key is present in the dictionary')
    else:
        print('Key is not present in the dictionary')
is_key_present(5)
is_key_present(9)
```

```
Key is present in the dictionary
Key is not present in the dictionary
```

In [ ]: Question 3 - Write a Python program to sum all the items in a dictionary.  
Input {'data1':100,'data2':-54,'data3':247}  
Output 293

```
In [3]: my_dict = {'data1':100,'data2':-54,'data3':247}
print(sum(my_dict.values()))
```

```
293
```

```
In [ ]: Question 4 - Write a Python program to get the maximum and minimum values of a
Input
{'x':500, 'y':5874, 'z': 560}
Output
Maximum Value: 5874
Minimum Value: 500
```

```
In [4]: my_dict = {'x':500, 'y':5874, 'z': 560}

key_max = max(my_dict.keys(), key=(lambda k: my_dict[k]))
key_min = min(my_dict.keys(), key=(lambda k: my_dict[k]))

print('Maximum Value: ',my_dict[key_max])
print('Minimum Value: ',my_dict[key_min])

Maximum Value: 5874
Minimum Value: 500
```

```
In [ ]: Question 5 - Write a Python program to remove a key from a dictionary.
Input
{'a':1, 'b':2, 'c':3, 'd':4}
Output
{'b': 2, 'c': 3, 'd': 4}
```

```
In [5]: myDict = {'a':1, 'b':2, 'c':3, 'd':4}
print(myDict)
if 'a' in myDict:
    del myDict['a']
print(myDict)

{'a': 1, 'b': 2, 'c': 3, 'd': 4}
{'b': 2, 'c': 3, 'd': 4}
```

```
In [ ]: Question 6 - Write a Python program to sort a given dictionary by key
Input
{'red':'#FF0000',
 'green':'#008000',
 'black':'#000000',
 'white':'#FFFFFF'}

Output
black: #000000
green: #008000
red: #FF0000
white: #FFFFFF
```

```
In [6]: color_dict = {'red': '#FF0000',  
                    'green': '#008000',  
                    'black': '#000000',  
                    'white': '#FFFFFF'}  
  
for key in sorted(color_dict):  
    print("%s: %s" % (key, color_dict[key]))
```

```
black: #000000  
green: #008000  
red: #FF0000  
white: #FFFFFF
```

```
In [ ]: Question 7 - Write a Python program to access dictionary key's element by index  
Input  
{ 'physics': 80, 'math': 90, 'chemistry': 86}  
Output  
physics  
math  
chemistry
```

```
In [7]: num = { 'physics': 80, 'math': 90, 'chemistry': 86}  
print(list(num)[0])  
print(list(num)[1])  
print(list(num)[2])
```

```
physics  
math  
chemistry
```

```
In [ ]:
```