

Worksheet – 2.3

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Section/Group: 809/A

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Subject Name: Programming in Python Lab

Subject Code: 20CSP-259

1. Aim/Overview of the practical:

- I. 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}
- II. Write a Python program to find the highest 3 values of corresponding keys in a dictionary.

2. Task to be done/ Which logistics used:

- I. 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}
- II. Write a Python program to find the highest 3 values of corresponding keys in a dictionary.

3. Steps for experiment/practical/Code:

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

Source Code:

```
d1 = {'a': 100, 'b': 200, 'c': 300}
d2 = {'a': 300, 'b': 200, 'd': 400}

for i in d2 :
    if i in d1 :
        d1[i] = d1[i] + d2[i]
    else :
        d1[i] = d2[i]
print(d1)
```

- II. Write a Python program to find the highest 3 values of corresponding keys in a dictionary.

Source Code:

```
#Method 1
from collections import Counter
```

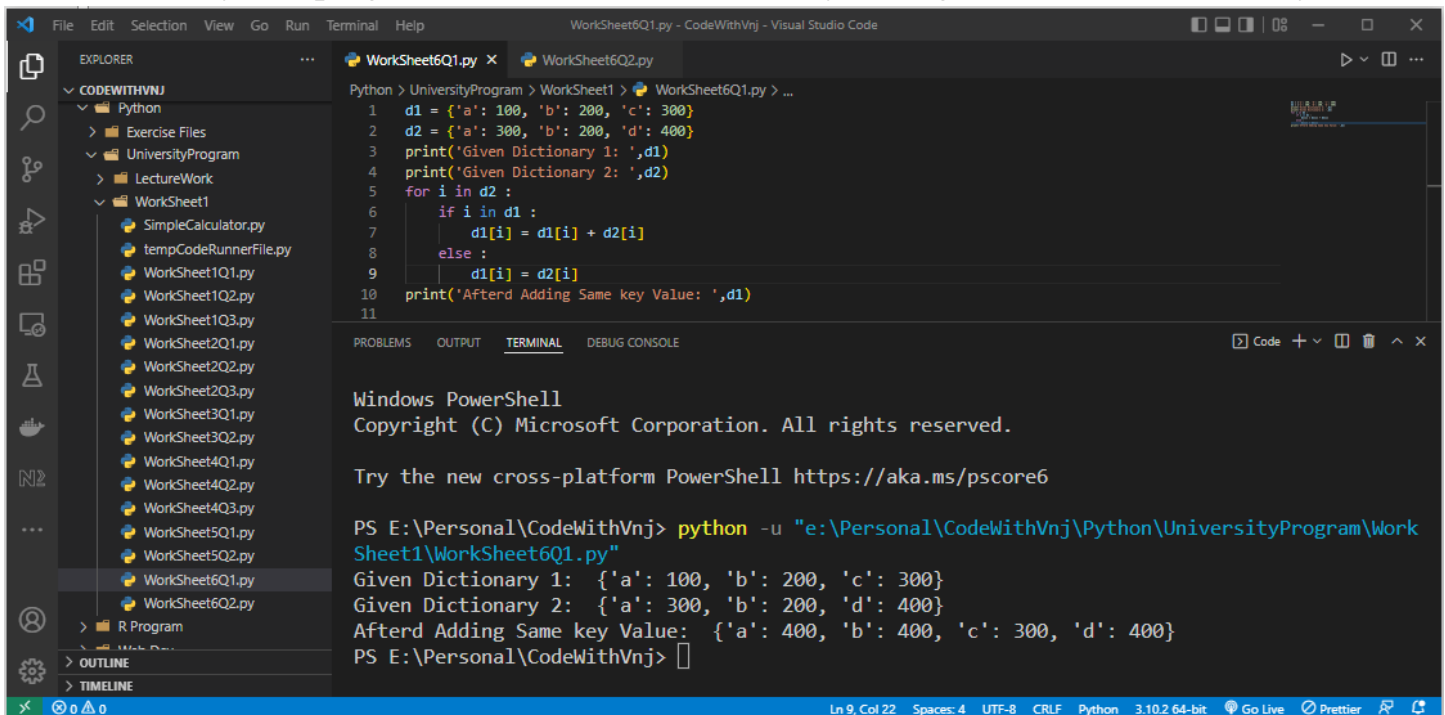
```
my_dict = {'a': 333, 'b': 4, 'c': 6, 'd': 5, 'e': 21, 'f':99, 'g':40}
k = Counter(my_dict)
high = k.most_common(3)
print("Dictionary with 3 highest values:")
print("Keys: Values")
for i in high:
    print(i[0],":",i[1])
```

Method 2

```
my_dict = {'a': 333, 'b': 4, 'c': 6, 'd': 5, 'e': 21, 'f':99, 'g':40}
my_keys = sorted(my_dict, key=my_dict.get, reverse=True)[:3]
print("Dictionary with 3 highest values:")
print("Keys: Values")
for i in my_keys:
    print(i,':',my_dict[i])
```

4. Result/Output/Writing Summary:

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



```
File Edit Selection View Go Run Terminal Help
Worksheet6Q1.py x Worksheet6Q2.py
Python > UniversityProgram > Worksheet1 > Worksheet6Q1.py > ...
1 d1 = {'a': 100, 'b': 200, 'c': 300}
2 d2 = {'a': 300, 'b': 200, 'd': 400}
3 print('Given Dictionary 1: ',d1)
4 print('Given Dictionary 2: ',d2)
5 for i in d2 :
6     if i in d1 :
7         d1[i] = d1[i] + d2[i]
8     else :
9         d1[i] = d2[i]
10 print('Afterd Adding Same key Value: ',d1)
11
```

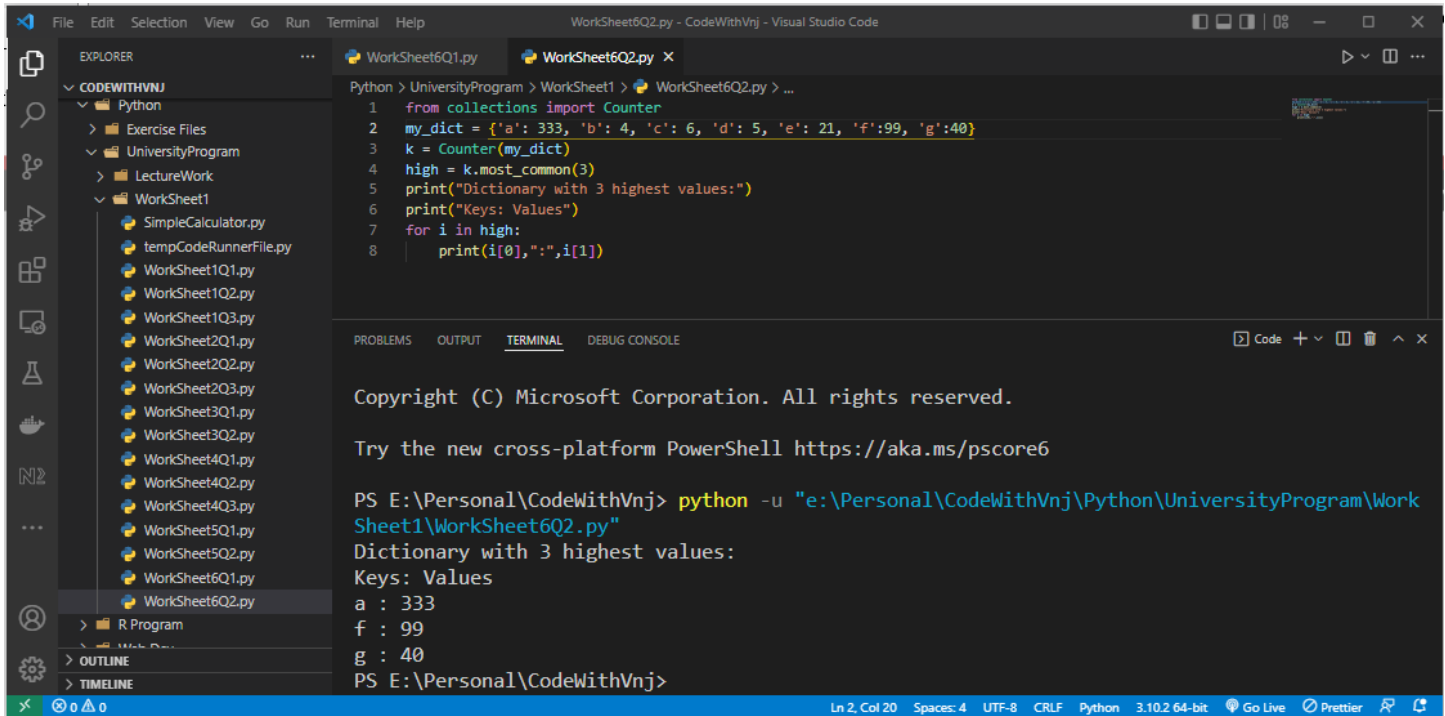
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell <https://aka.ms/pscore6>

```
PS E:\Personal\CodeWithVnJ> python -u "e:\Personal\CodeWithVnJ\Python\UniversityProgram\Work
Sheet1\Worksheet6Q1.py"
Given Dictionary 1: {'a': 100, 'b': 200, 'c': 300}
Given Dictionary 2: {'a': 300, 'b': 200, 'd': 400}
Afterd Adding Same key Value: {'a': 400, 'b': 400, 'c': 300, 'd': 400}
PS E:\Personal\CodeWithVnJ>
```

Ln 9, Col 22 Spaces: 4 UTF-8 CRLF Python 3.10.2 64-bit Go Live Prettier

II. Write a Python program to find the highest 3 values of corresponding keys in a dictionary. Method 1:



The screenshot shows a Visual Studio Code editor with a Python file named `WorkSheet6Q2.py`. The code uses the `collections.Counter` module to find the top 3 keys by value. The terminal output shows the execution of the program.

```

1 from collections import Counter
2 my_dict = {'a': 333, 'b': 4, 'c': 6, 'd': 5, 'e': 21, 'f': 99, 'g': 40}
3 k = Counter(my_dict)
4 high = k.most_common(3)
5 print("Dictionary with 3 highest values:")
6 print("Keys: Values")
7 for i in high:
8     print(i[0],":",i[1])

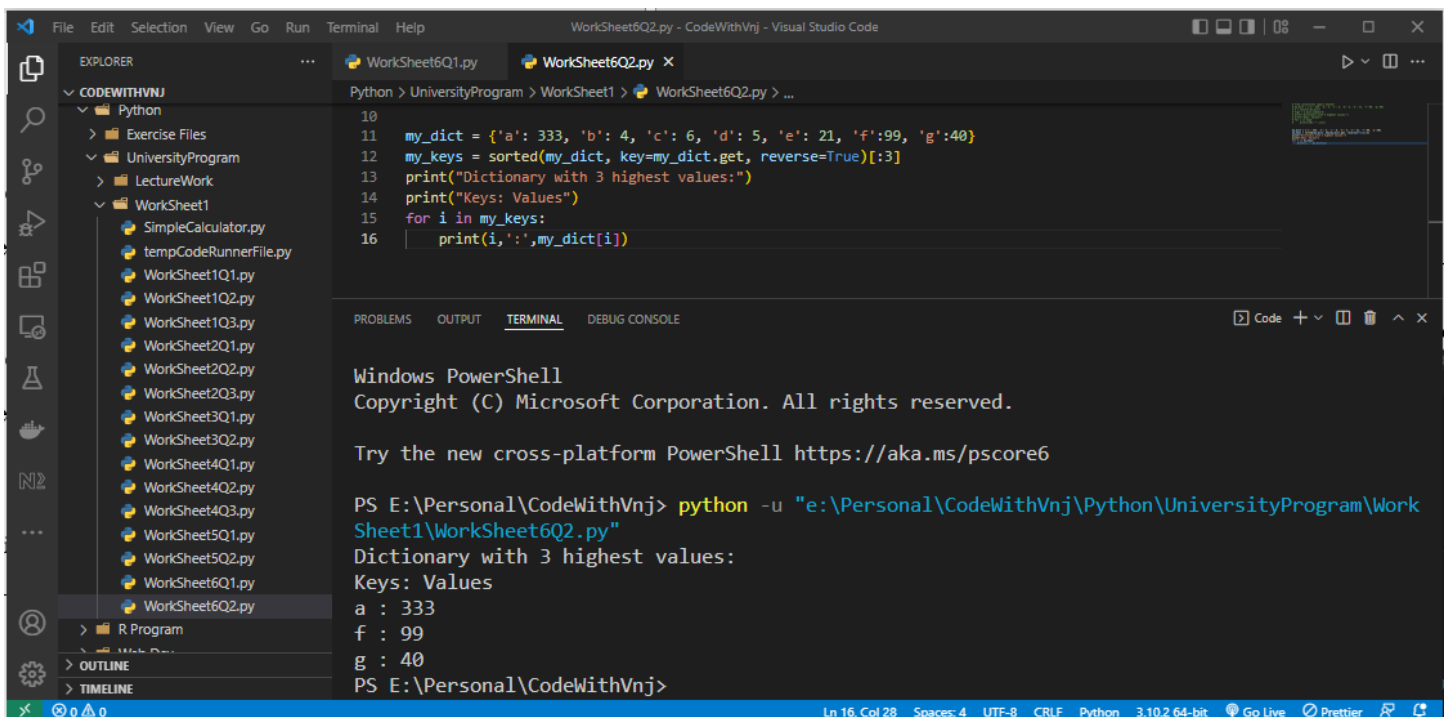
```

```

PS E:\Personal\CodeWithVnJ> python -u "e:\Personal\CodeWithVnJ\Python\UniversityProgram\Work
Sheet1\WorkSheet6Q2.py"
Dictionary with 3 highest values:
Keys: Values
a : 333
f : 99
g : 40
PS E:\Personal\CodeWithVnJ>

```

Method 2:



The screenshot shows a Visual Studio Code editor with a Python file named `WorkSheet6Q2.py`. The code uses the `sorted` function to find the top 3 keys by value. The terminal output shows the execution of the program.

```

10
11 my_dict = {'a': 333, 'b': 4, 'c': 6, 'd': 5, 'e': 21, 'f': 99, 'g': 40}
12 my_keys = sorted(my_dict, key=my_dict.get, reverse=True)[:3]
13 print("Dictionary with 3 highest values:")
14 print("Keys: Values")
15 for i in my_keys:
16     print(i,":",my_dict[i])

```

```

PS E:\Personal\CodeWithVnJ> python -u "e:\Personal\CodeWithVnJ\Python\UniversityProgram\Work
Sheet1\WorkSheet6Q2.py"
Dictionary with 3 highest values:
Keys: Values
a : 333
f : 99
g : 40
PS E:\Personal\CodeWithVnJ>

```

Learning outcomes (What I have learnt):

1. I have learnt, how to take List as well as Tuple Input from User.
2. Learnt to find the sorted tuple with their last element.
3. Learnt to List Manipulation.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			
4			