1. Write a Python script to sort (ascending and descending) a dictionary by value.

**CODE:**

import operator

d = {1: 2, 3: 4, 4: 3, 2: 1, 0: 0}

print('Original dictionary : ',d)

sorted\_d = sorted(d.items(), key=operator.itemgetter(1))

print('Dictionary in ascending order by value : ',sorted\_d)

sorted\_d = dict( sorted(d.items(), key=operator.itemgetter(1), reverse=True))

print('Dictionary in descending order by value : ',sorted\_d)

1. Write a Python script to add a key to a dictionary. [Go to the editor](https://www.w3resource.com/python-exercises/dictionary/#EDITOR)

Sample Dictionary : {0: 10, 1: 20}  
Expected Result : {0: 10, 1: 20, 2: 30}

**CODE:**

sample\_dict = {0: 10, 1: 20}

sample\_dict[2] = 30

print("Updated Dictionary:", sample\_dict)

1. Write a Python script to merge two Python dictionaries.

CODE:

dict1 = {'a': 10, 'b': 20}

dict2 = {'c': 30, 'd': 40}

merged\_dict = {\*\*dict1, \*\*dict2}

print("Merged Dictionary:", merged\_dict)

1. Write a Python program to sum all the items in a dictionary.

CODE:

my\_dict = {'a': 10, 'b': 20, 'c': 30}

total\_sum = sum(my\_dict.values())

print("Total sum of values:", total\_sum)

1. 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}  
   Sample output: Counter({'a': 400, 'b': 400, 'd': 400, 'c': 300})

**CODE:**

from collections import Counter

d1 = {'a': 100, 'b': 200, 'c': 300}

d2 = {'a': 300, 'b': 200, 'd': 400}

combined\_dict = Counter(d1) + Counter(d2)

print("Combined Dictionary:", combined\_dict)

1. Select the all correct way to remove the key ‘marks‘ from a dictionary

student = {

"name": "Emma",

"class": 9,

"marks": 75

}

1. **student.pop(“marks”)**
2. **del student[“marks”]**
3. **student.popitem()**
4. **dict1.remove(“key2”)**

**Ans. A & B**

1. Write a Python program to count number of items in a dictionary value that is a list.

**CODE:**

my\_dict = {

    'a': [1, 2, 3],

    'b': [4, 5],

    'c': [6],

    'd': [7, 8, 9, 10]

}

count = 0

for value in my\_dict.values():

    if isinstance(value, list):

        count += len(value)

print("Total number of items in list values:", count)