

# WEEK 5 - ASSIGNMENT 2

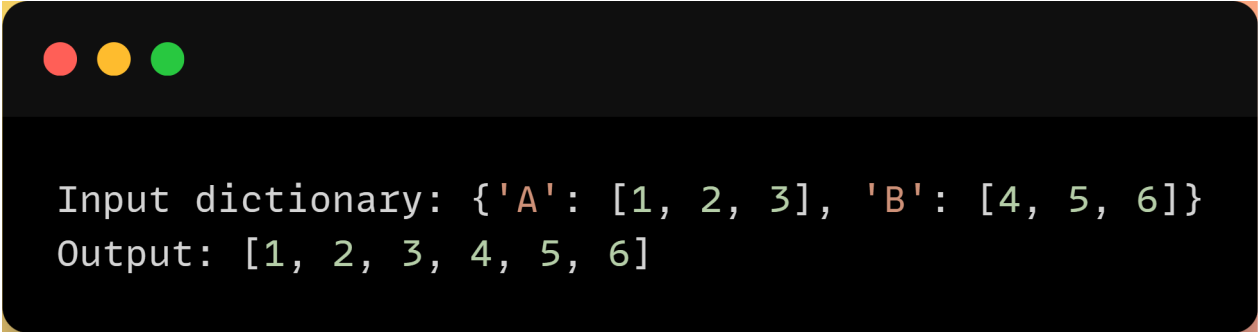
## DICTIONARY

### NOTE:

- No need to submit anywhere, just keep track of all the PDF you made in a specific folder.
- Compare your solution with the solution I'll provide, in case of doubts, kindly reach out to me.
- You may get assignment solution in format of PDF or VIDEO solution, depending on the difficulty level.

**Q1.** Write a Python function that takes a dictionary as input where the values are lists. The function should return a new list containing all the elements from all the lists in the dictionary.

It should have at least 3-4 keys and any amount of elements can be in a list.



```
Input dictionary: {'A': [1, 2, 3], 'B': [4, 5, 6]}
Output: [1, 2, 3, 4, 5, 6]
```

**Q2.** Create a function named **countChar** which will accept a string as a parameter. Create a dictionary having frequency of each character.

```
# Example 1
print(countChar("heellloo"))

# Output
{'h': 1, 'e': 2, 'l': 3, 'o': 2}

# Example 2
print(countChar("delhi delhi"))

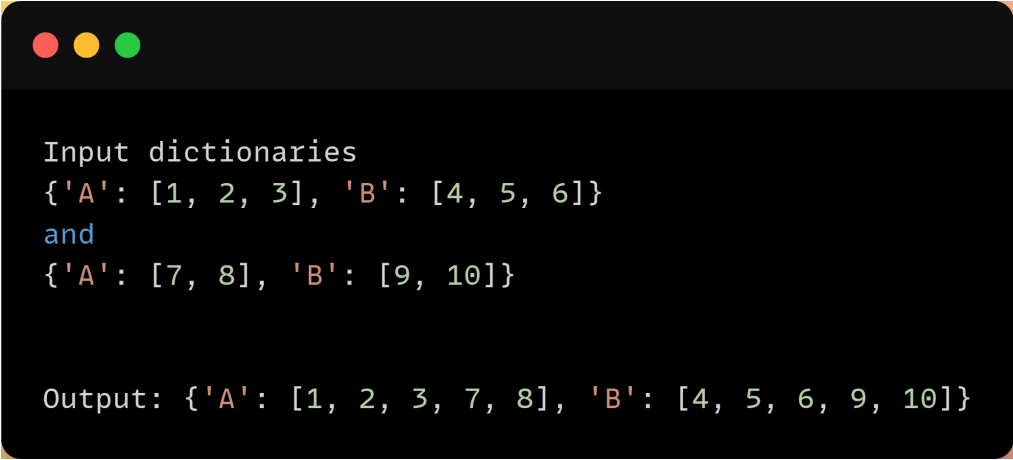
# Output
{'d': 2, 'e': 2, 'l': 2, 'h': 2, 'i': 2, ' ': 1}
```

**Q3.** Write a Python function that takes a dictionary as input where the values are lists of integers. The function should return a new dictionary where the values are lists containing only the even integers from the original lists.

```
Input dictionary: {'A': [1, 2, 3, 4], 'B': [5, 6, 7, 8]}

Output: {'A': [2, 4], 'B': [6, 8]}
```

**Q4.** Write a Python function that takes two dictionaries as input, where the values are lists. The function should merge the lists corresponding to the same keys in both dictionaries into a single list and return a new dictionary with these merged lists.

A terminal window with a dark background and three colored window control buttons (red, yellow, green) in the top-left corner. It displays the process of merging two dictionaries. The input shows two dictionaries: one with keys 'A' and 'B' having values [1, 2, 3] and [4, 5, 6] respectively, and another with 'A' and 'B' having values [7, 8] and [9, 10] respectively. The output shows the merged dictionary where the values for common keys are combined into a single list: 'A' has [1, 2, 3, 7, 8] and 'B' has [4, 5, 6, 9, 10].

```
Input dictionaries
{'A': [1, 2, 3], 'B': [4, 5, 6]}
and
{'A': [7, 8], 'B': [9, 10]}

Output: {'A': [1, 2, 3, 7, 8], 'B': [4, 5, 6, 9, 10]}
```

**Q5.** Write a Python program to combine two dictionary by adding values for common keys.

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

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

Sample output: {'a': 400, 'b': 400, 'd': 400, 'c': 300}

**Q6.** Write a Python program to create a dictionary of keys x, y, and z where each key has as value a list from 11-20, 21-30, and 31-40 respectively. Access the **fifth value** of each key from the dictionary.

```
{'x': [11, 12, 13, 14, 15, 16, 17, 18, 19],
```

```
'y': [21, 22, 23, 24, 25, 26, 27, 28, 29],
```

```
'z': [31, 32, 33, 34, 35, 36, 37, 38, 39]}
```

**Output**

15

25

35

**Q7.** Store name as a Key, and 5 marks in a List as a value in dictionary. Store details of at least 5 students. Print the total marks with percentage of each and every student.

**Q8.** Store name as a Key, and 5 marks in a List as a value in dictionary. Store details of at least 5 students. Print only the total marks of every student in ascending order.

**Q9.** Given a dictionary with key-value pairs, remove all the keys with values **greater than K**, including mixed values.

**Input :** test\_dict = {'Gfg' : 3, 'is' : 7, 'best' : 10, 'for' : 6, 'xyzx' : 'CS'}, K = 7

**Output :** {'Gfg' : 3, 'for' : 6, 'xyzx' : 'CS'}

**Explanation :** All values greater than K are removed. Mixed value is retained.

**Input :** test\_dict = {'Gfg' : 3, 'is' : 7, 'best' : 10, 'for' : 6, 'qqqq' : 'CS'}, K = 1

**Output :** {'qqqq' : 'CS'}

**Explanation :** Only Mixed value is retained.

**Q10.** A Python dictionary contains List as a value. Write a Python program to clear the list values in the said dictionary.

Original Dictionary:

{'C1': [10, 20, 30], 'C2': [20, 30, 40], 'C3': [12, 34]}

Clear the list values in the said dictionary:

{'C1': [], 'C2': [], 'C3': []}