WEEK 5 - ASSIGNMENT 3
DICTIONARY SORTING AND MORE

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

Sample Output

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

Ascending order = { 0:0, 2:1, 1: 2, 3: 4}

Descending order = {3: 4, 4: 3, 1: 2, 2: 1, 0: 0}

Q2. Write a Python program to count number of items in a dictionary value that is a list.

Sample Output

Dict = { 'M1' : [67, 79, 90, 73, 36], 'M2' : [89, 67, 84], 'M3' : [82, 57] }

Number of Items in a Dictionary : 10

Q3. Write a Python program to print a dictionary line by line.

Sample Output

Dict = { "Sam" : {"M1" : 89, "M2" : 56, "M3" : 89},

"Suresh" : {"M1" : 49, "M2" : 96, "M3" : 89} }

Sam

M1 : 89

M2 : 56

M3 : 89

Suresh

M1 : 49

M2 : 96

M3 : 89

Q4. Write a Python program to Convert two lists into a dictionary

Sample Output

keys = ["One", "Two", "Three", "Four", "Five"]

values = [1, 2, 3, 4, 5]

Convert Two List to Dict = {'One' : 1, 'Two' : 2, 'Three' : 3, 'Four' : 4, 'Five' : 5}

Q5. Create a Python function to sort a dictionary by its values. And return that new dictionary.

Q6. Write a Python program to find the maximum and minimum value in a dictionary.

Q7. Create a Python program to find the difference between two dictionaries.

First dictionary: {'a': 1, 'b': 2, 'c': 3}

Second dictionary: {'b': 2, 'c': 4, 'd': 5}

OUTPUT:

Keys present only in the first dictionary: ['a']

Keys present only in the second dictionary: ['d']

Keys present in both dictionaries: [’b’, ‘c’]

Q8. Create a Python function to reverse a dictionary (swap keys and values). **Make sure the values are different.**

Original dictionary: {'a': 1, 'b': 2, 'c': 3}

Reversed dictionary:

{1: 'a', 2: 'b', 3: 'c'}

Q9. Write a program in Python to calculate the average score of each student across multiple subjects stored in a dictionary of dictionaries.

Student scores:

{

'John': {'Math': 85, 'Science': 90, 'English': 80},

'Alice': {'Math': 75, 'Science': 88, 'English': 92},

'Bob': {'Math': 90, 'Science': 85, 'English': 78}

}

Output:

John: 85.0

Alice: 85.0

Bob: 84.33333333333333

Q10. Write a Python program to sort a dictionary by its keys in ascending order.

Original dictionary: {'b': 2, 'a': 1, 'c': 3}

Sorted dictionary by keys:

{'a': 1, 'b': 2, 'c': 3}

Q11. Write a Python program to sort a dictionary by the length of its keys.

Original dictionary: {'apple': 2, 'banana': 3, 'pear': 4, 'orange': 5}

Sorted dictionary by key length:

{'pear': 4, 'apple': 2, 'banana': 3, 'orange': 5}