Python Dictionary
Assignment

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

2. Write a Python script to add a key to a dictionary.
Sample Dictionary : {0: 10, 1: 20}
Expected Result : {0: 10, 1: 20, 2: 30}

3. Write a Python script to concatenate following dictionaries to create a new one.
Sample Dictionary :
dic1={1:10, 2:20}
dic2={3:30, 4:40}
dic3={5:50,6:60}
Expected Result : {1: 10, 2: 20, 3: 30, 4: 40, 5: 50, 6: 60}

4. Write a Python script to check whether a given key already exists in a dictionary.

5. Write a Python program to iterate over dictionaries using for loops.

6. Write a Python script to generate and print a dictionary that contains a number (between 1 and n) in the form (x, x*x).
Sample Dictionary (n = 5) :
Expected Output : {1: 1, 2: 4, 3: 9, 4: 16, 5: 25}

7. Write a Python script to print a dictionary where the keys are numbers between 1 and 15 (both included) and the values are squares of keys.
Sample Dictionary
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100, 11: 121, 12: 144, 13: 169, 14: 196, 15: 225}

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

9. Write a Python program to iterate over dictionaries using for loops.

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

11. Write a Python program to multiply all the items in a dictionary.

12. Write a Python program to remove a key from a dictionary.

13. Write a Python program to map two lists into a dictionary.

14. Write a Python program to sort a dictionary by key.

15. Write a Python program to get the maximum and minimum value in a dictionary.

16. Write a Python program to get a dictionary from an object's fields.

17. Write a Python program to remove duplicates from Dictionary.

18. Write a Python program to check if a dictionary is empty or not.

19. Write a Python program to combine two dictionaries 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})

20. Write a Python program to print all unique values in a dictionary.
Sample Data : [{"V":"S001"}, {"V": "S002"}, {"VI": "S001"}, {"VI": "S005"}, {"VII":"S005"}, {"V":"S009"},{"VIII":"S007"}]
Expected Output : Unique Values: {'S005', 'S002', 'S007', 'S001', 'S009'}

21. Write a Python program to create and display all combinations of letters, selecting each letter from a different key in a dictionary.
Sample data : {'1':['a','b'], '2':['c','d']}
Expected Output:
ac
ad
bc
bd

22. Write a Python program to find the highest 3 values in a dictionary.

23. Write a Python program to combine values in a python list of dictionaries.
Sample data: [{'item': 'item1', 'amount': 400}, {'item': 'item2', 'amount': 300}, {'item': 'item1', 'amount': 750}]
Expected Output: Counter({'item1': 1150, 'item2': 300})

24. Write a Python program to create a dictionary from a string.
Note: Track the count of the letters from the string.
Sample string : 'w3resource'
Expected output: {'3': 1, 's': 1, 'r': 2, 'u': 1, 'w': 1, 'c': 1, 'e': 2, 'o': 1}

25. Write a Python program to print a dictionary in table format.

26. Write a Python program to count the values associated with keys in a dictionary.
Sample data: = [{'id': 1, 'success': True, 'name': 'Lary'}, {'id': 2, 'success': False, 'name': 'Rabi'}, {'id': 3, 'success': True, 'name': 'Alex'}]
Expected result: Count of how many dictionaries have success as True

27. Write a Python program to convert a list into a nested dictionary of keys.

28. Write a Python program to sort a list alphabetically in a dictionary.

29. Write a Python program to remove spaces from dictionary keys.

30. Write a Python program to get the top three items in a shop.
Sample data: {'item1': 45.50, 'item2':35, 'item3': 41.30, 'item4':55, 'item5': 24}
Expected Output:
item4 55
item1 45.5
item3 41.3

31. Write a Python program to get the key, value and item in a dictionary.

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

33. Write a Python program to check if multiple keys exist in a dictionary.

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

35. Write a Python program to sort Counter by value.
Sample data : {'Math':81, 'Physics':83, 'Chemistry':87}
Expected data: [('Chemistry', 87), ('Physics', 83), ('Math', 81)]

36. Write a Python program to create a dictionary from two lists without losing duplicate values. Sample lists: ['Class-V', 'Class-VI', 'Class-VII', 'Class-VIII'], [1, 2, 2, 3]
Expected Output: defaultdict(<class 'set'>, {'Class-VII': {2}, 'Class-VI': {2}, 'Class-VIII': {3}, 'Class-V': {1}})

37. Write a Python program to replace dictionary values with their sum.

38. Write a Python program to match key values in two dictionaries.
Sample dictionary: {'key1': 1, 'key2': 3, 'key3': 2}, {'key1': 1, 'key2': 2}
Expected output: key1: 1 is present in both x and y

40. 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]}
15
25
35
x has value [11, 12, 13, 14, 15, 16, 17, 18, 19]
y has value [21, 22, 23, 24, 25, 26, 27, 28, 29]
z has value [31, 32, 33, 34, 35, 36, 37, 38, 39]