Dictionary

**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 if 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 square 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 a dictionary is empty or not. 

**19.** 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})

**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 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 key 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 multiple keys exists in a dictionary. 

**34.** Write a Python program to count 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

**39.** Write a Python program to store a given dictionary in a json file.   
Original dictionary:  
{'students': [{'firstName': 'Nikki', 'lastName': 'Roysden'}, {'firstName': 'Mervin', 'lastName': 'Friedland'}, {'firstName': 'Aron ', 'lastName': 'Wilkins'}], 'teachers': [{'firstName': 'Amberly', 'lastName': 'Calico'}, {'firstName': 'Regine', 'lastName': 'Agtarap'}]}  
<class 'dict'>  
Json file to dictionary:  
{'students': [{'firstName': 'Nikki', 'lastName': 'Roysden'}, {'firstName': 'Mervin', 'lastName': 'Friedland'}, {'firstName': 'Aron ', 'lastName': 'Wilkins'}], 'teachers': [{'firstName': 'Amberly', 'lastName': 'Calico'}, {'firstName': 'Regine', 'lastName': 'Agtarap'}]}

**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]