

Python Dictionary Questions by Infosmart Solutions

1. Create a dictionary of 5 students with their marks and print the student with the highest marks.

Test Case 1:

- Input: {'A':85, 'B':90, 'C':78, 'D':92, 'E':88}
- Expected Output: D

Test Case 2:

- Input: {'Tom':67, 'Jerry':89, 'Mickey':95, 'Donald':80}
- Expected Output: Mickey

Test Case 3:

- Input: {'Raj':60, 'Simran':60, 'Aman':59}
- Expected Output: Raj or Simran

2. Write a Python code to sort a dictionary by its values.

Test Case 1:

- Input: {'a':3, 'b':1, 'c':2}
- Expected Output: {'b':1, 'c':2, 'a':3}

Test Case 2:

- Input: {'x':10, 'y':5, 'z':7}
- Expected Output: {'y':5, 'z':7, 'x':10}

Test Case 3:

- Input: {'p':100, 'q':50}
- Expected Output: {'q':50, 'p':100}

3. Write a Python program to merge two dictionaries.

Test Case 1:

- Input: {'a':1}, {'b':2}
- Expected Output: {'a':1, 'b':2}

Test Case 2:

- Input: {'x':10, 'y':20}, {'y':25, 'z':30}
- Expected Output: {'x':10, 'y':25, 'z':30}

Test Case 3:

- Input: {}, {'a':5}
- Expected Output: {'a':5}

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

Test Case 1:

- Input: {'a':1, 'b':2, 'c':3}, key='b'
- Expected Output: {'a':1, 'c':3}

Test Case 2:

- Input: {'x':10}, key='x'
- Expected Output: {}

Test Case 3:

- Input: {'p':5, 'q':6}, key='z'
- Expected Output: Key not found

5. Write a Python code to check whether a key exists in a dictionary.

Test Case 1:

- Input: {'a':1, 'b':2}, key='a'
- Expected Output: True

Test Case 2:

- Input: {'x':5}, key='y'
- Expected Output: False

Test Case 3:

- Input: {}, key='a'
- Expected Output: False

6. Write a program to find the sum of all values in a dictionary.

Test Case 1:

- Input: {'a':10, 'b':20, 'c':30}
- Expected Output: 60

Test Case 2:

- Input: {'x':1, 'y':2}
- Expected Output: 3

Test Case 3:

- Input: {}
- Expected Output: 0

7. Write a Python code to invert a dictionary (swap keys and values).

Test Case 1:

- Input: {'a':1, 'b':2}
- Expected Output: {1:'a', 2:'b'}

Test Case 2:

- Input: {'x':5, 'y':5}
- Expected Output: {5:'y'} (last key kept)

Test Case 3:

- Input: {'p':True, 'q':False}
- Expected Output: {True:'p', False:'q'}

8. Write a program to find common keys between two dictionaries.

Test Case 1:

- Input: {'a':1, 'b':2}, {'b':3, 'c':4}
- Expected Output: {'b'}

Test Case 2:

- Input: {'x':1}, {'y':2}
- Expected Output: set()

Test Case 3:

- Input: {'p':10, 'q':20}, {'q':25, 'p':15}
- Expected Output: {'p', 'q'}

9. Write a Python code to convert two lists into a dictionary (keys from list1, values from list2).

Test Case 1:

- Input: ['a','b','c'], [1,2,3]
- Expected Output: {'a':1, 'b':2, 'c':3}

Test Case 2:

- Input: ['x','y'], [10]
- Expected Output: {'x':10}

Test Case 3:

- Input: [], []
- Expected Output: {}

10. Write a Python code to count frequency of elements in a list using dictionary.

Test Case 1:

- Input: [1,2,2,3,3,3]
- Expected Output: {1:1, 2:2, 3:3}

Test Case 2:

- Input: ['a','b','a']
- Expected Output: {'a':2, 'b':1}

Test Case 3:

- Input: []
- Expected Output: {}

11. Write a Python code to find keys having a specific value in a dictionary.

Test Case 1:

- Input: {'a':10, 'b':20, 'c':10}, value=10

- Expected Output: ['a','c']

Test Case 2:

- Input: {'x':1, 'y':2}, value=3
- Expected Output: []

Test Case 3:

- Input: {'m':5, 'n':5, 'o':6}, value=5
- Expected Output: ['m','n']

12. Write a Python code to create a dictionary from a list of keys with default value 0.

Test Case 1:

- Input: ['a','b','c']
- Expected Output: {'a':0, 'b':0, 'c':0}

Test Case 2:

- Input: []
- Expected Output: {}

Test Case 3:

- Input: ['x']
- Expected Output: {'x':0}

13. Write a Python code to remove duplicate dictionaries from a list.

Test Case 1:

- Input: [{'a':1}, {'a':1}, {'b':2}]
- Expected Output: [{'a':1}, {'b':2}]

Test Case 2:

- Input: [{'x':10}, {'x':10}]
- Expected Output: [{'x':10}]

Test Case 3:

- Input: []
- Expected Output: []

14. Write a Python program to convert a list of tuples into a dictionary.

Test Case 1:

- Input: [('a',1),('b',2)]
- Expected Output: {'a':1, 'b':2}

Test Case 2:

- Input: [('x',10),('x',20)]
- Expected Output: {'x':20}

Test Case 3:

- Input: []
- Expected Output: {}

15. Write a Python program to display all key-value pairs in a dictionary using a loop.

Test Case 1:

- Input: {'a':1, 'b':2}
- Expected Output: a:1, b:2

Test Case 2:

- Input: {'x':10}
- Expected Output: x:10

Test Case 3:

- Input: {}
- Expected Output: No items

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