Python Dictionary Practice Questions

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1. Create a dictionary from a string such that keys are characters and values are how many times they appear, **but exclude spaces**.
2. Write a program to swap keys and values in a dictionary. What happens if two keys have the same value?
3. Write a program to find the key with the maximum length (string length) in a dictionary.
4. Write a program to check if all values in a dictionary are unique.
5. From a dictionary of fruits and prices, print only those fruits whose price is divisible by 5.
6. Create a dictionary where keys are numbers 1–20 and values are "even" or "odd" depending on the key.
7. Write a program to check whether a dictionary is symmetric (same when keys and values are swapped).
8. Create a dictionary from a string but only include vowels as keys with their counts.
9. Write a program to delete a key from a dictionary if its value is the smallest among all values.
10. Write a program to find the sum of values of all keys that start with the letter "a".
11. Create a dictionary where keys are numbers from 1–10 and values are "prime" or "not prime".
12. Write a program to filter out all dictionary items whose value is not an integer.
13. Write a program to replace all values in a dictionary with their string lengths (if they are strings).
14. Write a program to count how many dictionary values are lists.
15. Given a dictionary of words and meanings, reverse the dictionary so meanings become keys and words become values (if possible).
16. Write a program to extract all dictionary keys that are of type int.
17. Create a dictionary that maps each digit (0–9) to how many times it appears in a given number.
18. Write a program to multiply all numeric values in a dictionary.
19. Create a dictionary where keys are numbers 1–5 and values are dictionaries with keys "square" and "cube".
20. Write a program to check if two dictionaries are disjoint (no common keys).
21. Write a program to merge two dictionaries but keep the maximum value for each key if keys overlap.
22. Write a program to find the average of numeric values in a dictionary.
23. Write a program to count how many values in a dictionary are themselves dictionaries.
24. Write a program to extract the second largest value from a dictionary.
25. Write a program to find the key(s) whose values are repeated the most times.

26. Write a program to create a dictionary from a list of numbers where keys are numbers and values are the sum of their digits.
27. Write a program to group words by their length using a dictionary.
28. Given a sentence, create a dictionary where keys are words and values are how many vowels each word contains.
29. Write a program to group numbers in a list by whether they are divisible by 2, 3, or 5, using a dictionary.
30. Write a program to create a dictionary where keys are characters in a string and values are lists of their positions in the string.
31. Write a program to remove all dictionary keys that contain any digit in them.
32. Write a program to merge two dictionaries but store values as a list if keys overlap.
33. Write a program to group dictionary keys based on the data type of their values.
34. Write a program to create a dictionary of each alphabet letter mapping to the count of words starting with that letter in a sentence.
35. Write a program to check if a dictionary is a subset of another dictionary (both keys and values must match).
36. Write a program to "rotate" keys of a dictionary so that the first key becomes the last, and others shift forward.
37. Write a program to create a dictionary of squares but exclude numbers that end with digit 5.
38. Write a program to reverse a nested dictionary (keys and subkeys become inverted).
39. Write a program to create a dictionary from a list of tuples but keep only the last value if a key appears multiple times.
40. Write a program to find the difference between values of the largest and smallest keys in a dictionary (assuming numeric keys).
41. Write a program to check if a dictionary is "palindromic" — i.e., reading keys in order equals reading values in order.
42. Write a program to extract all paths from a nested dictionary (like flattening JSON into key paths).
43. Write a program to build a dictionary where keys are words and values are whether they are palindrome or not.
44. Write a program to create a dictionary that maps numbers 1–100 to "Fizz", "Buzz", "FizzBuzz", or the number itself (FizzBuzz dictionary).
45. Write a program to create a dictionary of numbers 1–20 where values are "prime factors" of the number (list).
46. Write a program to check if all values in a nested dictionary are greater than 10.
47. Write a program to flatten a nested dictionary where sub-keys get concatenated with parent keys using _.

48. Write a program to generate a dictionary from a matrix where each row number is the key and row values are the list.
49. Write a program to create a dictionary that counts how many times each digit appears across all values of another dictionary.
50. Write a program to create a dictionary where keys are words and values are the set of unique letters in that word.