

Python List Questions by Infosmart Solutions

1. 1. Write a Python code to find all elements that appear more than once in a list.

- Test Cases:
 - Input: [1, 2, 3, 1, 2, 4] → Output: [1, 2]
 - Input: [5, 5, 5, 2, 3] → Output: [5]
 - Input: [1, 2, 3] → Output: []

2. 2. Write a Python code to remove all occurrences of a specific element from a list.

- Test Cases:
 - Input: ([1, 2, 3, 2, 4], 2) → Output: [1, 3, 4]
 - Input: (['a', 'b', 'a', 'c'], 'a') → Output: ['b', 'c']
 - Input: ([10, 10, 10], 10) → Output: []

3. 3. Write a Python program to reverse a list without using the reverse() method.

- Test Cases:
 - Input: [1, 2, 3, 4] → Output: [4, 3, 2, 1]
 - Input: ['a', 'b', 'c'] → Output: ['c', 'b', 'a']

4. 4. Write a Python program to count the number of occurrences of a given element in a list.

- Test Cases:
 - Input: ([1, 2, 3, 1, 1], 1) → Output: 3
 - Input: (['a', 'b', 'a'], 'a') → Output: 2

5. 5. Write a Python program to remove duplicates from a list while maintaining order.

- Test Cases:
 - Input: [1, 2, 2, 3, 1] → Output: [1, 2, 3]
 - Input: ['a', 'b', 'a'] → Output: ['a', 'b']

6. 6. Write a Python program to find the second largest number in a list.

- Test Cases:
 - Input: [10, 20, 4, 45, 99] → Output: 45
 - Input: [1, 2, 3] → Output: 2

7. 7. Write a Python program to check if a list is sorted or not.

- Test Cases:
 - Input: [1, 2, 3, 4] → Output: True
 - Input: [3, 2, 1] → Output: False

8. 8. Write a Python program to merge two lists and remove duplicates.

- Test Cases:
 - Input: [1, 2, 3], [3, 4, 5] → Output: [1, 2, 3, 4, 5]
 - Input: ['a', 'b'], ['b', 'c'] → Output: ['a', 'b', 'c']

9. 9. Write a Python program to rotate a list to the right by k positions.

- Test Cases:
 - Input: [1, 2, 3, 4, 5], k=2 → Output: [4, 5, 1, 2, 3]
 - Input: [10, 20, 30], k=1 → Output: [30, 10, 20]

10. 10. Write a Python program to get the common elements between two lists.

- Test Cases:
 - Input: [1, 2, 3], [2, 3, 4] → Output: [2, 3]
 - Input: ['x', 'y'], ['y', 'z'] → Output: ['y']

11. 11. Write a Python program to flatten a nested list.

- Test Cases:

- Input: `[[1, 2], [3, 4]]` → Output: `[1, 2, 3, 4]`
- Input: `[[['a']], ['b', 'c']]` → Output: `['a', 'b', 'c']`

12. 12. Write a Python program to square every element in a numeric list.

- Test Cases:
 - Input: `[1, 2, 3, 4]` → Output: `[1, 4, 9, 16]`
 - Input: `[5, -2, 0]` → Output: `[25, 4, 0]`
 - Input: `[]` → Output: `[]`

13. 13. Write a Python program to split a list into chunks of given size n.

- Test Cases:
 - Input: `([1, 2, 3, 4, 5], n=2)` → Output: `[[1, 2], [3, 4], [5]]`
 - Input: `([1, 2, 3], n=3)` → Output: `[[1, 2, 3]]`

14. 14. Write a Python program to find the index of the first occurrence of an element in a list.

- Test Cases:
 - Input: `([1, 2, 3, 2], 2)` → Output: `1`
 - Input: `(['a', 'b', 'c'], 'c')` → Output: `2`

15. 15. Write a Python program to check if one list is a subset of another list.

- Test Cases:
 - Input: `([1, 2], [1, 2, 3, 4])` → Output: `True`
 - Input: `([5, 6], [1, 2, 3])` → Output: `False`
 - Input: `(['a'], ['a', 'b', 'c'])` → Output: `True`

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