

Absolutely, here's a list of 50 questions each for arrays and strings:

Arrays:

1. Write a function to find the largest element in an array.
2. Write a function to find the smallest element in an array.
3. Write a function to find the sum of all elements in an array.
4. Write a function to find the average of all elements in an array.
5. Write a function to reverse an array.
6. Write a function to check if an array is sorted in ascending order.
7. Write a function to check if an array is sorted in descending order.
8. Write a function to remove duplicate elements from an array.
9. Write a function to merge two sorted arrays into one sorted array.
10. Write a function to remove a specific element from an array.
11. Write a function to find the index of a specific element in an array.
12. Write a function to find the frequency of each element in an array.
13. Write a function to find the second largest element in an array.
14. Write a function to find the second smallest element in an array.
15. Write a function to find the union of two arrays.
16. Write a function to find the intersection of two arrays.
17. Write a function to find the difference of two arrays.
18. Write a function to find the symmetric difference of two arrays.
19. Write a function to check if a given value exists in an array.
20. Write a function to shuffle an array.
21. Write a function to sort an array using bubble sort.
22. Write a function to sort an array using selection sort.
23. Write a function to sort an array using insertion sort.
24. Write a function to sort an array using merge sort.
25. Write a function to sort an array using quick sort.
26. Write a function to implement linear search on an array.
27. Write a function to implement binary search on a sorted array.
28. Write a function to find the frequency of each element in an array.
29. Write a function to rotate an array by a given number of steps.
30. Write a function to find the majority element in an array (element that appears more than  $n/2$  times).
31. Write a function to find the  $k$ th smallest/largest element in an unsorted array.
32. Write a function to move all zeroes to the end of an array while maintaining the order of non-zero elements.
33. Write a function to find the longest increasing subsequence in an array.
34. Write a function to find the longest decreasing subsequence in an array.
35. Write a function to find the longest contiguous subarray with equal number of 0s and 1s (binary subarray).
36. Write a function to find the longest contiguous subarray with sum equal to 0.
37. Write a function to find the maximum length of subarray with sum divisible by  $k$ .

38. Write a function to sort an array of 0s, 1s, and 2s (Dutch National Flag problem).
39. Write a function to find the maximum subarray product (continuous) in an array.
40. Write a function to find the minimum size subarray with a sum greater than or equal to a given number.
41. Write a function to find the median of two sorted arrays.
42. Write a function to find the k most frequent elements in an array.
43. Write a function to find the next greater element for each element in an array.
44. Write a function to find the longest contiguous subarray with sum less than or equal to a given number.
45. Write a function to find the maximum length of subarray with sum less than or equal to a given number.
46. Write a function to find the maximum sum of a subarray of size k.
47. Write a function to sort an array of 0s, 1s, and 2s in linear time complexity.
48. Write a function to find the maximum difference between two elements in an array such that the larger element appears after the smaller element.
49. Write a function to find the maximum product of two integers in an array.
50. Write a function to find the maximum product of three integers in an array.

Strings:

1. Write a function to reverse a string.
2. Write a function to check if a string is a palindrome.
3. Write a function to count the number of vowels in a string.
4. Write a function to count the number of consonants in a string.
5. Write a function to find the length of the longest word in a string.
6. Write a function to capitalize the first letter of each word in a string.
7. Write a function to check if two strings are anagrams of each other.
8. Write a function to check if a string contains only digits.
9. Write a function to check if a string contains only alphabets.
10. Write a function to check if a string contains only whitespace characters.
11. Write a function to check if a string starts with a specified substring.
12. Write a function to check if a string ends with a specified substring.
13. Write a function to remove whitespace from the beginning and end of a string.
14. Write a function to truncate a string to a specified length.
15. Write a function to generate a random string of a specified length.
16. Write a function to find the index of the first occurrence of a character in a string.
17. Write a function to find the index of the last occurrence of a character in a string.
18. Write a function to find the frequency of each character in a string.
19. Write a function to find all occurrences of a substring in a string.
20. Write a function to pad a string with leading zeros.
21. Write a function to convert a string to lowercase.
22. Write a function to convert a string to uppercase.
23. Write a function to check if a string contains a palindrome as a substring.
24. Write a function to find the longest palindrome substring in a string.

25. Write a function to find the shortest palindrome substring in a string.
26. Write a function to remove duplicates from a string.
27. Write a function to check if a string is a valid IPv4 address.
28. Write a function to check if a string is a valid email address.
29. Write a function to check if a string is a valid URL.
30. Write a function to find the longest common prefix among an array of strings.
31. Write a function to find the longest common suffix among an array of strings.
32. Write a function to find the shortest common supersequence among two strings.
33. Write a function to find the longest common subsequence among two strings.
34. Write a function to find the shortest common subsequence among two strings.
35. Write a function to find the longest repeating subsequence in a string.
36. Write a function to find the length of the longest repeating substring in a string.
37. Write a function to check if a string is a valid parenthesis sequence.
38. Write a function to find the longest valid parenthesis substring in a string.
39. Write a function to find the longest substring without repeating characters.
40. Write a function to find the longest common substring among two strings.
41. Write a function to find the length of the longest palindromic substring in a string.
42. Write a function to find the length of the longest palindromic subsequence in a string.
43. Write a function to find the length of the longest alternating substring in a string.
44. Write a function to find the length of the longest alternating subsequence in a string.
45. Write a function to find the longest contiguous substring with equal number of 0s and 1s (binary substring).
46. Write a function to find the longest contiguous substring with sum equal to 0.
47. Write a function to find the longest contiguous substring with sum less than or equal to a given number.
48. Write a function to find the longest contiguous substring with sum greater than or equal to a given number.
49. Write a function to find the longest contiguous substring with product less than or equal to a given number.
50. Write a function to find the longest contiguous substring with product greater than or equal to a given number.

These questions should provide a good mix of basic and advanced concepts in arrays and strings to help you strengthen your skills in these areas.