🚀 Logic And Thinking Building Questions

🔢 Numbers (Math & Number Theory)

01. Print first 10 cubes of odd numbers only.

02. Count how many primes are there between 50 and 100.

03. Find factorial of 7 without using built-in functions.

04. Find sum of digits of 9876.

05. Print first N natural numbers, squares, or cubes.

06. Check if a number is prime.

07. Print all prime numbers in a range.

08. Find factorial of a number.

09. Count digits of a number without converting to string.

10. Reverse a number (e.g., 1234 → 4321).

11. Check if a number is palindrome.

12. Sum of digits of a number.

13. Find GCD and LCM of two numbers.

14. Fibonacci sequence (iterative and recursive).

15. Print first 15 Fibonacci numbers. (same topic, can merge with 26)

📊 Arrays

16.   Find the max and min of [8, 19, 2, 45, 3, 67].

17.   Find the second largest in [10, 10, 5, 8, 20, 20] (careful with duplicates!).

18.   Count frequency of numbers in [4, 4, 5, 6, 5, 4, 7].

19.   Check if [2, 4, 6, 8, 10] is sorted.

20.   Reverse [1, 3, 5, 7, 9, 11] without using extra space.

21.   Find maximum and minimum in an array.

22.   Find second largest element in an array.

23.   Count frequency of elements in an array.

24.   Check if an array is sorted.

25.   Reverse an array without using extra space.

🔤 Strings

26.   Count vowels and consonants in "datastructures".

27.   Check if "racecar" is a palindrome.

28.   Reverse "Pranav" without using built-in reverse.

29.   Remove duplicates from "mississippi".

30.   Find the most frequent character in "leetcode".

31. Count vowels/consonants in a string.

32. Check if a string is a palindrome.

33. Reverse a string without using built-in functions.

34. Remove duplicates from a string.

35. Find the most frequent character in a string.

🗂️ Hashing (Map/Set based problems)

36. Count frequency of numbers in [4, 4, 5, 6, 5, 4, 7] (Q9 → HashMap for frequency)

37. Remove duplicates from "mississippi" (Q15 → Set)

38. Find the most frequent character in "leetcode" (Q16 → HashMap)

39. Count frequency of elements in an array (Q29 → HashMap)

40. Remove duplicates from a string (Q35 → Set)

41. Find the most frequent character in a string (Q36 → HashMap)