JAVA INTERVIEW CHECKLIST

A. QUESTIONS REQUIRING COLLECTIONS (ArrayList, HashMap, HashSet, Stack)

- Find duplicates in a list

- Count character frequency

- String compression

- First non-repeating character

- First unique character index

- Longest substring without repeating characters

- Two Sum (optimal)

- Two Sum II

- Find elements not in another list

- Common letters between two strings

- Missing & repeated numbers

- Transform array elements into rank

- Balanced parentheses (Stack)

- Merge dictionaries

- Pairs with sum

- Count sentences

B. QUESTIONS USING LOOPS + CONDITIONS ONLY

- Second largest

- Reverse string

- Reverse array (two pointers)

- Move zeros to end

- Increment integer array digits

- Split string into chunks

- Merge alternate strings

- Generate OTP

- Check A's before B's

- Binary search

- Bubble sort

- Diagonal difference

- ++x/x++ calculation

- Break palindrome

- Roman numeral conversion

- Missing number

- Expand encoded letters

- Decode count-encoded string

- Max pyramid height

- Rank transform (brute force)

C. MISSING IMPORTANT JAVA INTERVIEW TOPICS

Core Java:

- OOP: abstraction, encapsulation, polymorphism, inheritance

- Interface vs abstract class

- Method overloading/overriding

- String vs StringBuilder vs StringBuffer

- Exception handling

- Garbage collection

- Constructors, static/final

Collections:

- ArrayList vs LinkedList

- HashMap internals (VERY IMPORTANT)

- Fail-fast vs fail-safe

- ConcurrentHashMap

- Iterator vs ListIterator

Java 8:

- Lambdas

- Stream API

- Functional interfaces

DSA Essentials:

- Rotate array

- Kadane's algorithm

- Majority element

- Linked list problems

- Binary search variations

- Prefix sum

- Sliding window

Concurrency:

- Threads

- Runnable vs Thread

- Synchronized

- Deadlock