Interview questions preparation:

How would you implement Amazon's "users who bought this item also bought…";

What is the difference between an interface and an abstract class?

Given a set of integers, produce its power set (the set of all subsets of the original set)

- Find the intersection of two arrays of integers (the elements that are in both)

- Given a set of integers, produce its power set (the set of all subsets of the original set)

- Reverse a linked list

- Given a string, what characters are in it?

Given a unsorted list of integers. List size is arbitrary. Find the duplicate numbers in the list that occurs more than n times.

Find the nth largest number of an unordered list in time complexity of O(n)

Validate the BST

1st interviewer asked to check if a string is a substring of another string.

Second interviewer asked to reverse a linked list

Write and analyze an algorithm to check if there exists two numbers in an array that sum to a given third number

To copy a linked list. Every node's prev points to the previous node, but the next points an arbitrary node

the first one was a find the kth node in a linkedlist and the second was to check a string for "(" and ")" and there are only so many combinations that are considered valid and invalid. Valid is if all the "(" have an ending ")" for example , (( )) or ()()

Invalid would be )()( or ((()

if the string starts with ) its automatically invalid.

Shortest path problem

get the second most highest integer from an array

1. Find the first non repetitive character in a character stream.

2. Check for prime number and Elevator system design.

3. Agent bidding system design

4. Find for subtree within a larger tree.

Find the intersection and union of two integer array

Merge two sorted array

Return the first no-repeated character in a string.

describe java inheritence

make a function that counts the number of nodes in a tree

Please try to be as detailed as possible regarding the technical question, business case, etc.

what are the 5 Principals of Object Oriented Programming.

The last 15 minutes of the interview is a programming question. My question was to write a method that sorts 2 Array's into one. You write this code quickly and tell them over the phone how you wrote it (including parentheses commas, ect). He asks you clarifying questions like if you wanted this to run faster how might you right it, and assuming we wanted duplicates how would you need to modify the code.

The second interview was much more programming based. 20 minutes was general questions followed by a programming question which was done online on a website where both the interviewer and the interviewee could both see and work on the code. I forget what this code was but its a fairly simple method to write. At the end of the interview I was asked to write a method for StringToDouble in the next hour (following the end of the interview) and then to email it to the interviewer. This method had to include thorough error checking and a method to test various cases (invalid characters, double too large, ect).

Write a binary tree to a file and then restore it.