

Data Structures Questions

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In this exercise, you will solve a few problems that have been asked as interview questions. You may use Java's built-in data structures or the ones we've made in class (as java does not really have a Binary Tree, you may have to use the code from class).

1 Linked List Duplicates

Write a method which would remove duplicate items from a `LinkedList`. You may use additional data structures.

2 Stacked Queue

Create a `StackedQueue` class using two stacks. In other words, make a new Queue class named `StackedQueue`, but the only instance variables in it are two Stacks, and the methods, such as `enqueue` and `dequeue`, as implemented by pushing and popping items from the two stacks. The order that items enter are FIFO, just like a Queue.

3 Largest Smallest Item

Create a method that, given the root of a binary search tree, finds the largest item in the tree that is smaller than the root.

4 Permutation

Write a method that, given two strings, determines if one is a permutation of another.