

Interview Questions: Elementary Symbol Tables

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Warning: The hard deadline has passed. You can attempt it, but **you will not get credit for it**. You are welcome to try it as a learning exercise.

These interview questions are for your own enrichment and are not assessed. If you click the *Submit Answers* button, you will get a hint.

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Question 1

Java autoboxing and equals(). Consider two double values a and b and their corresponding Double values x and y.

- Find values such that `(a == b)` is true but `x.equals(y)` is false.
- Find values such that `(a == b)` is false but `x.equals(y)` is true.

Question 2

Check if a binary tree is a BST. Given a binary tree where each Node contains a key, determine whether it is a binary search tree. Use extra space proportional to the height of the tree.

Question 3

Inorder traversal with constant extra space. Design an algorithm to perform an inorder traversal of a binary search tree using only a constant amount of extra space.

Question 4

Web tracking. Suppose that you are tracking N web sites and M users and you want to support the following API:

- User visits a website.
- How many times has a given user visited a given site?

What data structure or data structures would you use?

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Submit Answers

Save Answers

You cannot submit your work until you agree to the Honor Code. Thanks!