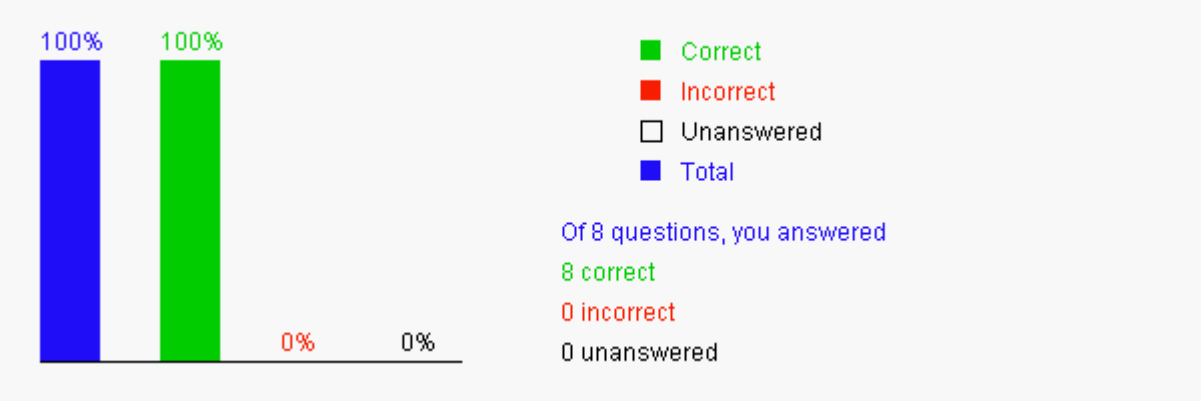
This quiz is for students to practice. A large number of additional quiz is available for instructors using Quiz Generator from the Instructor's Resource Website.
Videos for Java, Python, and C++ can be found at https://yongdanielliang.github.io/revelvideos.html.

Chapter 26 AVL Trees



Please send suggestions and errata to Dr. Liang at y.daniel.liang@gmail.com. Indicate which book and edition you are using. Thanks!

Section 26.1 Introduction

26.1 The _____ of a node is the height of its right subtree minus the height of its left subtree.

- (●) A. balance factor
- ( ) B. depth
- ( ) C. length
- ( ) D. degree

Your answer is correct ✔

26.2 The balance factor of every node in an AVL tree may be _____.

- [x] A. 0
- [x] B. 1
- [x] C. -1
- [ ] D. 2

Your answer is correct ✔

26.3 A(n) _____ (with no duplicate elements) has the property that for every node in the tree the value of any node in its left subtree is less than the value of the node and the value of any node in its right subtree is greater than the value of the node.

- [ ] A. binary tree
- [x] B. binary search tree
- [x] C. AVL tree
- [ ] D. binary heap

Your answer is correct ✔

Section 26.7 The AVLTree Class

26.4 In a(n) _____, the element j to be removed is always at the root.

- ( ) A. binary tree
- ( ) B. binary search tree
- ( ) C. AVL tree
- (●) D. binary heap

Your answer is correct ✔

26.5 In a(n) _____, the element just inserted is always at the leaf.

- [x] A. binary search tree
- [x] B. AVL tree
- [ ] C. binary heap

Your answer is correct ✔

26.6 What is the preorder traversal of the elements in a AVL tree after inserting 3, 4, 45, 21, 92, 12 in this order?

- ( ) A. 3 4 12 21 92 45

- B. 3 4 12 21 45 92
- C. 45 4 3 21 12 92
- D. 45 21 12 92 3 4
- E. 21 4 3 12 45 92

Your answer is correct 

Section 26.9 AVL Tree Time Complexity Analysis

26.7 The time complexity for insertion, deletion, and search is O(logn) for a _____.

- A. binary tree
- B. binary search tree
- C. AVL tree
- D. binary heap

Your answer is correct 

26.8 The average time-complexity for insertion, deletion, and search in a _____ is O(logn).

- A. binary search tree
- B. AVL tree
- C. binary heap

Your answer is correct