Binary Search Trees

CPE 360

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This document provides a walkthrough for building a binary search tree.

1 Binary Search Trees

Design and implement a Binary Search Tree in C++ that supports all basic operations of a search tree. Specifically, create a BST class and perform the following operations in a `while(1)` loop from your main function:

- Insert elements into the BST
- Delete elements from the BST
- Search the BST for a *key*
- Support tree traversals (in-order, post-order, and pre-order)

Test your code: Use the following sequence of events to test your code. Your TA will do something similar before assigning you a grade.

1. Insert the following elements in the same order as they appear here: 15, 6, 18, 3, 7, 17, 20, 2, 4, 13, 9
2. Delete the following elements: 9, 7, 3, 15
3. Search the BST for the following values (or *key*), and print success/failure: 2, 9, 20, 6
4. After you are done with the above three steps, print an expression for in-order, post-order, and pre-order traversals.