CSIT 503 HW4
Topic: Binary Search Tree

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1   Problem Description

Instructions. You are provided four skeleton program named *TreeNode.java and BinarySearchTree.java*. The source files are available on Canvas in a folder named *HW4*. Please modify the skeleton code to solve the following tasks.

- Task 1 (10 pts). Implement the *inorder_tree_walk()* function as discussed in Lecture 7.

- Task 2 (20 pts). Implement the *search()* function as discussed in Lecture 7.

- Task 3 (10 pts). Implement the *iterative_search()* function as discussed in Lecture 7.

- Task 4 (10 pts). Implement the *minimum()* function as discussed in Lecture 7.

- Task 5 (10 pts). Implement the *maximum()* function as discussed in Lecture 7.

- Task 6 (20 pts). Implement the *successor()* function as discussed in Lecture 7.

- Task 7 (20 pts). Implement the *insert()* function as discussed in Lecture 8.

- Task 8 (10 pts Extra Credit). Implement the *preorder_tree_walk()* and *postorder_tree_walk()* functions as discussed in Lecture 7.

- **Note:**   The parameters in some functions are different from the slides. You **should not** change the parameter for any function.

2   Submission Guideline

1. Work individually.

2. Please directly insert your code in the appropriate place in TreeNode.java, and BinarySearchTree.java.

3. Create a zip file of your .java source programs and submit it on Canvas on time. A late penalty of 10 points for each late day applies. Any late for more than three days receives zero automatically.