[20] **Homework 7**: *Sorting*

Due: April 17 , by the end of class.

Assume that you have a set S of n distinct integers. Using two generic operations (ADT–Abstract Data Types) that allow you to: (i) build a binary search tree (call it `bst`(S)), (ii) traverse the resulting tree T in any order (call it `inorder`(T), sort the file S. Right a program. Explain your answer (i.e., prove that your solution is correct).

What is the worst and the average case complexity of your algorithm? Justify your answer.