ESO207: Data Structures and Algorithms

Example Problems *4* Exercises 4.1: Binary Search Trees

Problem 1.[CLRS 12.2-5] Show that if a node in a binary search tree has two children, then its successor has no left child and its predecessor has no right child.

Problem 2.[CLRS 12.2-7] An alternative method for performing an inorder tree walk of an n-node binary search tree finds the minimum element in the tree by called MINIMUM and then making $n-1$ calls to SUCCESSOR. Prove that this algorithm runs in time $\Theta(n)$.