Extra Credit Question from Midterm Exam 1

3. Assume that T is a binary search tree. Design an algorithm called FindLeftLargest(T, B), which returns the largest key value k stored in the tree T that is smaller than B. Note that B is a value, not a node. You may assume that B is not equal to the smallest item stored in T. However, B may or may not be a key values stored in the tree. First write down the basic idea behind your algorithm and then provide as many details regarding the algorithm as needed. Analyze its running time. You may directly use as subroutines any of the algorithms we discussed in class without writing them down explicitly. Your grade will depend on the correctness and the time complexity of the algorithm. Any incorrect statements will be penalized.