

**Algorithm Design**  
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**Solution of Exercise C-2.32**

Starting at the root of the tree, recursively search the left and right subtrees if the root of the subtree has a key value less than  $x$ . This algorithm takes  $O(k)$  time, because there is no node in  $T$  storing a key larger than  $x$  that has a descendent storing a key less than  $x$ .