

BST.cpp : BST\* Node::Convert(Node\* N, int head, int tail, BST B, BST\* root)

Time complexity of the algorithm

This algorithm uses the idea of Merge Sort, dividing the linked list into half in every iteration, and add the very middle element into BST in order to have a lower height. Since the search time complexity of normal BST is  $O(h)$ , where  $h$  is the height of the tree.

Thus, time complexity is  $O(n \log n)$ , just like Merge Sort.