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CS214 --- ASSIGNMENT 2

OVERALL ALGORITHM

Our approach to the assignment was to create a linked list inside the SortedList object which stored all the values. We iterate through the list and use the comparator function to determine the place of the node to be inserted. We keep a reference to the data rather than copying it in each node, so it is the user's responsibility to maintain the data stored at the address they provide as a void*.

RUNTIME

Insertions are $O(n)$ because in the worst case, n comparisons need to be made, where n is the number of nodes in the linked list.

Removals are also $O(n)$ because in the worst case, the node to be removed is the very last node of the linked list.

CHALLENGES

We faced millions of challenges along the way, but overall felt we developed the best possible algorithm.