Act 2.1 - Linear data structure ADT execution

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Explanation of different sorting and search algorithms for this problem situation:

It is important to use double linked list because it is easier to implement than a singly linked list. While the code for the doubly linked implementation is a little longer than for the singly linked version, it tends to be a bit more “obvious” in its intention, and so easier to implement and debug.

In this program I use search function to find the index of the node we want to look for
I also implemented a function to update the value of a node in the list and a function to delete a node in the list by value of the node, all of this functions have a time complexity of O(n) because we have to go through the list to find the node we want to look for except the insert function that have a time complexity of O(1) because we only have to add the node at the beginning to the list and change the pointers; all of the functions work with pointers to save memory and to make the program more efficient.