


TidBIT

A recursive algorithm can always be implemented iteratively instead, but iterative code will usually have more lines of code than recursive code. Despite the compactness of a recursive algorithm, they are generally slower than iterative code as well since they are adding multiple function calls onto the function stack. Why then are some algorithms implemented recursively? Believe it or not, it is for readability and maintainability!



Required Resources

Textbook: *Data Structures and Algorithms*, Chapter 4 

(/d2l/common/dialogs/quickLink/quickLink.d2l?ou=1860222&type=lti&rcode=snhu-2534444&srcou=1040994)

This zyBooks reading will provide you with information on the following topics:

- List ADT, singly linked list, singly linked list insert, and singly linked list remove
- Searching in a linked list
- Doubly linked list, doubly linked list insert, and doubly linked list remove
- Sorting in a linked list
- Linked list dummy nodes
- Linked list recursion
- Stack ADT, queue ADT, deque ADT, linked list stack, and linked list queue
- Array-based list



Additional Support (Optional)

Video: Delete a Node from Doubly Linked List (Start/Middle/End Node) 

(<https://www.youtube.com/watch?v=LvUgew66zOQ>) (8:34)

This video explains how to delete nodes from the beginning, middle, or end of a doubly linked list.