Notes

Chapter 2: Linked Lists

- Linked List: A data structure that represents a sequence of nodes.

  - In a singly linked list, each node points to the next node in the linked list

  - A doubly linked list gives each node pointers to both the next node and the previous node.

- The benefit of a linked list is that you can remove items from the begining of the list in constant time.

- When discussing a linked list in an interview, you must understand whether it is a singly linked list or a doubly linked list.

- The "Runner" technique:

  - Used in many linked list problems

  - Means that you iterate through the linked list with two pointers simultaneously with one ahead of the other.

  - The "fast" node might be ahead by a fixed amount, or it might be hopping multiple nodes for each one node that the "slow" node iterates through.

- Recursive Problems
  - A number of linked list problems rely on recursion.
  - Recursive algorithms take at least O(n) space, where n is the depth of the recursive call.