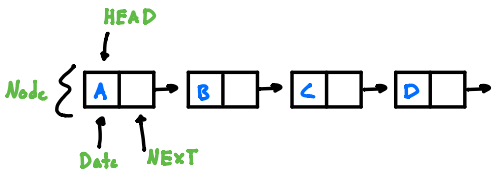
Singly Linked Lists - Length

- # of nodes in a linked list



Logic:

- Start from beginning of the list, Set a current node to the head of the list and go through each of the nodes until we hit null, and we will keep a running tally of how many nodes we've encountered.

Length Iterative

```
def length_iterative(self):

    count = 0

    current_node = self.head

    while current_node:
        count += 1
        current_node = current_node.next

    return count
```

Keep track of the # of loops we perform

Set current node to the front of the list.

While still a valid node object (loop thru linked list)

Keep updating number of times we loop

Return the count of nodes

Length Recursive

```
def length_recursive(self, node):

    if node is None:
        return 0

    return 1 + self.length_recursive(node.next)
```

Base Case

Call recursive, then pass in the next node