LinkedList Introduction - Operations

Insertion

At the beginning

- Inserting items at the beginning pf the linkedlist: very simple, we just have to update the references
- O(1) time complexity

  `linkedList.insertAtStart(10)`

At he end

- Inseting items at the end of the linked list: not tha very simple, we have to traverse the whole linkedlist to find the last node
- How do we find the last node? We know the last node is pointing to a NULL
    - we have to update the references when we get there
    - O(N) time complexity

      `linkedList.insertAtEnd(25)`

Remove

At the beginning

- Remove item at the beginning of the list is always very fast: we do

not have to search the item, we just have to uptade the references accordingly

- 0(1) time complexity

  `linkedList.removeStar()`

At he end

- Remove item at given point of the list is not always very fast: we have ti search for the given item which may take lot of time if the item is at the end of the list
- O(N) time complexity

  `linkedList.remove(10)`

  `linkedList.removeEND()`

Resume

	Linked List
Insert at the start	O(1)
Insert at the end	O(N)
Remove at the start	O(1)
Remove at the end	O(N)

Bruna Santos - January 29, 2018 12:15 pm