

Linked Lists (single)

1. Basic structure
2. append $O(1)$
3. delete $O(n)$

Structure



- search: $O(n)$
- delete: $O(n)$
- append: $O(1)$
- insert At Index: $O(n)$
- prepend: $O(1)$

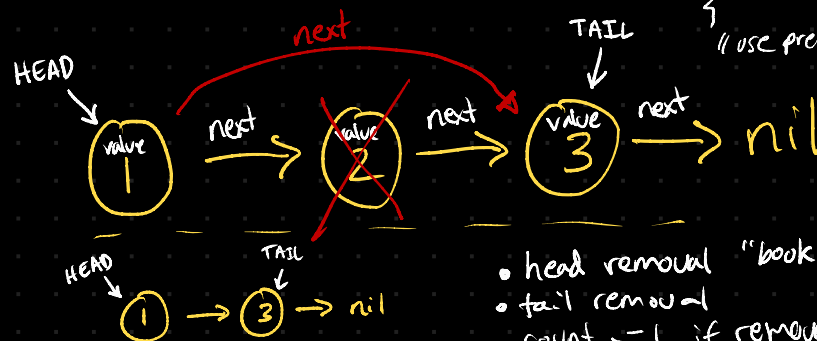
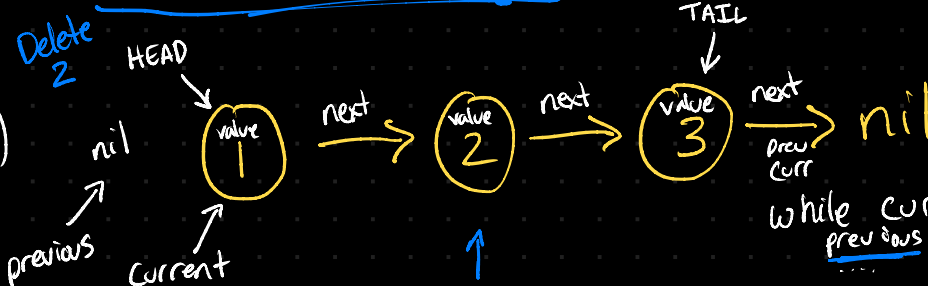
NODE

var item: Item
var next: Node<Item>?

Linked List

var head: Node<Item>?
var tail: Node<Item>?
weak var count: Int

Delete



append

1. Empty

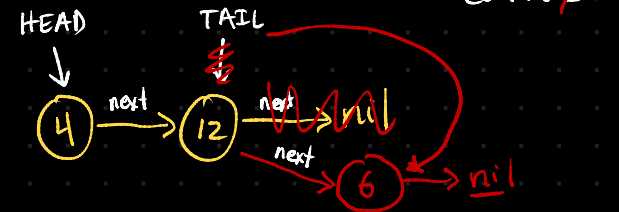
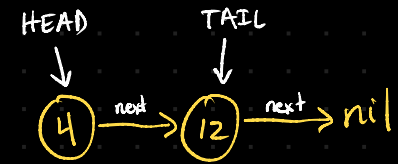


append(4)



2. not empty

append(6)



Count: 3
previous: nil
current: 1

while current.next != nil {
 previous = current

current = current.next

} // use prev to update tail

- head removal "book keeping"
- tail removal
- count -= 1 if removed