

Remove Element from Linked List

→ removing an element from the head of a singly linked list is essentially the reverse operation of inserting a new element at the head

`remove-first(L):`

if `L.head` is `None` then

error: list empty

`L.head = L.head.next` // make head point to next (or `None`)

`L.size -= 1` // decrement node count

Implementing a Stack using Singly Linked List

→ top of the stack at head: better choice because we can efficiently insert/delete elements in constant time only at the 'head'

`class Node:`

`--slots-- = 'element', 'next'`

`def __init__(self, el, next):`

`self._el = el`

`self._next = next`

`class LinkedStack:`

`def __init__(self):`

`self._head = None`

`self._size = 0`

`def __len__(self):`

`return self._size`

`def is_empty(self):`

`return self._size == 0`

`def push(self, e):`

`self._head = self._Node(e, self._head)`

`self._size += 1`

`def top(self):`

if `self.is_empty()`

raise `Empty`

return `self._head._element`

`def pop(self):`

if `self.is_empty()`

raise `Empty`

`answer = self._head._element`

`self._head = self._head._next`

`self._size -= 1`

return `answer`