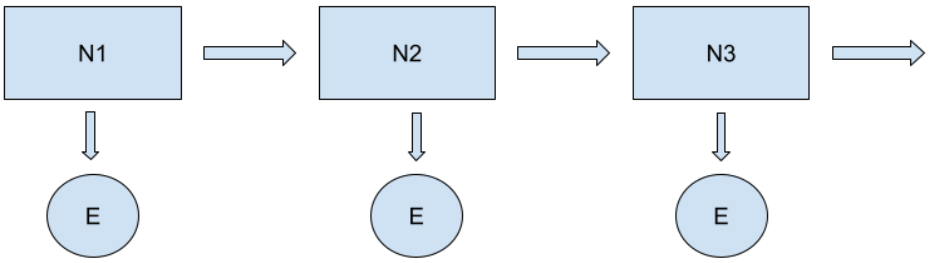
Linked List

The task is to build a linked list structure based on nodes where every node has two attributes. A pointer to the next node, None in case there is no next node, and the element that the node stores.



The linked list should come with all the checks and balances so it doesn't fail. All the list should be accessible from the first node (head). No other node will be required for any of the operations inside the linked list. The node Head can not be lost or the whole linked list will be lost.

The methods that will be required are the next:

add(node): add a node in the end of the list

add_first(node): adds a node to the beginning of the list

add_at(node, index): add a node in the given position

remove(E): removes the first node that contains that element

remove_all(E): remove every node that contains that element

remove_head(): removes the first element of the list

Tostring: a native python method that makes it so when the list is printed it prints the entirety of the list. so if my list is: 1->3->4 it would print 1,3,4. Research is suggested.