CS 240 Homework 5

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As it turns out, linked lists can be used to implement the main data structure we've been looking at: stacks. Specifically,

- pushing an item adds it to the front of a list.
- popping an item removes the front element of a list.
- peeking at an item looks at the data in the front node of a list.

These operations actually stay $O(1)$, and we don't need to worry about growing arrays.

To see this in action, you'll implement the same basic RPN calculator as in Homework 3, but instead of `ArrayStack`, you'll build a generic `LinkedStack<E>` data structure using (of course) a linked list. Make sure your class implements the `Stack<E>` interface. Take this as an opportunity to correct mistakes you made in Homework 3, as well.

Input Format

Input is of the same format as Homework 3.

Output Format

Output is of the same format as Homework 3.

Input Sample

Test against the ACID input from Homework 3, available at `http://www.csupomona.edu/~ajvondrak/cs/240/12/winter/hw/hw5.in`

Output Sample

Test against the ACID output from Homework 3, available at `http://www.csupomona.edu/~ajvondrak/cs/240/12/winter/hw/hw5.out`