

C-4.9

To implement a queue using two stacks, `stack1` and `stack2`, you can do the following:

on `enqueue()` : push the element onto `stack1`.

on `dequeue()` : pop each element from `stack1` and push it onto `stack2`, until the last element is reached. Temporarily store this last element. Pop everything off of `stack2` and push them back onto `stack1`. Return the last element. Enqueue takes $O(1)$ running time and dequeue takes $O(n)$ running time.