

Exercises on stacks and queues

1. Reverse the order of a stack
 - Using 2 additional stacks
 - Using one additional queue
 - Using one additional stack and some additional non-array variables
2. Put the elements on the stack S in ascending order using one additional stack and some additional non-array variables.
3. Transfer elements from stack S1 to stack S2 so that the elements from S2 are in the same order as on S1
 - Using one additional stack
 - Using no additional stack but only some additional non-array variables
4. Using additional non-array variables, order all elements on a queue using
 - two additional queues
 - one additional queue
5. Write a program that determines whether an input string is a palindrome; that is, whether it can be read the same way forward and backward. At each point, you can read only one character of the input string; do not use an array to first store this string and then analyze it (except, possibly, in a stack implementation). Consider using multiple stacks.
6. Write a program that can reverse the order of words of a sentence using stacks