Lab 8

Note: For questions 1,2 and 4 you can reuse your basic stack program for all these programs. For this

#include "filename.c"

1. Copy a stack onto another stack without changing the order: (A) using another temporary stack (B) using recursion
2. Write a program that deletes the middle element from the stack. Use a recursive function for this.
3. Write a program to return max element in a stack. For this, use two stacks. Stack S1 that maintains ALL the elements and auxiliary/temp stack S2 that maintains the current maximum.
    a. Write a function push that (i) pushes an element onto S1 (ii) pushes the element onto your S2 if it is the maximum element.
    b. Write a function pop that (a) checks if element exists on both stacks and if TRUE pops the element from both stacks, If FALSE pops from S1.
    c. Write a function getMaximum that returns the top of S2
4. Write a program to reverse a queue using a stack.