6. [20] Write a SPIM program which prompts the user for a single integer \( n \). Your program should then call a recursive function \( \text{print}(n) \), which if \( n \geq 1 \) prints the value of \( n \) followed by a space, then calls \( \text{print}(n - 1) \), and then again prints the value of \( n \) followed by a space before returning. If \( n == 0 \), the function should simply return. Your code must use the stack and follow the register conventions discussed in class and in Chapter 2.8 of the text. Your output should look like:

Enter integer: 5

5 4 3 2 1 1 2 3 4 5

Upload your solution document to Blackboard.