DATA STRUCTURES

Objective: Data Structures, Stacks, String Processing

Task:
Write a program that will take in a word from the user and reverses the inputted word.

What will the application do?
- Take in a user input and display said input in reverse.

Build Specifications:
- Request and take user input (1 point)
- Create a separate method for reversing your string (3 points)
    - Return type should be a string
    - Parameter should be a string
- Inside your string reverse method, figure out how to reverse the inputted string using a Stack (5 points total)
    - Instantiating a stack: 1 point
    - Using the stack to store characters: 2 points
    - Using the stack to retrieve characters in reverse order: 2 points
- Display the reversed string in the console (1 point)

Hints:
- This problem CAN be solved without using a stack; if you find it easier without using a stack, try solving it without a stack first. After solving the problem without a stack, re-iterate over your solution and use a stack instead.

Extra Challenges:
- Consider cases where the user does not enter a single word but a sentence instead.
    - Do not reverse the entire sentence, instead reverse each word in the sentence, keeping the words in their original positions.
- Validate user input: make sure the user is only entering words and not symbols or numbers.

Console Preview

Please enter a word you would like to reverse: Alligator

Your word in reverse is: rotagillA