Course #3 Data Structure
Assignment #3 Stack

1. Implement a Stack of integer class “MyStack” with the following methods:
   1. Push element to the stack. void push(element)
   2. Pop element from the stack and return it. int pop()
   3. return the Top element in the stack. int top()
   4. return the Size of the stack (number of element). int size()

   You must implement the stack in two ways: a fixed length stack, and a variable length stack.
   Consider using the Linked List you've implemented in this course.

Sample Run: (inputs in green)

Welcome to stack
Operation: push 10
Operation: push 20
Operation: pop
20
Operation: push 30
Operation: top
30
Operation: size
2
Operation: pop
30
Operation: pop
10
Operation: size
0
Operation: pop
Stack is Empty
Operation: end

Hint: You can split input string by space.

2. A palindrome is a word or phrase that is the same when spelled from the front or the back. For example “reviver” and “Able was I ere I saw Elba” are both palindromes. Write an algorithm that uses a stack to determine if a word or phrase is a palindrome.

Sample Run: (inputs in green)

Enter the word: reviver
Palindrome
Are you want to continue (yes/no)? yes
Enter the word: Able was I ere I saw Elba
Palindrome
Are you want to continue (yes/no)? yes
Enter the word: Hello World
Not Palindrome
Are you want to continue (yes/no)? no