Assignment 1

Write a program to implement the following operations on a stack:

1. Push: Add an element to the top of the stack.
2. Pop: Remove the element at the top of the stack.
3. Peek: Display the element at the top of the stack without removing it.
4. Size: Display the number of elements in the stack.
5. IsEmpty: Check if the stack is empty.

Use a fixed-size array to implement the stack. Implement the operations using a linked list approach for better memory management.

Example:

Input:

- Push: 5
- Push: 10
- Push: 15
- Pop
- Peek
- Size
- IsEmpty
- Push: 20
- Pop
- IsEmpty

Output:

- Push: 5
- Push: 10
- Push: 15
- Pop: 15
- Peek: 10
- Size: 2
- IsEmpty: false
- Push: 20
- Pop: 20
- IsEmpty: true

Note: Implement the program using a linked list approach for better memory management.