

COMP 203 Lab 5

Stack

1. Implement Stack abstract data structure as a fixed size array like we learned in the class. (50pt)

Implement Integer ArrayStack class (10pt) and the following methods:

Pop() (10pt)

Push(Integer element) (10pt)

Size() (5pt)

IsEmpty() (5pt)

Test your Pop(), Push(Integer element) in the main. (10pt)

Submit ArrayStack.java to Canvas.

2. Implement Stack abstract data structure as Singly Linked List. Remember in SLL we have only access to the head node. (50pt)

Hint: Think that “top” of the stack is head of SLL. It means that

1. push(String S): Add “S” as a new node at the head of SLL.

2. pop(): remove the head node in SLL.

Implement String SLLStack and Node class (10pt) and the following methods:

Pop() (10pt)

Push(String S) (10pt)

Size() (5pt)

IsEmpty() (5pt)

Test your Pop(), Push(String S) in main. (10pt)

Submit SLLStack.java to Canvas.