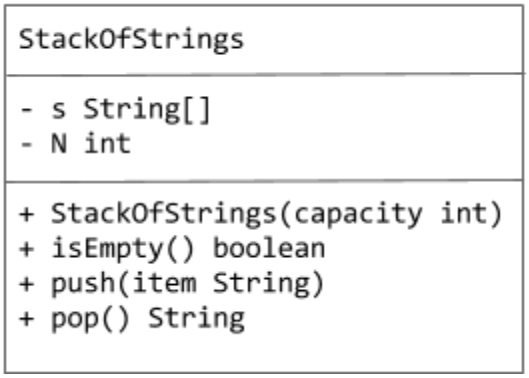

Implement the class described in the UML class diagram above.

A Stack is a data structure with the following rules:

1. All the elements are added in the order in which they are received
2. Every time you remove an element (pop) you remove the element that was last recently added

Because of these properties you will see the acronym LIFO (last in first out) used in connection with stacks.

The field s holds the elements of the stack.
The bigger the array s the more elements can be stored in the stack.
The actual size of s is equal to the capacity that was passed as argument to the constructor. It defines the maximum number of elements that can be stored in the stack.

The field N is the size of the stack and at the same time it is also the next open position on the stack.
When a new stack is created the field N is 0.

Note: *You might have noticed the upper case N for the second field. This is unusual because according to the Java naming conventions variable names should start with a lower-case letter or an underscore. You should always follow Java naming conventions unless you have a very good reason to do otherwise. Here we have one of those rare situations where we have a very good reason to use the upper-case N. The reason is to prepare you for Professor Sedgewick's code that we will use extensively in the algorithm and data structure course (CSIS-2420) and using the upper-case N is a frequently used convention in the analysis of algorithms.*

The method isEmpty returns true if and only if there are no elements stored in the stack
The method push adds the item that was provided as an argument to the next open position on the stack
The method pop removes the element that was last recently added

Create a class StackOfStringsApp that includes the main method. It should test class StackOfStrings:

- Create a StackOfStrings with capacity 10
- add the following two words: "good" and "life"
- remove one word

- add the following words: “is” and “life”
- Use a loop to remove all words as long as the stack is not empty. Print each word as you pop it.