Homework 5 – Due Apr. 10th 23:59 KST

Instructions: Complete the implementation and turn it in before the due date. Any deviations from the instructed deliverable format will result in a deduction of grade. DO NOT COPY OTHER'S WORKS!

In class, we talked about how an array can mimic a stack. This assignment will ask you to do the reverse: Use a Stack to mimic an ArrayList. You don't have to implement the full ArrayList class, but just the following select methods.

- indexOf(int)
- size()
- set(int, obj)
- get(int)
- add(int, obj)
- add(obj)
- remove(int)
- clear()

The behavior of these methods should be the same as the ArrayList counterparts. Please review the relevant lectures to ensure these behaviors.

Rubric: Grading will be based on, but not limited to, the following criteria.

- Complexity analysis (40 points): You should provide a header comment that provides a big-O time complexity analysis. Please clearly identify what the variable of complexity is. In addition to the big-O's, provide a brief explanation of how you arrived at that conclusion.
- Conversion correctness (60 points): Your implementation should behave as specified above. It should be error-free and use appropriate features of Java, such as generics.
- Miscellaneous: Do not change the method and class names. We will try our best to correct trivial compilation errors (with appropriate deductions), but any serious error that requires a major re-write of the code will result in a final grade of 0. Two or more unhandled exceptions will result in a grade of 0 for correctness. The instructions in the comments are also part of the official requirements, so please read them carefully.

Deliverable: Submit a single Java file named Stack2AL.java with no package structure.