# CS 2275 Exercise – 7 – C++ Class Exercises

Module 7 Objectives: Minimal C++ classes, class instances, static, and global variables.

Readings for Module 7: Lippman - 7

Using Dev-C++, create a .cpp source file titled ex2-<your last name>.cpp that contains solutions to the following problems. Use a .doc or .txt file ex2<your last name>.doc to provide the answers to the text questions. As with all assignments in this course, Be sure to include a block comment just about each method and class indicating its purpose and use really good method and class names. Include code under main to test your function by allowing the user to enter the needed parameters. Make sure you test your classes and methods sufficiently to insure correctness.

1. Rewrite the provided C++ IntStack class to insure the code does not access outside the array boundaries.
2. Create a new class InStackAlt, that is identical to IntStack except if it tries to push one too many elements onto the stack, it will create a new array double the size of the original, copy the elements of the original onto the new array, change the class-level pointer to point to the new array, and delete the old array.
3. Add a method to the IntStack class that returns a pointer to a new minimum-length array containing the elements in stack in their order on the stack.
4. Write a C++ class Person with properties first name, middle initial, last name, phone number. Add a static class-level variable that keeps track of the number of instances. Add code in main that tests this class.

Grading rubric: 25 points each. Style up to -10: poor variable or poor function names or no block comment with a goal statement for a function. Solutions that have significantly more lines that needed will be docked points for lack of elegance.

**REMINDERS**

* code that does not compile will not be graded
* the grader should not need to modify/uncomment your code to test it. Provide a test mechanism allowing the grader to enter various tests for teach function.