COSC 1437.S01

PROGRAM FOUR

**Program Requirements:**

Create a class to act as a generic array (i.e. the user will be able to choose the data type to be stored by passing the appropriate template argument. Integer template arguments will also be used to set the upper and lower bounds of the array. Provide all necessary functionality to allow the class to act as an array ([] operator, = operator etc.). The array does not need to provide input or output methods to act on the entire array. Errors within operators and constructors will be handled with assert. Demonstrate that your array operators work inside a function if the array is passed in by reference as a “const”. Provide a Copy method to provide the same functionality as the = operator. Also provide GetAt and SetAt methods to provide ways of getting and setting values at a particular index in the array.

**To Turn In:**

1) A printed listing of the class and all associated functions.

2) A printed listing of your test program used in your testing.

3) A printed listing of the output of your test program.

4) A copy of the files in the project folder as created by Visual Studio. These may be “zipped” placed on a 3 ½ inch floppy, a CD, or emailed to the instructor with the subject line “COSC 1437.S01 – Lab 4”.

**Date Due:** 22 March 2011