COSC 1437.S01

**PROGRAM FIVE**

**ASSIGNMENT:**

Using inheritance, derive two new classes from either the WCS\_String class, your string class, or the string class contained in the Standard Template Library:

**UpperCaseString** – This class will allow any characters to be stored but will store all alphabetic characters as upper case.

**DigitString** – This class will allow only digits to be stored. Usage of other types of characters will cause an exception (NON\_DIGIT\_EXCEPTION) to be thrown.

All error checking (bounds checking of indices, etc.) must be handled as exceptions (try, throw, catch). Your test program must demonstrate that all exception tests work.

Create all members or friend functions deemed necessary for proper functioning of your classes.

**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 5”.

**DUE DATE:** 31 March 2011