# Northeastern University

ETC2103 – Homework 7

This assignment is an exercise in using STL algorithms to solve a simple problem. Please review the documents STL\_Algorithms.doc and Ch7\_STLAlgorithms.pdf in the Week 9 Course Materials folder.

Given a vector of integers with the following values:

{32, 9, 100, 75, 3, 487, 62, 18, 77, 99, 115, 345, 408}

Use the binary search algorithm to find the values 99 and 114. The binary search algorithm performs a search on a sorted range. So you will need to use the sort algorithm before you do the binary search. There are two overloads of STL sort – one that takes two parameters,

sort(begin, end);

and an overloaded function that takes a third parameter,

sort(begin, end, ascending or descending);

The first function sorts the numbers in ascending order. The parameter ascending\_or\_descending in the second sort is a function that you write to compare two elements of the container such that the elements can be sorted in descending order. However, instead of writing this function you could use the Relational STL function object

greater<type>

which does the comparison to sort the vector in descending order. The sort function will look like this:

sort(begin, end, greater<int>);

begin and end are the iterators that specify the range.

The application should display both the unsorted and sorted vector container.

NOTE: To use the sort() and binary\_search() algorithms you have to include the file <algorithms>