### **Lab 9 Working with Binary Search Trees**

#### **Colton Murray and Chad Lape**

# Objective:

The objective of this lab was to create a balancing binary search tree class and learn about its implementation and the structure. The objective was also to dive deeper into how these trees can be balanced, why it is helpful to balance and how it can be implemented in a word frequency counting scheme.

Overall, this objective was met, the templated binary search tree was successfully completed balancing accordingly with each change in the tree. The BST class used the overloaded member functionality having each member function called as a public member to initialize whatever process is to be done then in that function it calls the private version of the function which then can be called recursively to traverse the tree. This was done with most of the member functions. Also this class was implemented successfully in the word count.

# **Instructions for compiling:**

All of the .ccp and .h files will be included as well as an executable for the files.

#### What each group member contributed:

Colton Murray – The structure of the binary search tree and most of the member functions, Wrote the lab report.

Chad Lape – The balancing of the tree, the remove and the outputting of the array of nodes. Also the implementation for the catalog and word class.