CS106L
Fall 2007

Handout #09
October 17, 2007

Assignment 0: Tag Clouds, Take II

Due: 11:59 PM, October 31

Introduction

It's time to take all of your newly-found Standard C++ skills and put them together to write a Standard C++ version of a pretty cool piece of software – the Tag Cloud generator! In this assignment, you will write the tag cloud program from CS106X Assignment 2 using only the standard C++ libraries.

The Assignment

You are to complete the CS106X ADT assignment for tag cloud generation following the directions specified in the assignment description (CS106X Handout #17), but with a few minor changes:

- You may not use any of the CS106X library functions. You may, however, use equivalent code written using the C++ Standard Library, including the code we've written in lecture.
- You may not use any of the CS106X ADTs. Instead use the STL container classes.
- You may not use any of the CS106X utility classes, notably `Scanner` and `Lexicon`. See the next section for how to tokenize input.
- Unlike the CS106 `Map`, the STL `map` stores its keys in sorted order. Thus you will **not** need to run the words through a `set` in order to sort them.

Tokenizing Input

With the loss of the `Scanner` class you're going to have to manually tokenize input. This shouldn't be too much of a problem, and with the standard libraries can be accomplished quite easily. Use either the >> operator or a `stringstream` to split the input into individual words. Since these words might contain trailing punctuation, you'll need to manually remove all the punctuation marks yourself. Unfortunately, at this point we haven't discussed a good way to do this, but next week when we cover STL algorithms we'll write a very cool and fully-functional implementation of a `StripPunctuation` function. Similarly, we'll write a slick `ConvertToLowerCase` function to replace the strutils.h version.

Deliverables

Submitting this assignment is just like submitting any other CS106X assignment. In the submissions directory, go to the folder labeled **CS106L** and choose the **Assignment 0**[*] folder. Create a subdirectory there with your name and submit your source code there. Please include your full name and Stanford username at the top of any files you submit. Though it's not necessary, if you plan on skipping this assignment (see Handout #00 for information on the grading policy), I would appreciate it if you created a folder and added a text file with your name and Stanford username.

[*] The original handout said to submit into the "Assignment 1" folder. This is incorrect – please submit into the Assignment 0 folder instead.