COP4530 Recitation Fall 2012
Week 12

Objective

1. Assignment 5 discussion

String Hash Function Implementation

A major task of assignment 5 is to implement a hash function that maps an STL string to an integer type. Your hash function should attempt to intuitively minimize collisions. Your hash function should address basic requirements e.g. your hash function should be deterministic and hash("abcd") should not equal hash("bacd").

Design Your Own Data Structure

Another major task of assignment 5 is to design and implement your own data structure. The data structure you design can be based on one you have studied in the course, a combination of the ones you have studied in the course, or your own idea. Keep in mind, the data structure you design will want to have a minimal search complexity because of the requirements of the assignment. A search complexity of O(n) is not desirable; O(logn) is much more desirable. You may also make your data structure efficient for commonly encountered English words.

Optimization Flags Review

The performance of your program will be graded in this assignment. Choosing an appropriate compiler optimization flag is important. Optimizations may affect the correctness of your code. Always verify the correctness of your code with these flags. Here are the different options in review:

- -O0, reduce compilation time and make debugging produce the expected results (default)
- -O1, reduce code size and execution time without performing any optimizations that increase compilation time
- -O2, perform nearly all supported optimizations that do not involve a space-speed tradeoff
- -O3, turns on all optimizations specified by -O2 and also turns on flags for more optimizations