CSE 2100 – Data Structures & Analysis of Algorithms

Lab #6 – Hash Tables

Labs are evaluated along axes of correctness, design, and style, with scores ordinarily computed as 3 × correctness + 2 × design + 1 × style.

Getting Started

Navigate to https://bitbucket.org/ChrisIsKing/cse2100/src/ and pull the starter code located inside of the folder named *Lab 6 Hash Tables*.

Located in this folder contains 3 files (main.c, hash_table_unchained.c, hash_table_unchained.h, hash_functions.c, hash_functions.h).

You will be operating mostly in **hash_functions.c & hash_table_unchained.c** but feel free to inspect all files.

If unfamiliar with concepts of Hash Tables review the powerpoint documents located in the Lab 6` Directory.

Tasks

Using your knowledge of Hash Tables taught in class you are required to:

- Implement the function `unsigned int string_hash_function(char* name)`in hash_functions.c that accepts as input a concatenated string of the users name and output it hash code.
- Implement the function `bool load(node* hash_table[], char* fname, char* lname)` in hash_table_chained.c that implements inserts an element into a chained hast table.
- Implement the `node* lookup(node* hash_table[], char* name, char* fname, char* lname) that searches your hash table for a given user.`

Bonus

- Implement the function `bool delete_node(node* hash_table[], char* fname, char* lname) deletes a given element from the hash table.`