

## **Problems**

### **Part 1**

Implement Open Addressing to store hashed data. Use as keys the last names in the patient.txt file in Project 2

### **Part 2**

Implement chaining to store hashed data. Use as keys the last names in the patient.txt file from course website. You can use the implementation code given in the textbook

Start by making the hash table or scatter table size 50. When collisions are detected your program should report this event and display a message that includes the index and key value information in the collision message. Keep a count of the total number of collisions and report that once the table has been completely populated by the keys from your patient.txt file. Include the capability to rehash the tables, for example you could implement this feature by allocating a new hash table twice the size of the old and insert the items into this new table and then delete the old. Include a menu with the following capabilities, quitting the program, displaying the hash table (index and key values) and rehashing the table.

Do not put main for part 1 and 2 in the same source code file, I should be able to compile and execute them separately.

You are required to include a readme file in which you will explain your implementation specifically list your hash function and explain why you chose it and explain how your open addressing program handles collisions.

## **Items to submit**

- Part 1 and Part 2 should be put in different folders inside the zip file.
- Follow general class assignment guidelines, and document any design or implementation choice made