**Lab 9**

**Timing Experiments**

# Description

Using the data provided, write a program that inserts all of the data from the file into the following data structures you wrote.

1. Array
2. Linked List
3. Binary Search Tree
4. Hash Table

Keep a running average of the insertions so at the end of when the data are all inserted, you have the overall average.

After you have inserted all of the data, do a dozen or so searches, also keeping a running average of the time to search for searches. Try to have the search data as diverse as possible.

Include in your lab submission a small document that indicates

1. The time it took to do all of the insertions, broken out by each data structure.
2. The time it took to do the search, broken out by each data structure.
3. Short observations on what you have observed and learned (1 - 2 paragraphs, 5-10 sentences).

Deliverables

One file including:

* Your code
* All of your times, clearly presented.
* Your observations.