CS 253 Programming Assignment 1 Report

Testing the Run Time Complexity of Insertion Sort

Mitch Miller, September 12, 2012

**Motivation**

Insertion Sort is one of the more basic types of sorting algorithms. It is useful to start out with an algorithm like this so that we can learn and understand the basics of how sorting algorithms work. The portion of this Algorithm that we are concerned with is it's run time complexity. What we want to see is how different sizes of arrays affect the complexity of this particular algorithm.

**Background**

Sorting algorithms are an essential part of modern programming in just about any language. They are used in many applications to order, or define the way that data should be stored or represented. There are many sorting algorithms in existence and many of them are much more complex than the one that we are testing in this experiment. However, algorithms like Insertion Sort are the building blocks for more complex sorting algorithms and studying them is a crucial part to learning and understand how complex sorting algorithms function.

**Procedures**

**Pseudocode and Pre/Postconditions**

**Problems Encountered**

**Testing Plan**

**Performance Results**

**Conclusions**