Craig Meinschein

Brianna Buckner

CS 350 Project Proposal

A Comparison of Sorting Algorithms

By Craig Meinschein and Brianna Buckner

## Project Description

For our project, we plan to implement and evaluate the performance of three different sorting algorithms which are considered to be among the most efficient for sorting large lists of elements. The three algorithms that we are interested in are Heapsort, Mergesort, and Quicksort. We chose sorting algorithms as our topic because we found it the most interesting out of the offered suggestions.

In order to thoroughly test the time-efficiency of these algorithms, we will prepare several small, large, and very large lists of integers. These lists will have a variety of characteristics which may affect the performance of sorting, such as being partially-sorted, reverse-sorted, completely random, and having many (or few) duplicate elements. We will then use each algorithm to sort these lists while measuring the amount of time it takes for each one to execute.