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420 Project 3 Report

For our project we implemented the Best-fit algorithm and Sorted Best-fit algorithm. We tracked the data for 100 instances of 100 items each and also had the code output the results of 800 instances of 100 items each.

The first 100 trials showed the average amount of bins used in the Best-fit algorithm was 25.56 and the average amount of bins used in the Sorted Best-fit algorithm was 25.62. Out of the 100 trials tracked, 53 times the Sorted Best-fit algorithm performed better than the Best-fit algorithm. The average ratio of the first 100 was 1:1.074. All of the data from the first 100 trials can be seen on the attached spreadsheet.

For the complete 800 trails, the Sorted Best-fit algorithm used an average of 25.64 bins and the unsorted Best-fit algorithm used an average of 26.34 bins. The Sorted algorithm performed better than the unsorted one 510 times out of 800.