

Project 2 - Testing Solution Quality

Overview

Project 2 involves testing various bin packing algorithms experimentally to determine the quality of the solutions they produce. Specific bin-packing algorithms to be implemented and tested are the following five algorithms:

1. Next Fit (NF)
2. First Fit (FF)
3. First Fit Decreasing (FFD)
4. Best Fit (BF)
5. Best Fit Decreasing (BFD)

NOTE: Algorithms above except Next Fit algorithm have two implementations. The naive version has time complexity $O(N^2)$. The faster implementation version uses balanced binary search tree (E.g. AVL Tree) and has time complexity $O(N \log N)$.

Bin Packing Algorithms Implementation

Experimental Testing

Test Method

Test Result Analysis