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Project 5 Report

The coordinates of the graph were calculated by determining the left adjacent rectangles and above adjacent rectangles for each rectangle. The longest path was then determined using comparisons. Then the previous rectangle with the largest path was used to calculate the x and y coordinates of each rectangle. This would be the width or height added to the x or y coordinate of that previous rectangle to get the sum.

The space complexity was O(n) for this algorithm. The time complexity was also O(n^2). Below is a tabulation of run-times for the sample input files that were provided. The larger the input files, the longer the run time.

Input File	I/O time (s)
r8.sp	0.000e00
r100.sp	0.000e00
r1K.sp	1.490e00
r2K.sp	1.132e01