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Programming Assignment 6

TSP Problem Using Stacks

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***Abstract***

The problem presented is to find the shortest route that a salesman can make with a finite amount of cities. The algorithm that is implemented uses Java API Stack rather than the recursive algorithm that was used in Lab 5. The finished time of the problem is extremely quicker compared to the times in Lab 5. For example, the time of execution and completion compared to Lab 5 for 12 cities is literally 600 times faster. The algorithm implemented in this problem is not recursive. The algorithm is called once and each stack frame is compared to each city in the adjacency matrix.

Lab 5’s recursive algorithm creates stack frames with 2 array lists in each stack frame. Also, each time the algorithm goes through, the cost is calculated and compared to see if it is less than what is currently captured.