Algorithm Final Project: Mailman Traversal

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Problem

Finding the most efficient way to deliver mail in a given route.

The starting point of the mailman will always be the post office, but the route may have multiple destinations.

Solution

Use DFS to visit all nodes (destinations) in the route.

Use Dijkstra's algorithm to find the shortest path back to the post office.

Also use Kruskal's algorithm to make an MST version of the original graph.

Conclusion

The result may vary depending on the graph.

The MST version can sometimes produce a more inefficient route compared to using the original unmodified graph.

The SPT version requires manual input of starting point so it is tedious to use, however the us of Dijkstra's algorithm is mainly to calculate the return trip.

Time and Space Complexity

Most often the using the unmodified graph results in the best time and space complexity.