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CS 32

Project 4 Report

StreetMap Analysis

load()

If the mapFile content has N lines, then the Big-O is O(N).

getSegmentsThatStartWith()

Since the function simply retrieves the segments via the ExpandableHashMap find() function which is O(1) and then sets the resulting vector to the return

vector, the Big-O is O(1).

PointToPointRouter Analysis

generatePointToPointRoute()

I used A\* for this method, and the data structures I used was a set<OrderedCoord> for the open list, and list<OrderedCoord> for the closed set where OrderedCoord has an f, g, and h data member (all doubles) and a GeoCoord coord. They are ordered by size of f.

DeliveryOptimizer Analysis

optimizeDeliveryOrder()

If the deliveries vector has N deliveries, then the Big-O is O(N^2).