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Project 4 Report

GeoDatabase

load(): The text document holds N street segments with an average of P locations per segment, load( ) is O(N\*P).

get\_connected\_points( ): If for each point held in the database there is an average of P connected points, get\_connected\_points is O(P).

get\_street\_name( ): For every case of points given to the function, get\_street\_name( ) is O(1).

Router

route( ): If its GeoDatabase holds N points and on average each point has P connected points, route( ) is O(N\*(P^2)). I used A\* to order the connected points before putting them back into the search queue. The sorting (bubble sort) of these points using the algorithm is what gives the P^2.