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/*****
* Project Report Template
* Project 3 (Map Routing), ECE368
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/*****
* Explain your overall approach to the problem and a short
* general summary of your solution and code.
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I began with little understanding of Dijkstra's algorithm. My program attempts to find the shortest path from A to B by using the graph and linked list data structures in order to map the vertices and their edges to their neighbor vertices. My code first reads the input file, allocates the memory for the adjacency list, and then reads in and initializes the vertices. Then, for all of the edges, it calculates the distance between one vertex and its neighboring vertices. Then, for the query input file, it scans starting locations and destinations, and applies Dijkstra's algorithm to calculate the route.

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/*****
* Known bugs / limitations of your program / assumptions made.
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My program requires the math.h library, so it must be compiled with the '-lm' flag. My program is also dependent on the fact that there should be no more than 100000 vertices, which was told to be true in the instructions. This program is slower than the sample program that was given to us for testing.

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/*****
* List whatever help (if any) that you received.
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* Describe any serious problems you encountered.
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It took me awhile to figure out how to get the adjacency list working as it should and making sure that it allocated and read in the input files correctly so that they could later be used in finding the shortest path. I also found the min heap part very difficult.

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/*****
* List any other comments/feedback here (e.g., whether you
* enjoyed doing the exercise, it was too easy/tough, etc.).
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I enjoyed this assignment, and learning about the graph data structure.

Important note : My program requires the math.h library, so it must be compiled with the '-lm' flag.