Brandeis Map Project, Part 2

The base Map Project counts 80% of the total grade for the Map project.

Part 2 asks you to make a campus tour by approximating a Hamilton Tour of the campus graph.

> **WARNING:** Don't do this, don't even think about it,
> until you have the basic project *fully* working!

All of the code for both Parts 2A and 2B goes in the file *Tour.h*, which should make use if the code you already have completed in Part 1 for a heap and an adjacency list representation of the graph.

Part 2A (10% additional credit):

Do Prim's minimum spanning tree algorithm and then traverse the resulting tree in pre-order to create a cycle that has cost that is twice the sum of the edges of the spanning tree (i.e., upon returning, preorder visits the edge in the opposite direction).

Grading criteria: For full credit, it needs to work, make use of the graph and heap structures from Part 1, and be reasonable well written and documented.

Part 2B (10% additional credit):

Make a tour better than the one computed in Part 2A.

Grading criteria: Grading of this part will be scaled according to the range of solutions submitted. The base method that should be tried is using edges that are not in the tour computed in Part 2A to replace a corresponding sequence of edges. Generally, more credit will be received for more effective ways making these shortcuts. Additional credit will be received for going beyond this base approach (e.g., offering the option of having the tour end at a different location). Credit will also depend on how efficiently your code works (e.g., less credit if it works, but could have been implemented more efficiently). And of course, greater degree of success (time or length achieved) will contribute to more credit.

To pass in your work, add these files to the folder for Part 1:

ReadMeTour.txt: A plain text file that describes how to use your code, how it works, and problems you had. Although the grader will run your code, you should describe here generally what results you achieved.

Tour.h: Becasue it is included by *Map.c*, you should at least have it in a state where there are no errors or warnings produced when you compile *Map.c*. If not, name it *Tour.txt*, and discuss what you have done, even though it will not compile.

OutputTour1.txt, OutputTour2.txt, ... : At most 9 sample outputs.