

## CS 212 MA #2

For this micro assignment, you will need to complete Dijkstra's algorithm in Graph.cpp. Having implemented Dijkstra's algorithm, you will need to implement a main that properly tests the correctness of your implementation.

### Main.cpp

HackerRank will test your program by supplying one or more vertices in the format

<Source ID> <Sink ID> <Weight>

Note that each data point will be separated by a single space. Here's an example:

1 2 5

The following line says that vertex 1 is connected vertex 2 with a edge weight of 5. Therefore, each line represents a single directional edge. If we wanted this edge to be bidirectional, you would have to provide both directions:

1 2 5

2 1 5

Your main should continue to prompt the user for vertices until it receives the value "-1". After which, your program should make a final prompt, asking the user for the vertex that will serve as the beginning for Dijkstra's algorithm. Having run Dijkstra's algorithm, your program must then output the distances, sorted by vertex number, to the screen in the format:

<Sink ID>: <Cost>

### Grading

Your submission will be graded based on the following:

1. [50] Your solution builds, does not cause any runtime issues, and passes all test cases

### Due Date

This assignment must be submitted through HackerRank and Canvas no later than midnight on Wednesday, March 22, 2017.