# Greedy Algorithm

The greedy algorithm has a time complexity of O(n^2). The algorithm starts from an initial city, picks the shortest path available from that city to an unvisited city, and continues this process until all the cities have been visited. Each city is considered exactly once. The complexity of considering a single city is O(n) because each outgoing edge must be considered to find the smallest path. This results in an overall running time of O(n^2). We did add one enhancement, so the greedy algorithm did not get stuck. If it ever has an infinite cost for the path, we just restart at a new arbitrary start city. There is no complex data structure used within the greedy algorithm, so the space complexity is simply the space needed to store the problem, which is O(n).

# Fancy Algorithm

<http://www.eng.uwaterloo.ca/~sjayaswa/projects/MSCI703_project.pdf>

# Results Table

# Discussion of Table