SAN FRANCISCO STATE UNIVERSITY
Computer Science Department

CSC510 – Analysis of Algorithms
Algorithm Challenge 5: Branch and Bound

Instructor: Jose Ortiz

Full Name: _____
Student ID: _____

Assignment Instructions. Must read!

Note: Failure to follow the following instructions in detail will impact your grade negatively.

1. This algorithm challenge is worth 10%, and will be graded using a grading point scale where the maximum possible grade is 100 points. For instance, if your grade in this assignment is 85/100, then this is equivalent to 0.85*10%=8.5% of 10%

Your Work Starts Here

Given a a list of cities and the distances between each pair of cities, what is the shortest possible route that visits each city exactly once and returns to the original city?

0	14	4	10	20
14	0	7	8	7
4	5	0	7	16
11	7	9	0	2
18	7	17	4	0

1. (50 points) Create a branch and bound algorithm to solve this problem **considering exit nodes first.**

2. (50 points) Create a branch and bound algorithm to solve this problem **considering entry nodes first.**