CS540 Section 3 HW2 02/22/2015

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P2.(a). No, it cannot guarantee to find the global optimal solution. It can only find local optimal solution.

(b).   n(n-1)/2. For every 2 cities, we can swap them to generate a neighbor. So it is choose 2 from n.

(c)i.   Successor states:

1.   <Madison-NYC-Chicago-LA>

2.   <Chicago- Madison- NYC- LA>

3.   <LA- Madison -Chicago-NYC>

4.   <NYC-Chicago-Madison-LA>

5.   <NYC -LA-Chicago-Madison>

6.   <NYC -Madison -LA-Chicago>

ii.   Yes, a global optimal solution can be found from this initial state. It is <Madison-NYC-Chicagp-LA> with total traveled distance 4933.94.