
NP-Completeness

Lecture for CS 302

Traveling Salesperson Problem

- You have to visit n cities
 - You want to make the shortest trip

 - How could you do this?

 - What if you had a machine that could guess?
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Non-deterministic polynomial time

- Deterministic Polynomial Time: The TM takes at most $O(n^c)$ steps to accept a string of length n
- Non-deterministic Polynomial Time: The TM takes at most $O(n^c)$ steps on **each computation path** to accept a string of length n