

Lecture 33

CSE 331

Apr 21, 2021

A couple announcements

- Last day to fill video project surveys!
 - By 8pm!
- NO lecture on FRIDAY (April 23)
 - Enjoy!
 - I may announce HW 7 today
 - Same deadline; you'll have more time

Give feedback!

note @1037

Feedback on CSE 331

Hi All,

I'm asking for your feedback about 331 and I prepared a form with custom questions. Please do give feedback via this anonymous form: <https://forms.gle/zjC6JRwvLBKG92iQ7>

Filling in this form is **completely optional** and **anonymous**.

I would love feedback even if it is critical. Also, after a week or so, I'll post my response to the feedback from y'all, though I might disagree with you on certain things. So at the very least, your feedback is appreciated. And then we can agree to disagree :)

Note that this is NOT the UB's course evaluation form; the results will be used to improve the class this semester and in future offerings.

logistics

edit

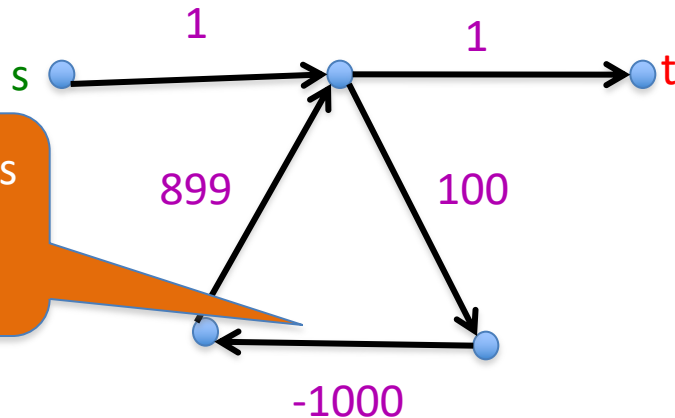
· good note | 0

Shortest Path Problem

Input: (Directed) Graph $G=(V,E)$ and for every edge e has a cost c_e (can be <0)

t in V

Output: Shortest path from every s to t

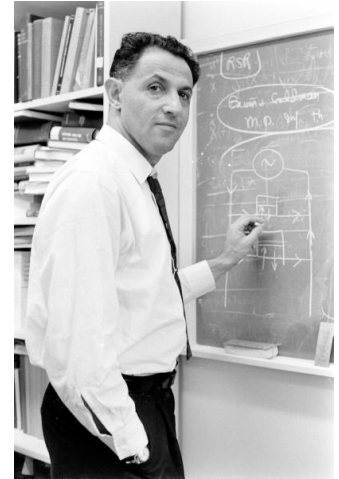


Shortest path has cost negative infinity

Assume that G has no negative cycle

When to use Dynamic Programming

There are polynomially many sub-problems



Richard Bellman

Optimal solution can be computed from solutions to sub-problems

There is an ordering among sub-problem that allows for iterative solution

Today's agenda

Bellman-Ford algorithm