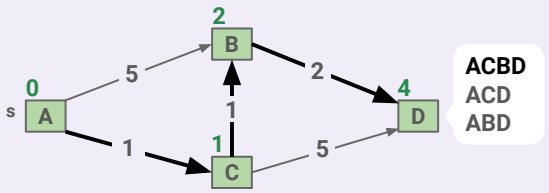
Q Arbitrary Challenging Problem of the Day

Given a weighted graph, find the **second-shortest path** from a source to a goal vertex.

Given a weighted graph, find the **kth-shortest path** from a source to a goal vertex.



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?: Dijkstra's relies on computing the shortest paths tree. What about a second-shortest paths tree?

Q1: Given a weighted graph, find the second-shortest path from a source to a goal vertex.

Q2: Given a weighted graph, find the kth-shortest path from a source to a goal vertex.

Q Wheelchair-Accessible Routes

Problem. Some routes present challenges for people with mobility needs.

A solution. Run k-Dijkstra's and filter by paths that meet mobility needs.

Evaluate this solution.

How might we address this problem in a different way? Evaluate your solution.

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?: What are the definitions of success?
?: What are the biases in the data?
?: What is the cost of failure?
?: What are the long-term effects and feedback loops?

Q1: Evaluate this solution.

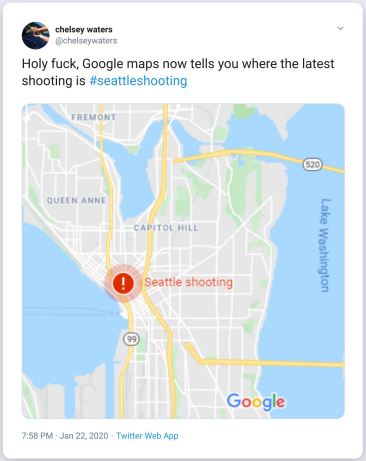
Q2: How might we address this problem in a different way? Evaluate your solution.

Q Shooter Events

Problem. During shooter events, people need to make informed decisions.

Give a description and evaluation of Google Maps' solution.

How might we address this problem? Evaluate your solution.



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?: What are the definitions of success?
?: What are the biases in the data?
?: What is the cost of failure?
?: What are the long-term effects and feedback loops?

Q1: Give a description and evaluation of Google Maps' solution.

Q2: How might we address this problem in a different way? Evaluate your solution.

Q Safety Routing

Problem. Users can unknowingly walk into dangerous situations.

A solution. Reroute users in real-time based to avoid potentially dangerous situations.

Evaluate this solution.

How might we address this problem in a different way? Evaluate your solution.

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?: What are the definitions of success?
?: What are the biases in the data?
?: What is the cost of failure?
?: What are the long-term effects and feedback loops?

Q1: Evaluate this solution.

Q2: How might we address this problem in a different way? Evaluate your solution.