Exercise 4.4.34: Monotonic shortest path. Given a weighted digraph, find a monotonic shortest path from s to every other vertex. A path is monotonic if the weight of every edge on the path is either strictly increasing or strictly decreasing. The path should be simple (no repeated vertices). Hint : Relax edges in ascending order and find a best path; then relax edges in descending order and find a best path.

Solution:

- Relax edges in ascending order in terms of weights.
- Dijkstras did this using greedy choice of relaxing edges in ascending order of weight.
- Find best among the monotonic paths by relax in ascending order or descending order. Just pick one method and find best