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**Exercise 4.4.35:** Bitonic shortest path. Given a digraph, find a bitonic shortest path from  $s$  to every other vertex (if one exists). A path is bitonic if there is an intermediate vertex  $v$  such that the edges on the path from  $s$  to  $v$  are strictly increasing and the edges on the path from  $v$  to  $t$  are strictly decreasing. The path should be simple (no repeated vertices).

**Solution:**

- Run ascending monotonic (ie; 1\_2\_3\_4).
- Descending monotonic.
- Take best combination.
- Check if it's also shortest path.