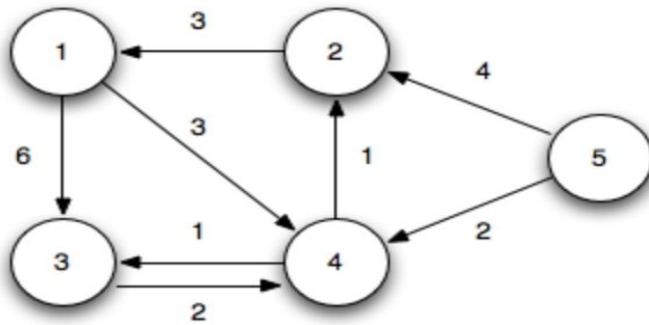


1. Dijkstra's typically outputs the integral value of the shortest path on a graph. How could you modify it to get the path itself?
2. What are the main differences between Dijkstra's and Bellman-Ford?
3. Run Bellman-Ford on this graph with vertex 5 as our source.



$(1,3) = 6$
 $(1,4) = 3$
 $(2,1) = 3$
 $(3,4) = 2$
 $(4,2) = 1$
 $(4,3) = 1$
 $(5,2) = 4$
 $(5,4) = 2$

4. The first vertex in a topological sort will always have an in-degree of ____
5. What is the runtime of a topological sort?
6. List/Discuss some applications of shortest path algorithms and topological sort algorithms.